

Democratic Money: The Case for a Decentralized Monetary System
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Chapter Four: Designing a New Medium

In order to obtain the optimal performance from our monetary technology, it should be managed within the context of its use. But redesigning administrative structures is not enough; interest-bearing money can still provide very destructive economic feedback. Hence, the first part of any potential reforms should be made upon the medium itself. I believe the goal should be to design an exchange system that can communicate accurate information conducive with social values and ecological limits. This information will be conveyed by money through its 4 basic functions: (1) medium of exchange, (2) standard of value, (3) unit of account, and (4) store of wealth. Conventional money has become a misinformation system, in part, because it has failed to perform adequately these four basic functions.

Barter vs. Mediated Exchange

As explained in chapter two, a classic barter system, also called “whole barter,” is one in which good and services, or wealth, are directly exchanged. John gives Mike a bushel of corn in return for a sack of potatoes. However if John does not want potatoes, no exchange will take place. This is the fundamental limitation of whole barter. Each trader must have something the other wants for any transaction to take place. Money was created to overcome this limitation. Money first appeared in the form of a culturally significant commodity, perceived to have inherent value. Such an exchange medium, regardless of whether it is sugar, tobacco, or gold, does not change the nature of the system. It still functions as a series of barter transactions, one commodity directly exchanged for another. However, in this system exchange is *mediated* by a commodity that is accepted, not because it is immediately useful to the recipients, but because they can trade it for something else. Such a system is known as “indirect barter” (Greco, 1990).

From indirect barter, mediated exchange evolved into “symbolic exchange”; i.e. the use of tokens, representing a certain value of an exchange commodity, be it tobacco, sugar, or gold. Tokens have taken the form of warehouse receipts, bank notes, and scrip, for example. These tokens represented a claim on real value. They provided an exchange commodity that could be traded symbolically without the inconvenience of carting around large quantities of tobacco, sugar, or gold. Although symbolic exchange was more convenient, it was much more easily abused as there was no way to verify the quantity, quality, or very existence of the commodity represented by a token. Over time as the economy expanded, abuse became a generally accepted norm. A good example would be Great Britain’s use of fractional reserve banking on the gold standard.¹

¹The gold standard is a specific type of symbolic exchange, and probably the most well known. On this standard, tokens (for the most part coins, scrip, or bank drafts) represented a claim on a fixed quantity of gold. At any time, the owner of these tokens could redeem them for the gold they represented. In the heyday of the gold standard (late nineteenth century), Britain’s currency, the pound sterling, was fixed at £3 17s 10.5d for one ounce of gold. It was generally assumed that British citizens would be content to use the currency instead of demanding its equivalent in gold. This was the logic behind the Bank of England’s

Today money is backed by debt and issued with compound interest. Although, money has developed into an even more ethereal medium, we still regard it as a commodity. This unfortunately corrupts its function as a medium of exchange. As a commodity, money has a price, which like that of any other good is subject to the forces of supply and demand. The price of money is the interest a lender must pay to obtain it. In essence, we have placed an access fee on our exchange media, or as Mark Kinney would describe it, executive information. This access fee must be paid in order to organize labor and resources to produce real wealth. We have predicated the health of the market mechanism on the supply and demand of a *virtual* commodity. A market economy that treats its exchange medium as a commodity will always be at the mercy of its money market.

To correct this problem we need to take the last step and turn money into a pure exchange medium. The goal is to *decommodify* money; turning it into the information medium of exchange it is supposed to be. This would entail, first and foremost, eliminating the access fee of compound interest. Interest encourages the speculative behavior that causes money to malfunction. Thus, it actually can hinder the production and exchange of real wealth.

Standard of Value vs. Unit of Account

In an ideal system, the dollar by itself would have no inherent value, but would simply represent a standardized unit of value. As Michael Linton has observed:

Money is really just an immaterial measure, like an inch, or a gallon, a pound, or degree. While there is certainly a limit on real resources — only so many hours in the day — there need never be a shortage of measure. . . . Yet this is precisely the situation in which we persist regarding money. Money is, for the most part, merely a symbol, accepted to be valued generally throughout the society that uses it. Why should we ever be short of symbols to keep account of how we serve on another (Linton, 1988)?

Conventional money is incapable of functioning as a reliable standard of measurement. Unlike the inch or pound, the value of the dollar has changed, and is expected to change, over time. Thomas Greco provides three reasons why a stable monetary unit — a standard of value that over time remains relatively constant in terms of real goods and services — is essential to a healthy market economy: (1) To maintain the value of contracts, specifically transactions that are time dependent — debts, investments, insurance, pension plans, etc. These transactions are contracted to exchange a certain amount of value, measured by units of money. However, these claims are denominated in terms of a unit whose value can vary drastically within the time frame of the contract. Fairness would dictate that it is the intent of the contract which must be fulfilled, but unless the unit of value used remains stable there is no way to ensure the final value transacted will equal the value agreed upon in the original contract. (2) The instability of our conventional

policy of fractional reserve banking. Fractional reserve banking simply means that the central bank maintains a supply of gold worth only a fraction of the country's money supply. In the late nineteenth century, the Bank of England kept gold in reserve worth only 2-3 percent of the money in circulation (Rukstad, 1992).

standard of value also threatens the integrity of current transactions. At first glance it would appear that a general rise in prices would cancel itself out as in theory, each commodity still carries the same value relative to others. Unfortunately, such shifts in value are never uniform. As a general rule, inflation in labor rates will typically lag behind that of consumer goods and services. The decline of collective bargaining power during the last two decades makes labor even more vulnerable to inflationary pressures. As real wages decline, workers begin to see their purchasing power consumed by inflation. (3) Inflationary instability, due to actions taken by governments and banking authorities, results in a loss of confidence in the system. Because our currency is expected to lose its value over time, interest on loans and investments are subsequently adjusted to compensate for inflation. Higher interest rates simply magnify the exponential growth imperative imparted by compound interest. This in turn exacerbates the very inflationary trends for which investors were initially trying to compensate. Ultimately, an inflationary currency will result in a general loss of confidence in the monetary unit, leading to reactionary economic behavior, as was experienced in Thailand during the height of the 1997 financial crisis.

One of the attendant problems to any reform of the current monetary system is confusion over the difference between measurement and standards. Before we can design a monetary system that can maintain a reliable standard of value, we must clarify the difference between a *unit of account* and a *standard of value*. According to the American Heritage Dictionary, a unit of account, or unit of measurement “is a precisely defined quantity in terms of which the magnitudes of all other quantities of the same kind can be stated.” An inch, a pound, or in the case of money, a dollar, are all units of measurement. A standard of value, or standard of measurement “is an object which, under specified conditions, serves to define, represent or record the magnitude of a unit.” A standard would be the length of an inch, the weight of a pound, or the value of a dollar. In later sections I will present a number of alternative standards upon which we could base a reformed currency.

Store of Wealth

At first glance, this would seem a very straightforward function. Workers defer consumption by saving a portion of current earnings for some future use; e.g., retirement, college fund, rainy day, etc. We’ve already touched upon one way conventional money fails to adequately perform as a store of wealth – its decrease in value due to inflation. A second problem with money is inherent to the medium itself. When money is used as a store of wealth, this function comes into direct conflict with its role as an exchange medium. When people collectively choose to defer consumption in favor of savings, it can lead to what Keynesian economists have termed the “paradox of thrift.” When money is hoarded on a large-scale basis, it is not available to serve its role as a medium of exchange. The need is to design a monetary system that encourages a healthy balance between spending and saving.

This problem in storing wealth is exacerbated in the conventional system that treats money as a commodity. In the late nineteenth century, Silvio Gesell, a successful merchant in Germany and Argentina, noticed that the “price” of money had a strong influence on trends in savings and spending. Gesell observed that his sales pattern correlated with the price of money on the money market. When interest rates were low,

sales were plentiful; but when interest rates rose, sales would decline. The shifts had little to do with the quality of his goods or the needs of his customers. Sales depended instead, on the availability of money. When money was plentiful, interest rates would drop. At some point, usually around a 2.5% interest rate, the profits on lending would not be enough to entice money owners to make their money available to borrowers. With money unavailable, investment declined, followed by production and employment. When the demand for money increased, interest rates rose and money owners made their holdings available, starting a new business cycle. Interest rates would start out high, but as money became more available, rates would begin to drop, culminating in another “strike” of capital (Kennedy, 1995).

Gesell attributed the business cycle to money’s status as a non-perishable commodity. Unlike most other goods and services, money can be held without incurring any costs. In Gesell’s words, “Money does not rust” (Kennedy, 1995). To illustrate, imagine one person has a bushel of corn and another has the money to buy the corn. The person who holds the corn is obliged to sell it before it begins to rot. The money owner, however, can hold out until the price is low. There are no inherent “holding costs” in money as there are in most other goods and services. To solve this problem, Gesell concluded that money must be put on equal footing with other goods and services. He suggested that money be subject to a “use fee”, an annual maintenance cost of around 5%. The use fee would operate like reverse interest. It would penalize those who decide to hoard their money by annually depreciating its value. This, in turn, would encourage people to spend their dollars into circulation where they would fulfill their function as a medium of exchange. The central message of his theory is, “Instead of paying interest to those who have more money than they need, and in order to keep money in circulation, people should pay a small fee if they keep the money out of circulation.” (Kennedy, 1995)

Gesell’s theory gave birth to the *Freiwirtschaft* (free economy) movement, which initiated a number of interest-free money experiments. One of the most successful programs was established during the Great Depression in the town of Wörgl in Austria. In 1932, the town’s mayor was able to convince local businesses and administrators that it would be in their best interests to participate in a local currency experiment. The town council issued 32,000 “Work Certificates” or “Free Schillings” (i.e., interest-free Schillings). The certificates were backed by an equal value of Austrian Schillings in the town’s bank. The success of the scrip was nothing less than astounding, as described by Irving Fisher:

After the scrip was issued not only were current taxes paid (as well as other debts owing to the town), but many arrears of taxes were collected. During the first month alone 4,542 schillings were thus received in arrears. Accordingly, the city not only met its own obligations but, in the second half of 1932, executed new public works to the value of 100,000 schillings. Seven streets aggregating four miles were rebuilt and asphalted; twelve roads were improved; the sewer system was extended over two more streets; trees were grown and forests improved.

... On January 1, 1933 Woergl (which is an Alpine town) had under construction a new ski jump and a water basin for the Fire Department. The mayor says that the scrip has fulfilled all promises, and thinks it should be adopted nationally. At all events, a neighboring city of 20,000 inhabitants, was, at last reports, considering the introduction of scrip within its borders... and the Woergl experiment has begun to attract somewhat general attention in Austria. As conclusion to this report [the mayor of Woergl] stated: "The Stamp Scrip of Woergl will have historic significance, because it has kept its promise to provide 'work and bread.' It has, in fact fully satisfied all our expectations" (Fisher, 1933).²

The Free Schillings were kept in circulation by a use fee of 1% per month, or 12% per year. The fee was paid by the person in possession of the scrip at the end of the month. Payment was made by gluing a stamp on the back of the scrip worth 1% of the note's value. The system encouraged the money to circulate, as people were eager to spend them in order to avoid the small fee. Within one year, the 32,000 Free Schillings circulated approximately 463 times, facilitating over 14,816,000 Schillings worth of transactions. In contrast the Austrian Schilling circulated only 21 times (Kennedy, 1995).

As a result of the economic activity generated by the local currency, unemployment in Wörgl was reduced by 25% in one year. The town government collected the use fee, which amounted to 12% of the 32,000 Free Schillings issued, or 3,840 Schillings. These earnings were, in turn, used to finance further public works (Kennedy, 1995).

The success of Wörgl's experiment with stamp-scrip money led more than 300 other communities in Austria to consider adopting the model. But in 1933 the Austrian National Bank prohibited Wörgl from continuing its local currency program, and forbade any similar experiments.

The Wörgl Schilling is just one of numerous experiments with stamp-scrip money that took place during the Great Depression. The system was specifically designed to overcome the immediate problem of hoarding. Stamp-scrip money succeeded in this endeavor admirably, but in a manner that made it unable to function as a store of wealth. Thomas Greco asserts, "If a currency or scrip is properly issued and its supply is not artificially restricted, there should be no incentive for hoarding" and hence no need for Gesell's stamp "gimmick" (Greco, 1994). However, other pundits are not so sure that structural change by itself can prevent the uncertainty that compels people to hoard their money.

Margrit Kennedy presents a solution to Gesell's system that permits money to act as a store of value while at the same time encouraging circulation. In this model all money is subject to regular devaluation in the form of a use fee. Given the electronic nature of modern money (about 90% of the money supply is nothing more than numbers

² This account is even more convincing given that Fisher did not subscribe to the *Freiwirtschaft* philosophy, and was particularly critical of Gesell's theories on interest. Fisher was a well-known devotee of conventional pre-Keynesian economics. He is famous for his poorly-timed, 1929 prediction that, "Stocks have reached what looks like a permanently high plateau." However, despite his theoretical bias, he went on record in support of stamp scrip programs as a useful tool to mitigate the affects of the Great Depression (Fisher, 1933).

in a bank computer) the application of a use fee is much more simple than in Gesell's time. Instead of relying upon stamps, banks can simply charge the fee to an individual's account. This fee takes the place of interest, which in this system will be abolished. As a result the inflationary pressures of compound interest will be eliminated.

In this model, each person would have two accounts: one checking account and one savings account. Each account is designed to cater to one of money's two conflicting functions. Checking accounts record money that is to be used as a medium of exchange, the use fee (as little as 1/2% a month, or 6% a year) is charged to these accounts to keep the money circulating. On the other hand, savings accounts are designed to act as a store of wealth. Money placed in these accounts is not subject to a use fee and hence maintains its value. Even though the savings account will not permit its holder to collect any interest payments as in the current system, people will be inclined to use it as a way to protect their money from regular devaluation and save for future needs. The bank can then use the savings deposits to back non-interest commercial loans to those who need it.

To protect against hoarding of scrip, banknotes would be issued with an expiration date, and recalled once or twice a year. This would be no more inconvenient or expensive than the replacement of worn-out notes with new ones, as occurs in the current system (Kennedy, 1995).

Enhancing the Information Medium

In Chapters I, II, and III, we've reviewed a series of structural flaws that inhibit the conventional currency from functioning as a pure information medium. Currently, the information carried in conventional money is corrupted at the onset by the growth imperative communicated through the mechanics of compound interest. Hence, the primary goal of any future reforms should be to create a monetary system that will function even when denied continuous economic growth.

However, even if we were able to eliminate these flaws, the information conveyed by money is often contingent upon conditions independent of the monetary system. Again, we should note that currency ideally acts as a *standard of value*. The information communicated by a unit of money denotes value, just as inches, feet, or yards denotes length. Therefore, the value of a good or service is determined by its market price. Unfortunately market prices rarely correlate with the social or ecological value of a particular good or service.

Economist Richard Douthwaite has addressed this concern by suggesting we impose our priorities upon the exchange medium itself. In his book, *The Ecology of Money*, Douthwaite asserts, "The ideal use of resources over the years can only be assessed in terms of one's objectives. At present, the system's objective is simply to minimize costs from moment to moment in terms of market prices that are largely determined by the current pattern of income distribution" (Douthwaite, 1999). Even if we were to design a currency that was not dependent upon continuous economic growth, it is still informed by market prices, which for the most part have nothing to do with our social or ecological objectives. If market prices are to reflect long-term objectives they need to be assessed by a standard that reflects those goals.

Douthwaite argues, "every economic system should establish the scarce resource whose use it seeks to minimize, and then adjust its systems and technologies to bring the least-use solution about." Given that people are always trying to minimize their

expenditures, it is logical to base a currency upon that global resource whose use we seek to minimize, Douthwaite suggests fossil fuel. If this link can be made, economizing behavior would in turn result in conservation of a non-renewable resource. In theory, the market prices on goods and services would be adjusted to reflect the conservation imperative. Goods that are produced using large amounts of fossil fuels will be more expensive than their energy-efficient counterparts.

The trick to Douthwaite's solution is to find a way to make the link between our new currency and fossil fuel conservation. If we were to connect the currency to a certain unit of energy, it would simply encourage more energy production. An even more frightening possibility is a currency backed by world fossil fuel resources. First, basing our new currency on a valuable commodity would negate one of the primary goals of monetary reform, the decommodification of money. Second, it would inevitably give oil-rich regions a virtual monopoly on world money supply, making fossil fuel reserves an even more contentious international issue.

Instead, Douthwaite suggests that monetary reform begin with the creation of an international currency based on Special Emission Rights (SERs)—the right to emit a predetermined amount of greenhouse gases through the consumption of fossil fuels. SERs would be established in accordance with the Contraction and Convergence (C&C) plan developed by the Global Commons Institute in London. Under this plan the international community would first need to agree on how high atmospheric levels of CO₂ can be allowed to rise. This step could pose the most contentious issue, as there is considerable uncertainty over how much CO₂ the atmosphere can safely absorb.³ Whatever target they ultimately reached would then determine how much the world must reduce yearly emissions in order to maintain CO₂ levels at a safe concentration.

Once the annual emission target had been set, an international administrator (say the IMF) would divide it into SERs, which in turn would be allocated to the world's nations on a per capita basis. Under-consuming countries would have the right to sell their excess SERs to more energy-dependent countries. This could generate income for many underdeveloped nations. However, if industrialized countries were permitted to purchase SERs with their reserve currencies, it would effectively permit them to increase energy consumption for free, because a good portion of the money used to purchase energy rights would circulate as a world exchange currency, as opposed to being used to buy goods and services within the country that issued it.

To overcome this problem, the IMF would also issue a purchasing currency, energy backed currency units (ebcus), which would be the only legitimate means of trading SERs. The ebcus would be divided among nations on the same per capita basis as SERs. The value of the ebcus would be set relative to the SER, and would be issued on a one-time basis to get the program started. The IMF would pledge to supply additional SERs to any country willing to relinquish the equivalent value of ebcus. However, any ebcus the IMF received in payment for SERs would be canceled, and volume of ebcus in

³ The current concentration of atmospheric CO₂ is estimated at roughly 360 parts per million (ppm). The EU has suggested that a 50% increase in current levels, to approximately 550 ppm, might be safe, while Bert Bolin, the former chairman of the Intergovernmental Panel on Climate Change (IPCC), believes that 450 ppm should be considered the absolute maximum. To maintain either of these targets will require massive cuts in greenhouse gas emissions. The IPCC believes emissions should be cut by 60-80% if we are to alleviate the risks of global warming (Douthwaite, 1999).

circulation would shrink accordingly. To avoid a contraction of world ebcus supply a country would need to purchase existing SERs from an under-consuming country. The price set by the purchase of SERs would establish the exchange rate of national currencies in terms of ebcus. To illustrate the process, assume large energy users were prepared to pay \$20,000 for a SER allowing a nation to emit 1000 tons of emissions. If an under-consuming country were able to sell a SER on the world market for 500 ebcus, each ebcu would be worth \$40. Under-consuming countries would use the ebcus proceeds from these sales for international transactions, which would in turn set prices for imports and exports in terms of ebcus.

Douthwaite's model requires extensive administrative oversight to ensure it is equitably maintained. For example, he suggests the program be administered by an international authority, which would regulate the supply of SERs by issuing them on a monthly basis according to the C&C formula. But the primary purpose of the model is to re-inform the system through its value standard. As Douthwaite concludes, "countries would control their economies by adjusting the energy supply rather than the credit supply as they do today" (Douthwaite, 1999). In this way a country's economy would be required to confine its expansion to the rate at which it became more energy-efficient, as opposed to the volume of debt it was able to maintain.

Margrit Kennedy proposes a different method. Instead of trying to impose our values upon the medium itself we should impose them upon the structures that manipulate market prices in the first place. In this model, monetary reform would be followed by tax reform designed to discouraging the use of non-renewable and slowly renewable resources. To this end, Kennedy proposes two initial changes in the way taxes are levied: (1) change the income tax into a product tax; (2) include in the product tax an assessment of the likely environmental costs.

Most self-described liberals, myself included, are initially appalled at the suggestion to abolish income taxes. However, this reform is logical when viewed from Douthwaite's least-use solution. Labor is arguably our most abundant, renewable, and sustainable resource. But income taxes only serve to make labor more expensive, compelling producers to invest in more mechanization. If income taxes were abolished, employers could reduce payroll costs without affecting their employees' take-home pay. Lower labor costs would also create more employment by reducing the pressure for increased automation.

In place of the income tax, Kennedy suggests we introduce a product tax upon goods that would take into account their impact on the environment. After monetary reforms remove the access fee on money, prices will initially drop. As estimated by Kennedy, industrialized countries could experience a 30% decline in general prices, possibly even 50% for capital-intensive goods. In these conditions, a product tax could be applied without increasing the general costs of living. However, in the long run a product tax would compel more sustainable consumer behavior by increasing the cost of resource-intensive products relative to their more environmentally friendly counterparts. Our present throwaway economy would be replaced by a price system that reflects the ecological principles of reuse and recycling. People would be less likely to purchase a new car if it cost significantly more than simply repairing their old one. Consumer demand would compel producers to provide higher quality and more durable products. In fact, durability could be one of the qualities reflected in the product tax.

In addition to tax reform, Kennedy proposes a series of land reforms that would combine the benefits of *private use* with *communal ownership*. Land, like money, is a resource vital to our economic, social, and ecological well-being. Like air and water, land is necessary for any and all human activity, and hence should be accessible to everyone. To this end, private ownership of land should be replaced by communal ownership. In Kennedy's words: "Land should belong to the community and then be rented out by the community to those who use it" (Kennedy, 1995). This concept of common land is by no means new, and was in fact the custom in Britain, as well as many other European countries. The tradition was phased-out at the beginning of the eighteenth century with England's enclosure movement.⁴

In practice these reforms would be implemented gradually. Kennedy suggests a few long-term strategies for implementation, one of which is for a community to charge a small tax of the value on each plot of land. The community would use the proceeds from this tax to purchase local lands as they came on the market. To access community lands members would obtain a lifetime lease on a plot of land. The leaseholder would not own the land, but instead would own any buildings or improvements made upon the land.

Kennedy's land reform is intended to complement a new monetary system by 1) eliminating or significantly reducing land speculation, and 2) democratizing local land-use. Because of its importance to any and all economic activity, control of land will greatly determine who has access to executive information. Like money, land is too important to treat like a commodity. Unlike money, land is a finite resource and can accommodate only a certain amount of use. Permitting speculation ensures that the highest bidder, not necessarily the most worthy, will determine how land is used. When a community decides to hold its land in trust, the issue of use can be decided democratically, giving community members a chance to shape local land-use in accordance with community values.

These reforms would provide two other note-worthy benefits. First, it would help maintain the structural reforms by eliminating a potential source of capital hoarding. Land acts as a capital sink. When money is tied up in land it cannot be used to buy other goods and services, and thus is effectively taken out of circulation. If the cost of land were deducted from real-estate prices, for many people it would free up a considerable portion of their income for other expenses. Which leads me to the second benefit, the societal repercussions of reducing housing costs. In another study conducted by Margrit Kennedy, she found that in order to purchase a building site in 1982, a German citizen needed to work three times as long as in 1950. Although land prices in the U.S. vary greatly from those in Germany, rising costs have made affordable housing an immediate

⁴ Prior to the enclosure movement, rural England was largely a peasant economy dependent upon agriculture. The livelihood of these communities was founded on the peasant's traditional rights to cultivate land in open fields and graze his herds on the commons. During the enclosure movement common lands were closed and sold off as private lots. The effect upon the peasant economy was drastic. What had been a free resource now could only be accessed with a fee. To further compound the problem, pre-industrial agricultural systems were heavily dependent upon cattle for proper fertilization. Originally communal grazing was able to fulfill this need, but as enclosure of open lands continued, small farmers found they did not have an adequate amount of land to maintain an optimal herd. This environment gave a significant advantage to the wealthy, large landowners, who began to squeeze out their smaller rivals. Without access to land, the traditional peasant farmer was demoted to the position of landless farm laborer. The process was completed in the early nineteenth century by means of a series of parliamentary acts.

problem for many large U.S. cities. A general decline in housing costs would also mean smaller mortgages, thus reducing the outstanding debt of most homeowners.⁵ If housing costs were to decline, for many it would make home ownership much more affordable.

In the end, I believe significant monetary reform will require a fundamental shift in how monetary matters are perceived. Our monetary system operates as a communications technology and money is its information medium. As a medium, money conveys economic power, which means that its disposition is inherently political. In the beginning of this chapter I stated that context is key to obtaining optimal performance from our monetary system. This also pertains to the medium itself. In order to obtain the optimal performance from money, the medium needs to be informed by the context of its use.

Assume, for the sake of argument, that we were able to eradicate the malfunctions inherent to interest-bearing money, and turn the U.S. dollar into pure information. We would still need to re-inform the medium to ensure that the information it carries is appropriate for its use. In the previous section I highlighted a few noteworthy possibilities for reform. However, in each case the proposed reform is designed to cater to a certain level of economic activity. When placed in a different context these changes may not provide the intended benefit. To illustrate, let's return to the proposed reforms.

In the case of Richard Douthwaite's C&C proposal for an international currency, the information it carries is based off a well-defined objective: reducing the threat of global warming. This objective is very appropriate for a global economic context. Global warming is an international issue, and its solution will require international cooperation. In this case the least-use solution is informed by this objective and its global context.

However, in a national context the C&C proposal may not be the most appropriate least-use solution, as Douthwaite would be the first to acknowledge. He suggested that, "*every* economic system should establish the scarce resource whose use it seeks to minimize." Different countries have different economic conditions. Depending on the country, reducing fossil fuel consumption may not be its highest priority. Take, for example, countries in the Middle East. Given the region's desert climate, coupled with its huge oil reserves, for many Middle Eastern countries water conservation would be a far more practical objective. This does not mean that the C&C proposal needs to be completely scrapped. It just isn't necessarily an appropriate standard for each national currency and hence should be used in its global context.

Margrit Kennedy's suggestions also require a consideration for context. Her proposed tax reform is designed to promote the use of labor over mechanization. This objective may not be as high a priority for some economies as others. For example, the U.S. economy, with its relatively small population, does not need to provide as many jobs as India's economy with its one billion inhabitants. In each case, tax reform should take into account the specific employment needs relevant to the national economy in order to properly inform the currency. But again, the needs of a national economy may not accurately reflect the needs of all its component economies. Each country is an economic

⁵ It is interesting to note that the word "mortgage" derives from the Latin words *mort* and *gage* meaning, "dead pledge." The logic behind the etymological meaning of the word is that when a person defaults on his loan the mortgaged properties are confiscated and for all intents become "dead" to their previous owner.

grab-bag of diverse local and regional economies. Kennedy's land reform proposal caters to this level of economic activity. It is the most flexible proposal, able to be molded to the specific needs of any local economy.

In the end what we see is that money's performance is based on the accuracy of the information it carries. The closer it is to the local and regional context the more specific the information conveyed. As we ascend through higher levels of economic activity, the information carried by money will by necessity become more and more general. To avoid any problems this might create, I contend that money is best informed from the bottom up, not the top down. This would result in a decentralized monetary system in which authority and responsibility is vested at the smallest appropriate level. Such a system would necessitate national and international decision making bodies. For instance the C&C proposal could not be implemented at the local or regional level. However, the authority of national and especially international decision makers should be limited, and their policies geared toward a very specific objective, one best pursued at that level.

In essence, a decentralized monetary system would turn the present system on its head. It is a complete reversal of how authority is currently exercised. Designing such a system would require reform at every level of economic activity, and is far too large a subject to fit into one thesis. Chapter five deals only with reforms at the local level. It attempts to answer the question: if, in the future, we were to create a decentralized monetary system, what might it look like at the local and regional levels?