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**The Rise of the Gold Standard, 1660-1819**

1734 [?]

Excerpt from Richard Cantillon's *Essai sur la nature du commerce en général*, published posthumously first in French in 1755 and in English in 1759, but dated to no later than 1734 since Cantillon was murdered at his London residence in that year. Cantillon's treatise is now widely considered as an example of the most innovative economic thinking of the early eighteenth century, but confusion over the date of its composition led many commentators to suppose, erroneously, that Cantillon had taken his ideas from the writings of other intellectuals. The innovative character of Cantillon's tract was finally recognised in the later nineteenth century by the economist W. Stanley Jevons. This particular passage concerns the relationship between gold and silver, which was a major preoccupation of European governments during the later seventeenth and early eighteenth centuries.

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[...] Silver mines have always been found more abundant than those of gold, but not equally in all countries or at all times. Several ounces of silver have always been needed to buy one ounce of gold, sometimes more sometimes less according to the abundance of these metals and the demand for them. In the year AUC 310, 13 ounces of silver were needed in Greece to buy an ounce of gold, i.e., gold was to silver as 1 to 13: AUC 400 or thereabouts 1 to 12, AUC 460 1 to 10 in Greece, Italy and the whole of Europe. This ratio of 1 to 10 seems to have persisted for three centuries to the death of Augustus, AUC 767 or AD 14. Under Tiberius gold became scarce or silver more plentiful, and the ratio gradually rose to 1 to 12, 12½, and 13. Under Constantine AD 330 and Justinian AD 550 it was 1 to 14<sup>2</sup>/<sub>5</sub>. Later history is more obscure. Some authors think it was 1 to 18 under certain French kings. In AD 840 under Charles the Bald gold and silver coins were struck at 1 to 12. Under Saint Louis, who died in 1270 the ratio was 1 to 10: in 1361, 1 to 12: in 1421 over 1 to 11: in 1500 under 1 to 12: about 1600, 1 to 12: in 1641, 1 to 14: in 1700, 1 to 15: in 1730, 1 to 14½.

The quantity of gold and silver brought from Mexico and Peru in the last century has not only made these metals more plentiful but has increased the value of gold compared with silver which has been more abundant, so that in the Spanish mints, following the market prices, the ratio is fixed at 1 to 16. The other States of Europe have followed pretty closely the Spanish price in their Mints, some at 1 to 15<sup>7</sup>/<sub>8</sub>, others at 15<sup>3</sup>/<sub>4</sub>, 15<sup>5</sup>/<sub>8</sub>, etc. following the ideas and views of the Directors of the Mints. But since Portugal has drawn great quantities of gold from Brazil the ratio has commenced to fall again if not in the the Mints at least in the Markets, and this gives a greater value to silver than in the past. Moreover a good deal of gold is often brought from the East Indies in exchange for the silver taken thither from Europe, because the ratio is much lower in India.

In Japan where there are a good many silver mines the ratio of gold to silver is today 1 to 8: in China 1 to 10: in other countries of the Indies on this side 1 to 11, 1 to 12, 1 to 13, and 1 to 14 as we get nearer to the West and to the Europe. But if the mines of Brazil

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continue to supply so much gold the ratio may probably fall eventually to 1 to 10 even in Europe which seems to me the most natural id anything but chance is to guide the ratio. It is quite certain that when all the gold and silver mines in Europe, Asia and Africa were the most exploited for the Roman republic the ratio of 1 to 10 was the most constant.

If all the gold mines regularly produced a tenth part of what Silver mines produce, it could not be determined that for that reason the ratio between these two metals would be a 1 to 10. The ratio would always depend on the demand and on the market price. Possibly rich people might prefer to carry gold money in their pockets than silver and might develop a taste for gildings and gold ornaments rather than silver, thus increasing the market price of gold.

Neither could the ratio between these metals be arrived at by considering the quantity of them found in a State. Suppose the ratio 1 to 10 in England and that the quantity of gold and silver in circulation there were 20 million ounces of silver and 2 million ounces of gold, that would be equal to 40 million ounces of silver, and suppose that 1 million ounces of gold be exported from England out of the 2 millions, and 10 million ounces of silver brought in in exchange, there would then be 30 million ounces of silver and only 1 million ounces of gold, still equivalent in all to 40 million ounces of silver. If the quantity of ounces be considered there are 30 millions of silver and 1 million of gold, and therefore if the quantity of the two metals decided the ratio it would be as 1 to 30, but that is impossible. The ratio in neighbouring countries is 1 to 10, and it would therefore cost only 10 millions ounces of silver with a trifle for the cost of carriage to bring back to the State 1 million ounces of gold in exchange for 10 million ounces of silver.

To judge then of the ratio between gold and silver the Market price is alone decisive: the number of those who need one metal in exchange for the other, and of those who are willing to make such an exchange, determines the ratio. It depends on the humour of men: the bargaining is done roughly and not geometrically. Still I do not think that one can imagine any rule but this to arrive at it. At least we know that in practice it is the one which decides, as in the price and value of everything else. Foreign markets affect the price of gold and silver more than they do the price of any other goods or merchandise because nothing is transported with greater ease and less injury. If there were a free and regular trade between England and Japan, if a number of ships were regularly employed in this trade and the balance of trade were in all respects equal, i.e., if as much as merchandise were always sent from England to Japan, having regard to price and value, as was imported from Japan, it would end in drawing at last all the gold from Japan in exchange for silver, and the ratio between gold and silver in Japan would be made the same as it is in England, subject only to the risks of navigation; for in our hypothesis the costs of the voyage would be supported by the trade in merchandise.

Taking the ratio at 1 to 15 in England and 1 to 8 in Japan there would be more than 87 per cent. to gain by carrying silver from England to Japan and bringing back gold. But this difference is not enough in the ordinary course to pay the costs of so long and difficult a voyage. It pays better to bring back merchandise from Japan rather than gold in exchange for silver. It is only the costs and the risks of the transport of gold and silver which can leave a difference in the ratio between these metals in different States: in the nearest State the ratio will differ very little, there will be a difference from one State to another of 1, 2 or 3 per cent. and from England to Japan the total of all these differences of ratio will amount to more than 87 per cent.

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It is the market price which decides the ratio of the value of gold to that of silver. The Market price is the base of this proportion in the value assigned to coins of gold and silver. If the market price varies considerably, that of the coinage must be reformed to follow the market rate. If this be not done confusion and disorder set in in the circulation, and coins of one or the other metal will be taken above the Mint value. There are an infinity of examples of this antiquity. There is a quite recent one in England under the regulations made at the London Mint. The ounce of silver, eleven twelfths fine, is worth there 5s.2d. sterling. Since the ratio of gold to silver (which had been fixed at 1 to 16 in imitation of Spain) has fallen to 1 to 15 and 1 to 14½, the ounce of silver sold at 5s.6d. sterling, while the gold guinea continued to circulate at 21s.6d. sterling, which caused the export from England of all the silver crowns, shillings and sixpences which were not worn by circulation, silver money became so scarce in 1728 (though only the most worn pieces remained) that people had to change a guinea at a loss of nearly five per cent. The trouble and confusion thus produced in trade and circulation obliged the Treasury to request the celebrated Sir Isaac Newton, Master of the Tower Mint, to make a Report on the measures he thought most suitable to remedy this disorder [reproduced above, dated from 21 September 1717].

There was nothing easier. It was only necessary to follow the market price of silver in coining silver at the Tower. And whereas the ratio of gold to silver was of old time by the laws and regulations of the Tower Mint 1 to 15¾, it was only necessary to make the silver coins lighter in the proportion of the market price which had fallen below 1 to 15; and, to anticipate the variation which the gold of Brazil brings annually in the ration between these two metals, it might even have been possible to fix it on the footing of 1 to 14½, as was done in 1725 in France and as they will be forced later to do in England itself.

It is equally true that the coinage in England might equally have been adjusted to the market price and ratio by diminishing the nominal value of gold coins. This was the policy adopted by Sir Isaac Newton in his Report, and by Parliament in consequence of this Report. But, as I shall explain, it was the least natural and the most disadvantageous policy. Firstly it was more natural to raise the price of silver coins, because the public had already done so on the market, the ounce of silver which was worth only 62d. sterling at the Mint being worth more than 65d. in the market, and all the silver money being exported except what the circulation had considerably reduced in weight. On the other hand it was less disadvantageous to the English nation to raise the silver money than to lower the gold money considering the sums which England owes the foreigner.

If it is supposed that England owes the foreigner 5 millions sterling of capital, invested in the public funds, it may be equally supposed that the Foreigner paid this amount in gold at the rate of 21s.6d. a guinea or in silver at 65d. sterling the ounce, according to the market price.

These 5 millions have therefore cost the Foreigner at 21s.6d. the guinea 4,651,163 guineas; but now that the guinea is reduced to 21s. the capital to be repaid is 4,761,904 guineas, a loss to England of 110,741 guineas, without counting the loss on the interest annually paid.

Newton told me in answer to this objection that according to the fundamental laws of the Kingdom silver was the true and only monetary standard and that as such it could not be altered.

It is easy to answer that the public having altered this Law by custom and the price of the market it had ceased to be a law, that in these circumstances there was no need to

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adhere scrupulously to it to the detriment of the nation and to pay to Foreigners more than their due. If the gold coins were not considered true money, gold would have supported the variation, as in Holland and China where gold is looked upon rather as merchandise than money. If the silver coins had been raised to their market price without touching gold there would have been no loss to the Foreigner, and there would have been plenty of silver coins in circulation. They would have been coined at the Mint, whereas now no more will be coined until some new arrangement is made.

By reducing the value of gold (brought about by Newton's Report from 21s.6d. to 21s.) the ounce of silver which was sold in the London market before at 65 pence and 65½ pence no longer sold in truth but at 64d. But as it was coined at the Tower the ounce was valued in the market at 64d. and if it was taken to the Tower to be coined it would be worth no more than 62d. So no more is taken. A few shillings or fifths of crowns have been struck at the expense of the South Sea Company, losing the difference of the market price; but they disappeared as soon as they were put into circulation. Today no silver coins can be seen in circulation if they are of full mint weight, only coins which are worn and do not exceed in weight the market price.

However the value of silver continues to rise imperceptibly in the market. The ounce which was worth only 64 after the reduction of which we have spoken has risen again to 65½ and 66 in the market; and in order to have silver coin in circulation and coined at the Tower, it will be necessary again to reduce the value of the gold guinea from 21s. to 20s. and to lose to the Foreigner double of what is lost already unless it is preferred to follow the natural course and to adjust silver coin to the market price. Only the market price can find the ratio of the value of gold and silver as of all other values. Newton's reduction of the guinea to 21s. was devised only to prevent the disappearance of the light and worn coins which remain in circulation, and not to fix in gold and silver coins the true ratio of their price, I mean by their true ratio that which is fixed by Market prices. This price is always the touchstone of these matters. Its variations are slow enough to allow time to regulate the mints and prevent disorders in the circulation.

In some centuries the value of silver rises slowly against gold, in others the value of gold rises against silver. This was the case in the age of Constantine who reduced all values to that of gold as the more permanent; but the value of silver is generally more permanent and gold is more subject to variation.

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*Source:* Higgs, ed., 1931, pp. 268-287, esp. 272-287.