# Value of money: labour value theory and quantity theory in Ricardo's economic theory

Susumu Takenaga, Daitobunnka University

Summary



## Preface

As is well known, the activities of Ricardo as an economist were relatively short, covering about the last 15 years (1809-1823) of his life time. One of their remarkable traits was that the publications of his writings were closely related to important political and economic problems of respective times, and that in many cases their dates were chosen just in time with the debates about bills and their divisions in the parliament. Such activities of his as an economic polemist openly aimed at intervening in the debates on the problems most ardently discussed at that time, namely about the currency and the Corn Law, from the stand point of the bullionism as for the former, from the opposition party to the Law as for the latter, and at exercising influences on the parliamentary debates about these bills.

His writings concerning the former topic began with his newspaper article *Price of Gold* and some related articles (from August to November 1809), extended and developed into the tract *High price of bullion. A proof of the deprecitation of bank notes* (published at the beginning of 1810 in three editions, the fourth and last edition in April 1811, hereinafter "High Price" for short), and in *Proposals for an economical and secure currency* (published in February 1816, hereinafter "Proposals" for short) he expounded his conception of the English currency regime after the resumption of convertibility of the note of the Bank of England made possible by the ending of the Napoleonic war. This series of his writings ends with *Plan for the establishment of a national bank*, the manuscript of which was written in the Summer 1823 just before his sudden death and published posthumous by his younger brother.

And his writings concerning the latter topic began with his tract opposing to the Corn Law *An essay on the influence of a low price of corn on the profits of stock*, 1815. On the strong advices of J. Mill, he extended and developed systematically this tract, the result of which was his main work *On the principles of political economy and taxation* (first edition in 1817, second 1819, third and last 1821, hereinafter "Principles" for short). And his remains *Absolute value and exchangeable value*, written in the summer 1823, was the end point of his lifelong reflection on one of the most important problems in debate at that time raised by his main work.

The writings of Ricardo belonging to the latter series include "Principles", highly estimated as the systematic theoretical work at the summit of the English classical political economy, and have continued to exercise profound influences on the development of economics in- and outside the English speaking world after the death of their author (J. S. Mill, Marx, Marshall, Sraffa etc.). But those belonging to the latter series do not include any systematic theoretical work comparable to "Principles". They are rather a set of writings of a temporary character calling into question the contemporary English currency regime and criticizing the circulation of inconvertible bank note. Probably because of this, they may be said not to have been so much took up and estimated in the literature. Along with the fact that Ricardo explicitly adopted the so-called Say's law, his theory of money was generally simplified and taken to be a quantity theory, and even today it is rather usual that he is regarded as a quantity theorist. But the quantity theory of money has a long history beginning with Hume and Monstequieu in the mid-18$^{th}$ century up to Freedman in recent times, and in such a stream Ricardo is apt to be considered rather as a minor figure. Such circumstances put together, the theory of money of Ricardo has not only been not often taken up but, even if taken up, has scarcely been examined in its relation with his theory of value and distribution.

In addition, the foundation of the system of economic theory of Ricardo is taken generally as the labor theory of value. And the money appearing in the abstract theory of chapter 1 “on value” of “Principles” is itself one sort of commodity namely gold, and as such its value is determined in the same way as every other commodity by the quantity necessary for its production. On the contrary, the quantity theory of money is a theory in which the value of money is determined by its proportion to the dimension of the commodity transactions to the circulation of which it serves as the medium, and hence is considered to be incompatible with his theory of value, rather contradictory to it. “The contradiction between a quantity theory and a labour (or a cost production) theory of the value of money is obvious.[...] There is no explicit attempt at reconciling the two conflicting views in Ricardo.” (De Vivo,1987, p.195)

But the two series of writings above did not coexist without connection in the thinking of Ricardo. We think that they are in fact closely linked together. The main purpose of this particle is to try to show such a link existing between the value and quantity of money, the most important theoretical subject in his theory of money. In fact, Ricardo started to write “Principles” just after having ended “Proposals” he wrote on the demand of Peter Grenfell, a member of parliament, from Summer to Autumn 1815, and the two remains *Absolute value and exchangeable value* and *Plan for the establishment of a national bank*, de fact his last works, were written in parallel.

Hereinafter we will pursue our purpose above in examining mainly “High Price” and the Appendix to its 4th edition (which includes the response of the author to the (anonymous) review article published in *Edinburgh Review*, Feb. 1811, written by Malthus), “Proposals” and chapters 1, 13 and 27 of “Principles”. Incidentally, in these writings of Ricardo, the comparative values of gold and silver in the bimetallic regime (it was only after the legislative measures in 1816 that gold came to occupy exclusively the position of illimitable legal tender), the role of the country banks, small issuing banks which existed at that time in various regions in England outside London, and their relation to the Bank of England are repeatedly discussed as important subjects on the contemporary currency regime, but in this article we will put aside altogether these problems, in order to show as simply and clearly as possible our interpretation about the points of view of Ricardo concerning the main subject of this article.

## 1. Basic framework of the theory of money of Ricardo

In the chapter 1 "on value" of "Principles", money appears as a measure with invariable value ("invariable measure or standard of value") with which to judge about how much of the cause of variation in the exchange ratio between two commodities to attribute to each of them. "If there were any other commodity which was invariable in its value, we should be able to ascertain, by comparing the value of fish and game with this commodity, how much of the variation was to be attributed to a cause which affected the value of fish, and how much to a cause which affected the value of game. [...] Suppose money to be that commodity." (I, 27-28)[1] Money is therefore one sort of commodity in the theory of Ricardo. But in order to serve as money (measure of value) its value must be relatively stable with regard to the other commodities. As commodities vested with such a property the precious metals (gold or silver) are regarded to be the most suitable[2]. Money is gold as a commodity, and gold has its proper value ("intrinsic value"[3]) just as any other commodity. This is the fundamental position of Ricardo on the value of money, and this position never changed throughout the whole period during which he continued to talk about the problems of money in spite of a great change (or rather evolution or clarification) about the determination of the value of commodities before and after the writing of "Principles".

---

1 All the quotations from the works of Ricardo are from *The Works* edited by Sraffa, and only the numbers of the volume and page will be indicated in Roman and Arabic numerals respectively.

2 The function of money as a measure of value is inseparable from that as a means of exchange, as is clear from the quotation above, and in order to assume these two functions at the same time, will be indispensable various physical properties other than the stability of value such as are enumerated by Marx in *A contribution to the critique of political economy, part one* and in the volume of one of *Capital* (homogeneity of every part, possibility of separation and fusion at will, immune from chemical reactions such as oxidation etc., unchanging physical properties through time, relatively high value contained in small size and weight, etc.).

3 In the opening page of "High Price", Ricardo makes clear the fundamental stance of his theory on the value of money as follows: "Gold and silver, like other commodities, have an intrinsic value." (I, 52) "Intrinsic value" is a term which was being used since long before Ricardo's time for indicating originally the net weight of precious metal contained in a coin, but in this quotation it seems to be used to mean an other thing: the proper value of precious metal as a commodity. In "High Price" Ricardo uses old terms like this one concerning the theory of money, which may be in relation with his intense study of the related English literature from the 17th century he had done in Autumn 1809 before writing "High Price" (cf. Sraffa, *Notes on the Bullion Essay*, III, 7). The term "intrinsic value" is used several times also in "Principles", but some of these terms are used only in 1810 and 1811.

Money is a commodity and has value as a commodity, so that it is exchanged according to this value just as the other commodities. If the exchange between a commodity and money is such as this, it is only one sort of exchange equivalent to that between two commodities. An exchange, one pole of which is money, is distinguished from an exchange of one commodity against another commodity other than money, only in so far as the money commodity with invariable value can express correctly the variations of value of the other commodity, enabling to attribute these variations entirely to those of the non money commodity. Therefore, the respective roles of money and commodity in the exchange are not understood as asymmetrical as in the well-known dictum "money buys commodities but commodities buy neither commodities nor money", but the exchange, on one pole of which money appears, is regarded only as one case of the exchange between two commodities. Hence Ricardo may never have conceived an explanation of how monetary exchange becomes necessary by the difficulties of direct exchange between commodities , as Smith had done in chapter 4 "on origin and use of money" of *Wealth of Nations*, and indeed there are no passages in his writings on money which may correspond to this chapter.

Such a viewpoint of Ricardo on commodity money is to be distinguished equally both from that of the quantity theorists who make of money a non-commodity without its proper value, the value of which is determined solely in the circulation (Hume, Montesquieu), and from the mercantilist conception of money which, on the contrary, raises money to a special rank among the commodities and considers it as the commodity among commodities incarnating the wealth to be pursued and accumulated. For Ricardo, the precious metal is only one element of wealth not at all distinct from the other commodities in so far as it is allotted to satisfy consumption desires just as the other commodities, and its value is determined on the same footing. But, in so far as it is used in a function particular to it as money (measure of value and exchange medium), the precious metal (gold) is not an element of wealth as it does no more contribute to satisfy consumption desires and is rather regarded as so much deduction from the wealth of a nation as its value relatively high to its weight and size. Contrary to the mercantilism (or in its wider sense the stream of "monetary theory of economy" from J. Steuart to Keynes), Ricardo rejects as something theoretically impossible to exist the thesaurization of money, which is for him entirely useless and an irrational behavior for a commodity possessor. Money is spent totally either for the satisfaction of consumption desires or for investment attempting to obtain more of it in the future. Moreover, if the demand for money as a commodity is always equal to its quantity, its total spending made up from consumption and investment is in principle simultaneous with its obtainment.

In the theory of money of Ricardo the circulation of commodity and money is considered according to the following double frameworks[4].

The first is the existence and functioning of money without institutional premises such as state or bank, transcending them. As seen above, there is no genesis of money in Ricardo, but what he discusses is the commodity money spontaneously formed in the course of the commodity exchange in the market, which is fundamental in Ricardo's conception of money. In this domain of circulation only bullion of certain weight (and of fineness) functions as money and its character as commodity money appears clearly.

The second is in contrast the domain of each domestic economy, where money circulates as a national currency issued by the state or a bank. In so far as the gold in the form of bullion circulates among nations as the money (currency) of the world[5] and each nation makes up a part of this world circulation (i.e. it is not completely isolated from the internationally related commodity and monetary circulation), this domain of circulation has necessarily that of the international circulation as its background and the money circulating in a domestic area cannot be understood without its connection with the international circulation. The national currency Ricardo takes up is made up from the following three elements: 1. (gold) coin minted from bullion of a weight corresponding to its mint price with deduction of a certain seigniorage, 2. banknote convertible at

---

[4] This is most clearly visible in the development of the first half of "High Price". After this tract ("Proposals", related chapters of "Principles"), Ricardo has the tendency to concentrate gradually his attention on the problems concerning the domestic circulation of money (or currency) in England, but the world circulation surrounding the domestic one as its outer framework is always supposed in the background. Every argument of Ricardo on monetary problems can be correctly understood only in such a context.

[5] The term "the money of the world" had been used in J. Steuart's *An inquiry into the principles of political economy*, 1767 and has been known since then as such. Ricardo used this term twice in "High Price" (cf. III, 53, 87). He also used the expression "the (general) currency of the world" (cf. III, 53, 57). Among the list of reading items Ricardo studied intensively just before writing "High Price" as mentioned in note 3 above, is included the work of Steuart (cf. III, 7). The use of these terms may have been inspired by these readings. But these terms are not used in his later writings on money. By the way, Marx entitled "the money of the world (Weltgeld)" the last section in chapter 3 "money or commodity circulation" of the first volume of *Capital* to consider the movement of money reduced to bullion deprived of its national uniform in the domain of international circulation.

sight into coins with the same face value, 3. banknote, issuing bank of which is exempted from the duty of conversion into specie (but still officially equivalent to the quantity of gold corresponding to the convertible banknote of the same face value).

In Ricardo's time de facto only the item 3. above was circulating. It is 1. and 2. with which the value of gold as a commodity (its "intrinsic value") has something to do in the determination of their quantities actually circulating in a domestic area. On the contrary, the quantity in circulation of 3. is not regulated automatically so to speak through price relations or demand/supply relations, but because of its being inconvertible paper, any quantity of it can not only be absorbed in the circulation but also continue to circulate there, irrespective of the quantity of gold represented officially by the total sum of the issued paper money in circulation calculated on the basis of its total face value and official mint price. The inconvertible banknote can circulate in any quantity depending on the policy and behavior of the issuing bank, but their purchasing power over the commodities including bullion varies in inverse relation to their quantity in circulation. The bullionists[6] including Ricardo express the purchasing power of the inconvertible banknote by that over bullion in the market (the reciprocal of its market price), which they call "value of money" (distinct from the value of gold money as a commodity). At a certain amount of inconvertible banknote in circulation, this market price coincides with the mint price. Ricardo and other bullionists adopted this conformity as criterion allowing to judge of the appropriate level of the issued quantity of inconvertible banknote, and they claimed that the issuing bank should make of this criterion the guide for their issue policy. But in reality the market price of bullion of the time was over and above its mint price, and the bullionists brought this forward as a proof of over-issue (as is precisely expressed in the title itself of "High Price"). As for the national currency which is in such a state, arises an appearance as if the quantity of money determined its value.

Such an appearance arises not only for the national currency in an inconvertible regime, but also for its antipode, i.e. gold in the form of bullion, "the money of the world". These two forms of money are antipodes of one another, because gold is itself a commodity with its "intrinsic value" and such a commodity money serves as medium of

---

[6] Designation made after the publication of Bullion Report in August 1810 by the Bullion Committee to designate its supporters.

circulation, and also because in international domain there exist no issuing organs as state or bank and the money which circulates there arose spontaneously from among the commodities exchanged there.

In the theory of Ricardo, the fact that money serves as medium of exchange in a domestic area is considered to be tantamount to the direct transfer of cash in the direction opposite to that of commodities, i.e. to the physical exchange between paper money or coin and commodities. It is certain that Ricardo speaks of "economy in the use of money"[7] in various passages of his writings, but he never discusses how this economy is carried out, how much and in what manner it changes or diminishes the quantity of money in circulation. In the time of Ricardo, various forms of cashless transaction must have already been in place: payment by commercial bills, their circulation, use of checks by bank deposits and also book credit practiced between sellers and buyers themselves without issuing and deposit banks participating in. But these are almost entirely neglected in his monetary writings. What exists and circulates in England and so participates in forming the purchasing power of money over the commodities including bullion, is made up exclusively of inconvertible banknote issued by the Bank of England, the whole of which seems to be supposed to move directly from hand to hand between buyers and sellers. This is an economy where every settlement is made directly by cash, which is the antipode of the pure credit economy of Wicksell. Ricardo's theory of the value and quantity of money too is built up on the premise of such a situation.

## 2. International trade and money ---debate with Thornton and Malthus

As we have seen in the previous chapter, the theory of money of Ricardo is based on gold money circulating among countries in the form of bullion. Money moves, just as do the commodities, from countries where its quantity is relatively superfluous and hence its price (in the case of money, its purchasing power over commodities) is low, to countries where it is relatively scarce and hence its price is (as for money, its purchasing power) is high. Thus the proportions of distribution of all the commodities and of money tend to be equilibrated throughout the world. If a complete equilibrate distribution is

---

7 For example, in "High Price" he says about this economy as follows: "the daily improvements which we are making in the art of economizing the use of circulating medium, by improved methods of banking, would render the same amount of notes excessive now, which were necessary for the same amount of commerce at a former period." (III,86)

attained, there will be no reason for all of them to move among countries. The world economy in the theory of Ricardo seems to be conceived as one solely composed of "civilized nations" (III,52) in Western Europe at that time, or rather of countries like enlarged or reduced mirror images of England. They form something like an agglomeration made up of fragments into which has been torn down the world economy existing as a homogeneous whole. Actually, of course, at that time England was in commercial relations with "non-civilized" countries outside Europe. But in the theoretical model of Ricardo the non-European world (characterized by the production of products different from those of Europe or by the productivity far different from that of Europe as for the similar kind of products) is neglected, and so the world economy is not seen as a whole comprising heterogeneous components. In every country, as far as it appears in Ricardo's world economy, a same set of goods produced in the same proportions to each other and also by the same methods of production is circulating[8][9]. Otherwise, it would be impossible to speak about an equilibrate world distribution of precious metals or an equalization of the value of money among these countries in equilibrium. And here there can be no distinction between exportable and non-exportable goods, everything being potentially exportable goods.

The precious metal as money is only one among these commodities. Hence, when the proportion which the quantity of precious metal money existing in one country occupies in its total sum all over the world is equalized with the proportion which the commodities produced and exchanged in this country occupies in their total sum all over the world, the proportion in which the precious metal money is exchanged in this country against the other commodities (i.e. "value" or "purchasing power" of money) is also equalized with that in every other country. When the world economy is in such a state, the international distribution of the precious metal is in an equilibrium state, and here there is no more reason for trade as transaction of commodities and money among countries. At the beginning of "High Price" where is explained the international distribution of precious metal money

---

8 However, in the discussion about the comparative advantage among nations in chapter 7 "on foreign trade" of "Principles", are presupposed relative differences in the conditions of production in different branches from country to country and so a little different situation from the configuration of the world economy in the theory of money.

9 So also the tastes for each sort of products and even the habits of consumption and life may be de facto supposed to be alike in every nation, which reminds us of an important aspect of the colonizing activities of the non-European world by European nations since the Age of Discovery.

Ricardo says as follows: “As soon as this equality was attained, all advantage arising from exportation would cease.”(III,57-58) The international commerce arises aiming at recovering the equilibrium state in the distribution of money among nations when it is disturbed. Regarding such a point of view of Ricardo on the motive of international trade with transfer of money, Malthus points out keenly as follows in his (anonymous) review article published in *Edinburgh Review*: “He [Ricardo] seems to think, that when once the precious metals have been divided among the different countries of the earth, according to their relative wealth and commerce, that each having an equal necessity for the quantity actually in use, no temptation would be offered for their importation or exportation, till either a new mine, or a new bank was opened [till a country gets an additional supply of money to disturb the equilibrium state]; or till some marked change had taken place in their relative prosperity.” ([Malthus, T.R.], 1811,p.345)

This comment of Malthus appears to comprehend correctly an aspect of the point of view of Ricardo on the international commerce, which induced debates with Malthus and Thornton belonging to the same camp of bullionism demanding to stop the depreciation of English currency by the resumption of convertibility, about how to interpret the fall of the rate of foreign exchange. In reality, unless an artificial barrier (embargo etc.) is not set up with international conflits such as war, the international commerce continues without interruption, naturally Rcardo must have known this well. As we have seen, money and in particular gold money in the form of bullion is for Ricardo but one commodity among others moving from country to country, and the equilibrate international distribution of such money (as is depicted in the quotation above from Malthus) is in fact only one case of that of the commodities. Moreover, the delivery of commodities in exchange for precious metal money (i.e. exportation) is for him also only one way of carrying out international commerce. Each of the other commodities is also distributed internationally in a certain state[10], and whether this distribution is in equilibrium is independent from the state of international distribution of gold. If the international distribution is in disequilibrium for some of the commodities other than gold, some commodities will leave the countries where they are relatively superfluous (i.e. cheap) to move to countries

10 This may be unthinkable if the composition of the commodities produced, circulated and consumed is different according to countries. To talk about an international distribution for every commodity is indispensable such a configuration of the world economy as we have seen in the first paragraph of this chapter.

where they are relatively scare (i.e. expensive). If in such a situation scarce and superfluous commodities correspond between two countries, they become objects of international commerce and mutually exportable commodities, and at the same time they function as means of paymenent and settlement. The commodity called money is also only one of the commodities moving among countries in this way. Ricardo does not recognize the monetary settlement as having some privileged meaning in comparison to the settlement by other commodities. About the international commerce in the situation of an equilibrate international distribution of money, he says at the beginning of "High Price" as follows: "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.[...] exports and imports of all countries would balance each other; bills of exchange would make the necessary payments, but no money would pass, because it would have the same value in all countries." (III,53-54)

Now the progress of the debate and the points discussed in it are as follows. In the review article cited above Malthus criticized the point of view of Ricardo on the fall of foreign exchange, to which Ricardo responded in the "Appendix" to the fourth edition of "High Price" published two months later. Thornton had already brought forward the view similar to that of Malthus in *An Enquiry into the Nature and Effects of the Paper Credit of Great Britain*, 1802. And Ricardo examined critically Thornton's view in "High Price". The central problem on which Malthus and Thornton diverges from Ricardo is whether the currency depreciation by over-issue is to be considered as the sole cause of the fall of foreign exchange or other additional causes are to be recognized. What came especially in question in relation to the foreign commerce was the importation of corn in order to make up its deficiency caused by the bad weather which consecutively occurred in England at that time. This debate is involved with the numerical data and their evaluation which concern: the progress of the quantity of the inconvertible banknote issued by the Bank of England remaining in circulation, the evolution of harvest and price of corn in England, the evolution of corn importation and of the price of imported corn, the variation of foreign exchange in relation to these movements. We do not enter into the disputes about the details of these numerical data, but limit ourselves only to show the differences in the points of view between Ricardo and Thornton=Malthus on the international commerce and on the role the money plays there, in order to clarify one important aspect of the theory of money of Ricardo.

Introducing critically Thornton's opinion, Ricardo says as follows: "it appears that the temptation to export money in exchange for goods, or what is termed an unfavourable balance of trade, never arises but from a redundant currency. But Mr. Thornton, who has considered this subject very much at large, supposes that a very unfavourable balance of trade may be occasioned to this country by a bad harvest, and the consequent importation of corn; and that there may be at the same time an unwillingness in the country, to which we are indebted, to receive our goods in payment; the balance due to the foreign country must therefore be paid out of that part of our currency, consisting of coin, and that hence arises the demand for gold bullion and its increased price." (III,59-60) Ricardo thinks on the contrary that even if a country in need of supplementary food supply imported corn in deficiency (whether or not money is distributed in equilibrium) money would not necessarily leave this country only because of this corn importation. Payment with money for importation is always a way of payment chosen for the benefit of this country having relatively superfluous money to be chased from it[11], but a country in no such situation, i.e. the value of money there not being relatively low, will not export money, will not pay for importation with it. A country can choose by itself what kind of commodity it gives back in compensation for its importation in consideration for its own advantage. A little after the quotation above, always criticizing Thornton Ricardo continues as follows: "If we consent to give coin in exchange for goods, it must be from choice, not necessity. We should not import more goods than we export, unless we had a redundancy of currency, which it therefore suits us to make a part of our exports. The exportation of the coin is caused by its cheapness, and is not the effect, but the cause of an unfavourable balance; we should not export it, if we did not send it to a better market, or if we had any commodity which we could export more profitably. It is a salutary remedy for a redundant currency." (III,61)

For Ricardo, the imported commodities are those which exist in a country but can be bought in higher prices because relatively scare. No other reason for importation is thinkable[12]. The same can be said also about the exportation. In such cases there exist

---

[11] Symmetrically, the quantity of money in the other country is relatively insufficient so that it imports money for its benefit. In such a case money is used as means of payment. Otherwise, there is no reason to use it as means of settlement.

[12] This applies in quite the same way to money, a sort of commodity. The importation is for Ricardo commodities (goods) brought from abroad to a country, and the exportation

certainly motives to transfer commodities between countries, but if money is equivalent in both countries, there will be no motive to allocate money to the payment for importation so as to make use of it more advantageously than in that country as is the case when superfluous money circulates there, and the payment will be made with other (relatively superfluous) commodities of that country. Ricardo has no idea that money has a special meaning as means of payment distinct from the other commodities, i.e. that it has the highest liquidity so that it is preferred to any other commodity of the same value. For him every commodity exchange is a barter in its essence. And if money becomes its medium in the international domain, it is only because money moves seeking favourable conditions of exchange. Receiving precious metal money as recompense for exportation does not mean for the creditor country any more benefit than if it received instead other commodities. Influx of money is rather forced to this country by the mechanism of equilibrate international distribution of money, when there are no relatively scarce commodities other than money in this country, and hence when the commodity prices are relatively low and the value of money is relatively high. In addition, the value the total sum of money (money thus "imported" plus that which existed there from the outset) has in the domestic circulation does not at all rise, and its value per unit of face value diminishes by as much as the increase in its quantity. For Ricardo, money serves nothing other than to procure really useful goods (virtual wealth) with it.

## 3. Value of money in Ricardo

### a. Value of metallic money in the international circulation

Among the writings about money Ricardo left behind during the whole period of his activities as economist, it is in "High Price" of the earliest time that the general

---

means their movement in an opposite direction. In the international commerce, being but a sort of commodity exchange, these movements of commodities in two opposite directions must be necessarily in equilibrium in terms of commodity value. Therefore, for Ricardo who includes money in the category of commodity in general, the international commerce in the black or in the red, the excess in exportation or in importation, the consequent favourable or unfavourable balance of trade, these are un-understandable and meaningless expressions. "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." (III,64) If Ricardo employs this expression in "High Price", it is always only as a concession to an "ordinary usage" of the term with which he cannot agree. Such an attitude can be seen in this quotation, too.

outlines of his theory of money are most conspicuously traced, and all the other writings after it may be said to have added and extended some points already contained in "High Price" in relation with the current conditions of currency and the debates about them. In this chapter we will consider the value of money in Ricardo's theory, the central subject of this article, mainly in examining the development of his arguments in "High Price" referring if necessary also to his later writings on money.

The starting point of "High Price" is the worldwide commodity circulation with precious metal money as its medium existing "previously to the establishment of banks." (III,52) Such a setting itself and the subsequent arguments suggest a strong influence from the work of D. Hume[13] which is considered to have given a clear expression to the quantity theory of money in the mid-18$^{th}$ century. But, while Hume considers the precious metal money as not being a commodity hence not having value in itself (cf. Hume, *ibid.*, p.41, p.63), Ricardo declares from the outset money gold to be a commodity with its proper value. "Gold and silver, like other commodities, have an intrinsic value, which is not arbitrary, but is dependent of their scarcity, the quantity of labour bestowed in procuring them, and the value of the capital employed in the mines which produce them[14]."

---

13 Cf. Hume, 1752, in particular the section *Of the balance of trade*. However, in "High Price" Ricardo mentions the name of Hume only once and in a much later part.

14 Cf. note 3 above as for "intrinsic value" appearing in this quotation. At the time of "High Price" Ricardo was not yet clear about the determination of commodity value. Here some elements determining value, scarcity, quantity of labour, value of capital, appear side by side only in a disorderly manner. But, since "High Price", he held uniformly the idea that the value of money is based on the value it has as a commodity and this value determines the quantity of money in circulation. "The quantity of metal, employed as money, in effecting the payments of any particular country, using metallic money [...]must depend [...] first on its value." ("Proposals", IV,55) "Gold and silver, like all other commodities, are valuable only in proportion to the quantity of labour necessary to produce them, and bring them to market. [...]The quantity of money that can be employed in a country must depend on its value." (chapter 27 "on currency and banks" of "Principles", I,352) The idea expressed in these quotations makes up the basis of Ricardo's conception on value and quantity of money. If that's all, the matter is very simple which would not require any investigation. But, except for the domain of international commerce where bullion really served as money, a money circulation consisting solely of precious metal money did never exist actually, at least during the time of which Ricardo spoke, i.e. from the time prior to the suspension of convertibility in England up to his own. The circulation was actually carried out by convertible banknote along with precious metal money (gold coin) or by inconvertible banknote excluding metallic money. The question is what becomes of the fundamental point of view of Ricardo shown in the quotations above, in such a situation of currency circulation as this where precious metal money did not circulate (exclusively).

(III,52) In this regard, the theory of money of Ricardo must be distinguished from the quantity theory of money of Hume (and Montesquieu) which excludes money from among the commodities and induces its value from their reciprocal quantitative relations.

At the beginning of "High Price" Ricardo speaks of the distribution of precious metal among the countries of the world as follows: "The precious metals employed for circulating the commodities of the world, previously to the establishment of banks, have been supposed by the most approved writers on political economy to have been divided into certain proportions among the different civilized nations of the earth, according to the state of their commerce and wealth, and therefore according to the number and frequency of the payments which they had to perform. While so divided they preserved every where the same value, and as each country had an equal necessity of the quantity actually in use, there could be no temptation offered to either for their importation or exportation." (III,52) Here is explained the distribution among nations proportional to the extent of wealth (hence of the dimension of commercial transaction) of precious metal money circulating in "civilized nations", but this distribution says nothing about the quantities of money as its results. These quantities of money in circulation in each country are determined by the total sum of the money which circulates all over the world. The theory of Ricardo on international distribution of precious metal money (maybe just as in the case of Hume) has nothing to do with this total sum of money. Given the "economy in the use of money" and the "state of wealth and commerce" i.e. the "number and frequency of payments", the quantity of money in circulation must be determined by the value of money commodity itself. And, according to the fundamental point of view of Ricardo seen above (money is a commodity with its proper value, exchanged with other commodities on the basis of this value), the quantity of money thus determined must be distributed among each nation proportionately to its dimension of transaction.

But, following the quotation above, Ricardo says that the theory of proportionate distribution shows how a given total sum of money is distributed in a certain way without implying the quantity to be distributed: "If the quantity of gold and silver in the world employed as money were exceedingly small, or abundantly great, it would not in the least affect the proportions in which they would be divided among the different nations ---the

---

The main purpose of this article entitled "value of money" consists in clarifying this point.

variation in their quantity would have produced no other effect than to make the commodities for which they were exchanged comparatively dear or cheap. The smaller quantity of money would perform the functions of a circulating medium, as well as the larger." (III,53) The quantity of precious metal money attributed to each country can be more or less according to the more or less quantity of total sum of precious metal existing in the entire world. And the quantity allotted proportionately to each country circulates there necessarily (since in Ricardo's theory money can never be thesaurized), varying up and down the prices of commodities correspondingly. It is as if the quantity of money functioning here as circulating medium were not determined by its value as commodity, but that money entered into the circulation in any quantity being devoid of its proper value and its value were determined only by its relation to the quantity of commodities (total sum of their value) to which it served as circulating medium. Why Ricardo, after having talked about the value of money determining its quantity in circulation, does he make in the immediately following page an opposite explanation à la quantity theory on the value of money ? The increase and decrease in the quantity of money is nothing other than the variation in the relation between the quantity of money and that of the commodities. If the production of money as a commodity evolves at the same pace as that of the other commodities (overwhelmingly industrial products), the quantitative relation between commodities and money will not continue to change in a certain direction for a long time, though it may be possible temporarily. If so, money as a commodity will be exchanged according to its intrinsic value. If Ricardo explains the value of money à la quantity theory in the quotation above, It seems to be because he is aware of the specific conditions of production of gold as money commodity different from those of the other commodities, industrial products in particular[15].

In the paragraph following the above quotation are depicted the disturbance of the

---

15 Marx, in "A. Historical notes on the analysis of commodities" put at the end of chapter one "Commodity", Marx 1859, criticizes Ricardo's quantity-theoretic explanation of the value of money in "High Price", contending that the quantity of production of gold as money commodity is regulated in accordance with the need of circulation so that it carries out the function as money according to its value. This criticism of Marx is from the standpoint that gold as money commodity can and must be treated quite equally as the other commodities. But Ricardo tried to treat somehow the difficulties of quantitative adjustment arising from the specific conditions of the production of precious metal in the framework of his commodity-money theory, of which Marx was not aware in his theory of money. These tentative efforts of Ricardo may be estimated as raising problems to the commodity theory of money.

equilibrate international distribution of precious metal money and its restoration by redistribution as follows: “If in the progress towards wealth, one nation advanced more rapidly than the others, that nation would require and obtain a greater proportion of the money of the world. Its commerce, its commodities, and its payments, would increase, and the general currency of the world would be divided according to the new proportions. All countries therefore would contribute their share to this effectual demand.” (III, p. 53) In the situation of an international equilibrium distribution of precious metal money, if one country enlarges the production of commodities faster than the other countries, the equilibrium of this distribution will be disturbed, which will necessitate a redistribution for the recovery of equilibrium. This is because the process of this enlargement of production of commodities does not include that of the money commodity. If the enlargement of production in each country progresses similarly tracing a concentric circle, every commodity including money commodity will remain in an equilibrium distribution in proportion to the weight each country occupies in the world economy. Why then is only the quantity of money commodity production treated as if remaining unchanged and left behind in the “progress towards opulence”?

The key to this question seems to be included in the following quotation belonging to the same context as the previous one. “If a mine of gold were discovered in either of these countries, the currency of that country would be lowered in value in consequence of the increased quantity of the precious metals brought into circulation, and would therefore no longer be of the same value as that of other countries. Gold and silver, whether in coin or in bullion, obeying the law which regulates all other commodities, would immediately become articles of exportation; they would leave the country where they were cheap, for those countries where they were dear”. (III, 54) In contrast to the previous quotation, we have here a new supply of money gold and an increase in its quantity though there is no country in which has arisen any increase in commercial transaction. The additional supply of money depends on the discovery of gold mine “in either of these countries”, i.e. on a purely accidental factor. It does not progress in every country pari passu with the increase of production of other commodities. The increase of the quantity of money does not always take place in accordance with the need of increased commerce in a country. On the contrary, the production of gold can increase accidentally in a country where there is no such need. In the country where a gold mine has been discovered by chance, a quantity of newly produced gold will be added to the gold already in existence. The gold in excess of the equilibrate distribution will become superfluous and relatively cheap (i.e. the prices will inflate) in this country, and therefore exported to foreign countries in search of favorite exchanges just as the other commodities. Thus will be exported to other countries the fall in the value of gold. This exportation of gold (which is at the same time importation of commodities) will continue till a new equilibrium point will be reached.

What is the meaning of this new equilibrate distribution of money gold among the country? It is clear at first that the prices of commodities have become again the same in every country, so that there can not be any motive for exportation or importation for the reason of differences in prices of commodities. Looking at this point only, the situation appears to have gotten back to the initial one before the disturbance of equilibrium. But the evening of prices everywhere at the same level is not the only result of this re-equilibrating process. Now the prices have become higher than before all over the world and the purchasing power of money has fallen in every country. Of course this is because the newly produced gold supplied accidentally in some one country irrespective of the variations of commercial activity in each country has diffused worldwide to reduce in an even measure the value of money everywhere. If the increase of gold production is largely a matter of accident, it may well happen on the contrary that in spite of an increase of commercial activities in some country(ies), there will be no new supply of gold required in this(ese) country(ies) in order to maintain the international equilibrate distribution of gold (cf. the quotation above from III,53). In this case will arise a situation contrary to that shown in the quotation above. That is, in these countries money gold will become relatively scarce and the value (purchasing power) of gold relative to other commodities will rise (prices will fall). There the exportation of commodities (importation of money) will continue until the value of money will equilibrate anew. When a new equilibrate distribution will thus be attained, the prices will have fallen evenly all over the world i.e. the value of money will have risen equally as compared to the level before the disturbance (worldwide diffusion of the relative scarceness of money arisen in some country(ies) and dissolution of this relative scarceness itself). Moreover, unless a new gold mine will be discovered somewhere by chance to supply gold afresh and put in motion a process similar to that described in the quotation above, any force tending to reduce the purchasing power of money once more to the initial level will not operate.

Both of these contrary situations arise from the difficulties in varying the supply of precious metal money as a commodity pari passu with the evolution of its demand, which makes its excess or deficiency subsist without dissolving easily. In such situations, the value of precious metal as money is apt to deviate from the value of precious metal as a commodity, besides these deviations can last long time. That is to say that even if the value of precious metal as a commodity were stable, its value as money can vary with the variation of the size of commercial transactions, which results in the instability of the value of money and its determination à la quantity theory. From the point of view of "principles of political economy" of Ricardo, such a state of thing could be interpreted as an extremely special case of the deviation between the value (natural price) of a commodity and its market price. On the abstract theoretical level of chapter 1 "on value" of "Principles", the deviation of the market price from the natural price is supposed to dissolve itself rapidly (instantaneously, in principle), so that every commodity is to be exchanged according to its natural price (or value), and the money appearing in this chapter as measure of value is precisely one of such commodities. But Ricardo was aware that, on a level of more concrete observation taking into consideration even the particular conditions of production of each commodity, it is not possible to apply such a supposition equally to every commodity[16].

### b. Quantitative adjustment of metallic money in the domestic

16 Hereinafter we are going to see more concretely this problem in referring to some passages of Ricardo's text. By the way, McCulloch, in his (anonymous) review article on "Proposals" (cf. [McCulloch],1818,pp.58-59), tells us about this point concisely and more clearly than Ricardo himself. There he says that according to the theory of Ricardo the value of precious metal is determined on the same principle as for other ordinary commodities but that it is on the condition that an unlimited competition is at work in the production of precious metal so that the quantity of its production can be promptly and easily increased or diminished in accordance with the relation between supply and demand, but that in reality the peculiarities of gold mining make no easy such quantitative adjustment. And, in such a situation, the value of precious metal money moves up and down following its quantity relative to the demand for it (i.e. the size of commercial transaction for which money serves as medium), so that the causation runs from the quantity of money to its value. At this time McCulloch was as a "faithful disciple" of Ricardo actively engaged in commenting and vulgarizing the works of Ricardo, just because of this he could make such an appropriate summary. On the other hand, in this review article, McCulloch paraphrases in detail the "principle of limitation of quantity" which plays an important role in the explanation of the value of inconvertible banknote and of its variation in chapter 27 "On currency and bank" of "Principles". We are going to examine it in a later section.

## circulation and instability of its value

We have discussed in the previous section about the international circulation. In this domain there can be only a spontaneous mechanism of quantitative adjustment of very low responsiveness, i.e. expansion and contraction of gold mining. Here the instability of the value of money by mal-adjustment cannot but be left as it is. On the contrary, in the domestic area it is national currencies issued by a state or bank which circulate in stead of bullion, and the quantities of various national currencies are regulated in different ways according to the nature of each of them, independently from the evolution of gold production.

The gold coin was minted from bullion of a weight corresponding to its official price stipulated at the beginning of the 18th century (mint price, 3 pounds 17 shilling 10 and 1/2 pence per ounce). The relation the quantity of coins issued in this way has with the quantity necessary for the circulation in a country can be known by comparing the mint price of gold with its market price. If the quantity of coins actually in circulation conforms with the quantity necessary for the circulation (mainly determined by the value of gold as a commodity), the quantity of gold contained in the coin is equalized with that which can be bought in the market with this coin, i.e. two different forms of gold of the same quantity are exchanged (but in fact since the mint subtracts a weight of gold corresponding to the seigniorage when minting bullion into coin, the gold actually contained in coin diminishes as much. But here we put aside the seigniorage.) In this case the purchasing power of coin over bullion is on a par with the quantity of gold contained in it.

In chapter 13 "taxes on gold" of "Principles" Ricardo says as follows: "the duration of the interval, before the market price will conform to the natural price, must depend on the nature of the commodity." (I,191) In this chapter he argues about the case in which the quantity of production cannot be readily diminished as the gold mining where a long time is required for cutting down the production in order to equalize the natural and the market prices with each other again when the former exceeds the latter (i.e. in case of excess of supply over demand). But a cut-down of newly produced gold alone does not suffice for diminishing the quantity of precious metal money. Here is a difficulty particular to the quantitative adjustment of it (a downward one in this case). "Although from its durable nature, and from the difficulty of reducing its quantity, it [metal gold] does not readily bend to variations in its market value, yet that difficulty is much increased from the circumstance of its being used as money." (I,193) Although gold used as money is produced as a commodity in the gold mining, it is not definitively consumed and does not leave the economic process as the other commodities but continues to stay there. The quantity of such money does not diminish by cutting down the new supply of gold from mines. The most this cut-down can do is to restrict the increase of the quantity of money. Of course, if its relative excess diminishes its purchasing power, a part of money gold may be converted into ornaments or materials of other industrial products, and then it may be possible to diminish actively the quantity of precious metal money. However, the extent to which this may be carried out will depend on the proportion the gold used as money occupies in its total quantity. If an overwhelming part of existing gold has been used as money, its conversion into other uses (i.e. the margin of cut-down of money) will be very limited, or on the contrary if the proportion of gold used as money is small (after Ricardo's expression, if gold has "a very slight connexion with money" (I,194)), it will be possible to diminish the quantity of money as much.

But in capitalism, since the economic activity generally continues to expand, may be rare a situation of excess of money, medium of commercial activities, rendering necessary its cut-down as in the case seen above. What Ricardo considered more important was: that the supply of precious metal does not respond to the expansion of economic activities, so that the quantity of money becomes scarce relatively to a larger quantity of commercial transactions, which destabilizes the value of money irrespective of the stability of the value of gold as a commodity (its "intrinsic value"). Ricardo brings forward in "Proposals" (1816) a plan of "economical and secure" currency regime. The fundamental conditions he required from a currency regime can be summed up in these two words. Prior to proposing a concrete regime satisfying them, he shows how the value of currency becomes instable when an expansion of commercial transaction takes place in a country (virtual country existing nowhere) where solely precious metal money (coin) circulate, as follows: "If, from increasing opulence, more commodities came to be bought and sold, the first effect would be that the value of money would rise." (IV,57) Because of the relative insufficiency of quantity of money, the market price of bullion falls below its mint price, bullion is then brought into the mint to be transformed into coin with its face value superior to the price at which it could be sold in the market. This increases the quantity of money and its value falls, i.e. the prices of commodities including bullion generally rise. But, since a special demand arises only for bullion to be minted and the quantity of its supply for sale in the market diminishes on the contrary, only the price of bullion may be supposed to rise more largely (or rapidly) through this process than those of the other commodities for which does not arise a special demand accompanying such a quantitative adjustment of money. In this way, the market price of bullion rises and comes to conform with its mint price, and then no more benefits can be obtained from converting bullion into coin and the process of expansion in the quantity of currency comes to end. At that moment the prices of commodities will be remaining somewhat lower than they were before falling. Here, the value of money in the sense of its purchasing power over bullion will have restored the former level, but with the rise in the value of bullion itself (or more exactly its market price) will have also risen the purchasing power of currency over the other commodities. In other words, though it is possible to restore the purchasing power of money over bullion (conforming anew its two prices with each other) by means of an adjustment with increase in the quantity of coin, the relation between money or bullion and commodities cannot come back to its initial state (i.e. the fallen money prices of commodities always staying below its initial level), and in this sense the "value of money" becomes instable[17]. This is an illustration of the instability of the value of money on the supposition of a pure metallic money circulation in a country never existing (having existed) in reality, illustration of which Ricardo makes use of as a preliminary to emphasizing subsequently that the issue of paper money from bank instead of additional supply of gold from mine is indispensable for stabilizing the value of currency, and that a banknote circulation is better than a metallic circulation in that the former makes easy the adjustment of quantity of currency.(Incidentally, also in "High Price" are justified in the same way the issuing bank and banknote. Cf.III,54-55)

---

[17] It is to be noted that the process of adjustment above is for the case where the quantity of gold transacted as bullion in the domestic market is superior to that necessary for the adjustment,but that things will not progress in the same manner if the quantity of bullion existing in the market is not sufficient for the adjustment or in an extreme case if there were no bullion there. Besides, the problem of currency discussed in the bullion controversy Ricardo actively participated in was contrary to the situation brought into question here, that of excess of currency and of the rise in the prices of commodities including the market price of bullion, and he himself was employed in making clear these phenomena. If a phenomenon alien to the actual state of Ricardo's time is analyzed here, it may be to reconfirm the advantage of the banknote circulation he had emphasized already in "High Price, and so to show that the banknote circulation is indispensable for the "perfect" (IV,55) state of currency to be realized in the future.

Ricardo considers it possible to remove the instability of the "value of money" caused by the gap seen above not easily dissolvable between the value of precious metal money as a commodity and its value as money, by means of the issue of convertible note from a bank and its appropriate quantitative adjustment[18] (it was for realizing this that he conceived the "Proposals". Its first concept dates back to the "Appendix" to the 4th edition of "High Price" (April 1811) and its definitive form was given in *Plan for the establishment of a national bank* (written in summer 1823, published in 1824)). But this is applicable only to the circulation of currency in the domestic area in which an issuing bank can be established and its banknote can circulate, and in the domain of international circulation beyond boundaries in the 19th century where no such institutions existed and worked, money cannot but circulate in the form of bullion, so that there the instability of the value of money seen above (varying according to the quantitative relation, determined in a way similar to the quantity theory of money) cannot be wiped out[19].

---

18 This quantitative adjustment can be done not by discretion or policy of monetary authority but automatically so to say, as long as are assured the conversion of banknote, the free minting of bullion and melting of coin and the freedom of its importation and exportation.

19 Ricardo is thus aware of the sluggishness of the production (hence of supply) of precious metal used as material of money, and this introduced quantity theoretic elements into his theory of determination of the value of money based on the theory of commodity money. In other words he was aware of the difficulties for the capitalist production to put under its control the commodity "money" just as the other commodities (industrial products in particular). Ricardo says that the labor and houses are similar to money in this respect. The houses are closely related to the earth. Then these three items can be interpreted as money, labor and earth, three elements difficult to subsume under the movement of capital but nevertheless indispensable for the working of capital, what may be related to the point of view of Polanyi on the difficulties of their commodification in his *Great Transformation* appeared more than one century after Ricardo. Ricardo says in the chapter 13 "taxes on gold" of "Principles" about the cut-down of gold production as follows: "The agreement of the market and natural prices of all commodities, depends at all times on the facility with which the supply can be increased or diminished. In the case of gold, houses, and labour, as well as many other things, this effect cannot, under some circumstances, be speedily produced. But it is different with those commodities which are consumed and reproduced from year to year, such as hats, shoes, corn, and cloth; they may be reduced, if necessary, and the interval cannot be long before the supply is contracted in proportion to the increased charge of producing them." (I,196) On the other hand, chapter 2 "on rent", chapter 3 "on the rent of mines" and chapter 5 "on wages" of "Principles" can be read respectively as explaining the difficulties capital encounters when trying to subsume as commodities under its movement the earth and labor, which are however indispensable for its valorization. Incidentally, Marx, who emphasized the historical limit of capital, also put forward the difficulties of commodification of the

## c. Value of precious metal coin and of convertible banknote

The precious metal coin and convertible banknote we are going to see in this section are those which are issued in a particular country by the state or by a bank in some relations with the state, the amount of which are designated by a denomination particular to that country, able to circulate as such solely in its domestic area (as national currency). For these currencies to serve beyond national boundaries as media of commodity circulation, they must be gotten back to the form of bullion or exchanged to other national currencies in the foreign exchange market.

When the actually circulating quantity of currency exceeds its necessary quantity, its purchasing power over bullion falls and the market price of gold rises over its mint price. In this case, as gold is estimated lower in the form of coin than in the form of bullion, coins are melted down and cease to function as money one after another. The actually circulating quantity of coin diminishes, and at the same time the quantity of bullion supplied in the market increases as much. Its market price falls and soon arrives at the same level as the mint price. Then coin becomes equivalent to the same quantity of bullion contained in it, and so the benefit from its melting down (or the loss of holding it as coin) disappears. The melting down is no more carried out and coin circulates in the necessary quantity. In the opposite case of the quantity in circulation being inferior to its necessary quantity, by the mechanism working in the contrary direction bullion is converted into coin (minted), which raises the fallen market price of bullion and soon this conforms with the mint price leading to the same result as above. In the case of circulation of gold coin as money, the actually circulating quantity of it is adjusted so to say automatically to the quantity necessary for circulating the commodities through the up-and-down variations of the market price of bullion. And the value of gold as money and the value of gold as a commodity conforms with each other. The quantity of money which brings about this conformity of these two values is its quantity necessary for circulation.

As the quantity of money necessary for circulation is determined not only by the value of the money commodity itself but also by the extent of the commercial transactions

---

earth and of labor in the chapters on wages and on ground rent of *Capital*, and made it clear that these difficulties impose constraints on the movement of capital accumulation. However, as for money, he stuck to the theory of commodity money even more radically than Ricardo and insisted that the production and circulation of precious metal money are not different from those of the other commodities, so that money gold must be treated on an equal footing with the other commodities.

for which money serves as medium and by the economy in the use of money (its velocity of circulation etc.), even if a quantity of money which was in conformity with its necessary quantity in certain conditions remains unchanged, the process of adjustment in either of the two directions seen above will come into operation with possible changes in its quantity necessary for circulation. Such processes will take place repeatedly with time. But as the general trend in capitalism is toward the expansion of economic activities, the quantity of actually circulating money will be adjusted upward to the necessary quantity expanding accordingly. More and more increasing quantity of money will be necessary. The supply of money gold will be possible up to a certain degree by minting bullion or gold used for various purposes other than for money, but it will finally have to have recourse on additional supply newly produced from gold mines. But, generally, it is very difficult that such a new supply of gold depending on the natural allocation of rare resources go pari passu with the progress of economic activities, with the result that in general cases the commodity money does not circulate according to its value. Ricardo shows in "Proposals" that the quantitative adjustment by precious metal money destabilizes the value of money, and after that he speaks of the advantage of paper money issue as follows: "by the judicious management of the quantity, a degree of uniformity, which is by no other means attainable, is secured to the value of the circulating medium in which all payments are made." (IV,57-58) He expresses the same idea also in "High Price". The money issued by "a bank [...], such as the Bank of England, with the power of issuing its notes for circulating medium" (III,54) adds considerably to the sum of the currency, and so "the same effect would follow as in the case of the mine". (III,55) But unlike the digging out from mine, the cost necessary for the issue of banknote is minimal and yet the quantity of its issue is speedily adjustable at will.

Historically it is exceptional that the currency circulation worked solely with precious metal coin. For the most part coin carried out its function as currency together with paper money issued from a bank (the Bank of England). If a banknote, a mere scrap of paper, could work as money side by side with and as equivalent to precious metal coin, it was because both of them were guaranteed the equivalence with a certain quantity of gold (convertible at sight into gold of a weight corresponding to the mint price). As for the coin this equivalence was maintained by the mechanism seen above. The banknote is originally a certificate of the duty in specie for the issuing bank to pay to its holder. Its equivalence with coin is guaranteed by its convertibility into the coin of the same face value, and on the basis of this guarantee the banknote assumed the function of money alongside coin. It is for this reason that the official mint price originally determining by law the relation between the face value of coin and its gold content was applied equally to the banknote as the standard of its value as money, its face value being indicated by the same denomination as that of coin.

The circulation of banknote presupposes therefore that of precious metal coin, and as far as the value of banknote in precious metal is guaranteed by the convertibility, banknote circulates along with precious metal coin (mixed circulation). In this case the quantity of money in circulation in a country is made up of the sum of issued quantities of coin and banknote. The banknote, not being itself gold, works virtually as an additional quantity of gold backed up by the guarantee of convertibility (whether and how much demand for conversion and actual conversion take place is an other question). If this sum is equal to the quantity of money necessary for circulation determined mainly by the value of gold as a commodity, the market price of gold conforms with its mint price. If the issued quantity exceeds that necessary for circulation, with the rise of the prices of commodities in general the market price of gold as a sort of commodity will rise above its mint price. In such a situation, the holders of coin will (in spite of the prohibition by law) melt it down and sell it as bullion in order to get a profit equal to the difference between its market and mint prices. And banknote holders will also convert it into coin at the bank in order to do the same thing with the coin obtained. In this way, when the issued quantity of money exceeds its necessary quantity, coin diminishes and banknote flows back to the issuing bank. Both contribute to diminish the quantity of money and with the general prices the market price of gold will fall, which will soon conform with its mint price. The conformity of these two prices with each other means that the currency exercises actually in the market the legal purchasing power over gold and hence has as much purchasing power over the other commodities as over gold. On the contrary if the issued sum of money falls below its necessary quantity, the prices of commodities including gold fall, and with this falls also the market price of gold below its mint price. In such a situation, people will buy bullion in the market and bring it to the mint in order to get coin or exchange it at the bank with banknote at a more favorable price. The total sum of money will increase, which raises the prices of commodities including gold. With this the market price of gold will soon conform with its mint price.

The total sum of issue of precious metal coin and of convertible banknote is so to say automatically adjusted to the necessary quantity of money through the up and down movements of the price of bullion in the market (approximately at the same pace and in the same direction as the prices of the other commodities), and so the value of money (in the sense of its purchasing power over gold) is automatically stabilized. However, this stabilization means only that the two prices of gold is in conformity with each other and money maintains in the market its official purchasing power over gold. Even if the value of money is stable in this sense, the purchasing power of money over the commodities other than bullion may become instable when varies the value of gold itself as a commodity or the relative price of bullion expressed as proportions of market price of bullion to those of the other commodities. In other words, even if the market price of bullion remains constant (the constancy of the mint price is a matter of self-evidence, its variation comes only from artificial price modification.), there may well be up and down movements of the prices of commodities caused by monetary factors. There are two cases to be distinguished in such a instability of the value of money (in the sense of its purchasing power over the commodities other than gold).

The first is the variation of the value of money as a commodity, of the "intrinsic value" of money so to speak. This depends on the conditions of production of gold as a commodity. The production of gold largely depends on the natural allocation of the rare resources and of its accidental and sporadic discoveries. Gold mining enterprises can hardly take control of the expansion of production and the cutting-down of cost of production. And in the long run the cost of production of gold can largely vary beyond human control. No institutional device would be able to prevent such variations or neutralize their effects. But on the other hand, in contrast to the agricultural production in particular, the productivity of gold mining is extremely stable in the short term in comparison to any other industries, which makes gold suitable to the function of measure of value and of money[20]. Consequently, the first case of the variations of the "intrinsic value" of money commodity can be put aside for the moment unless we bring into question the evolution in the (ultra-)long run such as the "price revolution" which proceeded over centuries during the Age of Discovery.

---

20 "though the variations in the *value* of gold or silver may be considerable, on a comparison of distant periods, yet for short spaces of time their value is tolerably fixed. It is this property, among their other excellences, which fits them better than any other commodity for the uses of money." (III,65)

The question is about the second case of the instability of the value of money. As we have seen above, the supply of gold, material of money, is in the short term extremely inelastic (so much so that it may be assumed to be zero) in regard to the variations in its demand. However, the demand for money (hence the quantity of money necessary for circulation) is considered to continue to increase in accordance with the expansion of economic activities in capitalism. As a result, the demand for money gold as a commodity is generally in excess of its supply[21]. And the proportion of exchange of money gold in the market against the other commodities, i.e. the purchasing power of money over them may stay deviated as much from their value relations in favor of money side (in the wording of the classical theory of value and price, it is a state in which the market price is remaining over and above the natural price because of the mal-adjustment of the former to the latter, or in other words a state in which the price expressed in such a money is remaining lowered.). Since his debut as economist in 1809 with the publication of "The price of gold", Ricardo consistently insisted on the stability of the value of currency in his writings on questions of money, in paying much attention to the destabilizing tendencies of the value of money accompanying the quantitative adjustment by means of precious metal money to emphasize the great advantage of the alternative measure: the quantitative adjustment by means of the issue of banknote.

As seen above, convertible banknote can work along with gold money as its equivalent in spite of its being devoid of substantial "intrinsic value" (but unlike gold money it cannot circulate beyond national boundaries). The sum of money in circulation in a country is therefore the total amount of these two kinds of national currencies. When this sum exceeds or falls short of the "quantity of money necessary for circulation", the adjustment process seen above will come into operation to dissolve the divergence between these two quantities. If in such a process of adjustment coin is melted down into bullion or on the contrary bullion is minted into coin, this will give rise to changes in the relation between demand and supply in the bullion market. In the former case the total amount of currency will diminish and at the same time the supply of bullion will increase. In the latter case on the contrary the demand for bullion (for minting) will increase at the

21 The sporadic and accidental discoveries of gold mines of large scale which took place during about one century after Ricardo may have made temporary and partial changes to such a situation.

same time as the expansion of the total amount of currency. In the process of adjustment of the total amount of currency proceeding in this way, in the former case the diminution of quantity of money and the increase of supply of bullion will have as their synergetic effect a fall of the market price of bullion more rapid than those of the other commodities the supply of which will have no reason to increase in this process, but in the latter case the increase of quantity of money and the rise in the demand for bullion will have their synergetic effect a rise of the market price of bullion more rapid than those of the other commodities the demand for which will have no reason to increase in this process. When the market price of bullion will conform with its mint price and the adjustment process will come to an end, the prices of other commodities will not have fallen to their initial level but remain higher than it in the former case, and in the latter case the situation will be to the contrary. In sum, the purchasing power of money does not completely recover from its temporary rise or fall, remaining somewhat higher or lower. Thus the destabilization of the value of money is unavoidable with the quantitative adjustment of precious metal money[22].

But in including in this process of adjustment the variations of quantity of banknote, we will have a different result. A bank issues its note in lending it. The main way of lending by the Bank of England in Ricardo's time was discounting of commercial bills. The money thus lent out will necessarily be redeemed and flow back to the issuing bank. The quantity of banknote actually in circulation is equal to the credit balance at each moment. The issuing bank can increase or decrease its credit balance according to its lending policy[23], but this increase or decrease has no direct influence on the demand or supply of bullion in the market, so that the variation of the quantity of money caused by the

22 The fundamental reason why such a thing happens is that money gold does not readily increase or decrease in response to the need of circulation. Incidentally, we are here putting aside the connection between the domestic and international circulations, limiting our consideration of the problems only to the former.

23 For such a discretionary action it is naturally supposed that the monetary authority is aware of the excess or deficiency of the sum issued (more precisely the total of the credit balance of banknote and of the amount of issue of coin). But its criterion is only the relation between the mint and market prices of gold. It is impossible to judge of the quantity actually issued (excessive or deficient) on the basis of a certain amount of money. An appropriate amount of issue is something quite unknowable. "The issuers of paper money should regulate their issues solely by the price of bullion, and never by the quantity of their paper in circulation." ("Proposals", IV,64)

measures of bank cannot give rise to an evolution of the price of bullion different from that of the other commodities. It is because the quantitative adjustment of the issue of banknote works as if the supply of quantity of money gold were adjusted to the evolution in the need of circulation, though the banknote itself is not gold. The difficulties of adjustment of the production of gold extracted from mines are thus surmounted cheaply and promptly by the bank which issues banknote as "virtual gold" instead of mines. If the quantitative adjustment of banknote takes place more speedily and largely than that of coin seen above, the instability of the value of money will be reduced as much. Until now we have supposed a mixed circulation of coin and banknote, but Ricardo aimed at a circulation consisting solely of convertible banknote. There coin will disappear from circulation. The conversion of banknote will therefore be carried out not by coin but by bullion. This is his "Ingot plan", according to which the quantitative adjustment of money will be naturally done entirely by that of banknote issue, which will totally wipe out the instability of the value of money as is brought into question here. But this can be said only of the currency circulating in a country and does not apply to the money of the world circulating in the form of bullion. "A currency is in its most perfect state when it consists wholly of paper money, but of paper money of an equal value with the gold which it professes to represent." (chapter 27 "on currency and banks" of "Principles", I,361)

Of the discussions made up to now supposing a pure metallic circulation or mixed circulation of coin and paper, the only one which Ricardo considered of reality is the worldwide circulation of precious metal money. For him coin and convertible banknote in the domestic circulation were something belonging to the past time. Nevertheless he discussed much about these forms of currency. It is because the considerations about them were indispensable premises for discussing about the note of the Bank of England under suspension of convertibility and its depreciation by over-issue, the central theme of his discussions about currency inspired by the debate of his time.

### d. Increasing issue of inconvertible banknote and its value

By the Bank restriction act enacted as a temporary legislation in 1797 but afterwards renewed several times, the Bank of England became entitled to issue banknote without being obliged to pay specie for it. An issue and circulation of inconvertible banknote were unprecedented in the English currency regime up to that time. Many worried about serious turmoil such as rapid and substantial falls in the value of currency leading to the collapse of the currency regime itself as a result of the loss of confidence in its issuer, etc. But contrary to expectations, there were no such disorder immediately after the suspension of convertibility. Some time after, at the turn of the century, a rise in the prices in England including that of bullion and a fall of the rate of foreign exchange of the inconvertible note of the Bank of England took place. Such a situation of the English currency gave rise to a debate which was to be called afterwards "bullion debate"[24].

Of the period during which Ricardo continued to publish his writings about the problems on currency (from 1809 to 1823(24)), up to the time when the resumption of cash payment was voted and officially decided in the parliament in 1819 following nearly his "Proposals", he did not cease accusing the lax lending policy of the Bank of England, the over-issue of its inconvertible note, its depreciation and its evils (forced and unjust redistribution of wealth from creditor to debtor, etc.), and continued to contend the necessity of the resumption of convertibility. In this section, we are going to consider his theory on the relation between the value of money and its quantity in the situation of domestic circulation of inconvertible note, in referring mainly to "High Price" in which he discussed most systematically the problems of currency in an inconvertible regime.

Ricardo moves to considerations of the inconvertible banknote only after having discussed the international distribution of precious metal money. In this context he puts a following preliminary remarks: "Such, then, appear to me to be the laws that regulate the distribution of the precious metals throughout the world, and which cause and limit their circulation from one country to another, by regulating their value in each. But before I proceed to examine on these principles the main object of my enquiry, it is necessary that I should shew what is the standard measure of value in this country, and of which, therefore, our paper currency ought to be the representative, because it can only be by a comparison to this standard that its regularity, or its depreciation, may be estimated." (III,65) The "main object of my enquiry" means naturally the monetary phenomena of the time, i.e. the circulation of inconvertible note of the Bank of England, the rise of domestic prices and the fall of foreign exchange. The reason why at the beginning of "High Price" the principles of international distribution of precious metal

24 Here we will not enter into the historical details about the events leading to the suspension of convertibility, the states of currency and the concrete evolution of the debate in England at that time. On these matters, cf. chs.8-10 of Feavearyear, Morgan, 1962 and chs.1-2 of Fetter, 1965.

money are discussed in detail, is that the clarification of the “main object of my enquiry” must be done “on these principles”. The precious metal distributed all over the world functions by itself as money. The money in circulation there has its own value, is exchanged against commodities (buys them) on the basis of this value. As for such a money therefore, there is no need to look for a standard outside it in order to indicate its value or its rise and fall. The “standard” appearing in the quotation above is a means by which to express the value of money and its variation with its physical quantity (its weight) in showing that money is equivalent to this standard through its conversion into it or through exchange with it in the market (i.e. in buying it). This standard works as such when the function of money is assumed by a medium which is valueless in itself such as paper instead of precious metal circulating as money. But it is not because gold has left definitively its place as money to cede entirely its function as money to its representatives, that gold becomes standard. As is evident from the quotation above, in the domain of international circulation bullion as a commodity circulate as money irrespective of monetary regimes reigning in each country. It is on such a background situation that even if in a particular monetary regime of a country gold ceases to circulate itself it functions always as the standard of value with regard to the non-gold currency in circulation there. Gold itself functioning as money makes up the precondition of the function of gold as “standard” of money.

As we have seen until now, money in the theory of Ricardo is first of all gold itself as a material commodity, and a non-gold money which makes of gold its standard of value is understood theoretically rather as a particular form of money. In fact, in “High Price” which is a work entirely devoted to the problems of money, the concept of “standard” appears for the first time in the passage quoted above where inconvertible banknote is taken up for the first time. It is thus only in a particular aspect in the theory of money of Ricardo that gold appears as “standard of money” distinct from money actually in circulation. In chapter 1 “on value” of “Principles” where money appears as a commodity serving as measure of value, the “standard” is (invariable) standard of the value of commodities i.e. money itself. And this “standard” cannot be a “standard of the value of money”.

It is naturally in the situation of circulation of inconvertible banknote during the bank restriction period that gold as standard of money plays a particularly important role. In the middle of “High Price” Ricardo says as follows: “Our circulating medium is almost wholly composed of paper, and it behoves us to guard against the depreciation of the paper currency". (III,74-75) De facto exclusive circulation of inconvertible banknote was the actual state of the English domestic currency at that time. Before beginning to tackle such a state and the depreciation of currency observed there, Ricardo accumulated, during the first half of "High Price", scrupulous considerations about the international monetary circulation as outer framework of the domestic circulation and about the domestic currencies before the suspension of convertibility. This procedure seems to have been to demonstrate how exceptional and abnormal is the exclusive circulation of paper money issued by the Bank of England exempted from the duty of conversion, and at the same time to prepare the theoretical foundation for estimating the state of inconvertible banknote[25].

Before the suspension of cash payment in 1797, both note of the Bank of England and coin circulated side by side as currency (mixed circulation of gold and paper) in England, in fact only in London and its surrounding areas. But, as we have already seen in the previous section c., banknote played originally a role supplementary to coin and was added to it with this aim, hence presupposes a precious metal circulation. We have also seen in the previous section the mechanism through which two kinds of currency with their media very different from each other, paper and precious metal respectively, can pass equivalent of each other. The suspension of convertibility means that a part of the function of this mechanism is suspended. But, even if the conversion of banknote ceases, inconvertible banknote will be always regarded as equivalent to coin and treated as such, as far as the market price of bullion does not deviate from its mint price, i.e. as far as with this inconvertible banknote one can obtain in the market a quantity of gold equal to that contained in a coin with the same face value as this banknote (here the seigniorage is put aside). But, when, in addition to the suspension of convertibility, an upper deviation of the market price of bullion from its mint price (a depreciation of currency including coin) arises, these two kinds of currency, even with the same face value, will no more

25 The chapter 27 "on currency and banks" of "Principles" begins with the following sentences: "So much has already been written on currency, that of those who give their attention to such subjects, none but the prejudiced are ignorant of its true principles. I shall, therefore, take only a brief survey of the general laws which regulate its quantity and value." (I,352) This chapter can be regarded as a "summary" of the theory of currency Ricardo had expounded till then. Here, concentrating on "the general laws which regulate its quantity and value", he briefly restates the mechanism of depreciation of the inconvertible banknote with its evils and his proposals of a currency "in its most perfect state" (I,361) he had already explained in "High Price" and "Proposals", in adding some new arguments.

be considered as equivalents. In such a situation, to buy bullion in the market with coin will be in fact to exchange gold of unequal quantities at a loss. Moreover, the holder of coin, rather than making use of coin depreciated together with banknote as currency to buy at a loss commodities including bullion, will be able to obtain an amount of currency (inconvertible banknote) superior to the face value of the coin, in melting it down to bullion by himself despite the legal prohibition to sell it in the market. Or, bringing out abroad the bullion obtained by melting of coin, he will be able to buy foreign commodities cheaper than domestic ones whose prices will have been raised by the depreciation of currency.

In the mixed circulation of coin and paper supposed here the total amount of the currency in a domestic circulation consists of the sum of coin and inconvertible banknote. The retiring of coin from the domestic circulation as seen above in case of depreciation of currency is tantamount to a diminution in its total amount. And at a certain point of this process of diminution the market price of bullion will conform with its mint price because of the rise in the purchasing power of currency and of the fall in the market price of bullion. Then this process will come to an end. The coin, retired from the domestic circulation to diminish the total amount of currency, will be brought back to the form of bullion and flow out abroad ("will be exported", as Ricardo would say) in search for more advantageous uses (i.e. buying of cheaper commodities). If there still remains a certain amount of coin in circulation then, the mixed circulation of coin and paper will be continuing as before even with a reduced proportion of coin in the currency in circulation. But, if the value of currency falls again to push up again the market price of bullion, the same process will come into operation anew and stop equally at a certain point. And if such a process is repeated certain times, coin will soon disappear totally from the circulation and solely banknote will circulate. If the depreciation of currency (inconvertible banknote only) still continues in such a situation, there will be no more quantitative adjustment of money (its cutting-down) and restoration of its value (in the sense of conformity of the two prices of gold with each other) as seen above. The situation Ricardo observed before his eyes was the exclusive circulation of the inconvertible note of Bank of England, final result of the progress to be expected according to his theory after the suspension of convertibility. And also such a state of currency and its problems were "the main object" (III,65) of "High Price". "If the Bank were restricted from paying their notes in specie, and all the coin had been exported, any excess of their notes would depreciate the value of the circulating medium in proportion to the excess." (III,91)

In the quantitative adjustment of money in the situation of mixed circulation of coin and convertible, as seen in the previous section c., it was banknote that assumed the role of stabilizing the value of money and progressing smoothly the adjustment. In contrast, in the mixed circulation in this section consisting of coin and inconvertible banknote, it is rather coin which assumes the role of quantitative adjustment. Besides this adjustment is one-directional, there is only retire of coin from circulation. This is because inconvertible banknote cannot but always remain in the domestic circulation once injected in it by the issuing authority, and because the issuing bank exempted from the duty of conversion tends to continually over-issue and depreciate its inconvertible banknote of such a nature[26]. A mixed circulation consisting of inconvertible banknote and coin can subsist only in so far as no depreciation of currency takes place. But as soon as depreciation begins, coin ceases successively to circulate as currency, furthermore there will be efflux abroad of bullion. And when only inconvertible banknote circulates exclusively, there will be no more reaction to the depreciation of currency caused by over-issue, which will manifest itself as as much of currency depreciation. "We have paper money only in circulation, which is necessarily confined to ourselves. Every increase in its quantity degrades it below the value of gold and silver bullion." (III,78) And so currency will remain depreciated, or if the over-issue continues it will depreciate still more. In order that the progress of such a process cease or turn back and currency restore the stability of its value, the behavior of the issuing bank itself must change, but such a thing can never be expected from "a company of merchants, notoriously ignorant of the most obvious principles of political economy[27]" (employing repeatedly similar expressions,

---

26 In chapter 27 "on currency and banks" of "Principles" Ricardo says as follows: "Experience, however, shews that neither a State nor a Bank ever have had the unrestricted power of issuing paper money, without abusing that power." (I,356) This statement applies exactly to the Bank of England during the bank restriction period.

27 Ricardo, [Three letters on the Bullion Report] *Report of the Bullion committee, To the Editor of the Morning Chronicle*, 1810. (III,133) When in June 1810 the Bullion Committee rendered its Report, an intense debate arose on its analysis (banknote in depreciation. over-issue as its main cause) and its conclusion (resumption of convertibility after a certain time. restriction of paper issue to a suitable level). The most influential criticism to this Report was contained in Charles Bosanquet's tract *Practical observations on the report of the bullion committee*, 1810. He sought the causes of rising prices and falling foreign exchange in factors other than monetary ones, and taking the so-called

Ricardo was continuously opposed to the Bank of England). “Parliament, by restricting the Bank from paying in specie, have enabled the conductors of that concern to increase or decrease at pleasure the quantity and amount of their notes; and the previously existing checks against an over-issue having been thereby removed, those conductors have acquired the power of increasing or decreasing the value of the paper currency.” (III, 75) This lead to the actual over-issue, which is in danger of further aggravation. Such is the tone which made up the consequent basso continuo running through Ricardo’s writings on the problems of currency up to the adoption in 1819 of the act of resumption of cash payment. He says for example as follows: “all checks against the over-issue of the Bank are now removed by the act of parliament.” (III,78) Or again, “There can be no limit to the depreciation which may arise from a constantly increasing quantity of paper.” (*ibid.*)

The issue of notes by the Bank of England at that time was made through the two channels, namely, loan to the government mainly for financing the war with France, and discount of bills drawn for commercial transactions. The Bank of England was a chartered institution of public character issuing currency, and at the same time it was a private enterprise for profit established as a joint stock company (“company of merchants”)(incidentally, Ricardo himself too was a shareholder of this “company”). Its main source of benefit was the interest obtained by lending the banknote issued by itself. It is therefore natural that the Bank of England, private lucrative establishment, was trying to earn this interest income as much as possible. The interest income depends exclusively on the sum of loan, given the rate of interest on loan. So long as the duty to convert its banknote into specie is imposed on the issuing bank, the amount of issue is limited of itself to a certain extent under the constraint of its gold reserve. But the exemption from cash payment removes such a constraint, so that the amount of loan will not cease to increase in order to expand the benefit. For the Bank of England its note is a very low cost commodity for lending producible with paper and ink, and the interest as the benefit obtained from this commodity has nothing to do with this cost. As can be seen from the quotations above, Ricardo repeatedly emphasized that the issuing bank put in such a situation is always potentially apt to expand and depreciate indefinitely its currency. But the loan of money

“real bills doctrine” as his theoretical foundation he denied the excessive issue itself by the Bank of England. Ricardo published an extensive pamphlet of counter-attack *Reply to Mr. Bosanquet’s practical observations on the report of the bullion committee*, 1811 (III,157-256), only two months after the publication of Bosanquet’s tract.

is possible only on its demand. For the contention such as advanced by Ricardo to be valid, it is necessary to suppose that the borrowers (government and merchants) will equally expand indefinitely the demand for loan just as well as the lender will increase it.

The government finance required for waging the war, though of large amount, may not expand infinitely.

But as for the discount of bills, another channel of the issue of money, Ricardo says as follows: "The application to the Bank of money, then, depends on the comparison between the rate of profits that may be made by the employment of it, and the rate at which they are willing to lend it. If they charge less than the market rate of interest, there is no amount of money which they might not lend, ---if they charge more than that rate, none but spendthrifts and prodigals would be found to borrow of them. We accordingly find, that when the market rate of interest exceeds the rate of 5 per cent. at which the Bank uniformly lend, the discount office is besieged with applicants for money; and, on the contrary, when the market rate is even temporarily under 5 per cent., the clerks of that office have no employment." (I,364) This quotation is from chapter 27 "on currency and banks" of "Principles". In chapter 21 "effects of accumulation on profits and interest", Ricardo writes about the actual state of the rate of interest on loan in the market at that time, with the "usury laws" in vigor stipulating the legal upper limit of the rate of interest at 5 % (cf.I,196-197). According to him, the Bank of England applied the upper limit interest rate of 5 % throughout the bank restriction period, but the actual rate of interest on loan of the other financial institutions was somewhat superior to this upper limit. In other words, the market rate of interest determined by the relation between demand for and supply of the loanable fund was over and above the legal limit, and the financial institutions other than the Bank of England which applied the market rate was conducting an illegal business. Only the Bank of England, issuing bank, observed the law. Ricardo thinks that the rate of interest should be fixed freely in the market and should not be regulated by law. From his standpoint, the usury laws of the time served to the Bank of England as a pretext for continuing the loan (discount of bills) at a rate of interest inferior to that of market[28]. In the paragraph following the sentences quoted

---

28 The coexistence of different rates of interest is explained by the fact that a part of merchants was excluded from the service of discount (loan) from the Bank of England hence was obliged to accept discount at a higher rate from other financial institutions. The Bank of England restricted its discounts to the bills drawn or endorsed by merchants

above he says as follows: "The reason, then, why for the last twenty years, the Bank is said to have given so much aid to commerce, by assisting the merchants with money, is, because they have, during that whole period, lent money below the market rate of interest; below that rate at which the merchants could have borrowed elsewhere." (I.364) Thus "the discount office" would be "besieged with applicants for money"[29].

In this way, the quantity of issue of inconvertible banknote has no definite limit. This quantity will gradually expand independently of the evolution of other economic variables. One important characteristic of this currency is that it "is necessarily confined to ourselves." (III,78) Besides, the inconvertible paper is confined not only in a particular country but also in the circulation of that country, i.e. it can never go outside of a domestic circulation[30]. Inconvertible paper money is of the same nature

---

of sufficient credibility (mainly those who were in business of a certain extent in London area).

29 But, according to the logic of Ricardo seen above, for this is required that the rate of profit is over and above the rate of interest, a condition more fundamental than the difference in the rates of interest applied by different agents of discount. In the face value of the bill brought to the discount office is already included the profit obtained by the sale of commodities against this bill. As far as a part of this profit remains in the sum of money obtained from the bank against the discounted bill, the exchange of bill by discount with a higher liquidity, i.e. cash, will maintain its meaning, and so the demand for discount will continue. But for this to be the case, the rate of profit in the face value of the bill must over and above a certain level. The question is whether the commercial transaction satisfying such a condition can expand indefinitely. Ricardo seems to assume such a possibility without bothering to justify it theoretically. Here, we also adopt provisionally Ricardo's position on the possibility for the discount of bill with inconvertible banknote to lead to an indefinite increase of currency issue and its concomitant depreciation, and follow his logic on the quantity and value of currency in such a situation.

30 At the same time it is only the issuing bank that can inject inconvertible paper into circulation, so that any other agents cannot increase or decrease at will the quantity of currency. In this case the issuing bank can regulate the quantity of currency independently of any other institutions or agents. This is a very different situation from the circulation of commodity (gold) money (free minting and melting of coin, free importation and exportation of bullion, conversion at sight of paper currency, buying of gold by the bank). In such a situation, it is on the quantity of currency injected into circulation by the monetary authority that its value depends. "The principle of limitation of quantity" Ricardo brings forward in chapter 27 "on currency and banks" of "Principles" (I, 353. This appellation was suggested by McCulloch, the author of the review article of "Proposals", [McCulloch],1818, and adopted by Ricardo in the 2nd edition of "Principles" he was just preparing at that time. But the original idea of this "principle" itself had been already included in chapter 6 "observations on the principles of seignorage" of *Reply to Mr. Bosanquet's...* published in January 1811.) to explain why a paper money devoid

as precious metal money circulating among nations in that they are confined to a certain domain. These two forms of money, situated in the two opposite poles in the theory of money of Ricardo (whole world or a country with respect to the domain of circulation, precious metal or paper in respect of medium), have curiously common elements in the causality determining respectively the relation between value and quantity. Near the end of the text of "High Price" Ricardo says as follows: "The circulation can never be over-full[31]. If it be one of gold and silver, any increase in its quantity will be spread over the world. If it be one of paper, it will diffuse itself only in the country where it is issued. Its effects on prices will then be only local and nominal, as a compensation by means of the exchange will be made to foreign purchasers." (III,91-92) As for the precious metal money as "the money of the world", because of the difficulties of control of its production and of the particularities of gold as a commodity, its quantitative adjustment is difficult (it is supplied generally in an insufficient quantity). On the other hand, inconvertible banknote tends to be issued in an unilaterally increasing quantity because of the "ignorance" (III,133) and interests of the issuers (it is supplied generally in excess). The quantities of these two forms of money are de facto out of control. In addition, both of them remain "enclosed" in each domain of circulation. In such conditions, for both forms of money the variation of quantity gives rise to a corresponding

---

of any value in itself can have value as money applies precisely to the currency in such a situation, and will be no more valid if the quantity of currency depends on some agents other than the issuing authority. Here we omit the presentation and examination of this principle. Ricardo says on it as follows: "Mr.Buchanan evidently thinks that the whole currency must, necessarily, be brought down to the level of the value of the debased pieces; but, surely, by a diminution of the quantity of the currency, the whole that remains can be elevated to the value of the best pieces." (I,356) This means that the value of currency as currency can be determined and vary independently of its "intrinsic value". Gold money and paper money are therefore not to be distinguished, in so far as they equally pass as currency with a value free from the "intrinsic value" of their media if their quantities are limited. Paraphrasing the well-known dictum of Keynes in *Indian currency and finance*, 1913, it may be said that gold of gold coin is only a medium on which to print its face value as money and there will be no essential change if this medium is changed from gold to paper. Such a point of view may have something in common with the contemporary chartalism, for which the value of money depends on the policy of its issuing authority irrespective of its medium.

31 In the first page (fourth paragraph) of chapter 27 of "Principles" is a sentence of similar tenor: "A circulation can never be so abundant as to overflow." (I,352) The very succinct and concise explanation on the relation between value and quantity of currency made in a space less than one page till this fourth paragraph seems to re-trace the arguments developed in "High Price" written about 7 years before.

proportional change of prices. But as precious metal is capable of international circulation as money, changes in its quantity do not change directly and in the same proportion the domestic prices. Their price effects diffuse and dilute worldwide. On the contrary, the effect of quantitative variation of inconvertible paper money on the prices is proportional to the degree of the variation but restricted to a domestic area and has no worldwide repercussion as in the case of precious metal money.

In the case of domestic circulation of inconvertible paper money, the value "inherent" in it can never determine or regulate its quantity in circulation, in whatever way it may be. Its value moves up and down only in accordance with the quantity issued. There exists in the market no force which gives rise to a quantitative adjustment leading to the conformity between the nominal value of the inconvertible paper money("mint price" of gold, which is, in the situation where coin circulates no more as money, only a "remnant" of the time when the convertibility was in vigor) and its real value ("market price" of gold[32], purchasing power the inconvertible paper money in question has actually as money) , i.e. to a movement from value to quantity. Only a given quantity of paper money circulates with the value determined by its quantity. This is precisely a situation akin to that in the quantity theory of money. Thus, in the theory of money of Ricardo phenomena à la quantity theory are recognized only in regard to a very limited particular state of monetary circulation (from the point of view of bullionists including Ricardo, it is rather an "abnormal" state causing evils to be removed). Here gold is in total absence from the domestic circulation, either as currency or as bullion. However, this country continues to assume a part in the world trade as a member of the civilized nations as before, without quitting the circulation of gold money. As far as the foreign commerce takes place and with it the inconvertible paper money of this country is exchanged at a certain ratio with currencies of other countries maintaining substantial link with gold, this country is deemed to continue to be included virtually in the mechanism of international

---

32 But there must be no gold remaining in the domestic market, because it has already entirely flown out. Then there must be neither gold transactions, nor the market price of gold. Nevertheless, Ricardo continues to make of the "market price of bullion" the measure of depreciation of the inconvertible banknote in the situation of its exclusive circulation and so to rely on this measure. If it is possible to talk about the "market price of bullion" although there is no gold transaction, no price of gold in the domestic market, it may be only via the foreign exchange between a foreign currency actually linked to a certain quantity of gold and the currency of the country.

distribution of gold. The quantity of gold virtually allotted to this country is equal to the value obtained by dividing the total sum of the inconvertible paper money in circulation in this country by the “market price of gold” calculated from the rate of foreign exchange. This country is regarded as having virtually added by the issue of its inconvertible banknote this quantity of gold to the world circulation instead of new gold production from mines (but such a virtual addition of gold was possible even with convertible banknote within the confines of the rate of gold reserve). On the other hand, this virtual quantity of gold, varying according to the variations of the two values determining it (though these two are not independent from each other), does not depend on the will the monetary authority of the country. Here again, the world money circulation, whether in purely metallic form or in the form of an “international mixed circulation of gold and paper”, evolves always spontaneously.

## Afterword

The theory of money of Ricardo is currently interpreted as a quantity theory, and which is considered to be in contradiction with the labor (cost) theory of value, foundation of the principles of his economic theory. In this article we have tried to show that these views are both misunderstandings, mainly through examinations of his writings on monetary matters.

But it is undeniable that some aspects of Ricardo’s theory of money appear to come under the quantity theory. A quantity of money given exogenously serves as medium of circulation in its entirety irrespective of its dimension, and the value of money (its purchasing power over the commodities) is fixed in inverse relation to this quantity. If such is the quantity theory, a similar situation is to be found also in the theory of money of Ricardo concerning the international circulation of precious metal and the domestic circulation of inconvertible paper money.

The basic framework of his theory of money is the world circulation of precious metal money as in the case of Hume. But unlike Hume he regarded the precious metal money in international circulation as a sort of commodity just as the other ones. Money has therefore its proper value. But in order that commodity money can pass as such value in the actual circulation, the supply of gold as commodity must be readily adjustable in response to the evolution of demand for it. The particular conditions of the production of gold render this adjustment much difficult, and for this reason the value of gold as money appears to be fixed irrespective of its conditions of production by the extent of commodity exchanges to which money serves as media, i.e. by the quantitative relation between money and commodities. But according to Ricardo gold is a commodity with its proper value, and if its price in the market (its proportions of exchange with other commodities, its purchasing power) deviates from its value, will come into operation the forces to increase or diminish the quantity of its production, even if besieged with difficulties. In this sense, the theory of money of Ricardo is not totally cut off from but maintains a feeble link with his theory of commodity money in "Principles", in spite of some of its aspects seemingly akin to the quantity theory.

Another domain in which a determination of the value of money à la quantity theory seems to be justified is the domestic circulation of inconvertible banknote. Inconvertible paper money can be injected into circulation by the monetary authority in any quantity according to its issuing policy, and its total sum remains in circulation. Its value per unit of face value falls in proportion to the quantity issued. This is precisely a determination of the value of money in the quantity theory. The reason for which such a situation takes place is that the quantitative adjustment of the domestic currency has become impossible by the suspension of convertibility. Ricardo demanded the abolition of the regime of inconvertible banknote destabilizing the value of money and conceived a currency regime in which it would be rather the quantity of money that should be regulated by the relation with its standard (gold). In his "Ingot plan" Ricardo aimed at economizing the use of gold and stabilizing the value of currency in regulating its quantity in circulation relying on the value of gold as a commodity, its ultimate anchor. It is an anti-pole to the quantity theory of money.

# References

## Primary literature

Hume David, *Political Discourses*, Edinburgh, 1752.

[Malthus, Thomas, Robert], Art. V, in *Edinburgh Review*, Feb. 1811.

Marx, Karl, *A contribution to the critique of political economy*, Moscow, Progress, 1977.

[McCulloch, John, Ramsay], Art. III, in *Edinburgh Review*, Dec. 1818.

Ricardo, David, [Three letters on the bullion report] Report of the bullion committee, 1810, in *The Works and Correspondence of David Ricardo,* edited by Piero Sraffa with the collaboration of M. H. Dobb, Cambridge University Press, Volume III, 1951.

Do., High price of bullion. A proof of the deprecitation of bank notes, 1810, *Ditto*.

Do., Reply to Mr. Bosanquet's practical observations on the report of the bullion committee, 1811, *Ditto*.

Do., An essay on the influence of a low price of corn on the profits of stock, 1815, in *Ditto*, Volume IV, 1951.

Do., Proposals for an economical and secure currency, 1816, *Ditto*.

Do., On the principles of political economy and taxation, 1817-21, in *Ditto*, Volume I, 1951.

Do., Plan for the establishment of a national bank, 1823(24), in *Ditto*, Volume IV, 1951.

Thornton Henry, *An Enquiry into the Nature and Effects of the Paper Credit of Great Britain*, 1802.

## Secondary literature in Japanese (bibliographical data translated into English)

Arai, Eiji, Theory of labor value and quantity theory of money in Ricardo, *Social Sciences Review*, No.93,1998.

Kurakata,Koichi, Bullion debate and Malthus's vision on money, *Economy and Economics*, No.92,2000.

Nakanishi,Mitsuko, A consideration on the bullion controversy ---Ricardo and Bullion Report, *Review of Mita Akademic Society*,Vol.54,No.10,1961

Do., Malthus as a bullionist ---in comparison with Ricardo, *Ibid.*,Vol.57,No.2,1964

Do., Ricardo's theory on money and finance ---centering on his views in the later phase of the bullion controversy, *Review of Josai Economic Society*,Vol.11,No.1-3,1975

Do., Position of Thornton in the bullion controversy ---in comparison with Ricardo, *Ibid.*, Vol.12, No.1-3,1977

Do., Real bills doctrine and bullion controversy, *Ibid.*, Vol.15,No.2,1979.

Sato,Shigemasa, A study on chater 27 of “Principles” of Ricardo, *Miscellany in economics and informatics of Onomichi University*,Vol.8,No.1,2008.

Do., Recent studies on the currency theory of Ricardo in Japan, *Ibid.*, Vol.8,No.2,2008.

Sato, Yuji, Politics of the resumption of cash payment ---reconsidering the Ingot plan and Plan for the establishment of a national bank, *Study Series* (Center for Historical Social Science Literature, Hitotsubashi University),No.41,1999.

Do., Classical theory of money ---old and new interpretations, *Annual Bulletin of the Society for the History of Economic Thought*, No.44, 2003.

Takenaga, Susumu, *A study of Ricardo’s economics ---theory of value and theory of money*, Ochanomizu Publishing House,2000.

Yamakura, Kazunori, Affiliation of the real bills doctrine in the bullion controversy, *Miscellany in commercial science*,Vol.72,No.2,2002.

## Secondary literature in European languages

Ahiakpor, J., Ricardo on money: the operational significance of the non-neutrality of money in the short run, *History of Political Economy*, Vol. 17(1), 1985.

De Boyer, J., Le rejet par Ricardo du mécanisme des points d’or, *Cahiers d’économie politique*, 55, 《David Ricardo 199 ans après》, 2008.

Deleplace, G., Les différents usages de l’étalon monétaire, *Cahiers d’économie politique*, 23, 《Monnaie et étalon chez Ricardo》, 1994.

Deleplace, G., Does circulation need a monetary standard？in *Money in motion The post Keynesian and circulation approach*, edited by Ghislain Deleplace and Edward J. Nell, Macmillan, 1996.

Deleplace, G., Les deux plans monétaires de Ricardo, *Cahiers d’économie politique*, 55, 《David Ricardo 199 ans après》, 2008.

De Vivo, Ricardo, in *The New Palgrave: A Dictionary of Economics*, edited by J. Eatwell, M. Millgate, P. Newmann, London, 1987.

Diatkine, S., La politique monétaire selon Ricardo : une comparaison avec l’école de la circulation, *Cahiers d’économie politique*, 55, 《David Ricardo 199 ans après》, 2008.

Feavearyear, A., Morgan, V., *The pound sterling: a history of English money*, Oxford, Clarendon Press, 1963.

Fetter, F. W. *Development of British monetary orthodoxy, 1797-1965*, Harvard University Press, 1965.

Glasner, D., A Reinterpretation of Classical Monetary Theory, *Southern Economic Journal*, 52, 1985.

Humphrey, T. M., Ricardo versus Thornton on the appropriate monetary response to supply shocks, *Economic Review, Federal Reserve Bank of Richmond*, 11/12, 1990.

Marcuzzo, M. C., Rosselli, A., *Ricardo and the gold standard, the foundations of the international monetary order* (tr. from Italian), St. Martin's Press, New York, 1990.

Marcuzzo, M. C., Rosselli, A., Ricardo's theory of money matters, *Revue économique*, 45 (5), 1994.

Marcuzzo, M. C., Rosselli, A., The standard commodity and the standard of money, *Cahiers d'économie politique*, 23, 《Monnaie et étalon chez Ricardo》,1994.

Peach, T., Ricardo, in *New Palgrave*, Macmillan Publishers, 2008.

Peake, C. F., Henry Thornton and the development of Ricardo's economic thought, *History of Political Economy*, Vol. 10(2), 1978.

Rosselli, A., Ricardo and Thornton on the 《unfavourable》 rate of exchange, *Cahiers d'économie politique*, 55, 《David Ricardo 199 ans après》, 2008.