

Eleventh Conference of International Philosophers for Peace

Radford University

May 24 – 27, 2007

Democratic Money Antidote to Empire

Bob Blain, Ph.D

Emeritus Professor of Sociology
Southern Illinois University Edwardsville

In a nutshell

Plutocratic money is the instrument of empire.

Democratic money is the instrument of autonomous cooperation.

To transform plutocratic money into democratic money:

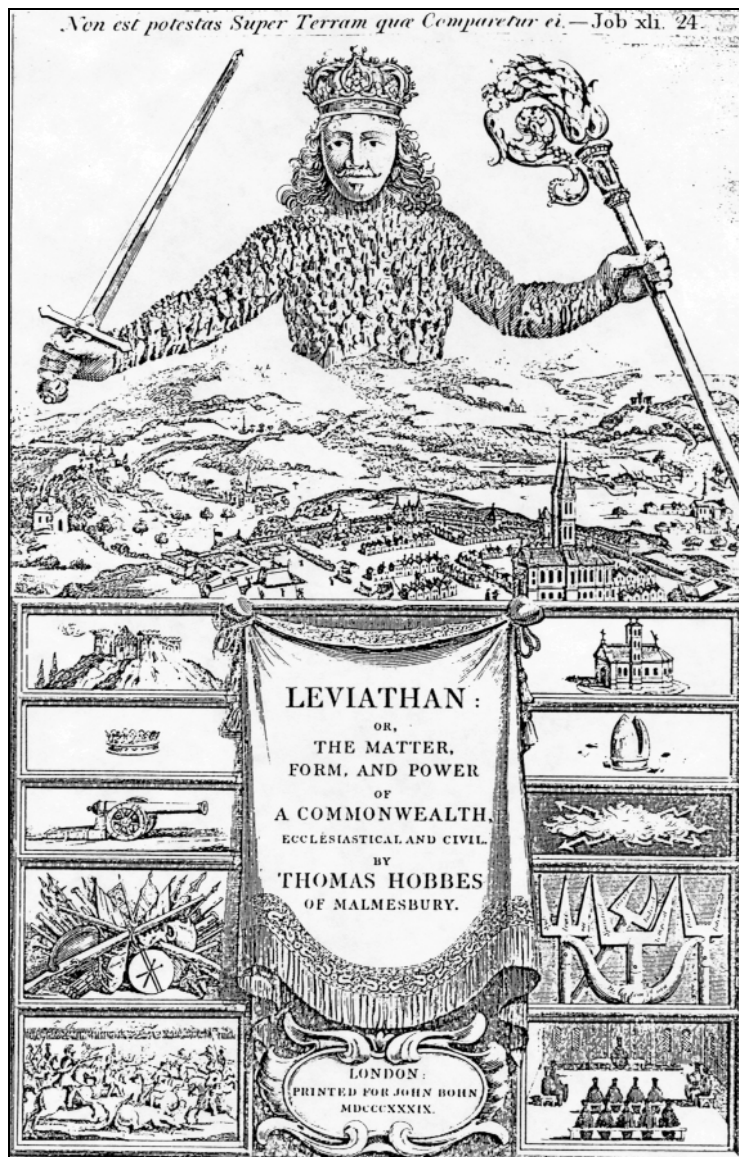
1. Have a democratic government issue money, and
2. Denominate money in work time.

Empire

Empire is “a political unit larger than a kingdom and often comprising a number of territories or nations, ruled by a single supreme authority” (American Heritage Dictionary, p. 428). Empire requires centralized control over vast territory. World empire requires centralized control over the entire earth.

Thomas Hobbes (1588-1679) portrayed what are generally recognized as the means of imperial control in the frontispiece of his 1651 classic, *Leviathan*. Hobbes’ Sovereign presides over a peaceful countryside. The body of the Sovereign consists of many other people, signifying that the Sovereign rules with the help of many others. The Sovereign holds a sword in one hand and a torch in the other, signifying rule by military force and religious faith. The smaller drawings show that force and faith have parallel features; castle and church, crown and miter, cannon and lightning bolts, weapons and forks, and battles and courtrooms.

Hobbes’ scene is local. His theory posed the “Hobbesian problem of social order.” No army could ever be large enough to control the 6.5 billion people on earth. How would such a huge army be controlled. Who would police the police? Empire would remain local unless some other means of control could be found. It was found. It is plutocratic money.



Plutocratic Money

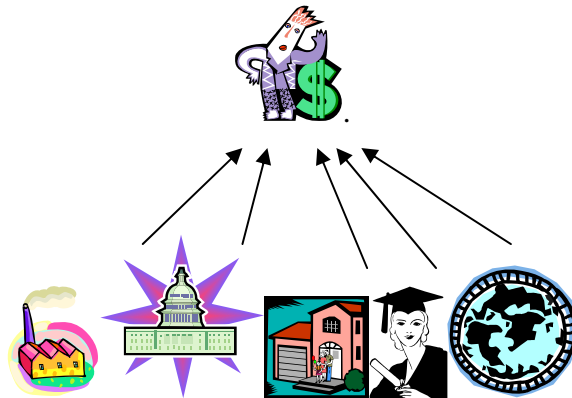
We have plutocratic money today, so its features are familiar.

1) Plutocratic money is created as *loans*. The creation of plutocratic money is obscured by it being described as the “fractional reserve system.” The label makes it seem that banks lend a portion of money that they have on hand. The booklet, *Modern Money Mechanics*, published by the Federal Reserve Bank of Chicago, states that bank reserves are increased by writing a check.

“The Federal Reserve System buys ... U.S. government securities ... with a check issued on itself ... in effect, by *creating* [emphasis in the original] a liability on itself” (October 1982: 6).

Everyone knows that money doesn't grow on trees, but who realizes that money is created by Federal Reserve bankers by a bookkeeping entry?

Because plutocratic money is created as loans, its creators never lose control of it. It is always owed, never owned. No matter how far from the creditors the money might flow, it must always find its way back to them.



Such is the superior sovereignty of money over the sword and the church. The sword and the church are themselves controlled by plutocratic money. Kings have had to borrow money to fight wars. In his book, *Behemoth* (1682), Hobbes had one of his characters say, “If the King had had the money, he would have won the war.”

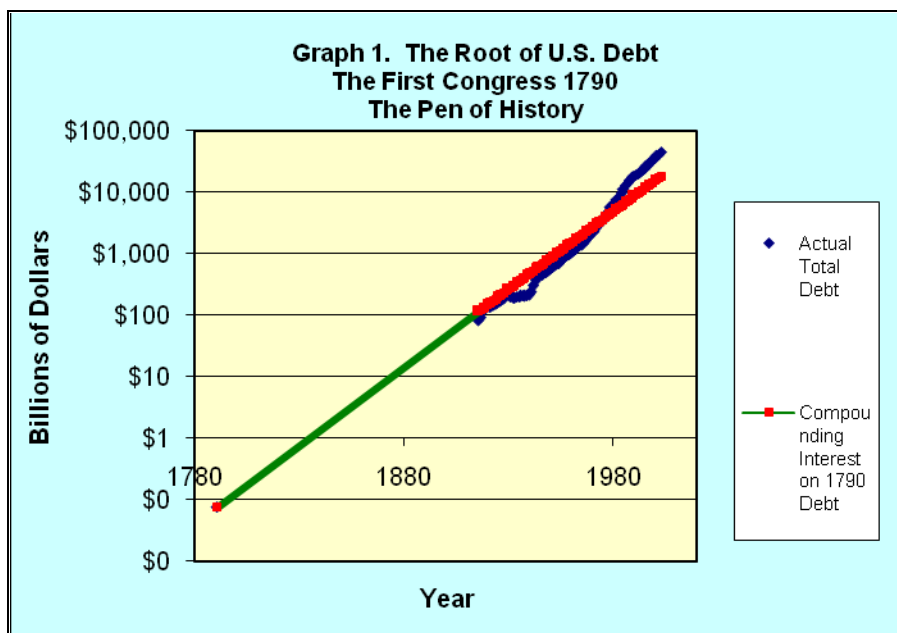
Creditors control plutocratic money, not governments. Mayer Amschel Rothschild is reputed to have said in 1790, “Let me issue and control the money supply of a nation, and I care not who makes its laws.” Whether or not he said it, it expresses the supremacy, the sovereignty, of plutocratic money.

If all debts were repaid, no money would remain in circulation. Individual debtors can repay their debts, but collectively there must always be more debtors to keep borrowing plutocratic money back into circulation.

Interest must be paid on plutocratic money forever. What money is available to pay interest? The borrowed money, the principal. Interest must be paid from the debt money supply itself. The plutocratic money supply must cannibalize itself. Then as soon as the first interest payment is made, the remaining debt money supply is *less* than total debt. If all debts were repaid at once, someone would be bankrupt. When bankruptcies occur, creditors collect the real property collateral and give new debtors the loans they need to purchase that collateral (Gertrude Coogan, *The Money Creators*, Omni Publications. 1967, orig. 1935).

The persons paying the interest change, but there must always be persons paying interest. That interest is out of sight. When homes are advertised, interest is never included in the price. Buyers may be told the interest *rate* and the monthly payment, but never the total dollars they will pay by the time the mortgage is paid. Interest is hidden in the prices of everything we buy. We are always told the sales tax, but not the interest contained in the price.

Interest on the public debt of the United States in 2006 was \$406 billion. Total Federal public debt is \$8.8 trillion. Total public and private debt of the entire United States economy is now close to \$50 trillion. How did that happen? It happened by compound interest on the original Federal debt of \$75 million. Increasing \$75 million at an annual rate of 6 percent generates the straight line in Graph 1. It intersects actual total public and private debt almost perfectly. Increase \$75 million by 6.4 percent for the 216 years from 1790 to 2006 to get \$50 trillion. In other words, total debt, not just Federal debt, is the original Federal debt increased by compounding interest, *almost nothing more*.



Hard to believe? It was predicted on February 9, 1790 by James Jackson, First Congressman from Georgia (*The Annals of Congress*, Vol. 1, pages 1140-1143). Congress was taking up its first item of business, what to do about the Revolutionary War debt. First Secretary of the Treasury, Alexander Hamilton, had proposed that Congress pass “The Funding Act” promising to pay interest on that debt. Jackson complained on January 28, 1790, that congressmen were sending agents into the countryside to buy up debt certificates believed to be worthless, knowing that Congress was about to make them worth a fortune.

"Since this report has been read in this House a spirit of havoc speculation and ruin has risen and been cherished by people who had access to the information the report contained that would have made a *Hastings* blush to have been connected with, though long inured to preying on the vitals of his fellow men. Three vessels, sir, have sailed within a fortnight from this port freighted for speculation; they are intended to purchase up the State and other securities in the hands of the uninformed, though honest citizens of North Carolina, South Carolina and Georgia. My soul rises indignant at the avaricious and immoral turpitude which so vile a conduct displays."

On February 9, 1790, Jackson made his case against the Funding Act.

"It is doubtful with me whether a permanent funded debt is beneficial or not to any country; some of the first writers in the world, and who are most admired on account of the clearness of their perceptions, have thought otherwise, and declared that wherever funding systems have been adopted in a Government, they tend more to injure posterity than they would injure the inhabitants to pay the whole debt at the time it was contracted."

Jackson then cites the experience of Florence, Genoa, Venice, Spain, France, and Great Britain in which funded debts had grown exponentially. He warns the First Congress:

"I contend that a funding system in this country will be highly dangerous to the welfare of the Republic; it may, for a moment, raise our credit, and increase our circulation by multiplying a new species of currency; but it must hereafter settle upon our posterity a burden which they can neither bear nor relieve themselves from. It will establish a precedent in America that may, and in all probability will, be pursued by the Sovereign authority, until it brings upon us that ruin which it has never failed to bring, ... Let us take warning by the errors of Europe, and guard against the introduction of a system followed by calamities so universal. Though our present debt be but a few millions, in the course of a single century in may be multiplied to an extent we dare not think of; for my part, I would rather have direct taxes imposed at once; which, in the course of a few years, would annihilate the principal of our debt....

"Gentlemen may come forward, perhaps, and tell me, that funding the public debt will increase the circulating medium of the country, by means of its

transferable quality; but this is denied by the best informed men. The funding of the debt will occasion enormous taxes for the payment of the interest. These taxes will bear heavily, both on agriculture and commerce. It will be charging the active and industrious citizen, who pays his share of the taxes, to pay the indolent and idle creditor.

“Thus the honest and hard-working part of the community will promote the ease and luxury of men of wealth; such a system may benefit large cities, like Philadelphia and New York, ... but the remote parts of the continent will not feel the invigorating warmth of the American treasury; in the proportion that it benefits the one, it will depress another.”

He concludes:

“These considerations induce me to wish that the further consideration be postponed for the present.”

The Funding Act was passed by the First Congress.

James Callender, a reporter for The Philadelphia Gazette, complained at the time.

“The funding law was passed through Congress by the influence of a majority, who purchased certificates from the army at under value; and who voted for the law, with the single view of enriching themselves. It is firmly believed and loudly asserted, by at least one half of the citizens of America, that the funding system was devised, not for the sake of paying the real creditors but of wronging them. Hamilton planned, Congress voted. The president approved” (G. R. Taylor, *Hamilton and the National Debt*. Boston, Heath. 1950, pp. 61-64).

Members of the First Congress acted to promote their own welfare at the expense of the general public, classic corruption.

A farmer's letter to the editor predicted,

“Such injustice and oppression may be colored over with fine words; but there is a time coming, when the pen of history will detect and expose the folly of the arguments in favor of the proposed system, as well as the iniquity” (Taylor, p. 53).

The word was “iniquity,” not “inequity.” The proposed system was regarded as evil, not just unfair.

The money of the United States has been plutocratic since the First Congress. Imperial control now extends around the globe. The dollar has become the *de facto* world currency. Control does not reside with the United States government. It never has. Control resides with owners of the debt.

2. Plutocratic money has no unit of measure. What is a “dollar”? It is a word that refers to United States currency. It does not refer to a “known quantity” as in the case of the meter. Meter refers to an actual physical length. Dollar does not, nor does the Australian dollar or any other national currency¹.



Ambiguity in the value of plutocratic money allows plutocrats to accumulate unlimited amounts of money and it facilitates the imperialistic exploitation of poor countries through currency exchange rates.

Units of measure are actual physical quantities. The meter has an actual length. The gram has an actual weight. The liter has an actual volume. The numbers on plutocratic money are just numbers. They have no definition, no actual observable quantity. Dollar was initially defined in the weight of gold and silver. That was a proper definition in the sense that it was an actual objective quantity. Dollar then had a unit. The problem was that weight is not a valid measure of price. The unit for money must be a price, not a weight.

Every physical quantity has natural limits: corn, water, land, timber, the amount of food we can eat, clothes we can wear, and so forth. Plutocratic money has no physical limit because it

¹ Ithaca Hours is a local currency in hours. Many local currencies use hours.

has no unit of measure. Consequently, lottery prizes run in the hundreds of millions, juries award billions of dollars in lawsuits, and plutocrats become multi-billionaires. We sense, intuitively, that such sums are somehow unreasonable, but who can prove it? Plutocratic money has allowed money income to become unequally distributed beyond any reasonable limit.

The modern mechanism of imperial extraction of resources from Third World countries is plutocratic currency exchange rates. Currencies are a babel of names: bahts, dinars, dollars, euros, pesos, pula, yen, yuan, and many others (Table 2 below). Their relative values are published to four decimal places, implying precision but actually nothing of the kind. Their value is most often expressed relative to the U.S. dollar. However, the U.S. dollar is just another undefined money number. We are told to have faith in the market to set currency exchange rates. Hobbes' faith in religion has been replaced by faith in the market. I will show you below that exchange rate disparities are precisely what we would expect of plutocratic money; they hide overcharging countries of the Third World to subsidize countries of the First World.

The overall aspect of a plutocratic money economy is debtors competing with each other for what is always less money than the total amount of money owed, growing income inequality within and among the countries of the world. Meanwhile creditors are safely behind the scene, undisturbed, far in the background, watching their claims on everyone else grow exponentially by compounding interest.

Democratic money.

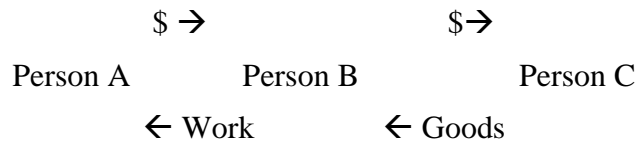
1. To be democratic, money must originate from a democratic government. Creditors are not elected. Debtors cannot control the development of their communities; bankers control them. With democratic money, citizens would control their communities through their elected representatives.

Democratic money is best paid² into circulation as certification for work done. Money would then enter circulation debt free and interest free. Money would circulate as does blood in the human body. Democratic money would flow equitably to all parts of the global human family.

Money's purpose is to communicate reciprocity. Money is a note. Notes convey messages. The money message is reciprocity. When person B works for person A who has no real good or service to give in exchange for that work, person A gives person B money. Person

² Democratic money could be granted to "prime the pump" initially.

B takes that money to person C to buy the good or service that is then the actual pay for the work done for person A.



Plutocratic money cannot communicate reciprocity because it has no unit to define a reciprocal exchange. Democratic money would improve reciprocity.

2. The denominator of democratic money would be work time. Person A would give person B notes equal to the amount of time person B worked. The exact amount of time would be negotiable between persons A and B. It might be less or more than strictly an hour of money for an hour of work. A and B would decide the amount; they know best the circumstances of the work. Person B would then take those notes to other persons C, D, E, etc. to buy goods and services. Because everyone would know the meaning of work time, transactions would be more reciprocal.

People already know intuitively that time and money belong together. They are spoken of together. We save time and money. We spend time and money. We invest time and money. We waste time and money.

Adam Smith (1723-1790) began his classic *Wealth of Nations* (1776) with the sentence, “The annual labour of every nation is the fund which originally supplies it with all the necessaries and conveniencies of life.” A few pages later, he wrote, “Labour was the first price, the original purchase-money that was paid for all things” (Smith, 1963:24). A few pages later, Smith rejects using time to measure labor. Having rejected what would have been the correct unit, Smith tried to justify using gold and silver as money. Today, we know better. However, instead of identifying the proper unit for money, the quest was abandoned in favor of faith in the market. The proper unit has always been present, but like gravity, it has gone unnoticed.

Equal Work Time: The Center of Gravity of Currency Exchange Rates

Work time is the center of gravity of currency exchange rates. To see it, we need to use GDP as a measure of Gross Domestic *Price* rather than Product. GDP is compiled by adding the money *prices* of all goods and services produced in a country in a year. It is not compiled by adding their values. Values are qualitatively and quantitatively different from prices. The value of a house is not its price. The value of a house is as a place to live. People pay the price to

obtain its value. The value of water cannot be measured in money. A glass of water from a faucet has the same value as one from a bottle, but their prices are very different because water from a faucet and bottled water are produced by very different processes.

Given GDP is a measure of total annual price in *money*,³ what is the actual price that we pay for goods and services? It is work. If no one worked, there would be no wealth. If money did not exist, we would still have to pay the price of work.

How do we measure work?

We measure work by its duration, by clocks and calendars. People are paid by the hour, by the week, by the month. Every aspect of economies is organized by time. People enter and leave the work force at a certain age. Rent, interest, and taxes come due at certain times. Mechanics, plumbers, carpenters, and lawyers charge a certain rate per hour. The only item that has escaped the discipline of time is money.

GDP as total money price divided by the total hours of work that produced it equals a money's value per hour of work.

$$\frac{\text{Gross Domestic Product}^4}{\text{Total Hours Worked}^5}$$

GDP's per hour correlate with IMF currency exchange rates a remarkably strong, $r = .86$ (Chart 2).⁶ Equally strong correlations have existed for all the years that the IMF has published the data. Like earth's gravity, work time has been the center of gravity for currency exchange rates at least since 1948.⁷ But, like gravity, its presence is unnoticed. Instead, we give credit to the invisible hand of the market. Benjamin Franklin and Karl Marx, among others, argued that work time is the socially and morally proper standard of price.⁸ Here is evidence that they were correct.

Work time is *de facto* the world money unit.⁹ What remains is to make it *de jure*, the official standard of currency exchange rate parity, so that remaining disparities can be

³ A corollary of GDP as price is that we should seek to minimize it while optimizing actual value, the path to sustainability.

⁴ Line 99b, *International Financial Statistics*, country pages.

⁵ I estimate total hours worked with employment (line 67e in *IFS*) times 2000, assuming 50 weeks of 40 hours.

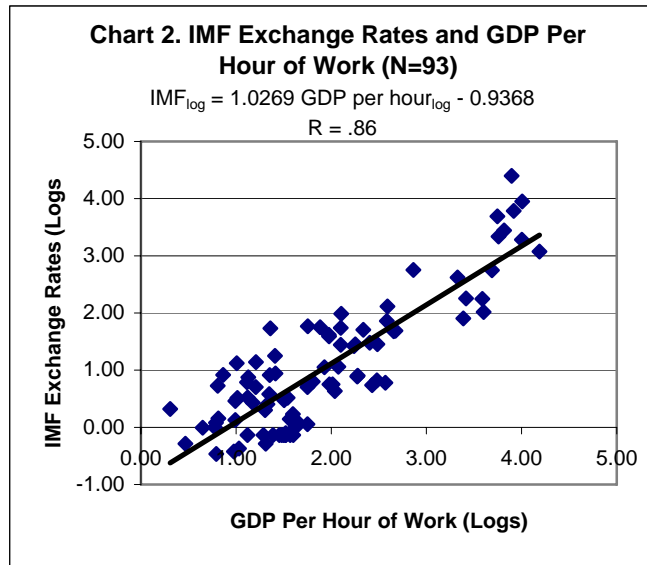
⁶ Logarithms are necessary because of the huge range of exchange rate values.

⁷ Bob Blain, "Defining exchange rate parity in terms of GDP per hour of work," *Applied Behavioral Science Review*, 4 (1), 1996, 55-79.

⁸ Although he rejects the use of time to measure labor, the very first three words of Adam Smith's 1776 classic, *The Wealth of Nations*, are: "The annual labour."

⁹ Blain, Robert, 2002, "The Hour is *de facto* World Money Unit," in *Monetary Unit Stability in Holistic Approach*. Leon Kozminski Academy: Warsaw Poland.

eliminated. Their elimination is an antidote to empire because the disparities are the means of imperial exploitation.



GDP per hour gives us two ways to calculate exchange rate parity. One way is to use the equation for the center line, shown above the graph in Chart 2. The equation and the graph are logarithms, so the results need to be converted to work time. If all countries had exchange rates that put their currencies on the line, their exchange rates would be about 10 minutes of work.

Many countries are already on or close to the line. Countries *above* the center line have exchange rates that are too high. They are paying more than an equal amount of work time to purchase the currencies and products of countries below the line. Countries above the center line are Third World countries.

Countries *below* the center line have exchange rates that are too low. They pay less than an equal amount of work time to purchase the currencies and products of countries above the line. Countries below the line are First World countries.

The second way to identify disparities is to divide exchange rates by GDP per hour of work. Multiply by 60 to express the result in minutes of work.

$$\frac{\text{Exchange Rate}^{10} \text{ times } 60}{\text{GDP per hour of work.}}$$

All currencies, including the United States dollar, are now expressed on a single scale of the known quantity, minutes of work (Table 1). Let's look at just one disparity that exemplifies

¹⁰ Line *ae* of International Financial Statistics country pages.

Economist Paul Samuelson suggested the most direct democracy. I had to get beyond being offended by his explanation of how the market system works to see it. Samuelson used this example with only minor variations in edition after edition of his economics textbook. He describes supply and demand pricing as:

“a vast system of trial and error, of successive approximation to an equilibrium system of prices and production.... Goods go where there are the most votes or dollars. John D. Rockefeller’s dog may receive the milk that a poor child needs to avoid rickets. Why? Because supply and demand are working badly? Quite badly from ethical viewpoints, but not from the standpoint of what the market mechanism is alone geared to accomplish. Functionally, auction markets are doing what they are designed to do – putting goods in the hands of those who can pay the most, who have the most money votes. Defenders and critics of the price mechanism should recognize this fact” (Samuelson, *Economics*. 1976:46-47).

I was and still am offended by how he accepts that a dog gets milk that a child needs to avoid rickets. That alone should disqualify the use of this vast system of trial and error to allocate goods. I have also always been offended by how he equates votes with dollars. Votes are allocated by the rule, one person, one vote. Dollars are not; their allocation is governed only by this vast system of trial and error! However, suppose dollars were allocated by an ethical standard of fairness? That would make all the difference in the world. That would constitute the most direct form of democracy.

The most direct form of democracy is people controlling their own lives. *Demo*-cracy, literally, rule by the people, does not need to mean rules decided by majority rule. Majority rule has always raised the issue of minority rights. Direct democracy can also mean, and in its fullest form does mean, each person governing their own life autonomously. Democratic money can establish that kind of democracy because it would operate like the metric system operates with all other weights and measures.

With the Metric System, governments endorse its units and insure that measuring instruments like scales and meter sticks are accurate. Then people *vote directly* in their daily actions for the lengths, weights, and volumes of goods and services they want in their lives, both in the ones they produce and in the ones they purchase. The Metric System facilitates unity in diversity, people applying the same standard units across all occupations: farming, mining, architecture, health care, science, and travel, to name a few.

Democratic money would establish that kind of direct democracy. Initially, when prices were converted to their equivalent in work time by dividing them by a country's GDP per hour of work, we could see immediately which prices are unreasonably high and which are unreasonably low. For example, GDP per hour in the United States today is about \$50. Dividing a minimum wage of \$5 per hour would convert it to 10 percent of an hour, or 10 cents an hour, unreasonably low. Dividing \$500 an hour by \$50 would convert it to 10 hours of money per hour of work. Maybe that would be reasonable based on circumstances, but it would certainly be a rate of pay the relevant parties would want to talk over. With work time as the recognized ruler of price, pricing would become wiser, more efficient, and more amicable. Democracy would be truly self-government by autonomous individuals, treating each other with equality and respect within and far beyond their communities.

Democratic money can be global, paid into circulation, flowing freely and accurately with prices expressed in work time worldwide, people buying and selling with confidence that they are being paid and are paying fair prices.

Reasonable Deviations

The beauty of money is that it decentralizes decisions. Money is the quintessence of self-government. Plutocratic money perverted money self-government because it is loaned at interest without a proper definition of its unit of measure. Those defects corrected, people would be free to negotiate whatever deviations they can agree to.

Like the meter as a unit of length does not require all objects to be the same size, all prices need not be an hour of money for an hour of work. However, anyone wanting a deviation from the standard, whether above or below it, would need to negotiate that deviation with work supervisors and merchants. Reasons they might use could include skill, overhead, education costs, hazard, overtime, yes, even supply and demand. The question would always be: is the proposed deviation *reasonable* relative to the standard an hour of money for an hour of work.

How would Democratic money be an antidote to Empire?

I assume that leaders everywhere want to help the people they lead, whether they be kings, queens, presidents, prime ministers, police, lawyers, ministers, or work supervisors. Bankers are leaders, as are brokers and stockholders. Plutocratic money embodies bad math. Give a leader a job based on bad math and you will get a bad result. That is what plutocratic money is doing. The math of compound interest is producing an exponentially expanding

unequal distribution of money. The rich are getting richer faster than ever, the poor poorer faster than ever, with the space in between completely filled with people of every varying degree of income.

Democratic money would give everyone an objectively clear idea of a fair wage and a fair price worldwide. Fair has been missing from the language of economics far too long. Converting plutocratic money to democratic money would reveal unreasonable prices and guide their adjustment. The general standard of a fair price would be an hour of money for an hour of work, pure and simple. Gone would be faith in mysterious and nameless market forces. Prices would be matters of simple arithmetic. Exchange rates would be adjusted to work time parity.

Empire would be gone. No more plutocratic debt trap. No more plutocratic currency exchange rates. Empire would be transformed into autonomous cooperation, worldwide, with money working like the Metric System, people worldwide making their pricing decisions with confidence that they are treating others fairly and are being treated fairly.





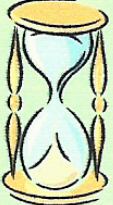
01 HOUR		Democratic Money Prototype		01 HOUR
	<p>Share the work. <i>Issued by a democratic government.</i></p>		<p>Share the wealth. <i>Paid democratically in work time.</i></p>	
01 HOUR	<p>An hour of money for an hour of work. <i>The human price of everything is the labor required to produce it.</i></p>			01 HOUR

Table 2. Data and Calculations of GDP per Hour (93 Countries)

IFS Dec 2005		Latest Year	IMF Ex Rate (line ae)	GDP (line 99b)	Employed (line 67e)	GDP Per Hour	IMF Ex Rate
Country	Currency		Per \$US	Billions	Millions	Currency	Minutes
Algeria	Dinars	2003	72.613	5124	6.684	383.30	11.37
Argentina	Pesos	2002	3.32	313.039	11.827	13.23	15.05
Armenia	Dram	2003	566	1624.643	1.1116	730.77	46.47
Australia	Dollars	2004	1.28	836.95	9.677	43.24	1.78
Austria	Euros	2004	0.7342	237	3.2	37.03	1.19
Azerbaijan	Manat	2004	4903	41873	3.764	5562.30	52.89
Bahrain	Dinar	2001	0.3760	2.9812	0.157	9.49	2.38
Bangladesh	Taka	2000	54	2370.9	51.764	22.90	141.48
Barbados	Dollars	2002	2	5.197	0.129	20.14	5.96
Belarus	Rubels	2004	2170	49445.2	4.32	5722.82	22.75
Belgium	Euros	2003	0.7918	270	4.07	33.17	1.43
Bolivia	Bolivianos	2002	7.49	56.818	2.118	13.41	33.50
Botswana	Pula	2002	5.4675	31.9224	0.279	57.21	5.73
Brazil	Reais	2003	2.888	1556.181	79.251	9.82	17.65
Bulgaria	Leva	2004	1.4359	38.008	2.923	6.50	13.25
Canada	Dollar	2004	1.2036	1290.19	16.021	40.27	1.79
Chile	Pesos	2004	559.83	57357	5.863	4891.44	6.87
China. P.R.	Yuan	2002	8.2773	10789.8	737.4	7.32	67.88
China: Macao	Patacas	2004	8.01	82.6855	0.218	189.65	2.53
China:H Kong	Dollars	2003	7.763	1208	3.223	187.40	2.49
Colombia	Pesos	2003	2780.82	229186	17.467	6560.54	25.43
Costa Rica	Colones	2003	418.53	6970.815	1.64	2125.25	11.82
Croatia	Kuna	2004	5.637	207.082	1.085	95.43	3.54
Cyprus	Pounds	2004	0.4250	7.2163	0.336	10.74	2.37
Czech Rep.	Koruny	2002	30.141	2414.7	4.765	253.38	7.14
Denmark	Kroner	2004	5.468	1460.5	2.72	268.47	1.22
Ecuador	Sucres	2004	25000	60,685	3.859	7862.80	190.77
Egypt	Pounds	2004	6.1314	485	18.62	13.02	28.25
El Salvador	Colones	2003	8.75	130.725	2.52	25.94	20.24
Estonia	Krooni	2004	11.471	141.493	0.596	118.70	5.80
Finland	Euros	2004	0.7342	149.73	2.365	31.66	1.39
France	Euros	2004	0.7342	1648.4	24.72	33.34	1.32
Georgia	Lari	2002	2.09	7.457	1.839	2.03	61.85
Germany	Euros	2004	0.7342	2215.7	38.868	28.50	1.55
Greece	Euros	2004	0.7342	167.2	4.313	19.38	2.27
Honduras	Lempiras	2003	17.7482	120.465	2.351	25.62	41.56
Hungary	Forint	2004	180.29	20338.2	3.9	2607.46	4.15
Iceland	Kronur	2002	80.58	766.239	0.157	2440.25	1.98
India	Rupees	2002	48.03	24633.2	27.206	452.72	6.37
Indonesia	Rupiah	2002	8940	1863275	91.647	10165.50	52.77
Ireland	Euros	2004	0.7341	148.5560	1.865	39.83	1.11
Israel	N Sheqalim	2004	4.308	523.851	2.401	109.09	2.37
Italy	Euros	2004	0.7342	1351.3	22.404	30.16	1.46
Jamaica	Dollars	2002	50.762	408.765	0.942	216.97	14.04
Japan	Yen	2004	104.12	505185	63.286	3991.29	1.57

Table 2 continued. Data and Calculations of GDP per Hour (93 Countries)

IFS Dec 2005		Latest Year	IMF Ex Rate (line ae)	GDP (line 99b)	Employed (line 67e)	GDP Per Hour	IMF Ex Rate
Country	Currency		Per \$US	Billions	Millions	Currency	Minutes
Kazakhstan	Tenge	2004	130	5582	7.166	389.48	20.03
Korea	Won	2002	1186.2	684263	22.169	15432.88	4.61
Kyrgyz Rep.	Soms	2004	41.625	94.08	0.499	94.27	26.49
Latvia	Lats	2004	0.516	5.9646	1.018	2.93	10.57
Lithuania	Litai	2004	2.535	62.44	1.463	21.34	7.13
Macedonia	Denar	2003	49.05	253.454	0.268	472.86	6.22
Malaysia	Ringgit	2004	3.8	447.547	10.033	22.30	10.22
Malta	Liri	2004	0.3425	1.8305	0.148	6.18	3.32
Mauritius	Rupees	2004	28.204	174.501	0.488	178.79	9.46
Mexico	Pesos	2003	11.236	6891.43	40.633	84.80	7.95
Moldova	Lei	2003	13.22	27.619	1.357	10.18	77.94
Morocco	Dirhams	2004	8.218	443.67	9.822	22.59	21.83
Myanmar	Kyats	1999	6.1992	2190.32	18.359	59.65	6.24
Netherlands	Euros	2004	0.7342	488.6	7.445	32.81	1.34
New Zealand	Dollars	2004	1.392	147.542	2.017	36.57	2.28
Nicaragua	Cordobas	2001	13.84	55.1553	1.702	16.20	51.25
Norway	Kroner	2004	6.04	1685.55	2.276	370.29	0.98
Pakistan	Rupees	2002	58.534	4401.7	38.882	56.60	62.05
Panama	Balboas	2003	1	12.9332	1.081	5.98	10.03
Paraguay	Guaranies	2003	6115	38805.5	2.351	8252.98	44.46
Peru	N Soles	2004	3.2815	234.261	3.367	34.79	5.66
Philippines	Pesos	2004	56.267	4826.3	31.613	76.33	44.23
Poland	Zlotys	2004	2.9904	883.656	13.795	32.03	5.60
Portugal	Euros	2004	0.7342	135.035	5.123	13.18	3.34
Romania	Lei	2003	3.26	190.335	9.223	10.32	18.96
Russia	Rubles	2004	27.7487	16752	66.496	125.96	13.22
Seychelles	Rupees	2002	5.055	3.8299	0.034	56.32	5.39
Singapore	Dollars	2003	1.7008	160.924	2.034	39.56	2.58
Slovak Rep.	Koruny	2004	28.496	1325.486	2.17	305.41	5.60
Slovenia	Tolars	2004	176.24	6251.2	0.807	3873.11	2.73
Solomon Is.	Dollars	1999	5.0761	1.839	0.057	16.13	18.88
South Africa	Rand	2004	5.63	1374.476	6.659	103.20	3.27
Spain	Euros	2004	0.7342	838	17.1166	24.48	1.80
Sri Lanka	Rupees	2003	96.738	1761.161	6.906	127.51	45.52
St. Lucia	E. Carib. \$	2003	2.7	1.9126	0.0639	14.97	10.82
Suriname	Guilders	1999	0.9875	0.65	0.073	4.45	13.31
Sweden	Kronor	2004	6.6146	2545.75	4.213	302.13	1.31
Switzerland	Francs	2004	1.1316	445.9	3.959	56.31	1.21
Thailand	Baht	2004	39.061	6576	34.717	94.71	24.75
Trinidad Tobago	Dollars	2004	6.2999	71.878	0.562	63.95	5.91
Tunisia	Dinars	2004	1.1994	35.14	2.855	6.15	11.69
Turkey	New Liras	2004	1.3395	426.305	21.709	9.82	8.19
Ukraine	Hryvnias	2003	5.3315	263.4	20.555	6.41	49.93
United Kingdom	Pounds	2004	0.5178	1163.94	28.438	20.46	1.52
United States	Dollars	2004	1	11,734.3	139.252	42.13	1.42
Uruguay	Pesos	2004	26.35	379.317	1.092	173.68	9.10
Venezuela	Bolivares	2004	1918	206125.4	10.234	10070.62	11.43
Zimbabwe	Dollars	2000	54.945	311.890	1.237	126.07	26.15