The Interpretations of Classical Monetary Theory: Old and New [1]

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I Introduction: 'New' Interpretations and 'Old' Interpretations

The classical monetary theory is different from the other many domains of the classical economics in that the disputes over it since the World War II have been beyond the walls of the economic schools, and have been one of the rare domains where active controversies have been repeated. But, for the understanding of the premises of the many disputes over classical monetary theory, great changes seem to have occurred since the end of the late 1970's.

Firstly, it has been increasingly understood that in classical monetary theories there were two different theoretical frameworks (the Humean quantity theory of money versus the classical monetary theory based on the commodity money). But 'Old' interpretations have ignored the difference of them insensitively.

Secondly, when financial policy was formed as a 'policy', what was the role that classical monetary theory performed? 'Old' interpretations have, cutting the problem by a diagram of 'the discretion vs. the rule' like the 'Hicksian' way which effectively denies the contributions of Classical Economics to the theory of currency and of monetary policy, thought that there might have been some tradition else since the classical era. But the 'New' interpretations have emphasized the serious role that classical monetary theory did play in this domain.

Thirdly, it is in the course of these new controversies over classical monetary theories that there has emerged a new frame of interpretation: the conflict between the pro 'free banking' ideas and the pro 'central banking' ideas. Such a frame was not only ignored by the 'old' interpretations, but this frame symbolizes the fact that the interpretations of the classical monetary theory have shifted to a new dimension now.

It is true that quite a few attempts to sketch such a new frame of interpretations have already done (e.g., Niehans 1987; Marcuzzo and Rosselli 1994; Skaggs 1999; Rosselli 1999; Glasner 2000). But they have been done from the viewpoints which are relatively independent of each other, so some kind of synthetic survey is necessary now.

But at first I must clarify the definition of the 'classical economics' before beginning the argument, which has become a focus of 'new' interpretations and also applies to this paper. This definition coincides with the one which Marx had told us before Keynes brought in his almost useless confusion about the meaning of a word to justify his own theory: that is, it denotes the tradition of economic theory which began with William Petty and Pierre Boisguilbert in about 1660's and was over with David Ricardo and Simonde de Sismondi in about 1830's (e.g., Niehans 1987, 409-10). The best representatives of the classical economics are, of course, Adam Smith and Ricardo, and in the field of monetary theory and policy they also laid the foundation for the development of the classical monetary theory, though through an important classical monetary theorist named Henry Thornton. During this period Britain had experienced the development and establishment of the gold standard and in the first 20 years in

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the 19th century there emerged one of the most important monetary controversies, viz. the Bullionist controversy, and then followed the currency controversy which was to reach the climax in 1840's. Interpretations of the currency controversy is beyond the scope of this paper, in any case the enough positioning of the currency controversy will be enabled only after it is examined in the light of the classical monetary theory which showed significant insight in the theory and policy of the gold standard. This paper proceeds as follows. Section Ⅱ sketches the main characteristics of the classical monetary theory as compared with both the quantity theory of money and the real bills doctrine. Section Ⅲ treats with Adam Smith's theory of money *à la* 'new' interpretations as distinct from 'old' ones. Section Ⅳ, after having paid short respect to Thornton, deals with the monetary theory and policy of Ricardo. In this section, the part of the reason why I think Ricardo to be the best classical monetary theorist is explained. Section Ⅴ surveys some of dissonances among the 'new' interpretations. Section Ⅵ contains a brief summary and concluding remarks.

Ⅱ The Classical Monetary Theory and the Quantity Theory of Money

1. Sine qua non ingredients of the Quantity Theory of Money

Among others, it is very essential to distinguish properly the Quantity Theory of Money (hereafter QTM) from the classical monetary economics and to understand the significance of their difference, so I must confirm the *sine qua non* ingredients of QTM. When I examined QTM of both Hume and Malthus before (Sato 2001; idem 2002), making reference to such studies as Girton and Roper (1978), Humphrey and Keleher (1982), Gomes (1993), and Glasner (1989; idem 2000), I pointed out that the first essential element of QTM is the premise of the 'exogeneity of money supply' (cf. Laidler 1991b, esp. 291). Following Blaug's (1995, 25ff.) presentation about QTM, but *adding to it one important point*[2], I shall refer to the four elements that are indispensable to QTM as follows:

(1) The premise that money stock is an 'exogenous' variable to which prices should be adjusted.

(2) The premise that there is a stable demand function for money the fact of which, in turn, should indicate a stable velocity of circulation of money.

(3) The premise that real output is determined by the real forces which are independent of the quantity of money or level of prices.

(4) The supposition of the Price-Specie-Flow-Mechanism (hereafter PSFM) that money stock of a country determines the price level of the country, and then the difference of each country's price levels should trigger the movements of money between countries and bring the international balance of payments adjustments.

These elements are already found so completely in Hume that we do approve of M. Friedman saying as follows: 'The contemporary economist can still read David Hume's essay 'Of Money' (1752) with pleasure and profit and find few if any errors of commission" (Friedman 1968, 433). And that the 'contradictory coexistence' in QTM which has been often told——the coexistence of the neutrality of money and the effect upon the expanded real output of the increased money supply——is two corollaries coming out of the supposition of the exogenous money supply must be also confirmed here. As for Hume who supposed that money swooped down to an economy 'miraculously'

[2] There is a serious omission in Blaug's presentation which does not explicitly include the price specie flow mechanism among QTM's *sine qua nons*.

from the outside, while saying that the *level* of the money stock was neutral for the *level* of real output, he also stated that the positive *rate of change* of the money supply caused a real output effect (Hume effect) via the increased consumptive expense of each economic subject. However, he did not think about the contradiction between those statements seriously. As a matter of fact, in the history of QTM after Hume it is rather difficult to find out any one case where some quantity theorists did not admit of both arguments[3]. Indeed the nineteenth century's quantity theorists continued to use either of these two arguments in an ad hoc way by manipulating interpretations of the 'exogeneity' of money supply expediently[4]. Certainly since I. Fisher who "had done much to rescue the quantity theory of money from the disrepute that its association with inflationary policy proposals had brought upon it in the final decades of the nineteenth century" (Laidler 1999, 183), and also "as a result of the routine employment of mathematical modeling" (O'Brien 1995, 51), quantity theorists have emphasized almost exclusively the neutrality proposition. But at last "the quantity theory, which began with Hume as a qualified argument in favour of creeping inflation, has come full circle in Friedman with the denial that there is any trade-off between output and inflation in the long run …"(Blaug 1995, 42).

2. Classical Monetary Theory

However, classical monetary theorists denied *all* of the QTM's *sine qua nons*. To classical economists "David Hume's case was peculiar" where "gold coins are treated *as if* they could be miraculously created or annihilated" (Niehans 1987, 413, italics original). "The quantity theory is, so to say, the illegal sideline of the classical tradition, the classical theory for unclassical fiat money" (414).

Classical school's commodity money is the article which is produced in the private sector while reacting to the rate of profit, and is supplied to an economy endogenously through both gold mines and specie flows. On the other hand, as for the money stock in each countries under the gold standard, it is determined endogenously by the value of goods through two exogenous variables of 'price of the monetary standard' (the mint price of gold in terms of internal currency) and the 'ratio between real prices of gold and other goods'. Thus, classical determination of price level can be represented by a well-known equation as follows (Keleher 1991, 147; Marcuzzo and Rosselli 1994, 1254; Sato 2002, 110):

$$\boldsymbol{P_{money/goods} = P_{money/gold} \cdot P_{gold/goods}} \qquad (1)$$

Thus the domestic prices of goods $\boldsymbol{P_{money/goods}}$ is determined by the product of the price of the standard (gold) in terms of money $\boldsymbol{P_{money/gold}}$ and the real prices of goods in terms of gold $\boldsymbol{P_{gold/goods}}$. Therefore, as for the

[3] James Mill (1821, 122-25) adhered to the neutrality proposition of QTM, and criticized an 'error' of Hume seriously who let the Humean effect coexist. However, J. R. McCulloch who, insisting on the neutrality proposition of QTM, also emphasized the significance of the Humean effect and then counterattacked James Mill (McCulloch [1849] 1995, 557n.), was more common among the 19th century's quantity theorists. J. L. Mallet, a member of the Political Economy Club, exposed that, *as late as 1830,* there were some disputes over the Humean effect in the Political Economy Club ("Whether the doctrine in Hume's Essay on Money in favour of depreciation is well founded?"). Thomas Tooke did 'not' think the Humean effect was right, and to repudiate the Humean theory and to point out the only possible case he invoked the Ricardian redistributive effect of the increased money supply: *wage-lag doctrine* (e.g., Ricardo 1951-73, III:318-9; VI:16; 233-34), which was in fact *not necessarily* within a framework of QTM. But McCulloch the quantity theorist, as usual with him, argued for the Humean effect and said "the producers ── the productive and industrious classes ── were benefited, which he [McCulloch] had no doubt they were by a gradual depreciation in the value of money' (Higgs 1921, VI:219). McCulloch the quantity theorist was, to this degree, faithful to Hume rather than Ricardo. Look how far was this would be Ricardo's disciple distinct from Ricardo!

[4] Hawtrey in his 'inflationism' (Hawtrey 1928, ch. IV) exposed the inflationary policy proposals of 'paper' quantity theorists such as Thomas Attwood and the Birmingham School. In practice, for the quantity theorists to realize their inflationary policy targets, the problem whether their proposed currencies were based on a 'metallism' (e.g., Hume, bimetallists etc.) or on 'inconvertible papers' (the Birmingham school etc.) should have been only secondary as compared with the assumption of the 'exogeneity' of money supply.

domestic price level, it is determined by $P_{gold/goods}$ which is *an exogeneous variable to domestic money supply* if the price of the standard is bound by convertibility. For example, if the level of real output except gold mining should increase, then the real prices of goods in terms of gold $P_{money/goods}$ would fall (or the quantity of goods commanded by gold would rise). Thus a rate of profit of gold production would rises or a shift to monetary gold stock from non-monetary gold stock would occur, so that a stock adjustment of monetary gold through the increase of flow of monetary gold would take place, and the real price of gold would return to an original level. And such stock- flow adjustments of gold production would occur on a world scale through the 'law of one price' by the arbitrage of gold in the world market. That is why classical monetary theorists could never accept either Hume's supposition that 'the sudden exogenous changes in the quantity of money' or the Humean effect that it connoted (Sato 2002, 111-12).

And in the first place, the neutrality proposition cannot have occurred in the classical monetary theory, because money commodity is a product having real value, and its production is accompanied by the (re-)allocation of capital and labor through the medium of the rates of profit between industries including gold mining ones. Moreover even if convertibility was suspended due to some factors, the value of money had only an indirect effect on the prices of goods only indirectly, not through $P_{money/goods}$, but through $P_{gold/goods}$, so the proportionality proposition that a country's price level was *in proportion to* its quantity of money *cannot* have held good for the classical monetary economists (Marcuzzo and Rosselli 1991, 41-43; Sato 1999a, 43n. 8).

Furthermore, as put by Thornton in rather general terms, *or* more concretely embodied by Ricardo in his Ingot plan, classical monetary theorists did *not* believe there was *any* stable demand for money *given* real output, *nor* neglect serious distresses which deflation of money would have caused in the economic activities. These themselves would have depended on the 'state of credit' (e.g., Ricardo 1951-73, IV:58; VI, 68; V:420), The 'wise management' (Sato 1999a, 30-34) of the currency was insisted on by classics in case there was a threat that gold demand in itself should become the unstable factor of the currency. So it is natural that the interpretations of classical monetary theory have one after another which have asserted the non-neutrality theory of money in classical monetary theory as deployed in this paper[5]. Hence M. Blaug who grew up in the 'Old Interpretations' has complained, but have to admit that "but in fact this [new interpretations] has become *almost a standard* interpretations of classical monetary economics in recent years" (Blaug 1995, 32, emphasis added).

Then I shall explain representative classical monetary theorists in order according to the 'new' interpretations.

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5 For Ricardo, see Marcuzzo and Rosselli 1994, 1256-57; Sato 1999a, 2.

	QTM	Classical monetary Theory	The Real bills Doctrine
money supply and its constraints	·Exogenously . ·In principle money can be printed *as many as necessary*.	·Endogenously . ·Its constraint is *the rate of profit* in industries of the money commodity.	·endogenously. ·There *should be no constraint* of money supply *to accommodate the needs of trade*.
money demand	· Stable. · 'Demand' is always monetary. · Money can be injected from outside like a cargo of a 'helicopter'.	· Unstable. · Both Velocity of money and demand for gold are unstable.	·Stable because it is determined by the 'needs of trade', which *are said to be the real production independent of money supply,* and there should be *an automatic law of reflux* according to which the public would immediately return to banks any excessive banknotes beyond their needs. ·Such needs of trade are represented by bankable assets offered as securities, e.g., the values of lands, or short-term commercial bills &c., *all of which in fact have nominal price dependent of money supply*.
Neutrality proposition and/or Inflationism	· The *level* of money stock is neutral to the *level* of real output. · **Causality is implied, which runs from money supply to the level of price.** · **Inflationism is implied,** or the 'Humean' effect is also implied: the positive rate of change of money supply should bring about the real output effect.	·Classical domestic price level determination says that gold is a product having real value so that the neutrality proposition cannot occur. $\boldsymbol{P}_{money/goods} = \boldsymbol{P}_{money/gold} \cdot \boldsymbol{P}_{gold/goods}$ (1) ·1stly the stock-flow adjustment through $\boldsymbol{P}_{gold/goods}$. 2ndly an indirect effect of the quantity of money through $\boldsymbol{P}_{money/gold}$. (With the proviso that there is possibility for future substitutability of 'more stable standard' for gold.)	·This doctrine *always claims to be neutral* because the 'needs of trade' is independent of money supply, and banks only *passively* respond to these needs. ·In short *prices are said to be an exogenous variable.*
Specie Flow mechanism	·*Price*-Specie Flow mechanism (PSFM). Adjustment through the medium of the differences of the levels of prices of countries.	·'Law of one price' by the arbitrage of gold in the world market.	? [Real production would command the movement of species between countries.]
Representa-tives	Hume, the Attwoods, & many other 'classicals' like McCulloch.	Ricardo Thornton Smith	John Law, Sir James Steuart

Table 1. Comparison of the three frameworks of monetary thought since the 18th century

Ⅲ Adam Smith

1. the act of 1765: Smith was not a 'real bills' doctrinaire.

The real bills doctrine is a view of credit which had held among Scottish bankers and merchants since the early 18th century, according to which any excessive bank notes should be returned immediately to the issuing banks as far as the issuing was done to accommodate money to the '*needs of trade*' (represented by the volume of the 'real' bills offered as collateral), or done to meet the existing demands for credit *passively*, so that there should never been superabundant currency. One would not need to confirm here that the representative protagonists of this doctrine were the two Scots John Law and James Steuart.

Certainly Smith knew well the fact that such a real bill criterion was really used for between Scottish bankers and he expounded its principle while respecting their rule of thumb. But Smith did understand that the real bills doctrine had such a *nominalist fallacy* as controlling the nominal money stock by means of nominal magnitudes like the market values of lands (*WN* Ⅱ.ⅳ.17; Ⅳ. ⅶ.c.58), and moreover he emphasized the fact that the bankers could *only* obtain *asymmetric* information about the characters of bills offered (*WN* Ⅱ.ⅱ.72-3, 77). The real bills doctrine is 'now generally recognized as comprising a minor component of Smith's monetary theory……It is important to recognize the status of Smith's 'real-bills doctrine' as simply practical advice on banking conduct, not a doctrine in any fundamental sense'(Carlson 1999, 9). Indeed Smith 'realized … that the real bills criterion by itself is not sufficient to prevent overissue. For that reason he advocated specie (i.e., gold) convertibility as the ultimate constraint on the quantity of paper money…… In short, he viewed specie convertibility as the overriding check to overissue'(Humphrey 1982, 9). It is noteworthy that such a recent emphasis of the importance of convertibility in Smith seems in favor of Ricardo's interpretation of Smith's monetary theory [6]:

> I am aware that the opinion of Dr. Smith, as quoted by Mr. Bosanquet [*WN* Ⅱ.ⅱ.59], appears to favour his opinion [the real bills doctrine]; but that able writer has in various passages of his work, and a few pages of that from whence Mr. Bosanquet has quoted, declared that, "The whole paper money of every kind which can easily circulate in any country can never exceed the value of the gold and silver of which it supplies the place, or which (the commerce being supposed the same) would circulate there if there were no paper money"[*WN* Ⅱ.ⅱ.48]. *Reply to Bosanquet* (1811). *Works,* Ⅲ:220. [ ] added.

In fact, what Smith emphasized was not a principle called 'the passive credit' by banks but the importance of the regulation for bank credit (the prohibition of the small notes and the legal obligation of the immediate convertibility). They were a very logical banking regulation theory (see Rockoff 2011, 256-262). And Smith's activities around the period of writing the *Wealth of Nations* still have many obscurities, but it has been made rather clear that Smith significantly contributed to the 1765 enactment that prescribed the prohibition both of the small notes below £1 and of the option clause (Gherity 1994).

2. net increase of social savings by means of the bank credit and the specie flow mechanism

Smith, *for the first time in the history of monetary thought*, analyzed how the operation of substituting of bank

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[6] Carlson (1999, 9) interprets, however, Smith as providing an additional advice which was to be known as the real bills criterion *because he thought that banks could overissue even with full convertibility*. I cannot agree to such an interpretation rendering the importance of the convertibility in Smith secondary.

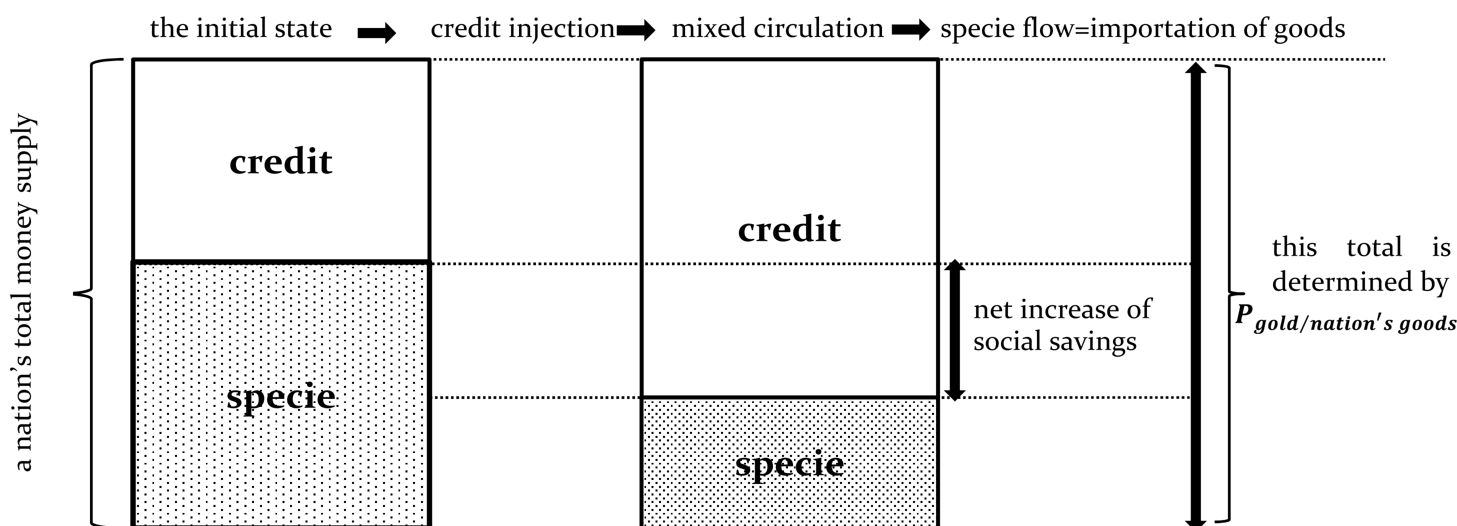

Figure 1. a nation's money supply is not altered by changes in the magnitudes of credit

notes for gold by banking contributed to economic growth when a nation's social savings were given[7] (see figure 1). Both Thornton and Ricardo took over and refined this Smithian *or classical* monetary approach (Sato 1999b, 154-55).

This Smithian theory is totally incompatible with the Humean QTM, because Hume had indeed insisted that the quantity of credit (banknotes) of one country should change the volume of its total money supply. Smith's adjustment theory resembles the monetary approach to the balance of payments. In other words, according to Smith, the adjustment of the balance of payments is not the Humean one that is made by the specie flow triggered by the differences between relative price levels of each country. Smith maintained that given a world price level indicated by $\boldsymbol{P_{gold/goods}}$ [8] the increase of the domestic money supply would make an excessive money stock overflow abroad promptly without any change in the domestic price level. Behind this Smithian adjustment theory, there was his conviction concerning the 'law of one price.' For example,

> Such a difference of prices ... would necessarily occasion *so great a transportation of the most bulky commodities*, not only from one parish to another, but from one end of the kingdom, *almost from one end of the world to the other, as would soon reduce them more nearly to a level.* (*WN* I.viii.31. Emphasis added.)

Furthermore, behind his conviction of the 'law of one price,' there was Smith's recognition that arbitrage transactions between the natural price of gold and that of any other kind of goods would always operate swiftly, and that gold above all was the one which adjusts immediately to its own 'effective demand'(Sato 2002, 112-15) .

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7 Laidler was right when he said that there was nothing akin to this Smithian analysis of substituting paper money for gold and the consequent benefits 'to be found in the writings of Hume, with whom Smith is so often unfavourably compared as a monetary economist, or of any other eighteenth-century monetary economist of whom I am aware'(Laidler 1981, 195) .

8 'The proportion between the value of gold and silver and that of goods of any other kind [$\boldsymbol{P_{gold/goods}}$], depends in all cases, not upon the nature or quantity of any particular paper money, which may be current in any particular country, but upon the richness or poverty of the mines, which happen at any particular time to supply the great market of the commercial world with those metals. It depends upon the proportion between the quantity of labour which is necessary in order to bring a certain quantity of gold and silver to market, and that which is necessary in order to bring thither a certain quantity of any other sort of goods.'(*WN* Ⅱ. ii .105. [ ] added)

J. Viner, who made one of the bases of the 'old interpretations' of the classical monetary theory, extolled Hume to the skies as against his contempt of Smith's monetary theory as 'obsolete' (Viner 1937, 87) . Then he said:

> *In so far as the classical theory of the mechanism of international trade had one definite originator, it was David Hume*. ...... He started out with the hypothesis that four-fifths of all the money in Great Britain was annihilated overnight, and proceeded to trace the consequences. ...... In Hume's account, *changes in price levels thus play the predominant role* in bringing about the necessary adjustment of trade balances, and are assisted only by fluctuations in exchange rates, held to be a factor of minor importance. (Viner 1937, 292-293. Emphasis added.)

But the international adjustment theory is one of the domains where the 'new interpretations' of the classical monetary theory have been accepted earliest as the standard interpretation. In other words, it is quite common today that on account of his defiance of the law of one price Hume is rated as inferior to Smith. However, in fact, there have been sporadically presented some 'heroic apologetics of Hume' since the 1980s, which have asserted that Viner's interpretation of Hume might have been wrong and, in fact, Hume could have obeyed the law of one price[9]. I say once again both Thornton and Ricardo took over and refined the Smithian adjustment theory.

3. Smith and the Bank of England

According to Smith, what banks could determine by themselves under the gold standard was not the volume of the total money supply of the country, but only the composition of it (see figure 1). *Hence*, that part of the total money supply which consists of banks credit induces an equal outflow of gold from the country, *so unregulated issue of banknotes would threaten convertibility* (the grounds of the 1765 legislation). On the other hand, under the fractional reserve banking system the management by a single bank of both the convertibility of currency and the system may be necessary. *Smith*, as West (1997) was worried, *surely instigated the legitimacy of the acceleration of the concentration both of issuing banknotes and of reserves into the Bank of England*: that is, the prohibition of the small notes was not only to promote the selection of the existing small banks, but also to form the high entry barriers in banking because the new comers' survivals would have turned upon issuing the small notes in those days in Scotland (West 1997, 129); the banning of the option clause which required the convertibility on demand made it insufficient for banks only to look at the clearing balance of their own outstanding notes, so their operations were required to hold enough of reserves, which was so expensive to them; and the realization of these Smith's proposals was the process which was to accelerate transforming the Bank of England into a central bank, and Smith, who continued to praise the Bank of England highly until the last fifth edition (1789) of the *Wealth of Nations* during his lifetime, did instigate such a process intentionally (West 1997, 133).

It is true that there is not yet an agreement among researchers about how we should interpret these Smith's high

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[9] Some attempts to rescue Hume have, interpreting him as having done 'for pedagogical purposes' (Humphrey and Keleher 1982, 135) 'simply a thought experiment' (Cesarano 1998, 179) by means of the setting that 'money being be miraculously created or annihilated one night,' asserted that he in fact adhered to the law of one price. But all thought experiments must include some purpose, and I think that the purpose of Hume here was just to show that an adjustment process began with the rise and fall of a country's price level which in turn was triggered by the increase and decrease of exogenous money supply. Other attempt has said that the money supply becomes endogenous in Hume *if the balance of trade is in surplus*, and in that case mild inflationism which Hume had said was the policy target of the magistrate could be interpreted consistently (Wennerlind 2005). In other words, the latest 'heroic' effort seems to let Hume return to mercantilism at last!

praises for the Bank of England. Rockoff thinks Smith in fact did not authorize the role of central banking —— the lender of last resort — anywhere and at best advocated restrictions on banks (Rockoff 2011, 262), although West (1997) thinks Smith would seem to advocate central banking. Carlson asserts that 'Smith's support of the Bank of England charter' is 'simply a recognition of the importance of non-economic factors in shaping developments in the economic sphere'(Carlson 1999, 11, 12).

But in any case, in the beginning of the Bullionist controversy only seven years later after the death of Smith, F. Baring, treating the Bank of England as a special one, called it the dernier resort of Britain's monetary system, whereas Boyd, *quoting only Smith as his economic authority* to rely on in his book, called the Bank of England 'the great source of all the circulation of the country'(Sato 2007, 85-86, 96). Smith's monetary analysis including his high praise for the Bank of England was already well-known among the main leading disputants of the Bullionist controversy, so while basing my argument on these facts I shall clarify in the following sections the theoretical inheritances from Smith to Ricardo via Thornton.

Ⅳ **Henry Thornton**

Thornton was, needless to say, the most important pivot in the development of classical monetary theory from Smith to Ricardo. His main achievements are as follows: (1) fundamental criticism of the real bills doctrine, (2) analysis of the repercussion effect of the changes in money supply, (3) analysis of financial assets other than banknotes, (4) analysis of the rate of interest and of the credit rationing (including the analysis of the cumulative process), (5) theory of exchange rates (including considerations of the possibilities of the outflow of gold by means of non-monetary factors and of devaluation), (6) theory of central banking (including the recognition of the necessity of the 'lender of last resort' at the time of the internal liquidity crisis), &c.

As is well known, Thornton made it clear by far earlier than Wicksell that if economy was in the 'full employment' and the lending interest rate of banks was below the rate of real mercantile profit, borrowing demands would be unlimited and there would be cumulative inflation. Thence Thornton proposed some interesting policy recommendations, namely, (1) the repeal of usury law, (2) credit rationing as the second best when the law could not be repealed, and (3) further criticism of the real bills doctrine as the norm of lending (Humphrey 1990, 45). But Thornton showed here some inconsistencies because he admitted the possibility that the increase of money supply might have effect on real output through 'forced savings.' In other words, the cumulative process premises that the real mercantile profit is *exogenous* to the money supply, whereas the 'force savings' emphasize that mercantile investments react to the increase of the money supply via the rise of prices and the increase of non-voluntary savings. So there are some inconsistencies here.

Ⅴ **David Ricardo**

1. new interpretations and Ricardo

It was F.W. Taussig and his well-known student corps (the Harvard school) that had a decisive influence on the interpretations of classical monetary theory in the 20th century. They were sharply opposed to J.L. Laughlin who had built the strong anti-quantity theory camp in the University of Chicago. For Laughlin the QTM was only another name of unsound inflationism, whereas the Harvard school aimed at the revival of the Humean QTM with the price-specie flow mechanism [hereafter PSFM]. In so doing, this school's student of distinction J. Viner, finding both Smith and Ricardo had not relied upon the PSFM, performed a stunt in the interpretation of the classical

monetary theory because he was not able to imagine any other plausible adjustment mechanism than the PSFM: namely he emphasized the 'obsoleteness' of Smith's theory, and criticized Ricardo saying that he was a quantity theorist but not so classical because of lacking the essential PSFM (Viner 1924; idem 1937).

But in the early 1970s the “emergence of a theoretical alternative to the QT[M]-PSFM system brought about an abrupt transformation in thought. … [T]he existence of a coherent alternative to the QT[M]-PSFM framework has already transformed how historians of thought view the classical monetary writers” (Skaggs 1999, 386. [ ] added.). What Skaggs calls here as a ‘theoretical alternative’ is the monetary approach to the balance of payments [hereafter MABP].

In the MABP summarized by Frenkel and Johnson (1976) and Frenkel (1976), the world price level under the gold standard is determined in the long run by the interaction between the worldwide demand for money and the gold stock. Therefore the domestic price level of the small open economy is not the result of the domestic money stock, because the purchasing power of the domestic currency is determined by this combination of the exogenous purchasing power of gold (the world price level in terms of gold), the unit price of domestic currency in terms of gold (the mint price of gold) and the money balance desirable for the domestic economy (which in turn lay the foundation of the international distribution of gold). And whenever the price in terms of gold of any country's goods becomes separated from its world price, it will be immediately arbitraged based on the law of one price across the world markets, so the international adjustment is accomplished only by means of gold flow without causing any change in the domestic price level.

In the MABP itself there are strong suppositions such as the law of one price, the perfect international mobility of capital and the price flexibility in all markets. But in any case the new interpretations of the classical monetary theory have appeared with the result of this approach.

It is true that with the extensive acceptance of the MABP "Ricardo's monetary theory has been treated better"(Marcuzzo and Rosselli 1994, 1252). But some researchers still accept Viner's criticism of Ricardo's adjustment theory while treating Ricardo (but *not* Hume) as a 'representative' of the PSFM. I think that their attitudes seem show some logical confusion. For example, Skaggs who proposes a new interpretation of the classical monetary theory depicts Ricardo as the father of the currency school who believed in the QTM-PSFM (Skaggs 1999). On the other hand, Arnon who has greatly contributed to Tooke study pictures Ricardo as a disputant who awfully depended upon the PSFM in order to contrast him with Tooke anyway (Arnon 1991, 46-8), though he in fact cannot but admit that Ricardo's real theory "remains unclear"(34).

As a matter of fact Ricardo seemed to be an important successor in this domain too. While depicting the international monetary adjustment (see figure 1), Smith pointed out clearly that in the international payments the important point was not whether such payments were made by means of gold, but whether these payments were profitable for the traders who engaged in payments. And he went on to say that such payments had often been made in other goods than gold (Sato 2002, 124). The proposition of Smith, Thornton and Ricardo that gold is only one commodity not merely insists that gold has an 'intrinsic value', but refers to the economic facts that gold is the commodity which is produced or traded only under the conditions of giving at least an average profit. According to Thornton,

> The export trade to foreign countries is, generally speaking, one trade; the trade of importing from foreign countries is a second; the trade of sending out and bringing home bullion, in order to pay or receive the

difference between the exports and imports, may be considered as a third. This third trade is carried on upon the same principles with any other branch of commerce, that is, it is entered into just so far as it is lucrative to the speculator in bullion, and no farther. (Thornton [1802] 1939, 117)

Therefore the conditions of the arbitrage based on the law of one price that the MABP sketches must be deepened still more by the profit motives of the bullion merchants. The gold flow triggered by such an arbitrage does not simply depend on the price level nor the balance of trade, so when one attempts to interpret Ricardo from such a point of view as the PSFM which stands almost only in the macroeconomic dimension, perhaps Ricardo still looks like a mystery.

2. Ricardo's plan for the bullion payments and his theory of central banking

Monetary theorists of the 18th century including Adam Smith took it for granted that reserve requirements of the issuing banks were about 20~30 %, namely it was the fractional reserve banking. (The genuine 100 % reserve banking would be what J. Steuart called the 'bank of deposit.') We know Smith wanted to keep the 'complete convertibility' of currency at any cost. But if we start from such reality, probably, we cannot but choose one of the following two methods, in order to realize issuing of currency with the 'complete convertibility': namely, the "fiduciary issue system" which the currency school actually realized, or the bullion payment plan which Ricardo devised.

As Reisman pointed out, Thornton imagined the ideal Bank of England accepting the 'role of lender of last resort' under the centralized reserve system to realize the 'well-managed gold standard' (Reisman 1971, 74) based on the fractional reserve requirements. But Thornton did not show a concrete plan to perform the 'management' of the gold standard and did not enter into the discussion on the monopoly of issuing by a single bank.

Ricardo did share recognition of the necessity for the 'complete convertibility' of currency with Smith. Thus Ricardo was to carry the theoretical frame of Smith to its limit via the bullion payment plan. And I have emphasized, among many proposals to stop the Bank restriction and make it resume payments in gold, how excellent Ricardo's plan of bullion payments was (Sato 1999a).

I enumerated the following as the main point of Ricardo's bullion payment plan. Namely, (1) it was going to realize the complete convertibility of currency under the premise of fractional reserve system. (2) It placed a special emphasis on protecting gold against changes in the demand for gold by as minimum bullion reserves as possible. (3) And it was t*he first attempt of constructing the systematic central banking theory in the classical economics* which aimed at letting the national bank (not the Bank of England which was merely a profit-pursuing private company) pursue discretionary policies after having the bank monopolize issuing to enable such a monetary policy[10]. Let's explain the above-mentioned points slightly in detail.

Supposing we can manage the money system so that the value of currency in terms of the standard ($\boldsymbol{P_{money/gold}}$) may become always stable by using the currency which consists only of paper money based on the bullion payment proposal which aimed not to produce unnecessary demand for gold, fluctuations in currency which remain will reflect only an exogenous real shocks such as the change in the exchange ratio between the standard and

[10] Deleplace (2001, 343)claims that Ricardo's bullion payment proposal is the one which is going to reduce the external outflow of the bullion of the country simply to the outflow of the bullion reserves of the Bank of England, and is also going to realize the stability of currency through arbitrage between the bullion merchants and the Bank of England. But it is only a *half* of the story which above (1) ~ (3) connote.

commodities ($\boldsymbol{P_{gold/goods}}$).

The currency school dreamed the system as if the banknotes made such a same motion as 'metallic fluctuations', and prescribed *100 % marginal specie reserve requirements* for the issue which exceeded ₤ 14 million. Thornton advocated the need of a large quantity of gold reserve by the Bank of England for the possibility that an unexpected external outflow might last *for two years* (Thornton [1802] 1939, 151-3).

Ricardo claimed that the reserve requirements of a central bank could be reduced to the minimum (about 10%) by use of 'discretionary policies.' 'Discretionary policies' here mean the "open market operations" performed considering the market price of bullion as a policy target, and a 'discount policy' (Arnon 1987, 273-80; Sato 1999a, 29-34; Davis 2005, 1999-205). Ricardo knew well that the nominal anchor function of reserves depended on neither the quantity nor its ratio to the currency (besides the 100% reserves were meaningless), and he warned that the rigid requirements rule, in particular, made the markets unstable when there were abnormal demands for liquidity. The fact that the Bank charter act (1844) which embodied the ideas of the currency school was driven into the suspension of enforcement three times within a quarter of century proved that Ricardo had been right (Glasner 1989a, 217).

The proposal of the low reserve requirements of Ricardo does not mean that he was much more optimistic than Thornton. The Bank of England was at best only a profit-seeking private company through the 19th century from its establishment of 1694. The Bank, together with the country banks which had escaped from fetters of convertibility and greatly increased since 1797, pursued the 'passive and procyclical' banking policy faithful to its profits opportunity, so in prosperous and inflationary periods it would increase both its lending and issuing by its own official real bills doctrine, but in recessionary and deflationary periods it would decrease both. A bank such as the Bank of England *could not have agreed* to possession of 'the mass gold reserve' yielding no profit that Thornton had advocated. After its malicious deflationary policy around its resumption of convertibility (1821), the Bank of England proceeded, now conspiring with the government, to pursue the procyclical policy of the expansion of credit, and at last caused the 1825 financial crisis and the large-scale bankruptcy of country banks.

Therefore Ricardo maintained that it was not a private company but the national bank independent of the government that could pursue the countercyclical policy, because such a policy necessarily required the non-profit motivation by the public spirit. Furthermore, the suggestion that there are some possibilities that Ricardo did reflect upon the "lender of last resort" function of the national bank will be found, for example, in his remarks on the Ireland financial crisis in 1820.

> [the Bank of Ireland] did seem to him to have acted with a degree of energy, which, *if it had been the case of this country [England], they would have found the Bank of England not ready to have adopted*. …… *The stoppage of a number of private banks in the country rendered it absolutely necessary that a very great increase in the circulation, of some sort or another, should be provided*. Either the diminution of the circulating medium must be supplied by coin, or a powerful effort must be made by the Bank of Ireland to make up the deficiency by an issue of notes. The Bank of Ireland did make that great effort to the amount, he believed of 50 per cent; and, from what he had himself heard from the Governor of the Bank of England, that issue would have been increased still farther if those securities had been offered on which the Bank of Ireland usually made their advances…
>
> (Speech on 28 March 1821, *Works*, Ⅴ：99. [　] and emphasis added.)

Ⅵ Concluding Remarks

The classical monetary theory is totally different from other alternative theories in that classical theory insists that *the nominal anchor is indispensable for any currency*. Both QTM and the real bills doctrine need not any nominal anchor (see table 1 above). The real bills doctrine is based on the nominal quantity of securities offered, and the 'balance' of the balance sheet (the law of reflux). QTM needs only the assumption of helicopter money.

The classical monetary theory which the "new interpretations" are reviving will give us the many historical lessons which are all the more important because we lack nominal anchors today, and the source of the imagination which should serve as guidance.

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