Lecture 2:

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GOLD STANDARD UNIVERSITY

Summer Semester, 2002

Monetary Economics 101: The Real Bills Doctrine of Adam Smith

Lecture 2

DON'T FIX THE PRICE OF GOLD!

- Let the Gold Eagle Coin Soar without the Heavy Baggage of Dollar Debt -

- Don't Let the Banks Sabotage the New Gold Coin Standard -

- The World without Banks -

I extend a hearty welcome to my audience at the first university course offered in the 21st century on the gold standard, made possible by Gold-Eagle University, an educational website to offer you knowledge put under taboo by mainstream/establishment universities. Taking this course will not get you a degree, but it may get you something more precious: a better understanding of the world, its past, present, and future.

In last week's inaugural lecture I offered a blueprint for a new gold coin standard the features of which can be summed up as follows:

(1) Open the Mint to free and unlimited coinage of gold. The one-ounce Gold Eagle coin should be adopted as a monetary unit minted for the account of anyone tendering the right amount and purity of gold, free of charge.

(2) To get the grass-root circulation of gold coins going, labor organizations (including those of pensioners and retired people) ought to be involved through their Credit Unions offering gold-coin deposit facilities. Banks must be excluded.

(3) Short-term credit to move goods from the producer to the consumer should be provided by the bill market, rather than by the banks, on the pattern of the pre-1914 way to finance world trade with gold.

(4) Long-term credit to the economy should be provided by the gold-bond market. The primary demand for gold bonds comes from financial institutions offering gold life insurance and gold annuity policies to the people. The primary supply is from the government and firms that want to operate on the basis of gold capital. Gold bonds must have a sinking fund protection. Issuers of gold bonds must see the revenues with which to retire the liability.

Parallel Monetary Standard

The first remark on this blueprint which, as far as I am aware, is new and radically different from any other that has been offered so far, is that it expressly avoids fixing the price of gold. At least for a transitional period that may last for several years, the paper dollar and the Eagle gold coins would circulate side-by side at a floating exchange rate. In other words, there would be a parallel monetary standard and the paper dollar would be free to compete with the Gold Eagle. The market should in the end decide which of the two deserved to survive. This is a major departure from historical precedents, which have all involved the stabilization of the paper currency in terms of gold. The question arises: why should we have such a complicated blueprint when a simpler one, fixing the gold price, could accomplish the same objective?

In all previous historical precedents stabilization came relatively early when the depreciation of the irredeemable currency has not yet progressed far, and a relatively minor adjustment in the gold price could solve the problem. In our case, however, the depreciation of the irredeemable dollar has progressed very far indeed. The loss of purchasing power of the dollar is in the order of 99 percent, and the factor by which the gold price needs to be adjusted is 10 (say, from $35 to $350 per ounce) or higher. While not impossible theoretically, in practice such a huge adjustment is inadmissible. There is no way to find the "right" price of gold. Any price would be arbitrary. Since the gold market is not free as long as central banks still carry huge gold reserves and may use them for bribe and blackmail, it cannot be relied upon to furnish an 'equilibrium price'.

Central bank selling and leasing gold is motivated by desperation rather than by design to punish those who have put their savings in gold. Central banks have been involved in the paper gold markets trading futures, options, and other commitments to pay gold in the future from inception. Little did they realize at first that the paper gold market will snowball and they would be called upon to underwrite the burgeoning liabilities. Central banks are much like the Sorcerer's Apprentice, who knew how to start the flow of paper gold but didn't know how to stop the torrent when the flow was getting out of hand. I look at central bank gold sales and leases as a desperate effort at damage control, trying to put off the day of reckoning.

Threat to Peace between Creditors and Debtors

The gold market is supercharged emotionally for a definite reason which is never spelled out but which cannot be evaded. I am referring to the threat to the uneasy social peace between creditors and debtors. Fixing the price of gold would destroy that peace. (Incidentally, this was a problem at every previous historic episode of stabilization, too, and it would be worth while to study the history of stabilizing irredeemable currencies from this point of view.) Net creditors would insist on a lower, net debtors on a higher gold price. Nor is it hard to see why. If the official price of gold was fixed at a lower level, $1,000 debt could only be discharged through great difficulty by the payment of a greater amount of gold which creditors would welcome but debtors would strenuously oppose. If it was fixed at a higher level, then the same debt could be retired relatively easily by the payment of a smaller amount of gold which the debtors would favor but the creditors would find unacceptable. There is no way to do justice between the two contending parties. Therefore in my opinion a blueprint that calls for the fixing of the price of gold is a blueprint for failure. It would only serve to discredit the gold standard.

Banks Must Go!

But there is a second problem, too, that must be faced. Let us admit that public opinion in most countries, including the United States, is not ready yet to embrace a gold standard. (This is hardly surprising after 70 years of virulent anti-gold propaganda on the part of the government, the banks, and academia.) In those few countries where public opinion may be receptive such as Argentina or Russia, people have lost practically all of their life savings denominated in the national currency and, rightly or wrongly, they consider the banking system as the villain. We may assume that the situation in the United States and other leading industrial countries will unfold along similar lines. When the return to a gold standard comes up as a realistic alternative, savers in the United States will find out

that most of their life savings denominated in dollars is gone, and debtors will realize that there is no way for them to escape from the deadly clutches of debt short of declaring bankruptcy. There will be a tremendous backlash. Rightly of wrongly, people will blame the banks for the disaster. In this poisonous atmosphere a blueprint that calls for the banks to carry deposit accounts denominated in gold coins that represent the savings of the people is a blueprint for failure. It would only serve to discredit the gold standard. Banks must go. This includes the Federal Reserve banks as well. Clearly, it is not going to be easy to get rid of the Fed. What better way is there to do it than letting the Fed go down the tube dragged down by its monster creature, the irredeemable dollar, while society is saved from the economic pain through the life-saver of the Gold Eagle!

The Dollar-Denominated Debt Is beyond Salvaging

The amount of outstanding dollar debt in the world is so huge that it boggles the mind. It cannot be salvaged. Either it will be 'inflated away' or it will be 'deflated away'. The latter phrase refers to bankruptcies and defaults wiping out a major part of the accumulated debt. I go further. Chances are that it is the further irresistible snowballing of debt that will turn public opinion around in favor of a gold standard. People will realize that without the golden flywheel regulator for debt creation no monetary system can last long. It will err either on the side of being too permissive and then the system will soon start spinning out of control (as it does in our case), or on the side of being too restrictive, in which case the system will seize up for lack of lubrication. Gold plays the role of the doorman that lets some loan applicants pass, while turning away others.

Be that as it may, the dollar-denominated debt is so huge that its conversion into gold-denominated debt at whatever official gold price may carry the seeds of self-destruction. The "fixed" gold price would have to be adjusted several times, fanning the flames of anti-gold propaganda. It is just as well to *let the Gold Eagle soar without the heavy baggage of dollar debt*.

It is a safe assumption that there are not many bankers in authority in the United States who look at gold with an open mind. More likely they look at it as Public Enemy Number One. The tender plant of the new gold standard would have to be entrusted to the care of its worst enemies. It is just as well not to create an opportunity for the banks for sabotage.

Coin, Credit, Circulation

Banks will be left in place only to the extent there is demand for irredeemable dollars on the part of producers and savers. Bankers could continue financing production and could channel savings into the economy only to the extent that producers and savers voluntarily choose the dollar as their unit of account. Another segment of producers and savers will voluntarily choose the Gold Eagle as theirs. Financing production and distribution of consumer goods with gold will have to remain outside of the domain of the banks. But if not the banks, then who will do the financing? The short answer to this question is: the four C's: Coin, Credit, Circulation, Clearing. Here is a key quotation:

"All the perplexities, confusion and distress in America arise, not from the defects in the Constitution or confederation, not from want of honor or virtue, so much as from downright ignorance of the nature of coin, credit and circulation."

-- *John Quincy Adams, 1829.*

The Real Bills Doctrine

This brings me to the title of this 13-week course in Monetary Economics, "The Real Bills Doctrine of Adam Smith". Although it may sound preposterous to 21st century ears, according to him *you don't need banks to extend short-term credit to finance the production and distribution of consumer goods, real bills will do It*. Adam Smith elevated the Real Bills Doctrine to scientific status in the *Wealth of Nations* in 1776. The market economy comes equipped with a natural, built-in clearing system that will generate all the credit needed to move goods from producers to retail outlets, provided only that the consumer wants the goods urgently enough. This credit is embodied by the real bill.

A real bill is a bill of exchange drawn by the producer (the *drawer* of the bill) on the distributor (the *acceptor* of the bill) specifying the kind, quality and quantity of merchandise shipped by the former to the latter, and specifying the sum (the *face value* of the bill) and the date on which the bill is payable (the *maturity date* of the bill, in any event, not more than 91 days after the date of billing). In order to be valid, the bill has to be accepted by the acceptor, by writing across its face and over his signature "I accept".

The Real Bills Doctrine of Adam Smith states that a bill of exchange can, before its maturity date, go into spontaneous circulation as the drawer will use it to pay his suppliers by endorsing the bill on the back. Everybody who receives the bill in payment thereafter can use it in a similar fashion. Endorsement signifies that the owner of the bill has assigned the proceeds to the next one. At maturity, the last owner will mark the bill "paid" and present it to the acceptor against the payment of the face value in gold coins. Alternatively, anyone who accepts the real bill in payment for goods and services, can discount it at the Discount House at any time. Discounting means selling the bill for cash at a discount, which depends on the discount rate and the number of days the bill has to run to maturity. The Discount House makes a market in real bills and acts as the residual buyer. Indeed, real bills are the most liquid earning asset that a financial institution can

have. At maturity the Discount House will collect the face value of the bill from the acceptor.

The point is that as goods in urgent demand emerge in production, the credit needed to finance their move to the consumer also emerges in the form of real bills drawn by the producer on the distributor. The real bill is a *non-inflationary* purchasing medium which the market has endowed with *limited* monetary privileges. Non-inflationary because the face value of the bill is matched by the value of the emerging merchandise. Limited because upon maturity the purchasing medium expires as the underlying merchandise is sold to the ultimate cash-paying consumer.

In many ways the circulation of real bills is a miraculous process. Nobody designed the system of credit and clearing that makes goods in demand move along from the producer to the consumer without outside financing. Yet there it is: the real bill will do the miracle of financing production and distribution spontaneously, *without taking one penny out of the piggy-banks of the savers, and without legal tender coercion*.

I hasten to add that the circulation of real bills assumes the underlying circulation of gold coins. To understand the concept a little better, I want you to look at a simple essential consumer good, bread, and assume that its production/distribution involves three stages: from wheat to flour to bread; handled by four tradesmen: the grain farmer, the miller, the baker, and the grocer. In the absence of clearing the pool of circulating gold coins would have to be invaded *four times* to finance the production and distribution of bread as the grain farmer, the miller, the baker, and the grocer, all four of them, would be trying to raise credit to finance their operations. But as it is, the pool of circulating gold coins need not be invaded even once. The consumer's single gold coin suffices to finance efficiently the journey of bread from the corn-fields to the dinner-table, *even in the complete absence of banks*. The movement of the "maturing bread" from the grain farmer to the grocer is matched by the parallel but opposite movement of the real bill from the grocer to the grain farmer. The three payments are made, not with gold coins, but with real bills. When finally the grocer gets paid, the single gold coin of the consumer will liquidate all four credits to which the journey of the bread has given occasion.

Self-Liquidating Credit

For this reason, the real bill is said to be 'self-liquidating'. The ultimate sale of the underlying merchandise in exchange for the gold coin of the consumer liquidates all the credit that was needed to move it forward to the consumer, whether there were four, fourteen, or forty merchants along the pipeline to handle the maturing good. We might say that as wheat "matures into" bread, so the real bill "matures into" the gold coin for which bread is ultimately exchanged. There is no need to divert gold coins to move the wheat or the flour. They will move under the steam that moves the bread, generated by

the single gold coin of the consumer. Real bills are flying, as it were, on their own wings and under their own steam. That is, provided that you do have a gold coin standard. If you don't, then forget it. Irredeemable paper currency in the hands of the consumer has no steam-generating power, nor can it lend wings to to real bills representing maturing merchandise. Bills will no longer fly. They no longer mature into gold coins. There are simply no real bills under a regime of irredeemable currency. They have been replaced by a bloated money supply. The nature-ordained dynamics of monetary circulation has been destroyed. Now paper is shuffled against paper, and you need an army of parasitic bankers to do the shuffling. Credit is no longer self-liquidating.

Real bills do work. Prior to the outbreak of World War I in 1914 word trade was financed through real bill circulation with London acting as the discount house. The system worked smoothly and efficiently, showing that there is no limit on the amount of credit that could be built on a given gold basis. World trade was completely self-financing, and producers as well as consumers prospered. The volume of world trade before 1914 was so great that it took more than 75 years before it was surpassed in the 1990's, in spite of a much faster population-growth. We may conjecture that if the international gold standard and the trading system of the world financed by real bills had not been destroyed by World War I, then the volume of world trade would have increased to a level several times higher than what it is today, and the resulting prosperity would have by and large eliminated poverty from the face of the earth.

The lesson: it is not enough to give independence to the native peoples of former colonies. You also have to give them self-liquidating credit, the gold standard and real bills, which formerly made it possible for them to participate in world trade on equal terms!

Critics of the Real Bill Doctrine

In spite of this great success story, and in spite of its impeccable genealogy and a most distinguished pedigree, the Real Bills Doctrine was subjected to vicious and unfair criticism both on left (e.g., by Milton Friedman) and right (e.g., by Ludwig von Mises). Later on during this semester I shall go into the details of this great controversy between the Quantity Theory of Money and the Real Bills Doctrine which ended with the apotheosis of the former and discrediting the latter. I shall also go through the origins of the real bill and the distortions whereby the commercial paper system to furnish elastic currency for the benefit of the people was corrupted and turned into a fiat money system monetizing debt. I refer to the story of the origin of real bills circulation by the name "The Second Greatest Story Ever Told", to emphasize that its roots are embedded in moral principles. The story I shall tell in twelve episodes is a real treat which I have reserved as a reward for my faithful audience that won't give up as the going gets tougher occasionally when we have to fight our way through some abstract passages.

All I want at this point is to indicate the importance of real bills from the point of view of the future. A complete re-evaluation of the Real Bills Doctrine is necessary. The new gold coin standard can succeed only if it is implemented in conjunction with real bill circulation. Only in this way can we ensure the needed elasticity of purchasing media to follow the seasonal and secular fluctuations in the demand for it. It is unrealistic to expect that the gold coin standard, unaided by real bills circulation, can meet these fluctuations. Indeed, the payments system would seize up during every Christmas shopping season, or whenever division of labor is refined by implementing new inventions, for reasons of dearth in the supply of purchasing media. We should remember that the supply of gold is highly inelastic (which is, paradoxically, the main reasons for gold to have become the monetary metal *par excellence*). So the choice is between (1) retaining the banking system which is liable to issue unsound credit thereby undermining the monetary system as it has done in the past, or (2) replacing the banking system by real bills circulation, which will not only provide the needed purchasing media, but will do it with transparency, satisfying the requirement of full disclosure. In the interest of the soundness and durability of the new international monetary system, we should decide against the banks including central banks, and opt for real bill circulation including the financing of world trade with bills of exchange payable at maturity in Gold Eagles.

Gold Coin, the Ballot Paper of the Consumer

The combination of a gold coin standard and real bill circulation is necessary if we want to put supreme economic power back into the hands of the people. The consumer must have gold coins, rather than bank notes, at his disposal as he goes to the market. The gold coin is his 'ballot paper' with which he casts his vote on a daily basis. If the consumer is denied the gold coin, then he is denied the right to vote. The act of purchasing goods with bank notes is not the same as purchasing with gold coins. In the former case the decision what to produce, how much, and when, has already been made by the issuer of the bank note. Too bad if the offering is not to the consumer's liking. He must 'take it or leave it'. He must 'grin and bear'.

In the latter case the consumer is the decision-maker himself. He is in the driver's seat. He has the whip: he can withhold the gold coin if he doesn't find what he wants. The producer and the distributor know this and they take the order directly from the consumer, not from the banker. The consumer is the boss; the producer and distributor are his most obedient servants who try to anticipate every wish of his.

It is important to see why the bank note couldn't be used to extinguish the liability at maturity. It would be tantamount to rolling the bill over, violating the absolute prohibition that maturity must never exceed the limit of 91 days. At any rate, it would take the power away from the consumer and transfer it to the issuer of the bank note, the banker. In order to safeguard the integrity and solvency of the clearing system, gold coins

must be used to liquidate the credit represented by the real bill. The sovereign consumer, the ultimate guardian of the gold coin, will liquidate the credit at maturity in buying the consumer goods of his choice.

It was Lloyd W. Mints of the University of Chicago who coined the term 'real bill'. Later his student Milton Friedman popularized it in an effort to give the bill of exchange a pejorative connotation. However, the neologism backfired. The disparager hit upon a term that described the object of his scorn admirably well. A bill of exchange is a real bill in that it represents *real* goods making a real move to a *real* consumer holding a *real* gold coin as the carrot (if he spends it) or as the stick (if he doesn't). An irredeemable bank note is a *phoney* bill, representing bad faith on the part of the issuer, ignorance on the part of the producer who gives up *real* goods and services in exchange for irredeemable promises to pay, and bondage on the part of the saver who has been thrown into slavery by his government when his gold coin was confiscated.

Why Gold?*

One hundred years ago, just after the turn of century, the gold standard ruled supreme in the world of public and private finance. No economist in good standing ever dared to question its underlying principles. Governments were eager to write gold clauses on their bonds so that they could get a higher price and a lower rate of interest. Great Britain prided itself of being the unchallenged world champion of sound money for centuries. France had successfully defended its metallic monetary standard through a century of devastating social revolutions and foreign wars. Germany, a junior member of the club of great powers, and considered an upstart by the senior members, was busy emulating the monetary policies of its peers. Germany used gold extorted from France as reparation at the end of the Franco-Prussian War to convert its monetary standard from silver to gold. The United States could do no less. After the Resumption of 1879 it enacted the Gold Standard Act of 1900 which was supposed to undo the questionable legacy of the Greenback Era for once and all, after a thorough public debate on the merits and demerits of the gold standard. Russia and Austria-Hungary were making economic sacrifices to appear every bit as credit-worthy as the other great powers in adopting a *de fact*o if not a *de jure* gold standard.

Now we are at another landmark, the start of a new century and millennium. The gold standard has become a butt of jokes. It is bad-mouthed as the rich man's ploy. Little is it recognized that the gold standard, provided that its rules are meticulously observed by the banks and governments, has always been the best friend of the little guy, of widows and orphans, and in particular the wage earners. They have no time and inclination to follow the topsy-turvy world of the financial markets. The gold coin was the only form of capital to which the working man had access, until it was denied to him. It was the gold coin that had put the wage earner into the driver's seat, letting him decide what to produce when

and how much. The gold coin was the ballot paper with which wage earners cast their vote of confidence or non-confidence concerning the performance of the captains of industry. When the gold coin was taken away from them, they have been disenfranchised, along with the savers and producers.

Why gold? Gold is needed as the essential agent for the litmus test of good faith in financial dealings. Gold needs no endorsement. It can be tested with scales and acids. The recipient of gold does not have to trust the government stamp on it if he does not trust the government that had stamped it. No act of faith is called for when gold is used in payments, and no compulsion is required.

Gold is highly unpopular with banks and governments. Why? Because gold is a most unimaginative taskmaster. It demands that not only men but also governments and banks be honest. It demands that they keep their promises. It demands that banks keep their demand liabilities safely within the limit of their quick assets. It demands that governments create no debts without seeing how they can be paid. If a country has a government and banks that will do these things, gold will stay with it and will come to it from other countries. But when a country's government creates debt lightheartedly, when its central bank makes the rate of interest artificially low in buying government securities to feed the country's money market, when it permits an expansion of credit that goes into slow and illiquid assets -- then gold grows nervous. Mobile capital of all kind grows nervous. There occurs a flight of capital out of the country. Foreigners withdraw their funds from it, and its own citizens send their liquid funds abroad for safety.

When suspension of gold payments eventually comes, speculators in the foreign exchange market treat paper currency most disrespectfully. They will sell it short. They will buy it only at a discount. The amount of discount is governed primarily by the expectation as to whether and when the government and the central bank will reverse its unsound policy and work back to orthodoxy and monetary rectitude.

Can we have irredeemable currency in a free country with free markets? Paper money is not merely a promissory note, of course. It is also legal tender. The government will, moreover, receive it as tax collector. Then there are various elements of patriotic support from a loyal citizenry for the paper. But beyond that, irredeemable currency embodies coercion. Legal tender, as the word is understood today, is extortion. It requires producers to give up real goods and services in exchange for irredeemable promises of uncertain value. Promises which the issuer has neither the intention nor the means to keep. All the same, the prestige of a great government and a long-established government can go far in upholding the value of its paper money even if the rational foundation for the value of the paper, redeemability, has been overthrown.

Ever since 1931 there has been a great deal of 'hot money' or nervous money in the world, jumping about from country to country seeking safety, refusing to be committed to long-term investments in any one country. Hot money jumps from one country to another not because it has found safety but because, for the moment, the former appears less safe than the latter. The origin of hot money was the excessive bank expansion of the 1920's.

Bank balances had risen tremendously under the cheap money policy of the 1920's. The nervousness of funds was due to the deterioration in the quality of excessive credit. Following World War II the policy of cheap money continued, and the problem of hot money became more pronounced, leading to a permanent state of currency crisis. The crisis continued even after the United States adopted extreme measures to let interest rates go stratospheric in the 1970's. Today, once more, cheap money is the order of the day, and hot money may be expected to resume its *danse macabre* any time.

A country which is afraid of hot money, money which may suddenly jump to another country, has a very simple way of avoiding that danger. There is no need for controlling the movement of capital. There is no need for foreign exchange regulations. The country can keep its liquid capital within its boundaries by creating a financial environment in which money cools off and wants to stay. In other words, by having a sound currency.

It was the prevailing doctrine among economists down to World War I that governments could not coerce their peoples into accepting at face value a dishonored paper money. But World War I and, even more so, World War II, brought an immense revival and intensification of governmental power over the lives of the people. A good many new techniques of price fixing and control of foreign exchange operations were introduced. They were devised to prevent transactions which would reveal the depreciation of irredeemable paper money. After 1971 the character of these techniques changed. Emphasis was shifted from foreign exchange controls to discouraging people from buying and holding gold as an instrument of saving. The earlier direct ban on gold ownership was lifted reluctantly, but in its place there is now an elaborate effort attempting to cap the price of gold through propaganda, through the escalation of the creation of paper gold (gold futures, options on gold futures, etc.) And, of course, producers of gold are bribed and holders of gold are blackmailed. It should be clear, however, that the psychological war on gold is counter-productive. More and more monetary gold is passed from official to private holdings in addition to newly mined gold, none of which finds its way into holdings any more. When a certain threshold is reached, the tables will be turned on the governments and central banks. They will no longer be in the position to dictate the future monetary role of gold in the world.

It is to be regretted that governments are not making the necessary preparations for a smooth transfer of power. The purpose of these lectures is to enlighten public opinion, if only in a modest way, that has been thrown into a great darkness by power-hungry governments.

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* A paraphrase of Benjamin M. Anderson's "The Tyranny of Gold".

Reference

An Inquiry into the Nature and Causes of the Wealth of Nations, by Adam Smith

Economics and the Public Welfare -- A financial history of the United States 1914-1946, Chapter 64: The Tyranny of Gold, by Benjamin M. Anderson, first published in 1949; second edition: Indianapolis (Liberty Press) 1979, p 414 ff.

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GOLD STANDARD UNIVERSITY

SUMMER SEMESTER, 2002

Monetary Economics 101: The Real Bills Doctrine of Adam Smith

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Lecture 2: Don't Fix the Dollar Price of Gold
Lecture 3: Credit Unions
Lecture 4: The Two Sources of Credit
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FALL SEMESTER, 2002

Monetary Economics 201: Gold and Interest