PART III - Segregated Monetary Functions And An Objective, Global, Standard Unit Of Account

Money, a Confusion of Functions

Money is said to serve several functions: it is (1) a generally accepted "medium of exchange," (2) "a store of value," (3) a "standard of deferred payment" and, most fundamentally, (4) "a unit of account" or "measure of value" (Dunkman, Wm. E., *Money, Credit and Banking*, Random House, New York, 1970.) We think we know what we are talking about when we use the word "money," but in fact we do not. All of the orthodox definitions of money describe its supposed functions and not its essence. Further, because the term "money" is commonly applied to a diverse array of financial instruments which are created in a variety of ways, the whole subject has degenerated into a sea of confusion. It is a curious fact that the problems arising from these contradictory functions, while they have not gone completely unrecognized, have been so completely swept under the rug.

I believe that the keys to transcending the confusion, and the creation of an equitable and efficient exchange system, free from political manipulation, lie in accomplishing the following:

1. the separation of the various functions which money is supposed to serve,

2. the establishment of an international objective standard unit of account and,

3. the recognition of the true nature of the ideal medium of exchange - pure information.

The Unit of Account Function

The "unit of account" or "measure of value" function has not historically been well served by any money. Fiat monies, the type common in current use, are especially unreliable measures of value because they are undefined and subject to gross manipulation by governments and central banks. It seems not to have been widely recognized that there might be a better alternative. While money might appropriately be used in the settlement of accounts, it need not, and should not be used in defining the values to be exchanged.

Confusion of the Value Unit With a Currency Unit

The most disastrous confusion is the one which arises when the medium of exchange obliterates the meaning of the value measure or unit of account. This typically derives from state (legal tender) legislation designed to compel acceptance of a central bank issued currency. The clearest explanation of this which I have seen was given by Dr. Walter Zander in 1935, as follows:

> "Whatever the monetary system of a country, it is essential that the measure of value should be clearly and unequivocally determined. Thus, where there is a gold currency, a silver currency, or an index currency, the value should be measured by gold, silver and the index respectively. This basis of measuring economic values, and therefore of any monetary system, is destroyed when in the case of gold or silver currency the notes of the bank of issue are made legal tender, for this compels everybody to accept these notes in payment regardless of their real value. **Compulsory acceptance renders it even impossible to measure the notes by the unit of value within the country. Indeed, it establishes a legal fiction on the basis of which note and unit of value are identical.** [emphasis added] For this reason, the names of the units of value - e.g., the terms dollar, mark, pound - become ambiguous in that they mean now a fixed weight of gold and then the note of a bank of issue. Accordingly, the measure of value, on the unambiguity of which everything depends, comes to have two definitions. This renders impossible any real measurement and thus the whole monetary system is falsified." (Dr. Walter Zander, "A Way Out Of The Monetary Chaos." From *The Annals of Collective Economy*, Geneva, 1936?)

The motivation which underlies every legal tender law, of course, is the attempt by governments and their central bank cohorts to escape the consequences of their irresponsible financial manipulations. Such consequences invariably involve a depreciation of the currency in the marketplace. When legal tender is imposed to prevent the devaluation of the currency relative to an objective standard and relative to goods and services generally, then prices, in terms of the legal tender unit, must rise. This is called "inflation." Without compulsory acceptance of a currency, inflation could not occur. As Zander expresses it, "This confusion is only possible when a legal equivalence has been established between the notes of this bank and the standard of value."

“Monetary Value” and “Gold Inflation”

When speaking of a single commodity standard, e.g. gold, it is important to distinguish between its “commodity value” and its “monetary value.” Whether or not there can be a “gold inflation” is a subject of long debate. The matter is complicated by the fact that the demand for gold is affected by the “gold mystique,” and its monetary use, especially when other currencies are failing. Another factor is the fact that the supply of gold is ever increasing, since very little gold is “consumed,” and that which is used for non-monetary purposes is largely recycled. I have come to hold the following view.

I am in general agreement with Zander, however, I would admit a “gold inflation” as a possibility, but only if gold were the sole substance of money in circulation. That is, given the use of gold as a standard of “value,” a rise in the general level of prices may occur in response to a shift in the supply and demand functions for gold, but only if gold comprises the entire money stock.

When gold is used as “monetary reserves” in a fractional reserve monetary system, it is given, by agreement or decree, a price which is, in terms of other goods and services, higher than it would be if it were traded as just another commodity. This condition is possible as a result of government’s power to tax, confiscate and redistribute wealth. Given that circumstance, producers will supply more gold than they would otherwise. If technology should suddenly reduce the cost of production (shifting the supply schedule), producers would be willing to supply even more gold at the official price. Government or the central bank could simply add to its “reserves” and leave prices, in general, unchanged. The inflation of the general price level does not automatically arise. On the other hand, if the monetary authority were to allow the expansion of paper money or credit based on the new reserves, inflation would result, but they need not do this. When currency was redeemable in gold on demand, inflations were relatively moderate. Redeemability placed a limit on the ability of the monetary authorities to debase the currency. Such debasement would result in increasing redemption and a loss of reserves. They would be faced with the choice of either stopping the debasement or acknowledging it with an official devaluation, i.e. an increase in the official price of gold. With the withdrawal of the redeemability feature, there exists no effective limit to official currency debasement, save the total loss of confidence in the monetary system itself.

The First Step Toward Monetary Freedom

Given the political realities of our present era, i.e. the concentration of power in state and financial hierarchies and the general lack of understanding of money and banking matters, it would be futile to attempt to gain rescission of such laws as legal tender which have become almost universal among Western nations. Any effective remedy will have to derive from private initiative. An understanding of the foregoing leads us to recommend the following prescription:

1. AN OBJECTIVE PRICE STANDARD AND UNIT OF ACCOUNT MUST BE DEFINED AND PUBLISHED BY SOME PRIVATE GROUP.

2. THIS UNIT SHOULD BE GIVEN A NEW NAME WHICH MUST BE KEPT DISTINCT FROM THAT OF ANY EXISTING OR PROSPECTIVE CURRENCY UNIT.

This unit would be used only for the accounting of values and the specification of contractual obligations. The settlement of debts would be made using any mutually agreeable currency or clearing procedure. The implementation of this prescription would allow traders to accurately account for values and to transact business more fairly and with less risk.

Criteria for Selection of a Price Standard

The confusion and inequity which arise from using an unstable official monetary unit as the unit of account cry out for an alternative. Almost any alternative measure of value would be an improvement over this situation. One of the greatest obstacles to peaceful human relations is lack of an invariant unit of account. Many proposals have been made but the question remains, - what is the most appropriate price standard upon which to base a unit of account?

I think it necessary to establish some criteria to be applied in making that choice. I suggest the following:

1. The price of the standard, in terms of the totality of goods and services being traded, should be highly stable over time.

2. The standard should be relatively immune from manipulation or control by any individual or group.

3. The definition of the standard should be as simple as possible.

4. The computation of values of all products and exchange media, in terms of the standard unit, should be easily obtained.

There have been numerous suggestions for establishing a price standard. The most notable have been the following:

* some existing currency unit (e.g., dollar, mark, yen, pound)
* gold (some specified weight)
* some other single commodity (a specified weight)
* a "market basket" of commodities (composite unit)
* a unit of energy
* a unit of labor

A Single Commodity vs. a Composite Standard

The question is often asked, "why is a composite standard to be preferred to a single commodity? The answer is that a single commodity is too variable in price, too easily manipulated by governments or large corporate entities and influenced too much by transitory conditions. These same objections apply to a unit of energy. On the other hand, a commodity composite would be difficult (likely impossible) to manipulate to any significant extent, and would tend to average out effects of transitory conditions on individual commodities.

Historically, perhaps the closest approach to an equitable and efficient unit of account occurred when the monetary unit was defined as a fixed weight of gold. But because gold was also used as an exchange medium, its market value in terms of other goods and services, has been distorted and tended to fluctuate. It has been distorted on the demand side by its use as money and on the supply side by the hoarding of it by both governments and individuals, especially in times of financial distress. The major disadvantages of using gold as a price standard then are (1) its price relative to all other goods and services being traded can not be expected to remain sufficiently constant over time, and (2) since objective value can only be approached by prices established in free market trade, and since gold trading is subject to extreme manipulation by governments, large producers, banks and wealthy corporations, the "objective" value inherent in a fixed quantity of gold cannot be reliably measured.

What would seem to be a far superior price standard is a fixed quantity of an assortment of specified basic commodities which are important in world trade and the satisfaction of basic human needs; what has been called a "composite unit." This idea is not entirely new, but heretofore it seems not to have been considered separately from a redeemable currency. During the 1970s Ralph Borsodi and

his associates issued an experimental currency called the "Constant." The plan was to ultimately make the Constant redeemable for a "market basket" of basic commodities. While the experiment never got that far, Constants, backed by bank deposits, did successfully circulate for more than a year in parts of New England.

Borsodi had the right idea in using an assortment of commodities but his main objective was to provide an inflation-proof circulating currency. That was well and good but it made the problem more complicated and the job more difficult than it needs be. Borsodi never saw that a distinction could be made between a "standard of value" and a "basis of issue." This is clear from reading his last book, *Inflation and the Coming Keynesian Catastrophe: The Story of the Exeter Experiment With Constants* (E. F. Schumacher Society, RD 3, Box 76, Great Barrington, MA 01230, 1989). This is not at all to minimize the importance of Borsodi's work. The concepts and approach which Borsodi developed in connection with the Constant experiment, in my opinion, stand as a major advance in the development of monetary theory and practice.

I see as two separate problems the establishment of an objective standard unit of account and the creation of an inflation-proof currency. The former is primarily a matter of somewhat arbitrary definition and agreement based on statistical analysis, while the latter is a matter of proper, equitable and efficient banking practice uncontaminated by political influence or monopoly control.

Money should be purely and simply a medium of exchange. Its essence (at least in the ideal) is information, as E. C. Riegel explained in *Flight From Inflation: The Monetary Alternative*, and Michael Linton has demonstrated with his LETSystem. As such, it is valueless in and of itself. The unit of account should not be subject to wide fluctuations over time relative to the totality of prices. The price standard is analogous to a reference point in space. In space everything is in motion relative to everything else; nothing is stationary. Locations can only be stated in terms of other objects. The choice of a particular body or reference point which we agree to consider as fixed is quite arbitrary. It is the agreement which is important, though some reference points may have certain definite advantages over others.

It has been suggested that the price standard might be defined as the value (price) of a market basket of commodities as of a particular date. But fixing the date detaches us from our composite of commodities and leaves us with no means of knowing what that value was except in terms of some other unit or commodities. Any reference point must be physically identifiable at any point in time, otherwise there is no way of locating it. We cannot say, for example, that our spatial reference point is the location of the Sun on a particular date, for that point cannot

subsequently be located except by reference to some other body, in which case that body would become the reference point and not the Sun. Similarly, if we want to take a commodity composite as our standard, it cannot be associated with a particular point in time.

One clear advantage of using the Sun as a celestial reference point is the fact that in its movement it takes the planets with it, leaving the planetary interrelationships unaffected. Likewise, when the value of basic commodities, as a group, changes, the value of everything else will tend to change accordingly (assuming the absence of distorting factors of privilege in the economy). Further support for this contention is found when one considers what might cause the value of commodities in general to change. This could only be the result of changes in the value of the foundational economic inputs - energy and labor, which, to some extent are interchangeable. I believe that further analysis of the relationships within this value hierarchy will clarify and strengthen the case in favor of a composite commodity price standard.

Defining the Composite

A composite standard will not have a perfectly fixed value over time, but it will be much more invariant than anything else which has ever been used, and its use in accounting and contracts will be a giant leap forward in the liberation of the exchange process. The following are my criteria, in approximate order of importance, for selection of the commodities which would define the price standard:

1. traded in several relatively free markets (free exchange).
2. importance in world trade (volume).
3. importance in satisfying basic human needs (necessity).
4. stability of prices (in real terms) over time (stability).
5. uniformity of, or standardization of quality (uniformity)

No doubt these criteria are highly correlated with one another anyway so this particular ordering probably need not be strictly adhered to. Borsodi selected 30 commodities as a basis for his “Constant” and, according to Bob Swann, one of Borsodi’s close associates in the Constant experiments, the 30 proved to be as stable as larger composites (involving a greater number of commodities) which were considered. The thirty commodities which Borsodi used for his Constant currency could be taken as a starting point, each being evaluated according to the above criteria (See Appendix C). Some would likely be dropped and others added. Once a reasonably good mix is settled upon for the price standard, a

unit of account, defined in terms of the standard should be published and given a unique name. Any circulating currency could then be evaluated relative to the standard and its unit using the readily available market prices prevailing at any point in time.

Expected Results

I believe that the publication of such an objective international price standard and unit of account will result in the following outcomes in quick succession:

1. Traders will quickly see the advantages of using the new unit in keeping their accounts and will begin to do so.

2. As political currencies become more unstable and international finance more chaotic, traders will begin drafting their exchange agreements in terms of the standard accounting unit.

3. New, non-political, free enterprise exchange systems and currencies, which hold their value close to par with the standard unit, will come into being and displace present national currencies.

The Effects of Legal Tender

It is legal tender laws which attempt to establish the price of a currency by decree. Such an outcome, however, is in defiance of natural law. Only in appearance can it be achieved and this is by the process of obliteration and abandonment of objective price standards. Given an objective price standard which can be kept distinct from any legal tender currency unit, government and bank manipulated currencies, if accepted at all, would be accepted only at a discount from par. No longer could the dilution of official currencies be camouflaged.

Legal tender requires that the currency be accepted in payment. It further requires that a creditor owed an amount of X dollars must accept X dollars as payment in full; that he cannot demand more than X dollars. In other words, the money must be accepted at par, regardless of how shamelessly it may have been manipulated in the interim between the incurring of the debt and its payment. But traders need not take as their reference point a constantly manipulated accounting unit such as the "dollar" but can choose an objective unit defined in terms of a fixed quantity of physical commodities, which would be impossible to manipulate.

If, then, accounts are kept in terms of some objective accounting unit (let's call it

a "VAL" for the time being) rather than in dollar terms, a creditor could demand, as justice requires, an equal number of VALs in payment. He might be willing to accept dollars but the amount of dollars would be determined by the market value (price) of dollars in terms of VALs at the time of payment, which could easily be determined from the current prices of the commodities in the market basket. Traders could thereby protect themselves against currency dilution and devaluation.

How governments would respond to the existence of an objective accounting unit is difficult to predict. They certainly would not initially give it support since it would make their irresponsibility all too apparent and tend to constrain their power. They would perhaps attempt to legislate it out of use. I have been informed by one source that it is the policy of the Internal Revenue Service to attempt to tax as a capital gain any dollar amount of increase resulting from fulfillment of an indexed contract. Thus, if a contract were written to try to assure that the same value delivered today would be repaid tomorrow, any increase in the number of dollars required, resulting from depreciation of the dollar in the interim, would be taxable. Hopefully, however, saner minds will eventually prevail in fostering use of the objective standard unit, seeing that it is essential to preventing financial chaos.

What About a Labor Standard of Value?

It has often been noted, and rightly so, that human labor is the basis of all value. Granted that the Earth is the source of our material sustenance, its bounty cannot be accessed or made usable without the application of labor. Even in simple societies which live close to nature the fruit must be gathered and the game hunted. This recognition has led some to propose that a labor hour be used as the objective standard accounting unit. But how is a unit of labor to be defined? Is it a unit of time spent in labor, and if so what kind of labor, and whose? Some workers are more skilled than others and not all labor is equivalent in value. Labor is too vague a concept for the purpose of value measurement. Bilgram and Levy, in *The Cause of Business Depressions*, state that "we can only obtain a conception of the value of labor by its fruit." In consideration of the above I have never favored the idea of establishing a labor hour as a price standard.

The motivation which I perceive in those who advocate a labor standard of value is to correct the vast and obvious inequities in the labor markets. I share those motives but the problem will not be solved by choosing a labor standard as the basis for the unit of account. One must understand that, at present, the trade arena is polluted by privilege which manifests as usury and "super-rents," which are conceptually the same thing. But the establishment of fair and free labor markets

requires much more than the definition of a value standard. When I go to market, my purchase agreements are based upon the utility to me of the products offered and not upon the amount of effort which produced them. If the distortions created by privilege in the marketplace are eliminated, then the producer would be assured of a fair return for his/her labor.

Finally, it should be remembered that impersonal trade is only one type of economic exchange. It has its place but should not be expected to accomplish all of the results which are more appropriately obtained by other types of (closer) interpersonal interaction.

Power to Issue Money

At present, monetary issue is still monopolized by virtue of state granted privilege. This is what presently makes money-mediated trade a negative-sum game, and is the primary problem which must be remedied. A convivial (open to all) exchange system derives from distribution of the power to issue, which is dependent on the allowed basis of issue of a currency and not upon the choice of a price standard or unit of account. Josiah Warren and Proudhon attempted to democratize economics by "generalizing" the basis of issue; in effect, allowing workers to monetize their own labor. This was a step in the right direction.

Both businesses and individuals are increasingly learning to cooperate in creating exchange mechanisms which do not rely upon the use of official currencies or bank credit. So called "barter" exchange, or more properly "reciprocal trade" is becoming very popular among even some very large businesses. They have discovered that their trading need not be limited by an insufficiency of official currency or the willingness of banks to lend, and that they can provide their own interest-free medium of exchange in the form of credit which all agree to honor.

The same general principle is applied in Michael Linton's Local Employment and Trading System and Conrad Hopman's Community Cooperation Coordinator. Linton's LETSystems, of which there are several currently in operation, are intended to be strictly local and limited to supplementing the official currency system. Hopman's plan is more far- reaching and incorporates a wide range of agreements which comprise a quasi-legal system.

Mark Kinney, recognizing the need for restructuring of social interrelationships as well, has proposed a socio-economic reorganization with global possibilities. The unique feature of Kinney's vision is its emphasis on what I call "co-responsibility." Kinney's system, called the "GEN$ystem" (for Global Economic Net-dollar

System), is similar in concept to LETS but instead of joining as individuals, members join as part of a group in which the group is responsible for each of its members. The GEN$ystem uses a "nested" structure: each individual is part of an affinity group which is part of a "Base Group"; several Base Groups comprise a "Union," several Unions comprise a "Neighborhood," these, in turn, are nested within "Self-Reliance Leagues" which are nested within "Areas," and so on, potentially up to the global level.

The idea of being co-responsible may take some getting used to, especially for Americans who tend to be individualistic and non- committal, but participation is intended to be completely voluntary and the idea should appeal to the increasing numbers of people who are being marginalized and feeling alienated within the mass society. And as Kinney puts it, the reason for nesting is "not just to be sure that everyone is honest, which is important, but to insure, by the same process, that everyone is successful. If an entire nest of any type (Base Group, SR League, or Area, etc.) develops a "poverty spiral" in its total balance of payments, "information will be accessed by their next larger nest capable of reversing that trend." (Mark Kinney, *A Flow Chart For Liberation: A Hypothesis of History And a Liberative Strategy For The 1990s*. New Civilization, 16255 Ventura Blvd. #605, Encino, CA 91436). In other words, the other groups within a nest, seeing that one of their peers is having difficulty in providing as much value as it receives, will come to its assistance with whatever information is necessary to assure its viability.

Confusion of Currency with Assets

The inappropriateness of using money as a "store of value" has also been recognized. Dr. Dunkman has stated:

> "To the extent that money is used in the asset or holding function (store of value), this money is not being used as a medium of exchange. Thus a single financial instrument is being used for two diametrically opposite functions, in the sense that, if the purpose of money is to be spent, then money is used as a medium of exchange; if the purpose of money is to be held as an asset, the money is not to be spent. As we shall see, this duality makes the theory of money more complicated than it would be if money had but one function. … The inclusion of the store of value function introduces a confusion into the definition of money." (Dunkman, Wm. E., *Money, Credit and Banking*, Random House, New York, 1970, p.15)

Rather than talk about "money," a subject which has been totally confused, let us

consider the two objectives of (1) facilitating exchange and (2) storing value, and consider how each might be achieved independently. The previous section (Part II) dealt in detail with the characteristics of an ideal exchange system. All that is needed here is to describe the process of clearing balances and adjusting ownership claims. The ideal exchange system could be described as a "producer credit exchange system" or "mutual credit exchange system," in which each producer is authorized to incur a debit balance up to a certain limit based upon his past or expected volume of sales. The totality of debit or credit balances within the system would be analogous to the money supply, but in this system it would be self-adjusting since the "money" is created as needed by traders themselves.

Separation of Saving From Exchange - Value Storage

One problem which may arise in a system of exchange is stagnation within the system which can result from idle balances, either credit or debit. Those holding idle debit balances, in effect, would not be honoring their commitments in a timely manner. Those who hold idle credit balances would, in effect, not be demanding from the market value which is due them. This can be a problem because the system is intended primarily to facilitate trade. The primary problem to be overcome in facilitating trade is the "barter limitation," *i.e*., the fact that the buyer may not have anything the seller wants. By creating an intermediary "medium of exchange" there is a "space" created within which the seller may supply the buyer's need anyway and then proceed to find a supplier for his own need. This "space" is only partially temporal; mostly it is interpersonal, a matter of matching up specific needs or wants with appropriate supplies in the market. In other words, it allows some slack in which people can find one another so that each can have his/her needs satisfied.

Credit balances create a demand pressure upon the market, since creditors are yet to be satisfied, while debit balances create a supply pressure on the market, since debitors are committed to deliver value to the market. Idle credits mean that value supplied to the market is not being taken up as expected. A possible consequence of this is that suppliers, seeing slack demand, will reduce prices and adjust their production downward. Idle debits, on the other hand, mean that value is not being supplied to the market as expected. With supply deficient in relation to the credits seeking satisfaction, there will be a tendency for active suppliers to raise their prices and to adjust their production upward to satisfy the apparent increase in demand.

In a centrally controlled monetary system in which the supply of money (or credits) is artificially restricted, both of the above described conditions are

experienced, usually in cyclical fashion and with catastrophic consequences for at least some portion of the population. In a free "mutual credit" exchange system, in which credits (and debits) arise automatically in the course of trade, the problem would presumably be much less severe, but that does not mean it can be ignored. In the design of such a system, steps should be taken to prevent its becoming problematic. What steps would be appropriate?

Before considering the answer to that question, let us focus on a second necessary function in finance, the store of value. The term "store of value" is a metaphorical phrase. Since value is an abstract concept and not a physical quantity, it cannot really be stored. Cabbages can be stored, wheat can be stored, building materials can be stored, metals can be stored, but each, of course, is subject to some degree of deterioration over time. The problem to be solved by storage is the asynchronicity of supply and demand. The very idea of storage is based on the desire to match present supplies with future needs. We put aside the extra food from the garden in summer to satisfy our hunger next winter when the garden will not be producing. Similarly, we save during our productive years so that we can have the means of livelihood during our retirement years, but unlike our storage of food from the garden, which we do directly, our saving for retirement we do socially.

Ultimately, at any point in time, non-producers are dependent upon then current producers for the satisfaction of all their needs and desires. The mechanisms by which the needs of non-producers are met are varied and often complex and are based on such factors as values, ethics, social norms, legal statutes and financial agreements. In our retirement years for example, we are mainly dependent upon two basic arrangements (1) coercive redistribution of wealth by governments in the form of such programs as Social Security and Welfare and (2) contractual agreements of a form usually called "investments" (including pensions) which consist of such financial instruments as stocks, bonds, mutual fund shares, bank deposits, etc..

In either event, what we have can be called a "claim" against current or future production. The question of which claims may or may not be "legitimate" is, of course, always open. And the question of which claims may or may not be honored is always a matter of concern. It has been suggested that, in order to make exchange credits a pure medium of exchange, the imposition of levies upon either debit or credit balances, or both, might be used. Levies applied to debit balances would constitute a form of interest, while levies imposed on credit balances have been called "demurrage." Given our conditioning and the prevailing practices within the conventional systems of money and finance, there is a greater tendency to favor the imposition of levies or charges upon debit balances rather than upon

credit balances, debit balances being thought of as loans from the community to the debitor, and the levy representing an interest charge. Given what has been said above, I think it can be seen that the matter is not so "cut- and-dried." Also, different considerations apply depending on whether we are talking about short-term claims which facilitate exchange or long-term claims which represent the "storage of value."

Some have argued that, in order to keep an exchange system vital, it is more important to impose a periodic levy upon credit (positive) balances (See, for example, Silvio Gesell, *The Natural Economic Order*). This "demurrage" would encourage the spending of credit balances, and insure the lively flow of "money" through the system. Indeed, several issues of "stamp scrip" issued during the Great Depression of the nineteen thirties used the demurrage feature. If credits are thought of as money, this seems to make sense. Likewise, if debits are thought of as debts, an "interest" charge on them also seems to make sense. But, if we can separate in our thinking the two functions of facilitating exchange on the one hand and value storage on the other, then I think it becomes clear that in a system of pure exchange, neither is necessary nor efficacious.

The imposition of levies upon either debit or credit balances, or both, as a way of promoting their use as an exchange medium is counterproductive to the main objective of "reciprocity," i.e. equal value for equal value. Since everyone benefits from the facilitating power of the system, buyers and sellers should bear an equal burden in the cost of its operation, and this burden should be kept to a minimum.

In order to prevent the use of exchange credit balances for value storage or the use of debit exchange balances for long-term financing, both could be time-limited. I would handle the matter by limiting both the amount of debits and credits which could be carried over from one period to the next. I would propose to periodically "clear" exchange balances to a capital account. Anyone who has purchased more than he/she has sold during the current period, or who wants long-term financing for any purpose, must find someone who is willing to assign his/her credits for a specified period. This is a capital market function.

Likewise, anyone who desires to "save" his/her credits, must find some suitable investment medium for accomplishing the storage of his/her value. In other words, side-by-side with the exchange system, there should exist a capital market in which savers and entrepreneurs can be brought together; in which surplus balances held by some can be allocated to others (savings or storage of value) to be used in capital formation (investment) or to finance consumer durables.

Those traders holding credit balances, which means that they have delivered more value than they have received, have a general claim against wealth owned by those holding debit balances. Similarly, those with debit balances have a commitment to deliver that much value to the community. Rather than allow these claims or commitments to be held indefinitely, they should be "cleared" (reduced to zero) at frequent intervals. This would tend to make these balances a pure exchange medium and extenuate the store of value function. The fact that the exchange medium is readily available to all producers and may be created as needed in the course of trade will tend to make it valueless in and of itself. Also, its value will diminish further the more frequently the balances are cleared.

The next question to be answered is, "What is the nature of this 'capital account'"? If the trading balances represent claims within a "current account," and they are strictly for the purpose of facilitating exchange, then the resultant increases or decreases must be translated into changes in ownership of real wealth. Thus, each trader, in addition to having a current account, would also have a capital account representing his/her ownership share of some real assets or long-term claim against future production. These assets might be in the form of real property or capital equipment, while the claims might take the form of equity shares, e.g., common or preferred stock in productive enterprises. These instruments would constitute the store of value.

Capital formation is the creation of new businesses or the expansion of existing ones. It includes construction of buildings, improvement of land, to be recovered over a long period of time.

In each case, whether current account or capital account, a credit balance represents a "claim," and the activity which gives rise to the claim should determine whether it is "currency" or "capital." In the former case it is a short-term claim upon the market which is intended only to facilitate trade. It is a "demand" deposit which the market should be able to satisfy at any time. In the latter case it is a long- term claim against assets which are not liquid, e.g. if the claim has resulted from activity which has produced tools, it will take time for the cost of the tools to be recovered in the production of consumable goods and their sale in the market.

One of the "sins" of the present banking establishment is that they have blurred this distinction between savings deposits and demand deposits. Formerly, banks paid no interest on demand deposits because, being subject to immediate withdrawal, they could not be invested in income earning assets. Properly, demand deposits represent goods (and services) presently in the market and available for purchase, while savings deposits represent investments in capital goods and durables. Now banks are paying interest on demand deposits and giving some savings deposits

much the same liquidity as demand deposits.

The way in which I propose to separate the medium of exchange from the store of value is not new and it is neither cumbersome nor problematic. It is as easy as transferring deposits from your checking account to your savings account, or buying shares of stock or a mutual fund. Indeed, much of what needs to be done in solving the financial crisis is to restore sound banking practice. Since the monetary and financial authorities seem unwilling to do it, the people themselves will have to rebuild the system from the ground up based upon the principles of equity, conviviality and reciprocity, and a clear understanding of the effects of various financial practices.

OVERALL STRATEGY for liberation of exchange and enhancement of cooperation.

To summarize my prescription for solving the monetary mess, I propose implementation of the following steps:

* Definition and declaration of a global price standard (comprised of a composite of basic commodities), and the definition of an objective unit of account based upon this standard.

* On-going monitoring of markets and prices, and computation of currency values in terms of the objective unit of account.

* Establishment of independent local exchange systems, reciprocal trade exchanges or clearing houses to provide interest-free exchange mechanisms under community control.

* Establishment of capital markets separate from the exchange systems but also under community control.

The networking of these locally controlled exchanges and their adherence to an appropriate set of principles and protocols could provide an equitable world-wide mechanism for exchange and material security for all.

Appendix A

Definition of an Objective, Global Standard Unit of Account Using a Composite (Market Basket Assortment) of Basic Commodities

Defining the Standard

The definition of a composite commodity standard can be achieved by completing the following steps.

1. Select about 30 commodities to be included in the standard, based on the following criteria:

    1. traded in several relatively free markets (free exchange).
    2. importance in world trade (volume).
    3. importance in satisfying basic human needs (necessity).
    4. stability of prices (in real terms) over time (stability).
    5. uniformity of, or standardization of quality (uniformity)

2. Determine the "economic importance" (I) of each commodity by multiplying its average price (P) during the base year in one specified market (e.g. New York) by world production (V) of that commodity in the base year. Thus

I=P*V

3. Determine the fractional weight (W) for each commodity in the market basket by dividing its economic importance by the sum of all the economic importance figures. Thus

W=I/sum I

4. Selecting the initial value of the market basket arbitrarily to be equal to, say, $1,000,000 (one million dollars), determine the initial value amount (D) of each commodity to be included by multiplying its weight (W) by $1,000,000. Thus

D=W*$1,000,000

5. Determine the physical quantity (Q) of each commodity to be contained in the market basket by dividing its value amount by its average price (P). Thus

Q=D/P

6. Adjust the quantities (Q), discarding fractional units in such a way as to not disturb too greatly the relative make-up of the market basket while maintaining its initial value close to $1,000,000.

7. Consider the value of the final market basket to be (arbitrarily) equal to 500,000 (five hundred thousand) standard accounting units. Thus, the standard unit will be initially equivalent to $2 US, or $1 will equal .5 standard units.

The process described in Steps 1 through 6 above reduces to taking the same fraction of each commodity's total world production, that fraction being $1,000,000 divided by the total value of world production of all the selected commodities

Determining the Value of Currencies in Terms of the Standard Unit.

Given the definition of the standard value unit as being one five hundred thousandth of the specified "market basket," the value of any currency (e.g. the U.S. dollar) at any time can be easily determined by computing the current cost of the market basket in dollars using prices reported in actual trading. Dividing by 500,000 will give the dollar equivalent of one standard accounting unit. The reciprocal, of course, would be the value of the dollar expressed in standard accounting units.

Appendix B

Dialog on the Composite "Value" Unit

Bilgram and Levy, (Bilgram, Hugo & Louis Edward Levy, *The Cause of Business Depressions*, J. B. Lippincott, Philadelphia, 1914) raise a number of objections to the use of a composite unit, all of which I believe are without merit. They, like Borsodi, seem not to have made the distinction between using the composite as an accounting standard as opposed to using it as a basis of issue for a currency.

In section 31, they do mention in passing the kind of standard I am proposing. They say,

> "Some writers.....have proposed a composite or multiple unit (321), consisting of a definite number of staple articles in definite quantities. The total value of the items is to constitute a standard sum, such as one hundred or one thousand dollars, according to the composition of the list. Of course, by this expedient only an approach to an idealistic unit could be obtained."

Well, what's wrong with that? If an ideal standard is impossible, then we must find the closest possible approach to it. However, it should be given a name different from any existing currency or any prospective currency. In section 32, they seem to favor a gold standard, saying, "While the gold denominator is not altogether free from objection, no available substitute appears to be preferable." I disagree. I think it is indisputable, based on the historical evidence, that a composite standard would be much more stable than a fixed weight of gold or of any other single commodity. Their arguments against a composite commodity standard seem specious to me. Let us consider these in turn.

1. It is true that "most goods are produced in different grades of quality" but the commodity markets seem to have no trouble in dealing with this. They do not seem to be plagued with "frequent disputes as to proper quality." This is not a significant objection.

2. Their next objection expresses a multitude of confusions and non-sequiturs. It does not matter that "each commodity will vary in price." Some will rise relative to the others and some will fall, but the value of the composite should remain fairly constant relative to all other goods and services being

traded. They say, “there is no economic force by which the market value of things generally can become related to a prescribed unit of this kind.” Well, I say, if each commodity which makes up the composite is freely traded, then the value of the composite is established in terms of any single commodity or any currency. The composite itself need not be traded as a “market basket.” We are agreeing by definition on a new accounting unit, the value of all currencies, goods and services to be measured in relation to it and not the other way around.

3. Their last objection is “the difficulty of making the value of money conform to a given composite unit.” I grant that this would be difficult, but happily, it is not at all necessary. What we are looking for is something which would serve as a determinate unit of account and preserve the integrity of contracts, and against which the value of any currency could be measured. The use of such a unit would clearly show up any currency dilution which heretofore has manifested as general price inflation in the marketplace. Instead of currency dilution forcing prices up, it would force the price of the currency (in terms of the standard unit) down. In other words, traders would discount the currency.

Bilgram and Levy’s book is a masterful work on the subject of money, but one must keep in mind the times in which it was written and the mindsets which were predominant then. They too seem to have had their biases and blind spots. This is clearly evidenced in section 321 where they state:

> “While a number of contributory causes have been at work to raise the cost of living, the principal cause is no doubt to be found in the vast improvements made in the metallurgy of gold. Through the introduction of the cyanide process gold is now obtained with less labor and cost than formerly.”

Well, clearly that argument no longer applies, if it ever did, since current money has no relationship to gold. Further, I think a careful study of history shows that price inflations in terms of gold-backed currencies have occurred many times. And to the extent that the statement is true, it simply supports my argument against the use of a single commodity as the defined reference point for measuring values.

In the last paragraph of that section they take another poke at their “straw man,” the volume theory of money, where they allude to the impossibility of controlling the value of the currency through manipulation of its volume in circulation. But there is nothing to be gained by being drawn into this debate. They say nothing

about how the currency is put into circulation, and this is the crucial question which determines its value. The process of official currency dilution is analogous to the farmer pumping water into his milk. The total volume of fluid is increased but that is not the significant factor. What is significant is the fact that a given volume of fluid now contains a lesser amount of nutritional value. Similarly, the addition of false (albeit, legal) claims to the real claims within the money stream (dilution of currency) results in a lower value content in each currency unit.

Bilgram and Levy seem to have been unable to separate the ideas of "standard of value" and "medium of exchange." In section 111 they show that they are hung-up on redeemability. They object to a composite standard on the grounds that the currency would have to be redeemable in the market basket of commodities. If a currency is properly issued, however, on the basis of the production of real value, its value should remain at or close to par with the standard unit without redeemability. A properly issued currency will always be redeemable in the marketplace. Under monetary freedom, traders will choose to use those currencies which show themselves to be most stable in terms of their purchasing power.

After all their objections, B & L grudgingly concede in paragraph 4 that an "index number" based on a composite of commodities would allow the mean price level of all things to be kept approximately stable, and they mention Irving Fisher's work in this regard. They question the workability of it in practice but offer little in the way of specific support for that argument. They perhaps did not fully comprehend index numbers which were then quite a new concept. They may, however, have had just cause to question the workability of such an approach given the state of development of markets, transportation and communications systems of their day (1914). Conditions are much different today and index numbers of various kinds have been in common use for some time. I think there is little question now that such an approach is practical.

Appendix C

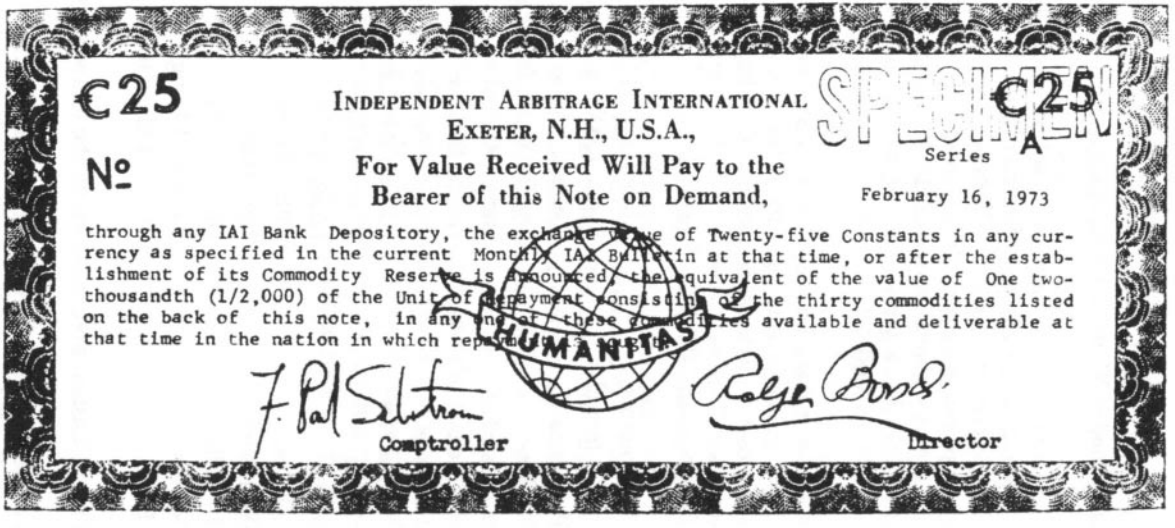
Note on Ralph Borsodi's "Constant" Currency

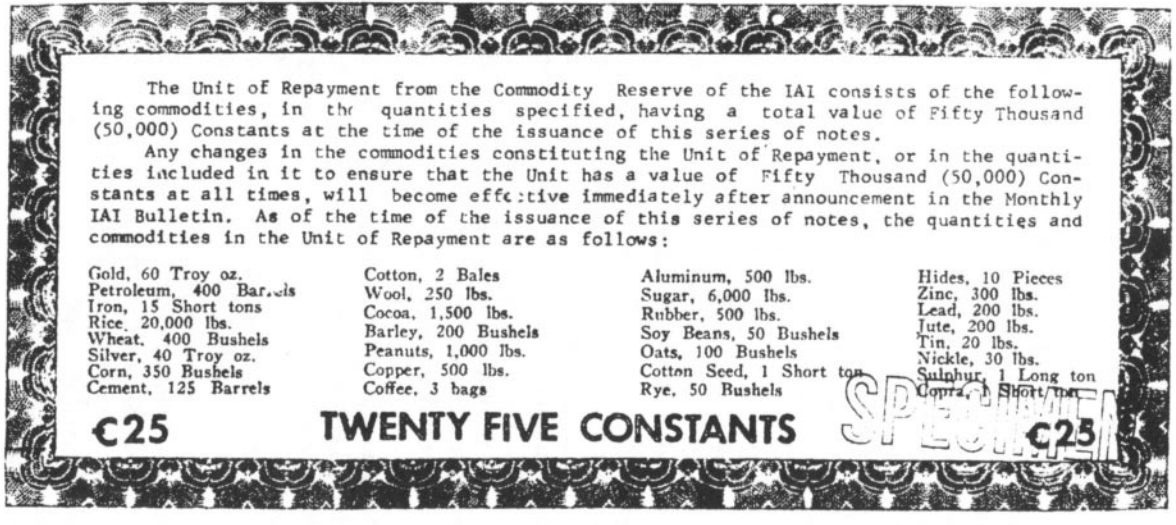
In 1972, Ralph Borsodi and a few associates set-up an organization called Independent Arbitrage International with the object of conducting some experiments in privately issued money. They set out to prove two things, (1) that "an honest private money could be circulated with a fair degree of public acceptance and without automatically facing interference by the government," and (2) "that a form of paper money could be issued that would neither inflate nor deflate."

Borsodi's strategy for making his currency inflation-proof was to make it redeemable. The Constant was to be redeemable for a "market basket" of "the world's 30 major raw material commodities." The unit of repayment for the Constant was defined as follows, with the total "market basket" being equivalent to fifty thousand (50,000) Constants:

Gold, 60 Troy ounces	Aluminum, 500 lbs.
Petroleum, 400 Barrels	Sugar, 6,000 lbs.
Iron, 15 Short tons	Rubber, 500 lbs.
Rice, 20,000 lbs.	Soy Beans, 50 Bushels
Wheat, 400 Bushels	Oats, 100 Bushels
Silver, 40 Troy oz.	Cotton Seed, 1 Short ton
Corn, 350 Bushels	Rye, 50 Bushels
Cement, 125 Barrels	Hides, 10 Pieces
Cotton, 2 Bales	Zinc, 300 lbs.
Wool, 250 lbs.	Lead, 200 lbs.
Cocoa, 1,500 lbs.	Jute, 200 lbs.
Barley, 200 Bushels	Tin, 20 lbs.
Peanuts, 1,000 lbs.	Nickle, 30 lbs.
Copper, 500 lbs.	Sulphur, 1 Long ton
Coffee, 3 Bags	Copra, 1 Short ton

A facsimile of a 25 Constant note is shown on the following pages.


€25
INDEPENDENT ARBITRAGE INTERNATIONAL
EXETER, N.H., U.S.A.,
SPECIMEN
€25
Nº
For Value Received Will Pay to the
Bearer of this Note on Demand,
Series
A
February 16, 1973
through any IAI Bank Depository, the exchange value of Twenty-five Constants in any currency as specified in the current Monthly IAI Bulletin at that time, or after the establishment of its Commodity Reserve is announced, the equivalent of the value of One two-thousandth (1/2,000) of the Unit of Repayment consisting of the thirty commodities listed on the back of this note, in any one of these commodities available and deliverable at that time in the nation in which
HUMANITAS
Comptroller
Director



The Unit of Repayment from the Commodity Reserve of the IAI consists of the following commodities, in the quantities specified, having a total value of Fifty Thousand (50,000) Constants at the time of the issuance of this series of notes.

Any changes in the commodities constituting the Unit of Repayment, or in the quantities included in it to ensure that the Unit has a value of Fifty Thousand (50,000) Constants at all times, will become effective immediately after announcement in the Monthly IAI Bulletin. As of the time of the issuance of this series of notes, the quantities and commodities in the Unit of Repayment are as follows:

Gold, 60 Troy oz.
Petroleum, 400 Barrels
Iron, 15 Short tons
Rice, 20,000 lbs.
Wheat, 400 Bushels
Silver, 40 Troy oz.
Corn, 350 Bushels
Cement, 125 Barrels
Cotton, 2 Bales
Wool, 250 lbs.
Cocoa, 1,500 lbs.
Barley, 200 Bushels
Peanuts, 1,000 lbs.
Copper, 500 lbs.
Coffee, 3 bags
Aluminum, 500 lbs.
Sugar, 6,000 lbs.
Rubber, 500 lbs.
Soy Beans, 50 Bushels
Oats, 100 Bushels
Cotton Seed, 1 Short ton
Rye, 50 Bushels
Hides, 10 Pieces
Zinc, 300 lbs.
Lead, 200 lbs.
Jute, 200 lbs.
Tin, 20 lbs.
Nickle, 30 lbs.
Sulphur, 1 Long ton
Copra, 1 Short ton

Dr. Borsodi's objectives were only partially achieved. In a report which appeared in the Fall, 1975 issue of *Green Revolution*, (p. 7) Borsodi, then age 89, had this to say:

> "I personally conducted the Exeter Experiment for over a year during '72-'73 to show the feasibility of circulating privately issued money, both in the form of paper currency and in the form of hundreds of checking accounts at five different banks. Toward the end of the experiment, the equivalent in Constants of $160,000 was in circulation. This, to my satisfaction, proved that an honest private money could be circulated with a fair degree of public acceptance and without automatically facing interference by the government. Unfortunately, the Exeter Experiment was only a partial test of the Constant Currency system - the public part. The part of the system that would provide the commodity backing was not set up. Many people misunderstood this. If the complete Constant Currency system had been in operation, there would have been no reason to end the experiment, since it was a success as far as it went. I proved what I'd set out to prove. Now it's up to some younger people to carry on and set up a complete Constant Currency system. The International Monetary Fund has recently decided to eliminate the use of gold, completely now, in international transactions. -Just as President Nixon has ended all relation between gold and the U.S. dollar. The monetary system of the non-Communist world is based on the U.S. dollar and the U.S. dollar is merely a green piece of paper backed by nothing and redeemable in nothing. If the U.S. dollar collapses, it won't merely be a national disaster like the German Mark's collapse in the 1920's. The dollar would carry down with it the currencies of 50 or 60 other nations which use the dollar as backing for their own currency. The crash that would follow would make 'the great depression' look like a joke by comparison.
>
> I don't know that there's enough time remaining to set up something, like the Constant Currency system, which could cushion the collapse of the free world monetary system. -But we have to act on the hopeful basis that it's not too late. All of the necessary research on indices, etc. has been done. Three things would be required. First, a group of people with banking talent. Second, a group of people with statistical talent. Third, a sufficient amount of capital to initiate operations. A minimum of $250,000 would be required, but more would make things easier. One final remark: To one who questions the idea of money backed by

> a spectrum, of commodities rather than just gold, I recommend John Kenneth Galbraith's new book, MONEY. Among other things, Galbraith points out that the colony of Virginia used a pound of tobacco as its monetary standard for over 150 years - a longer period of time than we had the gold standard in America."

With regard to government interference, Borsodi's words should not be taken as too much comfort. In a personal conversation that I had in 1988 with Terry Mollner, one of Borsodi's associates in the experiment, he told me that they had had a visit from the Securities and Exchange Commission just as they were closing up shop. What the SEC wanted, or just how much of a problem the government regulatory agencies would have posed, may never be known. The question was moot at that point so no one pursued it. Also, with regard to Borsodi's statement that the U.S. dollar is "backed by nothing and redeemable in nothing," something more needs to be said. While Borsodi's statement may be accepted in terms of conventional monetary thinking, it is not quite accurate. The reality is that the U.S. dollar, like all fiat currencies, is backed by force, i.e. the power of the government to tax, either directly or by its inflationary manipulation of its currency. So long as people have any confidence in it at all, and so long as alternatives remain absent, it remains redeemable in the marketplace for the wealth of the country, including the land and natural resources which, because of international exchange rate manipulations, are increasingly falling into the hands of absentee owners.

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