Mind Over Money

An Introduction to the New Currency Revolution

Revision 1

Part 1

Intro

Introduction

While our lives revolve more and more around money, more and more, money has a life of its own. Everyone, from bankers to businesspeople, to everyday workers and householders of all classes, are at its whims. While we use it simply as a medium of exchange, it now circulates to every corner of the world, and has created a deep web that we only find ourselves entangled in. We all know that if there is no work there is no money – but the odd thing is, if there is no money, there *is also no work*. As much as we work for money, we need to start making money work for us.

If someone were to tell you that you could simply create your own money, you might think they were insane. Yet that is exactly how money is created – by people. And believe it or not, when the money we use today is short, people have begun to create their own money, allowing them to stay in business and stay employed, and for communities to finance their own needs.

If you were to use something as a medium of exchange – whether it is a rock or a shell or something drawn on a piece of paper, as people have done for thousands of years, what comes in the way is that someone else has to accept it. Of course, if you were to pay someone with something you drew up on a piece of paper, it would be hard to use it to pay someone, because that person would have to convince the next person to accept it as well. Yet again, this is how all money, including the money we use today, began. People agreed on using it together, like how people developed a common language. The people creating new kinds of currencies today are doing exactly this.

Now, why would anyone want to create a new currency, when the money we normally use can already buy you anything that money can possibly buy? Why reinvent the wheel? The most immediate and basic problem with our money today, among many, is that even though it is all around us, it is really *inherently scarce* – it is a common experience of anyone or any business that while people need work done, and there are people willing to work, there is not enough money to pay people. Unemployment and a bad economy do not exist because there is no work. There is always plenty of work needing to be done. The problem is, there is not always enough money to facilitate trade. So, people have started to create their own money to use side-by-side, that is, to be *complementary* to the money they normally use.

Yet scarcity is only one inherent problem of the money we use today. While our money has facilitated the great miracles of the modern world, from building our roads to sending someone to the moon, it is at the

heart of our greatest problems as well. In addition to scarcity, the deepest problems we face in our world, including the disparity of wealth, and the ongoing social, economic and ecological collapse, are being driven by the nature of our money in how it's designed and used by itself as the means for all ends and the ends of all means. Our money is driving our problems to the extent that if we do not provide more options for ourselves that are designed to suit our needs, *no matter what we do* to regulate and direct how money is created and to whom and for what purpose it flows, our problems will continue and get much worse.

Bernard Lietaer, who has helped design the Euro and was once considered the world's foremost currency trader[1], has seen a full range of our money's inherent problems and shortcomings, and has thus dedicated himself to the idea of *complementary currencies*. Much of this pamphlet is based on his work in researching initiatives, and his broad vision of how complementary currencies will change our world for the better. As Lietaer puts it, money is a tool, and using one tool to solve all our problems is like “painting with a screwdriver” - new currencies are being created that are useful for what our money, and no single type of money can solve effectively. If we use the new currencies widely, it will bring about deep stability, equality, and allow us to invest in our future. Complementary currencies have deeply profound effects, allowing us to direct their use towards a broad number of purposes. Many balance and solve the inherent problems of our money, being used as needed, as opposed to when they happened to be available, and for the benefits of cooperation and long term investments among other things. The new currencies people have created vary considerably. Perhaps the largest example is what people call *modern barter*, where a *trade dollar* is equal to the value of a dollar. Others use *time* as a unit of currency, where people trade hours of work. There are also many digital currencies, and many ideas on the table that would be backed by commodities, while being designed to circulate for a particular purpose or benefit.

It seems strange that something so pervasive as money is so overlooked by everyone. Yet this is exactly the problem – it is such a basic fixture in our lives that we take it for granted. Everyone, from beggars to consumers to business people to economists have overlooked the very nature of money and especially the money we use. John Maynard Keynes claimed, "I know of only three people who really understand money. A professor at another university. One of my students. And a rather junior clerk at the Bank of England." Yet it is not that money is elusive, or that it is above anyone's intelligence. It is really that it is too simple and basic to have been perceived worthy of consideration by anyone. As a result, we

have allowed money to insidiously shape our decisions and thoughts, letting it control us by the seat of our pants, when we can be using it to our advantage, even creating possibilities that were not available before.

While complementary currencies are *the solution* to some of our most vexing problems, they do not require us to have to overhaul anything, while anyone can participate in helping create and use them as they are intended. Any group of people can readily create a currency, and it has become easier than ever. As money has gone digital, people can simply create a community that trades a currency online. People can simply use the new currencies with the predominant form of money today, and the inherent problems and shortcomings will become irrelevant. If people start by understanding money itself, and the currencies they use and are available to create, we can start on the path to making money work for us, and in the process solve our deepest problems and create far more possibilities than we previously thought imaginable, with surprisingly little.

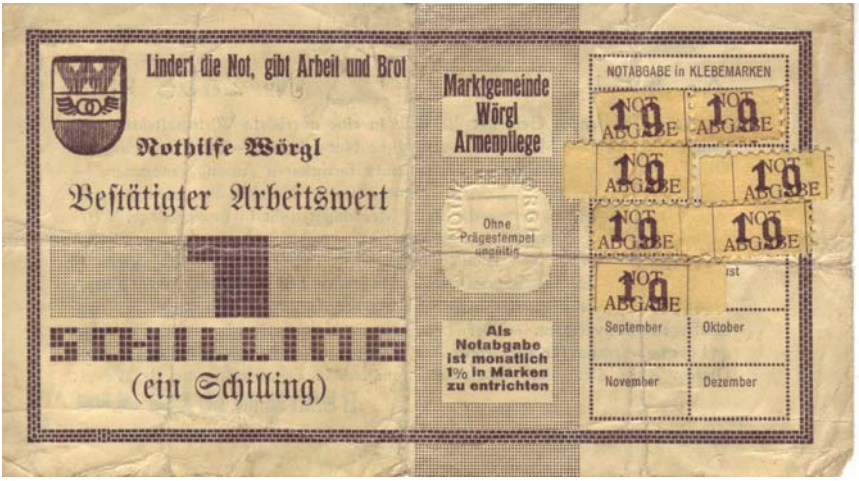
Stories from the Past

While money is simply a medium of exchange, if you change it slightly – the material it is made of, if any, or the way it is produced and distributed – it has broad impacts on society. We all know this firsthand, as money has gone through tremendous changes in the digital world. Checks and cash have been replaced by digital money and credit cards, while paper money severed its ties with gold less than four decades ago. Yet however the money we use has changed throughout the modern era, we have been using essentially the same type of money. There are many examples of currencies, even during the modern era, that have had profoundly different effects for those who used them.

While people may point to the fact that currencies that existed before our predominant currencies took shape were flawed and even harmful, there are many experiences that demonstrate otherwise. Before the US Dollar was established in 1913, there were over 30,000 competing currencies in the United States[2], with varying success, in the form of private bank or government bonds, by companies like retailers, or some that were backed by gold and silver. While many look at the situation as a mess, the lack, if any, of a proper money system was not inherently because there were so many currencies. As history has further illustrated, there are many problems with the money we use, many of which because there are not complementary currencies, which have often been extroordinarily successful.

During the Great Depression, when the whole developed world

was experiencing a typical unemployment rate of 30%, there were many who began successful initiatives that generated full employment. The most famous example that was copied widely began in the town of Worgl, Austria. The mayor of the town decided to print a *stamp scrip* to pay people[3]. One of the key features of the currency was that at the end of every month, each note had to be stamped to reduce the value of it by 1%. This discouraged people from hoarding the money, as people payed for things ahead of it losing its value at the end of the month. Full employment generated rapidly, and the town was able to repair and expand its infrastructure. After people converged on Worgl to understand the miracle, it was copied widely across Europe and even more initiatives were created across the United States.



The Worgl Stamp Scrip. *People had to apply the stamp for the current month in order for it to be valid. The currency drove the local economy, generated full employment, and allowed the city to repair and expand its infrastructure, even building a ski jump.*

The stamp attached to the currency at the end of every month was a *demurrage fee*, which went to pay for a soup kitchen to feed those most in need. Demurrage fees have been used off and on by many prosperous civilizations in complement with other currencies, like gold and silver. During the Middle Ages, a time associated with backwardness and disease, there was a period of 200 years where there was remarkable growth and prosperity, largely underpinned by demurrage currencies circulated in localities and regions. Demurrage currencies have an interesting effect – unlike the money we use today, which has interest attached, people do not invest in the money itself. Any investment that would involve accumulating and keeping money would be discouraged, so people

invested in things that lasted and produced long term prosperity. This is why most of the great cathedrals in Europe today are from this era. To take one example, the cathedral of Chartres, in France, has a capacity greater than the population of the town at the time it was built 800 years ago. It was meant to be a pilgrimage attraction and produce long term prosperity, which it still does to this day. There was such great abundance during this time, and people were so well-fed, that the heights of people increased tremendously, only being surpassed in the 20th Century.[4] In the case of Europe during this era, when a new sovereign would come to power, usually at the previous sovereign's death, all the coins in circulation would be invalid, and it might be that every four coins would be replaced by three new coins, each of which had the same value as the previous coins, amounting to a demurrage fee of 25%.[5]

Demurrage currencies were common throughout history, and often they were backed by commodities. In the case of Ancient Egypt, whose pyramids are still standing today, it is believed by some that people who stored grain were given clay receipts called *ostraka* that circulated as demurrage currencies. When people would redeem ostraka for grain, they would be charged a fee for the cost of storage, and any ongoing loss or deterioration in grain, in proportion to the amount of time the receipt was issued and the grain was stored, and were thus given less grain than the value of the receipt.[6][7][8] As grain was the staple of their agrarian economy, this may have underpinned what made Egypt a highly prosperous and stable, and in many cases exceptionally egalitarian society for 3000 years. Likewise, with one initiative in Germany during the Depression era, called the *Wara*, an owner of a coal mine printed a currency to pay its miners, which was backed by the coal they mined, and the demurrage fee went to pay for storing the coal. He arranged for foodstuffs to be brought in for payment, which ignited its circulation. The *Wara* circulated all over Germany and beyond,[3] perhaps because coal was the lifeblood of the industrial economy.

As the initiatives of the Depression era grew considerably, noted economists Irving Fisher, Russel Sprague, and the Undersecretary of the Treasury, Dean Acheson discussed the trend, and became convinced it was the solution to the depression. Fisher even said on the record, “The correct application of stamp scrip would solve the Depression in the United States in three weeks!”[9] They met with President Roosevelt, who was impressed. But decisions on policies were left to their staff, and instead, they were all banned by executive decree, as they were elsewhere, one after the other, in every country, and the communities that benefited went back to heavy unemployment. The Nazis rose to prominence on the backs of millions of

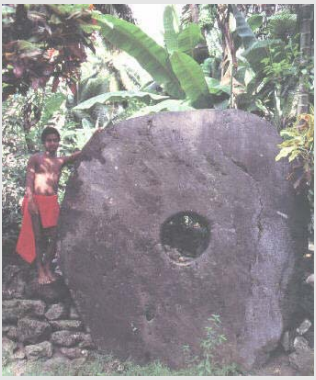
frustrated workers, and the invasion of Austria was widely welcomed by its people. The only thing that drove the Western World out of the Depression was World War II. Only one currency remained unbanned, and it is alive and well today. The Swiss *WIR* is now used by a third of all businesses in the country, and is considered a reason for Switzerland's remarkably robust economy.[10]

History is further replete with examples like these. When early modern states came to power towards the end of the Middle Ages in Europe, the local demurrage currencies were banned and gold currencies were debased, which destroyed the thriving economy. Ten percent of the population died of hunger from 1315-1322,[11] and the Black Plague struck in 1347-1349, again killing over a third of the population, under conditions that many believe were ripe for such a disease to spread more than it otherwise would have.[12] Ben Franklin created a monetery policy that allowed the British colony of Pennsylvania to greatly prosper, an initiative that all the British North American colonies soon copied.[*citation needed*] When the English government banned the currencies by the Currency Act, and insituted money created by the Bank of England, it inflicted severe hardship. Several taxes were instituted that may look small, but were difficult to pay, as the entire economy had to orient itself to obtain the currency to pay them. The added fact that the government of Britain had no accountability to the colonists, which were considered their subjects, added insult to injury, and led to the Revolutionary War and the founding of the United States.[13] Though they had lost the American Colonies, as Britain and other nations colonized various parts of the world, they developed standard ways of creating economic domination through taxation and debt. In the case of what was to become Ghana, the British imposed a *hut tax* of only one shilling per year, which caused the entire traditional, locally based economy to collapse, as they had to orient their economy towarde centralized trade with the British.[5] When the Germans colonized the Yap Islands of Micronesia, they simply had to draw a black 'x' on the islanders' unique, large stone money to symbolize the transfer of their posession, to whip them into action, repairing paths they had cleared (see insert).[3]

Any currency promotes certain values and flow towards certain purposes, that may or may not align with the people using them. Whether or not the money we use today is intended to be beneficial, as it is created by central authorities that are intended to bear accountability, it is promoting certain values and behaviors that are not being balanced with the benefits that the creation of wider variety of currencies would. Thus, people in the era of the information revolution are creating complementary

currencies, and this time, their long term establishment holds greater promise, as people are beginning to see their mutual benefits.

A small yap coin



A larger yap coin

On the Yap Islands of Micronesia, a remarkable currency exists to this day, which is excavated from a rare stone on islands 400 miles away. It is a testament to the astounding diversity of money. They range in size, the smallest being several inches, and the largest being 8 feet, 4 tons, and needing to be carried by 20 men. When a payment is made, the coins usually simply stay on a property when ownership is transferred. When the German colonists wanted to whip the islanders into action, repairing paths they had cleared, they simply painted a large black 'x' on them, which meant “property of the colonial authority.” Seeing the Yap Islanders as strange is a mirror reflection of our own form of money - Milton Friedman compared this to how gold was often transferred in vaults by people simply transferring them to drawers with ownership marked separately. Interestingly, while the Yap stone money are considered “masculine”, money done with high transactions, the women of the Yap Islands conduct much of the day-to-day trade with readily available strings of mussel shells. They are yet again an example of the diversity of money and the effects each form of money has on peoples minds and behaviors.

Diversity

Much of the problem with the type of money we use is that while it is inherently fragile, it is left alone and isolated, as the only kind of money we use. It is the age old wisdom that one should not “put all their eggs in one basket”. Even within the money system we use, people “diversify their holdings” - as currencies have been volatile, investors have begun to hold a variety of currencies to protect themselves in case one or more fail. Yet the world is moving towards fewer and larger currencies, such as the Euro, and economists and many industrialists have emphasized the eventual creation of one global currency as the most simple and *efficient*, and therefore considered inherently most beneficial. In general, the sole emphasis that has been placed with efficiency has led to an economy that

is prone to collapse, regardless of the fixes we make. We are creating one basket , and the emphasis has been on the notion that “one bad apple ruins the rest”, and refining the basket we happened to have, rather than adding and maintaining diversity. On top of this, the nature of the way our money is created, despite its ease, makes it more prone to collapse than other forms of money, the reasons for which will be discussed later. With the combination of an inherently fragile money system, and the lack of options available, we are increasingly vulnerable. No matter what kinds of cosmetic changes we make to the economic system, collapses will continue to happen, and they will become larger as the system grows more efficient. During the 25 years from 1971-1996, there have been 169 monetary crises, and 93 banking crises, which hit 130 countries, a situation that hasn't changed since.[14] The solution has always been to blame the last kid on the block – whatever bank or policy was the one to pop the bubble. There will always be problems with any system, it is just that we are increasingly relying on one – and while the benefits of one will be received widely, the problems will also be pervasive, and when there are crises, people will have nowhere else to go. Efficiency must be balanced with diversity in order for there to be a rich and productive world.

The balance between efficiency and diversity can in fact be applied to anything that is complex and dynamic – whether an ecosystem, a community, a monetary system, or the world of culture, language and ideas. Think of a forest where there are deer and wolves, their natural predator - if one is removed, as has been the case with wolves in many places in the world, the deer ravage the landscape and destroy the forest. It is not that the deer are inherently this way, rather their population is not balanced by the wolf. The deer in fact depend on the wolf, as the deer tend to overpopulate and their population crashes.[15] The same is true of agriculture – while the potato revolutionized Irish society, with its climate and rocky soil, they only propogated one variety from the nearly 4000 from the Incas, and a single disease wiped out all the potatoes in the disastrous Great Irish Famine.[16] In fact, the blackouts that have been experienced in electric networks as robust as the United States' have been attributed to the same problem – the overemphasis placed on efficiency, and not having enough diversity, redundancy, and interconnectivity.[citation needed] Likewise, if we do not have a variety of exchange networks and currencies, both in number and in type, we will continue to see economic collapse. Lietaer uses *network theory* to explain this.[17] Any complex and dynamic network requires a balance between efficiency and diversity and interconnectivity for it to be productive, dynamic, adaptive and resilient.

An increase in diversity must be accompanied by a decrease in efficiency, and vice-versa. If there is too much efficiency at the expense of diversity, the network becomes brittle and prone to collapse, which will reduce its overall productivity. If there is too much diversity at the expense of efficiency, the system chokes on itself, and becomes stagnant and likewise unproductive. There must be a balance between efficiency and diversity in order for the system to function well. An ecology tends to optimize itself, as would an economy if left on its own. The emphasis placed on top-down efficiency has been artificial to the way that people naturally operate in creating a variety of networks to draw upon.

When defining efficiency, often the lines are drawn in ways that are arbitrary. One must ask – what makes something *efficient*, and for what *needs*? The emphasis has been on productivity and the ease of trade – or simply on money itself. Money is a tool for exchanging much of what we value – and we don't only value money. Furthermore, along with efficiency, the other obsessions of the modern world – *competition* and *choices* – are often arbitrarily or mistakenly seen as too redundant, and thus inefficient for what is considered inherently "naturally" ubiquitous. If the availability of choices are of benefit, that certainly applies to currencies, the very medium of exchange.

In the wider scheme of things, there is nothing inherently redundant about having multiple mediums – they are for a wide variety of purposes, and have inherent faults and benefits, like anything else. The inherent benefits of our currency are tremendous. It allows us to earn money in any place, and go anywhere in the world and spend it on anything, whether a meal or a house. It allows the coordination of resources on any scale, from paying for the tools to tend a garden, to building a rocket to send people to the moon. It has underpinned the great

material prosperity and technological proliferation that is the miracle of the modern industrial world. The drawbacks to the type of money we use are likewise tremendous. To name the most aggregious, the money we use is inherently fragile, creates hierarchical dependancy, inherently creates an overemphasis on competition with its inherent scarcity, an inherent stratification of wealth, forces economic growth even at the expense of society, promotes short-term thinking while making long-term thinking infeasible, and thus is not beneficial for long term investments like infrastructure and the environment, and it is prone to instability itself, most notably with inflation.

We can try all we want to make cosmetic changes to many of the biggest problems we face in the world, but the type of money we use is in itself at the heart of these problems, and if we do not address money itself, using money will be like sitting on quicksand, and at best using the sand to hold ourselves up and stay out of a faster and faster, ever-sinking mess. As Albert Einstein said, “We can't solve problems by using the same kind of thinking we used when we created them.” Below we will go through the systemic problems of our money, first with how it is produced and inherently fragile, and then moving on to the inherent problems of a sole currency based on interest.

Part 2
Our Money

How Our Money is Created – and Inherently Fragile

'So you think that money is the root of all evil?... Have you ever asked what is the root of money?' - Ayn Rand

We all use money, and sometimes it feels like we practically live for it – but few people really know where it actually comes from. Again, people typically see it as a medium of exchange that the government has created for our convenience. The truth is actually quite astounding for anyone who hears it for the first time. It in fact sounds absurd – as economist John Kenneth Galbraith once famously said, "The process by which money is created is so simple that the mind is repelled." Believe it or not, when a bank lends someone money, it is actually creating that money. That money did not exist before it was lent. Almost all of the money that we use was created by banks like the ones you use to deposit your checks.

To begin, imagine:
*Say there's one bank in town.
*Alice deposits $100 in the bank
*Billy needs a loan, so the bank gives him $100.
*Billy pays Carol, who deposits the $100 bank in the bank.
*The bank now has $200 - $100 of deposits from Carol, and $100 from Alice
*The bank can then make a loan to David for $100, and so on.

There's one catch – at some point, anyone who deposits money in the bank might want to withdraw it at any time. The bank knows that at most, at any given time, everyone altogether might withdraw 10% of their deposits.

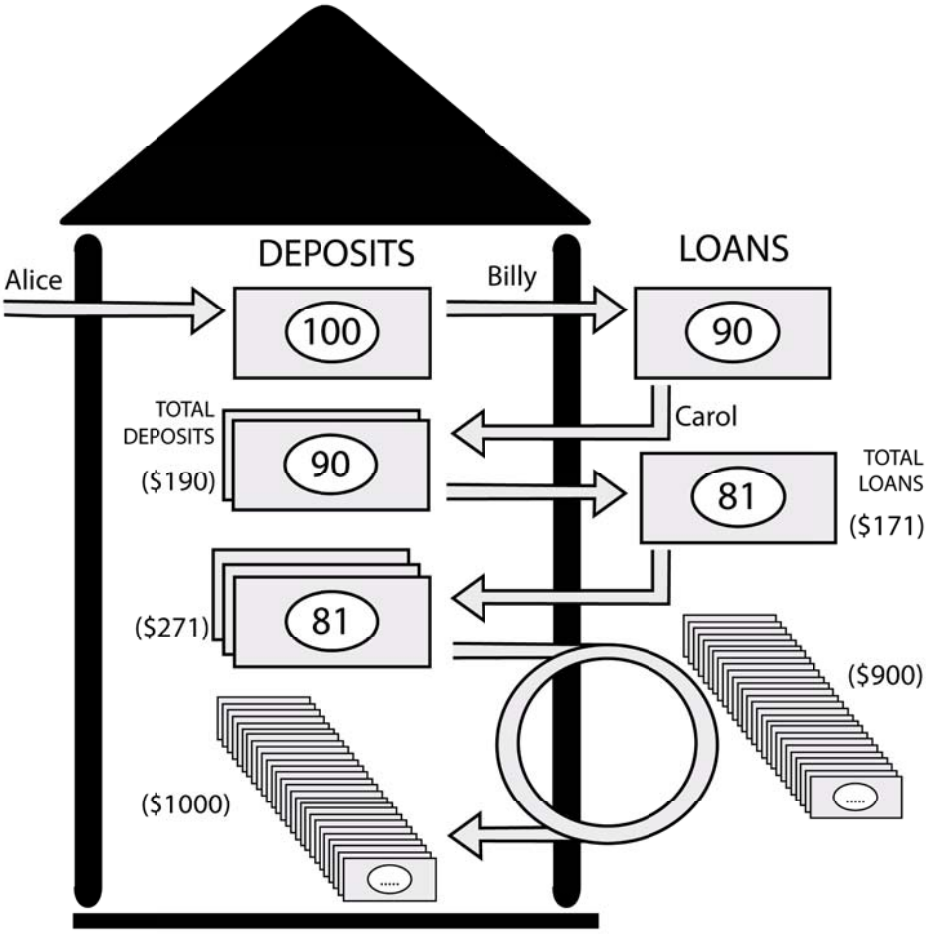
So, in reality, it would actually work like this:
*Alice deposits $100 in the bank
*Billy needs a loan, so the bank gives him $90, keeping $10, or 10% of the amount of deposits it has in case of withdrawal
*Billy pays Carol who deposits the $90 bank in the bank, and the bank now has $190.
*Of the $90, the bank then keeps 10%, or $9, and loans $81, which is deposited back in the bank.
*This process continues until $1000 is created from the initial $100 deposited.
*Of the $1000 created, the bank only has $100 in deposits for all the people who might come and want to withdraw, and the other $900 is

loaned.

Now, think of the bank not as *one* bank, but as the banking system as a whole. Alice may deposit her money into one bank, and then Billy might take out a loan and pay Carol, who deposits in another bank, which uses her deposit to lend to another. It doesn't matter – the banking system as a whole creates money from the initial deposits into it.

Now, in the example above, Alice had $100 to start. Where did she get that money to set things in motion? In the case of the money system as a whole, a *central bank*, which is the bank of banks, creates the original credit. Its job is to facilitate the creation of money at its source. It lends money to banks, which sets off the multiplier. Often it takes loans from banks as well, which takes money out of the economy, reducing the overall money in circulation, so there is not too much inflation. The multiplier works in reverse as well – as the example above illustrates, for every $100 it puts in, with a 10% reserve, it creates $1000, while for every $100 it takes out, it takes out $1000. The job of a central bank is to maintain the value of money, which, the theory goes, cannot be done without central coordination. Whatever the effects are at a local level by its policies, it keeps the overall economy intact. The central bank creates only a small amount of the money that is created, while the vast majority is multiplied through the banking system in what is called *fractional reserve banking*. While there are numerous currencies in the world, they are all essentially under the same type of national currency, originated by central banks and multiplied by the banking system.

This system has advantages – it allows for the ready creation of money that is accepted widely, while the central bank ensures the stability of its value. However, among many things, money that is based on fractional reserve is inherently fragile. If a bank borrows money, whether from another bank or a central bank, and makes bad loans, then the bank goes bankrupt, and cannot pay back the loans or deposits that people made. In fact, if people know or are afraid that their bank made bad loans, they might try and withdraw their money quickly, and if too many people do that in a *run on the bank*, the bank might also go bankrupt, and the depositors lose money. When one bank may have defaulted, the banks that lent to it also default or have problems, and so do the lenders that lent to them, and so on. Through fractional reserve, money is built like a house of cards, as every dollar that disappears through default causes many more dollars to disappear, which cause more to disappear, and so on. This is exactly what has happened every time there has been an economic collapse, from the Great Depression, to the housing bubble. Nearly every time, the answer has been for the central bank to lend money to jumpstart


DEPOSITS
LOANS
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Carol
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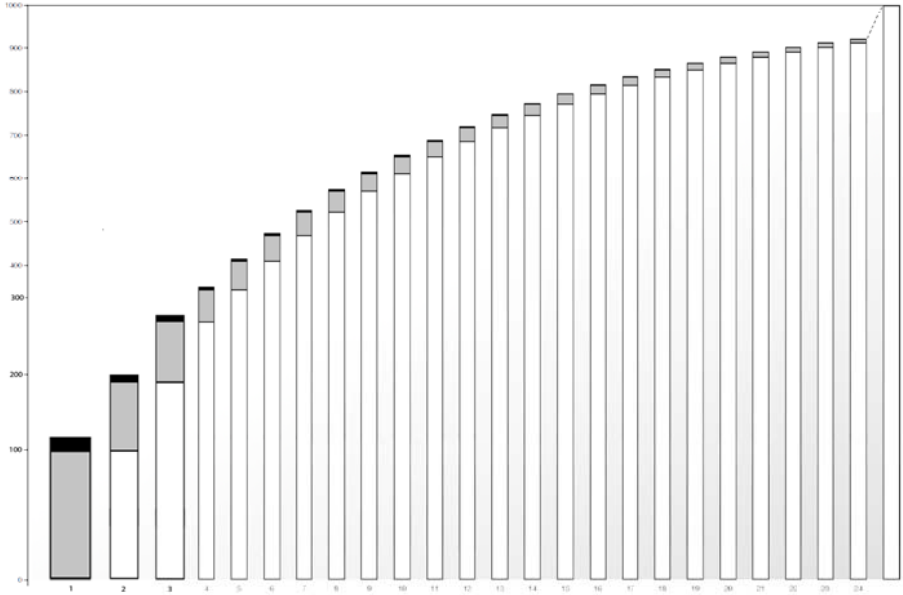


the system. In recent times, larger banks have bought up smaller ones with loose credit and collapse, in a cycle that makes banks bigger and bigger. They have grown so large that they are considered “too big to fail,” as they are so large, their default would take the rest of the economy with them. So, governments have done everything they can to save them, and again, the big ones bought the smaller ones, becoming even larger. While the money and financial system is built to grow larger and larger, it also has the characteristic that it tends to grow more efficient and brittle through collapse after collapse, after which the banks will eventually be, as Lietaer puts it, “too big to bail.” The system is growing and becoming more ubiquitous on its own, with the way it is built.

In collapse after collapse, the answer has been at best to fix the system with regulations for what caused the contagion to take place. We need to realize that the problems with our economy are the symptoms of deeper problems that will only continue. People are beginning to see that complementary currencies do not undermine the predominant system, rather allows it to breathe, while balancing and mitigating or removing the problems they create in a mutually beneficial, win-win situation for everyone. There are complementary currencies that have even in practice to this day been able to stabilize the overall economy, while addressing the other problems of a single currency, of which there are many. They are the natural, obvious and practical solution to the problems our money creates.

6 Problems with Interest

There are many more deep problems with our money that go beyond its inherent fragility. All of the money that is created is done so through loans, and those loans must be paid with *interest*. Therefore, every dollar, yen, rupee or euro in your pocket is an asset for you because it is someone's liability, and it all has interest attached. The idea behind interest is simple and logical, but it is not inherent to all forms of money. The reason that our money system bears interest is so that it has inherent power, as people have an incentive to invest it. With interest, money has a life of its own and wealth can accumulate on its own. There are obvious advantages to this, but there are enormous consequences for there being a sole form of money based on interest.

It is no secret that interest can pose a heavy burden, and no secret that it has a power of its own. Interest allows the accumulation of capital, which creates a great deal of versatility and creativity. Yet anyone trying to pay off their house knows the weight it bears every day. Some of the world's most predominant religions, especially Christianity and Islam, strictly forbade interest, sometimes considering it the most aggregious sin.

Yet the benefits of interest were understandably seen, and the idea slowly changed. Over time, *usury*, the term for interest, came to mean an unreasonable, unpayable or illegal rate of interest. Today interest is simply the way things are done, and the consequences are enormous, and need to be mitigated with the conscious use of complementary currencies.

There are six key problems of all money being based on interest:

(1) Scarcity and competition
(2) Stratification of wealth
(3) Economic growth at society's expense
(4) Inflation
(5) Short term thinking
(6) Valuing money in itself

Scarcity and Competition and the Stratification of Wealth

To begin to understand the problems associated with interest, we can use a variation of a story by Bernard Lietaer called the *11th Round*, which illustrates the issue beautifully.[3]

> Once upon a time, in a small village, people used to barter for all their transactions. On every market day, people walked around with chickens, eggs, ham and bread, and had to spend a great deal of time haggling to work out their trades. At key periods of the year, like harvests or whenever someone's barn needed repairs after a big storm, people worked together to help one another, as they knew that if they had a problem some day, others would aid them in return.
> One market day, a stranger with shiny black shoes and an elegant white hat came by and observed the whole process. When he saw one farmer running around to corral the six chickens he wanted to exchange for a big ham, he could not refrain from laughing.
> "Poor people" he said. "So primitive."
> The farmer's wife overhead him and challenged the stranger, "Do you think you can do a better job handling chickens?"
> "Chickens, no," responded the stranger. "But there is a much better way to eliminate all that hassle."
> "Oh yes, how so?" asked the woman.
> "See that tree there?" the stranger replied. "Well, I will go wait there for one of you to bring me one big sheet of leather. Then have every family come visit me. I'll explain the better way."
> And so it happened. He took the sheet, and cut perfect leather rounds in it, and put an elaborate and graceful little stamp on

each round. Then he gave to each family ten rounds, and explained that each represented the value of one chicken.
"Now you can trade and bargain with the rounds instead of the unwieldy chickens," he explained.
It made sense. Everyone was impressed with the man with the shiny shoes and inspiring hat.
"Oh, by the way," he added after every family had received their ten rounds, "in a year's time, I will come back and sit under the same tree. I want you each to bring me back 11 rounds. That 11th round is a token of appreciation for the technological improvement I just made possible in your lives."
"But where will the 11th round come from?" asked the farmer with the six chickens. "You'll see," said the man with a reassuring smile.

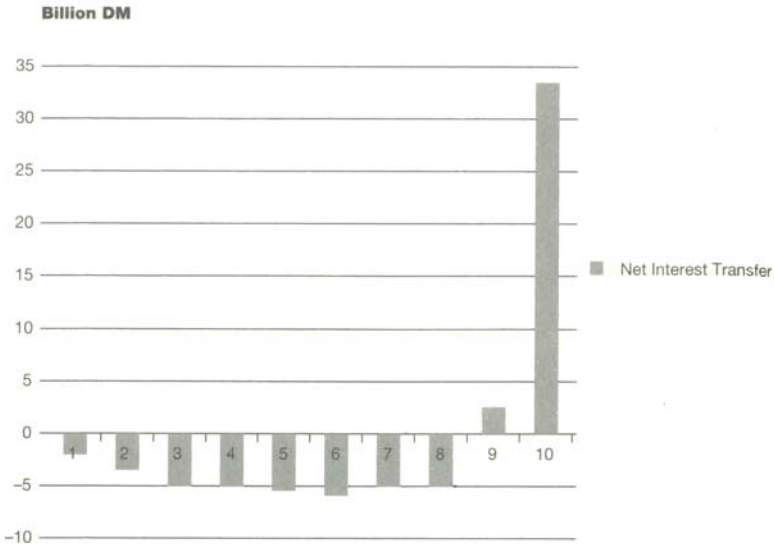
Assuming that the number of people in the village and the amount they produced remained the same, what do you think had to happen? Remember, that 11th round was never created.

When a storm threatened the crop of on the the families, the other families had to make ends meet. They were less generous with their time, and instead the family payed their 10 rounds to the other 10 families, which allowed them to have the 11 rounds they needed to pay back. While it was much more convenient to exchange the rounds instead of the chickens on the market days, the new game also had the unintended side effect of actively discouraging the spontaneous cooperation that was traditional in the village. Instead, the new money game was generating a systemic undertow of competition among all the participants.

While the story is very simple, when you take all the variables of a changing money supply, population growth and trade, the rules are still the same – more money is owed back at any time than exists in the system, and thus enduces competition.

Furthermore, the ones who lose end up in debt, while others accumulate more wealth. In this case, one family went bankrupt so the other ten families could make ends meet. This is one outcome, but over time wealth would stratify in a very complex way, as the richest would have investments that carried entitlements, and the people on the bottom are in perpetual debt. Only one study has been done, in Germany, on how interest payments are stratified across people of different incomes.[18] As one can see from the graph, only those in the top 20% gain net interest payments, while the other 80% have to pay more interest. This amounts to

an enormous ongoing flow, as investments compound upon themselves. This is the way things would always play out in society with an interest-based system like we have today. In other words, no matter how much we try to create equality, if we do not address the monopoly of our money, with interest attached, we will end up with the same effect.

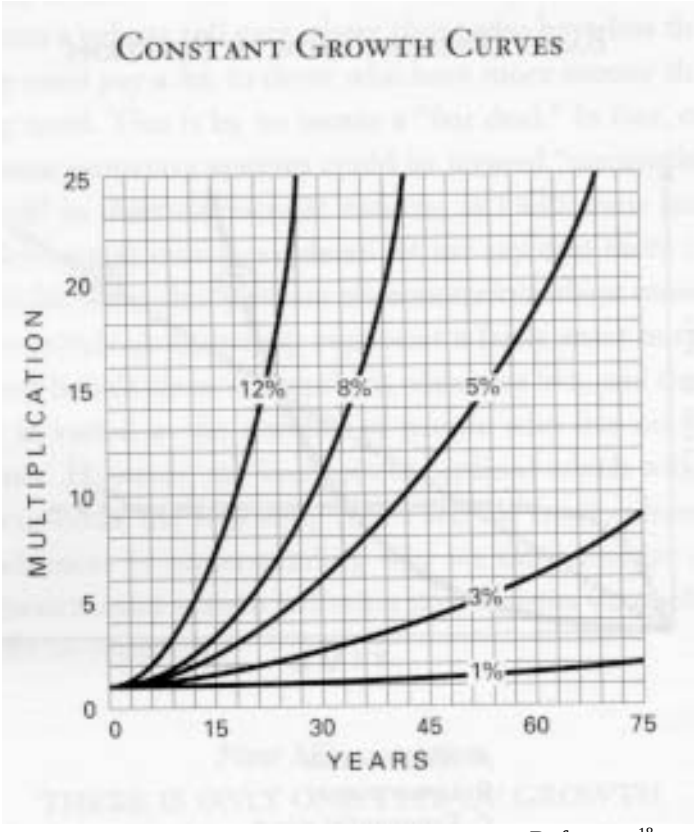


While the predominant form of money and other scarce currencies, like gold and silver might promote competition, there are currencies that exist that actually promote cooperation, while some currencies promote other values entirely. Many communities have found that *mutual credit*, discussed later, actually allows them cooperate, and generates community. If mutual credit proliferated, people could perhaps create a cooperative society, while the money we use today money remains available, and perhaps people would use it to make up for the nature of interest-based currencies, and vice-versa.

Economic Growth and Inflation

One must consider a basic fact of compound interest – with interest attached to all money, the amount of money or the economy would have to grow infinitely in order to keep up. Take a simple example – if all money were loaned at an interest rate of 10%, it would take a little over 7 years for their investment to double. That means that if money held its value, 7 years from now, everyone would have to be producing twice as much, and if there were the same number of people and there was no change in technology to increase their productivity, that would mean they would

have to be working twice as hard for money. That might still be possible, but sooner or later it becomes completely infeasible. The economy may double, and the doubling may double and so on, and 70 years later, there would have to be over $1000 for every dollar created. If someone in the time of Christ (assuming the year 1 A.D.) saved a penny's worth of gold at an interest rate of 4%, it would have been worth the earth's weight in gold around 1850. By 2010, it would have been worth 500 times the earth's weight in gold.[19] At some point something has to give. The only way an economy can withstand the pressure is for there to be some combination of inflation, economic growth, ongoing default and periodic collapse, whether or not that would be a result of having to keep up with compound interest.



Reference[18]

While economic growth and inflation are often caused by a variety of factors, in many cases, interest actually causes them to happen. To cover their interest payments, people may have to borrow more and produce more, which increases economic growth, or borrow more and raise their prices, which increases inflation. In the case of the 11th Round,

with a 10% interest rate, people would need to borrow and produce 10% more every year. Since a round was equal to a chicken, they would have to perhaps have 11 chickens for every 10 they had before. Either this, or everyone would have to borrow more, and use that amount to pay for the same number of things, hence increase their prices, and inflation. Again, as the value of a round was equal to a chicken, the price of a chicken would go up 10% a year, or 10 chickens would be worth 11 rounds. Thus, interest is a factor that is often insidiously behind the falling value of money, and the reason that people must often work harder to produce more than they really need, in order to meet, or beat interest. Interestingly, as they take place, economic growth and inflation would to a degree counteract the competition and stratification that interest would create, as either more things or more money are produced that goes around to those who need it and are willing to do more for it. All in all, for a society dependant on money based on interest, in order to maintain any vitality and balance, there must be economic growth and inflation.

However, there are other factors that cause economic growth and inflation that allow an interest-based money system to sustain itself, and compensate for where people would otherwise have to keep up with interest. To start, one of the primary factors that has allowed the modern money system to sustain itself is the simultaneous population growth and change in technology in the modern era. From the time the world's population started growing exponentially 500 years ago with half a billion people,[20] it will have increased nearly 20 times, to 9 billion by the time it is believed it will stabilize in the next 50 years. While the changes have been uneven, these changes happened to be where modern money has been most in effect, where the world has been “developing”, first primarily in the Western World, and then everywhere else at the end of colonization. Furthermore, where development has been taking place, the productivity of a single worker in the era of mass production is many times what it used to be. A single worker can press a button that makes clothing that dozens or hundreds of workers would have made by hand. In the same period, the economic output per person will have increased 80 times, from $300-500 throughout the mostly agrarian world to over $25-40,000 in the mostly industrialized world.[19]

Much of the economic growth has been, especially in the case of development, a welcome trend for societies that were relatively poor, and had to worry about their most basic needs. The scarcity of wealth has certainly been a driving factor along with the scarcity of money itself. It is possible that an interest-based system may have pushed technological productivity and perhaps even created conditions for population growth

indirectly, but it is also likely that interest and technological productivity are mostly only correlated, and it is the availability, and wide acceptance, or *liquidity*, of money that has been a key ingredient to the productivity the world has seen. The availability of capital on the other hand, in turn, has a lot to do with the fact that interest drives the accumulation of capital that is used for business and technological ventures that has driven industrialization. The question of where the effects of interest have been positive or negative is of course a complex one, and again, we need to become conscious of what they are and how we can utilize any positive benefits and change their negative consequences.

There are likewise many factors that cause inflation, that significantly offset the inflation that may have been caused by interest itself. The uneven increase in wages, the overzealous lending of central banks, and the expectations of people all play a part. Interest aside, what allows our money to inflate in the first place is the fact that its value is designed to float freely, which some commodity currencies are designed to not, a subject discussed later. Yet with a free-floating currency, regardless of other factors, there must be scenarios when people would have had to increase prices to cover the burden of interest and make ends meet. And in any case one thing is certain – compound interest cannot be sustained forever with the value of money remaining the same. To sustain interest in the long run, regardless of other factors that may have compensated, interest must force money to either inflate, or the economy has to grow or collapse. As the population and productivity of the developing world continues to grow, the effects may continue to offset, but there must be a limit, after which there must be some combination of interest-based inflation and collapse.

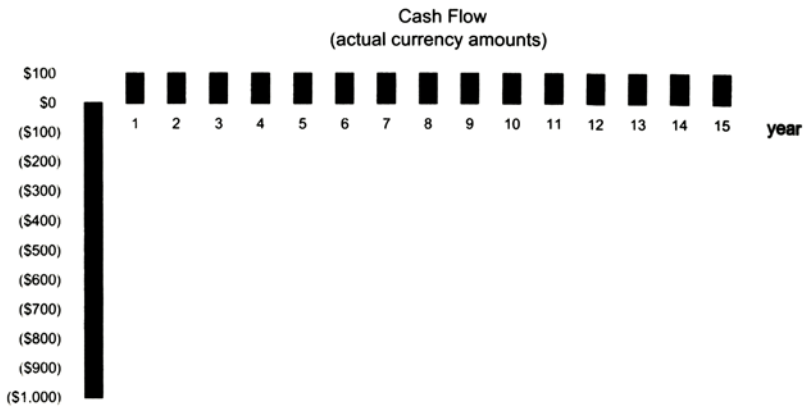
As interest necessitates the expansion of money and growth, the job of policymakers and economists have been, broadly speaking, to try their best to maintain the value of money by keeping inflation low, and grow the economy as a whole at all costs. What economists mean when they say that “the economy has grown” is using a measurement called Gross Domestic Product (GDP), which is simply the value of everything produced that is measured by and traded with money. As much as a growth in GDP may mean that millions may be lifted out of poverty, it also includes any growth in trade. It means that heroin addictions, as well as the cost of an addict's healthcare, ecological destruction, bogus investments based on loose credit, and unnecessary and wasteful government spending, would register as an increase in economic growth. This would be fine if it weren't for the fact that economic growth were not always considered *inherently good*. The reliance on GDP as the sole

criteria for judging the health and well being of a society or economy is literally dangerous, as growth is being driven for the sake of growth.

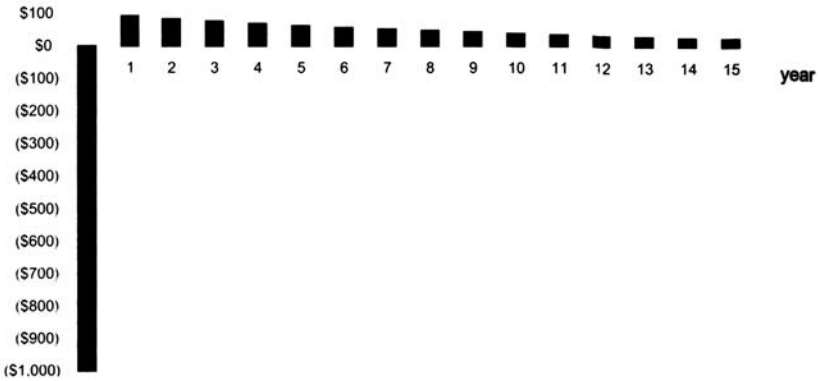
Money affects our behaviors in subtle ways, from our everyday decisions to the policymakers at governments and large companies. The features of a form of money have powerful effects with the way we think cumulatively, and the culture we propagate. Are economic growth, competition, and consumer spending really fundamentally important in any context, or is it that we just need them to survive with the money we use? The obsession with competition, efficiency and growth have become almost superstitions, and the scientific notion of "survival of the fittest" is a deeply engrained modern mythology. If at the time of harvest there was not enough food to go around, would we call the resulting famine "survival of the fittest", or a lack of foresight? This is the logic that we have imposed on ourselves with the overarching value of compound interest.

Short Term Thinking and the Inherent Value of Money

One behavior that interest creates on the scale of a society is that it makes us think short-term, and makes long-term thinking infeasible. Long term investments like a house or the environment hardly pay off. This is one of the first things one learns in Finance 101 – *discounted cash flow.* Say an investment was made for $1000, and it would return $100 a year for 15 years. In the long run, this sounds like a good return. To you, it might look like this:



But to an investor, if the average interest rate was 10%, it might look like this:



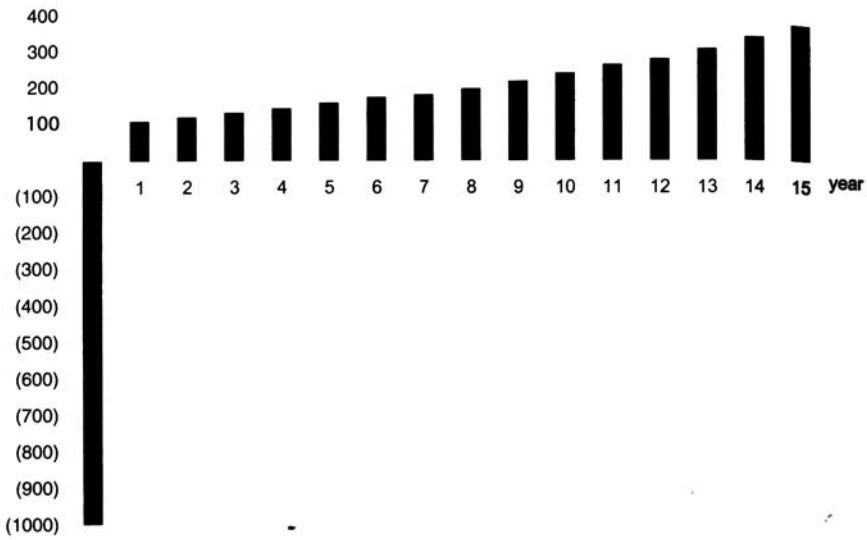
Reference[3]

To an investor, if $100 was received a year later, it would be worth $91 today. The investor looks at it under the perspecitive that if she were to just stick $91 in the bank with an interest rate of 10%, it would be worth $100 a year from now. By the 15th year, the investment would be worth a dismal $24. An investment must beat the 10% interest rate, and because that is often so expensive for the borrower, investments of more than 30 years under typical interest rates are more often infeasible. Even so, by the end of a mortgage, a homeowner will have typically paid twice as much as the original loan in interest. An investment of more years for the environment is simply impossible. Restoring depleting soil and reducing massive chemical runoff is not nearly as profitable as poisoning and ravaging a landscape, as the long term financial return would be little to nothing, and the short term return will be the only way that an investor would be willing or able to invest, and a borrower to obtain any loan. Many economists often look at the average interest rate to determine how people might have an incentive to worry about climate change. If there was mounting devastation over the next 100 years, it would have to be relatively severe now for an investment to be worth anything today from a financial standpoint. An interest-based monetary system is the greatest systemic cause of the unprecedented ecological destruction we are facing today. It makes the whole problem highly intractible. As people are a part of the living earth, interest is what has made us a cancerous tumour, growing for the sake of growth, at the expense of the body that it depends on.

Interest creates an emphasis on money itself – the more an

investment involves accumulating more money, the more worthwhile an investment. All of this sounds like an obvious fact of life, but it is hard for us to believe that this is actually not entirely a fundamental aspect of money, because of how the design of our money has affected the way we relate to it. We have come to treat money as a thing in itself, when *money is actually not a thing*, no matter how physical it is in form. Money is only an *idea* that is representative of things. The nature of the predominant form of money, or other forms such as gold and silver, promote the accumulation and stocking of money by itself. But demurrage currencies, an example mentioned earlier, actually have an incentive against hoarding money. Though demurrage currencies are seen by its users as very useful, one specifically wants to avoid the very idea of keeping it for future use.

Interestingly, a demurrage currency, which loses value over time, functions like a *negative interest rate*, and creates the opposite effect in how people think and invest. As mentioned earlier, where demurrage currencies were predominant, people spent more on things that lasted, where they did not have to spend money. The Europeans of the Central Middle Ages built cathedrals that would last, and bring a continuous flow of wealth over a long period. While interest promotes very short term thinking, demurrage promotes very long term thinking. If there were a 10% demurrage fee applied yearly, it would look to an investor like this:



If someone had the option of receiving 100 units of currency now or a year from now, they would choose to have it later, because they would receive it without having to pay the fees. So, receiving 100 units a year

from now would be the same as having 110 units today. In this way, with interest, the same amount of money is worth more today than later, and with demurrage money is worth more later than today.

When making investments using demurrage currencies, the longer term the investment, the better. People would literally be making investments indefinitely into the future, as they did in cathedral-building Europe. Investments in the environment, restoring landscapes, watersheds and biodiversity would be some of the strongest investments, here and now.

Now, switching entirely to a demurrage currency might simply go from one extreme to another. Perhaps it may in many cases reduce short term investment when it would otherwise be beneficial. Furthermore, demurrage does promote the accumulation of wealth in forms other than money itself. It is hard to know what kinds of other social problems it may cause. This is why a variety of currencies are important, in making up for others shortcomings. People might apply certain currencies for certain purposes. Though there are mutual credit currencies that promote cooperation, as competition is often beneficial, Lietaer suggests that perhaps interest-based currencies can be applied for that purpose. Along these lines, perhaps demurrage currencies can be applied for long term investments, and interest-based currencies for short-term investments. Again, complementary currencies would exist in an ecosystem of sorts, where each currency is balanced and often dependant on others, and mutually beneficial. The exact relationship can only be educated speculation at best until we use them and actively observe their effects. We are all completely blind to the effects money is causing, though we create it as a simple agreement, in our own minds. We must collectively become conscious of money, and direct it for solving our problems and producing greater mutual fullfillment.

Money *Itself*

Regardless of how it's designed, there may be many advantages and problems with money itself, and they must be taken into account as well. The use of money as a liquid medium of exchange has brought things into the market, facilitating a deep form of democracy. A dollar is equal to a dollar, no matter what social identity or gender you belong, and thus the market has flattened the disparities between people in a mutually dependent web, where systemic prejudice must be put aside for greater gain. This is an unseen, and very understated benefit a market economy has provided. However, it is hard to say whether this market democratization has always been appropriate, or even at times detrimental.

Is the value of working for money really greater than the value of domestic work and childcare? Are we valuing people and work and wealth for its intrinsic value, or its market value? Furthermore, the use of money as a liquid medium of exchange has made us think that what we value can be measured. If apples and oranges were equally abundant, and one apple costs twice as much as two oranges, does that mean that we value apples twice as much as oranges? Or, are we, as the proverb goes, *comparing apples with oranges*? Also, we know that some things are simply unmeasurable – we all know that we cannot buy what we value the most, such as people and unconditional love. If economics is suppose to be the measurement of what we value, what about the goods and services of our relationships and the environment? Those who try and measure them often miss the point – they are inherently unmeasurable, and what we need to throw out the door is the obsession with measurement as the means of determining everything. Economics has dealt with measurement, and thus largely only deals with money, which is only a small part of the economy of our existence.

Given that economics focuses on only that which can be measured, it leaves out a whole range of what can be known. David Freedman gives a good analogy about economics, and science in general,[21] that has been dubbed the *streetlight effect*:

> A drunk man was seen by a police officer crouching over the ground. When the officer asked the man what he was doing, the man said, “Looking for my keys.”
> The officer replied, “Where did you leave them?”
> To which the man replied, pointing, “somewhere on the other side of the road”.
> When the officer asked him why he was looking where he was, the man replied, “Because the light is better here.”

There are few economists who have really examined money fundamentally, rather just simply looked at the monetary system the way it was, and optimized it based on the information they happened to have, that is based on measurement. Furthermore, when information is available, it must fit into what can be understood from a birds-eye view. People make day-to-day decisions which are often called “irrational” by many economists today, because their decisions don't fit into their measurable utility. As the economist Axel Leijonhufvid claimed, “[Traditional economics] models incredibly smart people in unbelievable simple situations while the real world is in more accurately described as

believably simple people [coping] with incredibly complex situations."[5] Economics is very powerful for what it can do, but it is small in the grand scheme of what we value. It is simply a way of thinking about complex problems, as the story of the *11th Round*, for example, is intended to illustrate. We must put money, and economics in their rightful place in our lives.

With all this said, the subject of study is affecting those who study it, and the nature of the money we use simply exacerbates the problems with money being used as a way to measure value. With the value that the money we use today places on money itself, the obsession with measurement has gone to an extreme. While the value of a parent is not measurable, when a parent drops their child to a daycare, that value registers an improvement in the GDP. Everything is sucked into a marketplace, from childcare to the value of human life. Again, money is a tool, and as the proverb goes, "When all you have is a hammer, everything looks like a nail." When money is used as a measure of all means and ends, it is the skewed window through which we look upon our world. Money in general emphasises measurement, and the money we use today makes us look at things in terms of its inherent biases.

Now that we have observed the effects of the currencies that are in use, we can go into the different ideas that have been implemented, and generate a theory on where to start. Once we develop the awareness of how money affects our minds and actions, it will be a never-ending process to evolve what works at a given time.

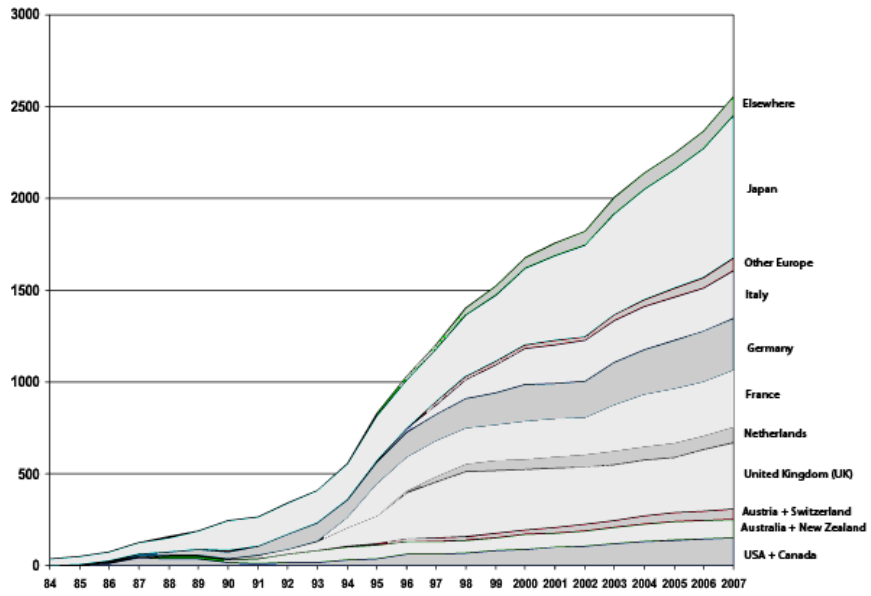
Economists and Economics

Economics is influenced by the economy, just like everything else. If times are good, economists try and find more of the same, while if the economy fails, people study what went wrong. Either way, most have generally tried to fix the system itself, while not questioning money on a more fundamental level. Silvio Gesell on the other hand provided the theoretical foundation for entirely new forms of currencies, especially the various currencies of the Depression era, and the Chiemgauer, discussed later. The theory and practice of complementary currencies have undone many of the most basic assumptions made by conventional economics, from scarcity to inflation to the very notion of what should be valued in an economy.

Part 3
New Money

Complementary Currencies

We are on the throes of a quiet explosion in complementary currencies that has not been seen since the Depression era. The need has always existed for complementary currencies, and while in the Depression the needs was more urgent, the resurgence we are seeing today have to do mostly with the information revolution, and how it has made it easy for people to create information and share it. Money and information has always been closely tied, and each time there has been a change of information technology, there has been a major change in the very nature of money and finance. Paper and printing revolutionized finance, and the digital revolution will do much more, in a shorter amount of time. We have already seen our paper-based system go nearly entirely digital, and the proliferation of ATM machines and credit cards. Money is even being sent from expatriates in Somalia over mobile phones, and as microfinance has become increasingly common especially in the developing world, on sites such as Kiva.org, people can finance business ventures directly. Yet digital money is going to change money in entirely different ways than before. Since the mid-1980s there has been an exponential increase in the



Complementary currencies have been increasing tremendously since the mid-1980s. The numbers used in the chart are only a very conservative estimate made by Lietaer, and include the larger, or more public initiatives, in countries for which some data is available. There are numerous initiatives of varying sizes that are only known to the people trading internally, in community or business networks.

number of complementary currencies, entirely separate from the predominant form of money. Also, since the rise of the internet, there have been many complementary means of exchange, such as freecycle, where people can post things they are getting rid of, and craigslist, where people can post offers of all kinds, from their junk they want to get rid of, to things they want to sell, to jobs. The fundamental nature of the digital age is that anyone can create information that can be received by anyone, and anyone who needs something, can be connected to someone who can provide it. As such, the basic way that people connect to one another is by posting wants and offers (see insert). In any forum, whether craigslist or the complementary currency platforms that are popping up, wants and offers are posted side-by-side, and the community can draw on that and trade. This has begun to change trade, and the very notion of work (see insert).

Work versus Jobs

Interestingly, the information revolution has begun to change the very nature of work. Lietaer points out that while 'work' is an an ancient word, the word 'job' dates to the industrial revolution, with the process of mass production.[3] The word 'job' is derived from 'gob', as in 'gobs of stuff', and meant “a pile of things to do.” As everything from work to money to manufacturing is becoming more on-demand in nature, jobs and professions will change to be more versatile, while for some professions, work will remain and not appear to be anything like the traditional *job*. This is important to keep in mind when going forward with the notion of certain complementary currencies that create employment in the availability of ongoing *work*.

Some complementary means are common, and people are mostly unaware that they are not actually a different form of currency. Most are small initiatives, and have affected peoples lives greatly for those who have used it. In some cases, like in the Depression era, they have come under suspicion or have been shut down and banned, as is the case with the *Liberty Dollar* and *bitcoin*. Yet some are welcomed by everyone, such as the Ithaca *HOUR*, which is officially tax-exempt by the US government, *Local Exchange Transfer Systems (LETS)*, which are officially endorsed by the Central Bank of New Zealand, or *barter networks*, which are taxed and encouraged by the US government. Out of the wide variety of currencies that have been created, the ones that are most significant or seem to hold the most promise are discussed.

With the information revolution, anyone who has access to a web-enabled device can create and access any information, and has thus revolutionized the way we trade. Any interface in an online exchange has a similar basic outline, with offers and wants, and can range from advice and old junk to housing and jobs. As money is a simple form of information, people can readily create complementary currencies in minutes, using software packages that are readily available and free.

How Currencies Evolve

The nature of money can be mysterious, and currencies can be very strange in how they evolve. A single change to a currency can change its nature, and over time, incremental changes can turn it into something else entirely. The money we use today, for example, evolved from the use of gold. For millennia, gold has been traded in the form of coins. With the advent of paper, goldsmiths, who stored peoples gold, gave people receipts, which started to circulate as currency, backed by gold. As far as people were concerned, they were trading gold, only through the representation of paper. Because fewer and fewer receipts would be redeemed for gold, many realized that they could literally create more receipts than there was gold, and thus fractional reserve (explained earlier) and modern banking took form and grew on its own. Eventually, money was backed by a certain amount of gold in a “gold standard”, but when more gold was being withdrawn than could be compensated for during the Vietnam War, President Nixon completely severed the tie of the US dollar from gold, and completed the transition. Money went from being gold to being purely paper, to being completely immaterial digital currency we use today, which will altogether transform money into something else. Before all this, the circulation of gold evolved from its use in trading

ornaments and jewelery, alongside other mediums of exchange, like shells, rocks and beads. The value of gold increased because it could neither be created not destroyed, and was rare. The currency we use today is essentially one currency that has evolved.

Like this, any currency in circulation today, including the most predominant form of money, can be subsumed by a form that represents it. To give one basic example, there is a market in India where people simply write on pieces of paper *I-owe-you*, with an amount, as a receipt.[citation needed] If a buyer paid a seller 1000 rupees, and the seller received an I-owe-you, and a week later, the seller bought something from the buyer worth 1000 rupees, then he could write a new I-owe-you to the seller, and their I-owe-yous would cancel out, while no conventional money was exchanged. Many trading platforms using mutual credit, discussed later, allow users to do exactly this, using any currency as an I-owe-you. This allows there to be many more transactions, as conventional money might be scarce. If anyone wanted to call their debts, they could redeem it over time, and no one would offer more credit than can be called. Furthermore, people can trade currency that simply represents the value of a currency, and is not backed by it, as is the case with typical barter exchanges, discussed later. Such systems could in theory subsume the currencies they were backed by or represent in value.

People can furthermore direct money in the way they prefer. Our predominant form of money, whether the Euro or the dollar, is used to direct resources by governments and foster a common identity in a nation or region. Back when currencies were backed by gold, this would have amounted to little more than each nation creating a the same currency, but with different colors and symbols, as *their gold*. Likewise, if some people were to take a national currency and simply mark several bills as a *local currency*, they could foster a local identity and economy. The bill could be used by people in the group to pay anyone outside the group, but they choose to keep it among themselves. This is essentially what people are doing with local and regional currencies, which are driving self-reliance and fostering a common identity. People can direct currencies for a wide variety of purposes. They can make all sorts of stipulations of how a currency must circulate, directing it to produce particular resources or breathe life into particular economies. Like the water people use to irrigate fields flows back into watersheds, currencies can flow and change their purpose, along with their form and function to create a world of our willing both here and now and into the future indefinitely. Once we add money to what we are conscious of collectively, we can use it to co-create an enormous wealth of possibilities.

It is helpful to go even further with examining the notion of a currency itself. Arthur Brock, who engineers trading and tracking systems, has found it more instructive to consider anything that can be used as a medium to track a flow of resources as a currency.[22] So a college degree or a credit score, or when someone clicks “like” to a post in a social network or video would be currencies that track reputation. A college degree is used as a medium insofar as the person who receives a degree is the one who might be qualified to legitimize another person who receives a degree, while someone who receives many “likes” online or has a good credit score might gain reputation with their input or their business, which is likewise passed on, in a continuity of trust. The metacurrency project, which Brock has helped spearhead, is intended to create a whole language of standards to design and create currencies, which must be defined broadly. It is inevitable that much of the resources will be based on open standards, and free and open source software. This will allow people to engineer currencies and the media with which they are carried, in their form and function, everything from the way one can view their accounts, to the calculation of finances, to their credit scores, to the platforms they use to trade anywhere and everywhere. The technology and language we use will allow us to instruct the flow of resources of the world we live in.

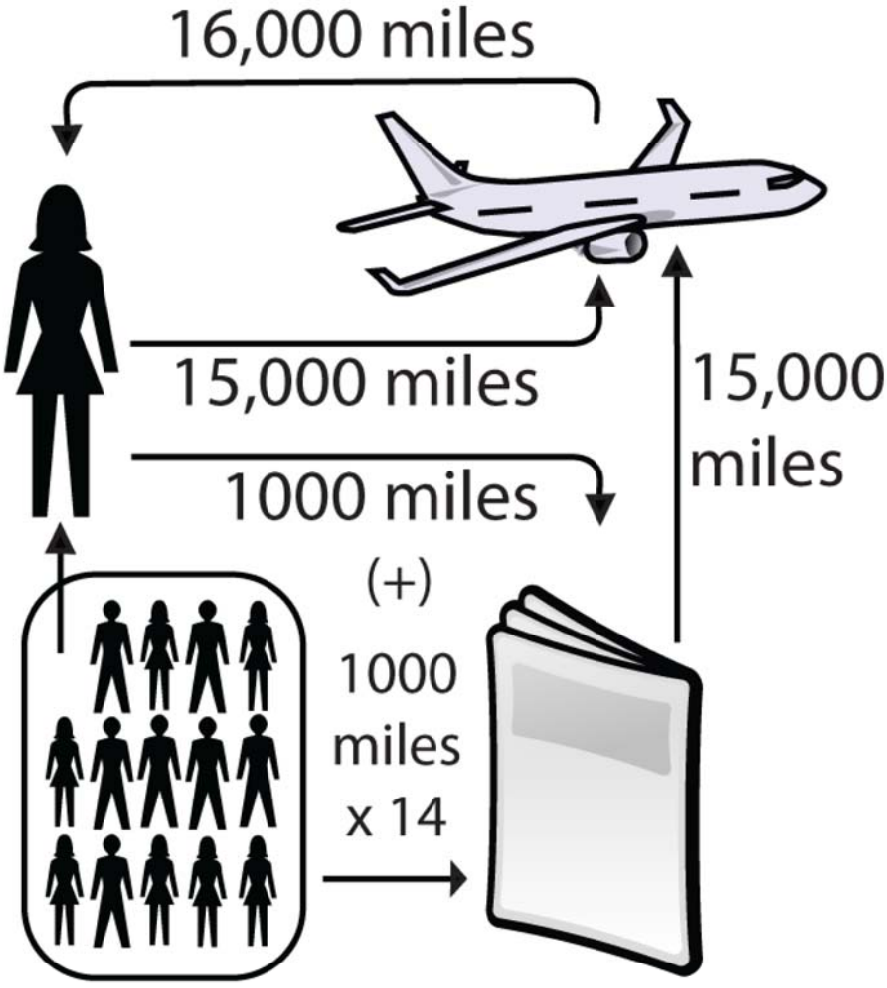
A Dollar is a Dollar

Money may be abstract, but it is simple in practice, and we use it every day. Complementary currencies, such as the barter networks that are coming up, are based on common sense – if everyone you know has stuff and services they want to sell, and people are willing to buy them, and there is no money, just create your own money to trade what you otherwise can't. They can just say that, say, 10 dollars worth of stuff can be bought and sold for 10 “trade dollars” worth of their own currency. Businesses can buy and sell what they otherwise couldn't, and buffer themselves from the ebbs and flows of the *dollar economy.*

Everyone can start and be involved with compementary currencies just by using them, as we do with our conventional money, and they do not require any special intelligence. In the “Complete Idiot's Guide to Barter & Trade Exchanges”, some advice was given to people selling the idea of barter: “Ironically, smart people can be the dumbest when it comes to figuring out trade. Be prepared for someone who is intelligent and successful to still not get it. Even after you've described the whole process, and maybe even gotten your client to put her name on the dotted line, she reverts back to trading eggs for delivering a baby. “But what if the optical company doesn't want carpet cleaning?” she'll ask with a blank stare. Be

patient. Go over it again, and again, if necessary." [24]

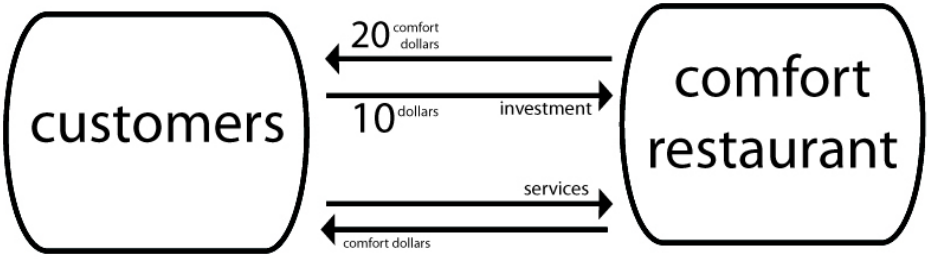
Many people use benefits like *miles* and *points* that are essentially based on this same concept, and they don't even realize they are using a different currency. If you take a flight, the airline gives you *miles*, and typically something like 15,000 miles might buy you an airline ticket. The airline is not charging you, they are selling their empty seats, which don't cost them anything when a plane is going to fly anyway. In return, they fill their empty seats, and might gain your loyalty. Often an airline might offer customers magazine subscriptions in return for their leftover miles, which the magazine company might use for airline tickets. The customer gets a free or cheap magazine subscription, the magazine company gets cheaper flights, and the airline adds value to their currency. Likewise, when a company offers a customer "points", where perhaps one point is



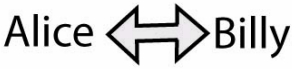
equal to one dollar, no actual dollars change hands. The business gains your loyalty, and sells the things on its shelves that aren't selling. In many cases people use systems like these to invest in businesses. In one case, a restaurant in New York opened called “Comfort”. They gave out small cards that customers could swipe for meals. They cost $10, and were valued at 20 *comfort dollars* in return.[23] They sold so many that they were able to raise a large portion of their startup capital interest-free, and the owner was even able to use comfort dollars to pay for some services. In at least one case, a city utilized its own complementary currency. The city of Curitiba, Brazil, with over a million people, had many favelas with dirty streets. For a sack of trash, people were given a bus token, which had extra seats. It cost the city nearly nothing, and people cleaned up the streets, while other Brazilian cities were literally having to destroy parts of the favelas to widen the streets for garbage to be picked up. Whether the economy is doing well or not so well, complementary currencies simply take the resources that already exist and enable people to utilize them intelligently.

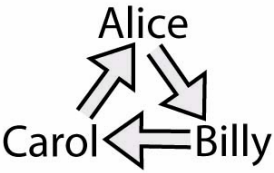
We are so engrained in the need for money to pay for what we need and want, we forget that we are exchanging services, and money is only the medium, not the service that is valued in all the transactions. Exchanging things through barter is just a way of thinking – often people don't realize that they can exchange services and gain as much as if they used money. If someone is able to offer money, or able to do valuable work, one must ask what that seller is offering, and what the buyer is valuing, for what purpose. Barter has always worked by people just simply finding what people need, and trading directly. In the case of Comfort Dollars, the owner was able to pay a part of the fees for a lawyer and a website with them, as people were willing to dine at his restaurant.

Yet one-on-one exchanges can only happen so often, and to that's where people have to be particularly creative. Money works on the principle that what comes around, goes around. The advantage of money is that if Alice has what Billy wants, but Billy doesn't have something Alice wants, but he has what Carol wants, and Carol has what Alice wants, Alice



can trade with Billy, who can trade with Carol, who can trade with Alice, and money is just simply a *liquid* medium for getting what each other needs. The more widely it trades, for more things, the more *liquidity* it gains, and eventually, as is the case with our money, it's hard to realize that we are all simply connected by what we need and can offer. So, in using a new currency, it takes





connecting to people and people to people. If someone did work for someone, they might find that the customer can't offer anything they would want, but they can use it in payment for someone who has something they do want. So if, say, the web developer did not go out much, and would have no use for Comfort Dollars, perhaps the person who painted her apartment was a frequent customer of the Comfort Restaurant, and could be payed in Comfort Dollars. Trade like this can be done by word of mouth, a network of friends, using an online marketplace, or with a facilitator to connect people, all with or without a medium. When people use a medium, it is technically not correct to call it *barter*, but it is helpful to look at any currency this way when starting out, to make it more clear to people how to relate to it from the outset, until perhaps it becomes more liquid. This kind of trade, whether a medium is used or not, is a powerful way of thinking, and many who have developed the mindset and resourcefulness are able to live a large part of their lives from it, at all income levels, and companies of all sizes. One person likened the future of complementary currencies to “rocks, pebbles and sand”, where a currency that an individual or few people might use in their business or circle might be a grain of sand, while one between a community would be a pebble, and ones that circulate widely, between communities of communities, would be rocks.[23] Any currency starts small, and some are meant to remain small and be likened to barter, while others might grow large.

Mutual Credit

Let us think about money in a more basic way. Say you did some work for somone – you would probably expect that they would do something in return. In fact, it might be under the condition that they would do something in return. This is the way that a simple and powerful form of money, called *mutual credit* functions. Basically, if you did work for someone for an hour, you might get +1 hour, and as the other person

owes you, they get -1 hour. When that person does work in return for an hour, with the +1 credit being used to “purchase” an hour, and their -1 debit made up, everyone goes back to zero. As a more widely liquid medium, the +1 credit can be used to purchase something from someone else, who might use the credit to purchase something from the person with the -1 debit. All transactions can be recorded in a variety of forms, the most common being online. Rather than rely on a bank to originate credit, people can trade with each other directly in a network of trust, and create and use as much money as they need, when they need it, in sufficiency to their trade.

Mutual credit promotes cooperation and community, whereas the money we commonly use does not, and in fact often reduces it. Beyond the problems with interest, Lietaer gives an analogy to show how the money we use does not promote ongoing relationships.[3] Say someone were walking out of their house. On the way, their neighbor asks, “What are you up to?” To which he replies, “going to the hardware store to buy a box of nails.” The neighbor says, “Oh, why don't you just take a box from me, I'm never going to use it.” Now, when his neighbor gives him a box, he may likely feel that if he had something lying around, he would provide it to his neighbor, whereas, if he went to the hardware store, the exchange would be even and settled on the spot. In this way, the money we use, despite the fact that it is based on debt, does not tie people and businesses to one another, whereas mutual credit, especially when done directly between people, promotes interpersonal connections. While the money we use allows the freedom of having obligations settled, with debts tied to banks, mutual credit allows the freedom of relying on a community, with debts tied to a community of trade.

Mutual credit can be used in lending any currency, or representing the value of any currency, no matter what form of money there is. People could simply trade amounts that are fully backed by gold, or dollars that they have in their bank accounts, or they could use currencies like “trade-dollars”, which, again, are are equivalent to the value of a “dollar”. Local Exchange Transfer Systems (LETS) are one of the most common types of communities that use the value of conventional money in mutual credit. Typically a LETS system has at least one administrator, like a typical website, where they can set credit limits of people when they sign up online. When a new user comes and has not established any credit, an admin might give someone a credit limit like $100, and if that person reaches -$100, then they have to start providing for the community because they've taken as much as they were allowed. Of course the credit limit might not be arbitrary, as the person would be known by others in the

community, and it is understood how much they can give. In some cases, mutual credit systems are completely decentralized, where users can set credit lines with each other, and each individual is autonomous. Some mutual credit systems are even decidedly low-tech. A particularly ingenious method thrives in Mexico, called the *Tlaloc*.[3] People simply write their balances on a register that circulates. Once the register is filled, it returns the administrators, who exchange a new register, and signatures from the filled registers are recorded in a computer.

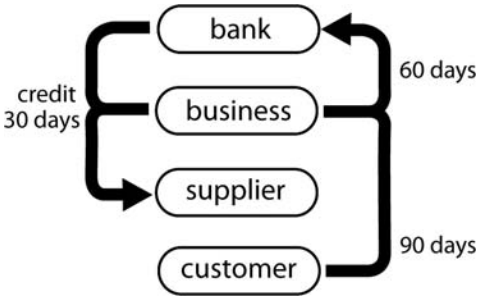
In the case of the growing barter networks, they also use *trade dollars*, but they typically function as a business. As the barter company administers the system, they determine peoples credit lines, and connect people to one another, and have sales people that connect people to trade. In return for its service, the barter company might charge 6% of the value of the transaction in conventional money. Interestingly, in the case of the United States, all transactions have to be recorded, and their taxes paid, in conventional money as well. Though there are costs in conventional money, it still significantly improves businesses' cash flow, as they could use much less conventional, scarce money, and they can buy and sell what they otherwise might not be able to. Barter businesses ensure the integrity of the system, as any participant enters a contract to settle negative balances under certain circumstances. In one example, a restaurant closed one of its branches, and tried to back out on $20,000 in a negative balance. He was reminded of his obligation according to the contract he signed, and was able to make up the trade with the remaining restaurant.[24]

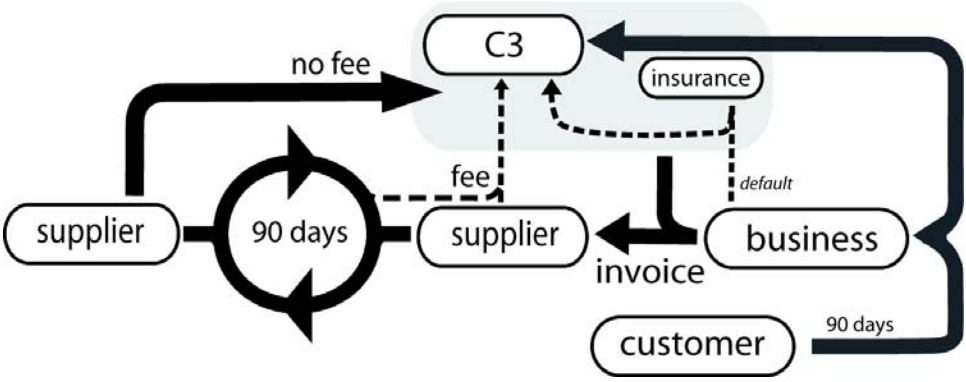
Given that they are dedicated to the currency and depend on its success, barter businesses are a particularly powerful model, and are growing rapidly. Many barter businesses are independent, while others are a part of a larger network that certifies them and aids their development, as well as helps facilitate trade in the network as a whole. One organization, called the International Reciprocal Trade Organization (IRTA), has volumes of trade in excess of $10 billion, mostly in the United States.[25] While the dozens of successful barter companies that are members of IRTA are primarily focused on their local business communities, IRTA created a *Universal Currency (UC)* that allows barter networks to trade with one another, creating a network of networks. One barter network might arrange for one of its members to stay in a hotel of another barter network, with the two networks arranging the deal and trading in Universal Currency. As the network grows, much of the trade would not have taken place, facilitating a resilient and dynamic economy, while as it is all taxed, the government gains increasingly more revenue than it otherwise would have.

The most successful and remarkable barter network is the WIR (meaning *we*) of Switzerland, where nearly one-third of all businesses participate. It was the started in 1934 when a group of businesses formed a small cooperative. It was the only currency of the Depression Era not to be banned, and attests to what the world may have been like if they weren't. Participants can find nearly anything in a catalog. People typically offer a percent of any product in WIR, ranging from 10% to 100%. A restaurant might put a sign up that they accept 50% WIR, and charge half a meal in WIR, and the other half in the Swiss Franc (CHF).[26] They can use a single card that uses WIR and CHF simultaneously. Amazingly, people have found the WIR to be countercyclical. That is, people use more WIR when there is less money available in the Swiss Franc economy, and less when more Swiss Francs are available.[10] As the Swiss Franc is always scarce to some degree, the WIR is a good option for many. The WIR has many bank branches, and even offers home and business loans in WIR, where the principal must be paid in WIR, and the interest in the Swiss Franc. Of course, like all barter networks, the WIR itself does not have interest attached, and the businesses generate the credit themselves in the cooperative, which the WIR bank only facilitates. The WIR bank determines peoples creditworthiness in the same way that any bank would for establishing a credit line.

Another interesting currency is the Commercial Credit Circuit (C3), which have the added benefit that they can be exchanged for conventional currencies.[27] Pioneered in Brazil and Uruguay, the C3 reduces the incessant cash flow problems of small businesses. It is common for a business to have to pay its suppliers in 30 days, and receive payments from the businesses that it supplies to in 90 days, while they often have to borrow money in the meantime, when conventional credit is often short or hard to come by. With the C3, a business can insure an invoice with a customer that owes them, and use it to pay a supplier, which can either cash the money by opening an account with the C3 clearing network, along with certain fees, or simply pay *their* suppliers with it. When the invoice matures, the original business can simply pay

the C3 network, and whoever holds the invoice can withdraw it for conventional money without any fees. If the original business fails and does not pay, the insurance company pays the network. Thus it allows everyone to breathe, as it greatly relieves the problem of cash flow of small and medium-sized businesses, a tremendous bottleneck for what amounts to 80% of the workforce.





One-on-one barter is conducted on a regular basis on every scale, and mutual credit can facilitate it much more broadly. There are in fact few major global corporations that do not regularly engage in international barter, commonly referred to as *countertrade*. Between $800 billion and $1.2 trillion of countertrade is conducted yearly, which amounts to 10-15% of all international trade.[28] An estimated 2 out of 3 global corporations engage in countertrade, and have departments dedicated to making such deals.[29] It is perhaps expensive, but reduces the risk of having to use currency and credit. In one example, as the US and the Soviet Union did not trade very much directly, a deal was worked out between dealers of vodka and pepsi, where Pepsi Co. would import vodka, which it had the infrastructure to sell in the United States and around the world, while pepsi could be sold in the Soviet Union, and both sides would profit. If for such trade a medium was used that gained greater liquidity, it would bring greater versatility and resilience for business networks as a whole.

Mutual credit can exist in peer-to-peer networks as well, where people might pay one another, and without mediators, keep track of their own obligations within a much larger interconnected web. This can be

done with individual currencies or larger, standardized currencies, like trade-dollars. If Alice did 5 hours of work for Billy, Alice might then come across Carol, who would do work for Alice and could also use Billy's work. In providing 5 hours of work for Carol, Alice would make sure that Billy met his obligation, as Carol has to be willing to do the deal, and Alice has to build and maintain her own reputation. Anyone can then come along, and the web can grow, and anyone can pay anyone readily. If someone were to credit someone for a good or service whom they did not know, they could have credit lines set up and borrow from their trusted partners, who would make sure that the person owned up to their obligations. People could find people who need what they have or have what they need through their own efforts, searching and browsing online. While people would not have to rely on mediators, regardless of how much people can do all their trading directly, people will always find the services of people to lend, verify trustworthiness of oneself and others, connect buyers to sellers and sellers to buyers, ensure payments are made in full, and enforce contracts.

Mutual credit promises to become a dominant form of money that is used seamlessly throughout the world in interconnected, global networks, where anyone can pay anyone, anywhere. Mutual credit will likely exist in many layers, from decentralized, peer-to-peer webs, to large, ubiquitous networks with many branches, like the WIR in Switzerland, while independent networks of all sizes might interconnect, either through networks like those of IRTA, connected by their universal currency (UC), or markets where people can openly trade currencies for one another. Eventually, anyone can generate credit anywhere, and trade with people anywhere in the world, similar to how people can today. As mutual credit grows like this, individuals, business networks and communities can have far greater control, readily using money that is always available in sufficiency for trade they wish to mutually conduct.

Time-based Money

While many mutual credit currencies are equal in value to national currencies, others uses units of *time* as a currency, and are typically used for communities more than businesses. An hour of work receives an *hour* as a unit, which is usually divided into *half-hour* and *quarter-hour* denominations. With the many *timebanks* that are popping up across the world, many require that an hour of work is never worth more or less for anyone else, and all are paid equally, as an *hour* for an hour of work. This creates an interesting effect, where people must value each others time equally. Others might not strictly abide by the rule, but it still creates an

interesting mindset where people know how much their time is "worth" in a way that is clearly transparent. Time-based currencies are easy for their participants, but they cannot be easily used for business transactions, as converting to hours would be difficult. While it is possible that a time standard might be adopted over time, as time-dollars might gain liquidity and be traded more and more for trade-dollars, any guess would only be speculation.

Another time-based currency, called HOURS, does not use mutual credit and while people would work for an hour and receive an HOUR, it is typically valued at a fixed rate, such as $10 per HOUR. In Ithaca, New York, where it started, a group of people meets monthly and decides how much to print, and distributes it to people who can use it to pay for work, typically for community needs.[30] In some cases, people have begun to pay a portion of their rent with Ithaca HOURS, and it has aided in the

unemployment in the area. In the case of the HOURS system in Madison, Wisconsin, people often trade HOURS for time-dollars at the local timebank, which provides a transition between units of hours and dollars.[citation needed]

A community using time-based currencies like these can bring great community-level cohesion, identity, and prosperity. On the island of Bali, communities are tightly-knit, as people work for one another and engage in ongoing events and festivities. In meetings, people mutually delegate units of time for work that people must fulfill. While Bali may look poor from the perspective of its GDP, it is an incredibly wealthy society from others. They have literally dozens of holidays and festivals

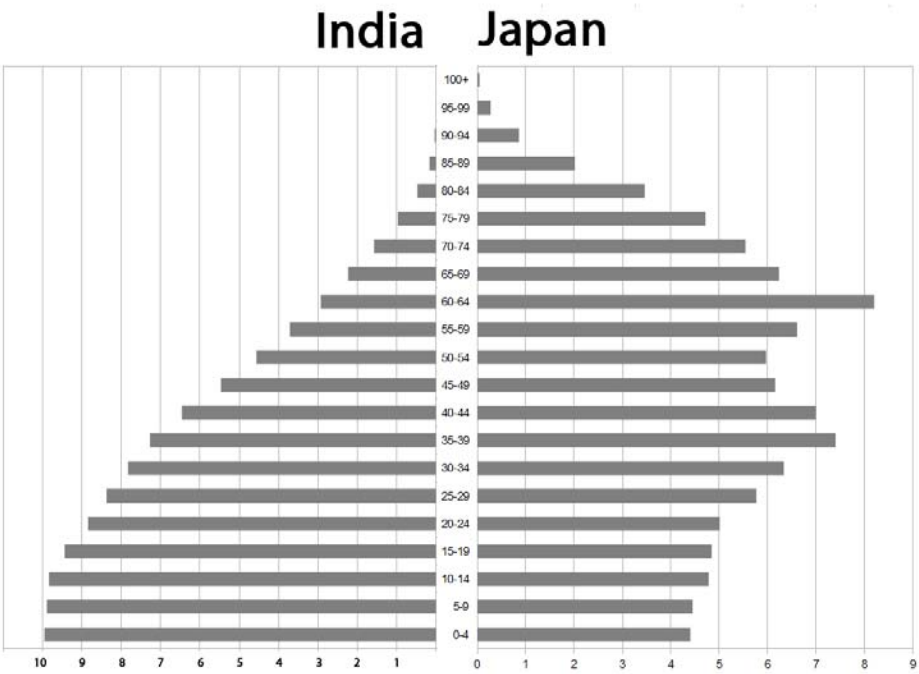
every year, and people have ample time that they devote to personal and community activities that make up their greater economy. The talents that people can develop in their own lives and the communities can devote as a whole is remarkable. With its time-based currency called *Nayahan Banjar*, communities in Bali are able to thrive by financing their needs on all levels, from help with weddings, to infrastructure.[5 31] If people do not meet their obligations in the community, it worse than the equivalent of declaring bankruptcy, as people cannot receive valuable work and are chastised from their more interpersonal relationships. Interestingly, an island-wide currency, called *Uang Kepeng* was circulating as late as the 1970s, after it was banned in the 1950s. Yet there are now efforts to revive the Uang Kepeng, as it has not disappeared from peoples minds and their way of life. All in all, Bali is a remarkably coherent and peaceful society that thrives from tradition. It is yet to be seen whether the values that conventional currencies instill in Bali, especially with all of the tourist trade that has developed, will be well-balanced with the obvious benefits they've seen from their traditions. Yet people throughout Bali and beyond are conscious of the power of their traditions, and are working to maintain them.

A particularly remarkable currency was pioneered in Japan to use in healthcare. With *Furei Kippu* ("caring relationship tickets"), someone who would take care of an elderly person would receive hours, which they would use for themselves when they would get older and need elderly care. While it is a long-term currency, people can also accumulate hours to "spend" on their elderly parents or grandparents who live in another city. Some even donate their hours, effectively providing two hours for every hour they work. Because of the nature of the currency being based on mutual care, people have found that the work provided through caring relationship tickets provide a higher quality of care, and they prefer it over care they pay for in yen. Over 387 interlinked initiatives have sprung up in every corner of Japan, and it is growing rapidly.[32 3 5]

Fureai Kippu
(Caring Relationship Tickets)
Samakaya Welfare Foundation

This is a tremendously advantageous solution for Japan, which is being hit the hardest by a global aging crisis that is being experienced by other nations, one after the other. When Otto von Bismarck helped establish the world's first social security system for people over 65 in the

1870s, the life expectancy was only 48 years, and only 2% of the population of Germany was over 65.[5] Now Germany is second only to Japan with its age wave. As of 2011, Japan has over 23% of its population over 65, and at the peak of its age wave, one out of three will be over 65. By 2030, the world's population will bear the same ratio of elderly, and in the developing world it will peak between 2040 and 2050, where the population is overwhelmingly young now. This is perhaps one of the biggest obstacles people will face in the coming decades, and while the traditional family-based support systems have broken down everywhere, Japan has shown how a whole nation of people can take care of each other as a family.

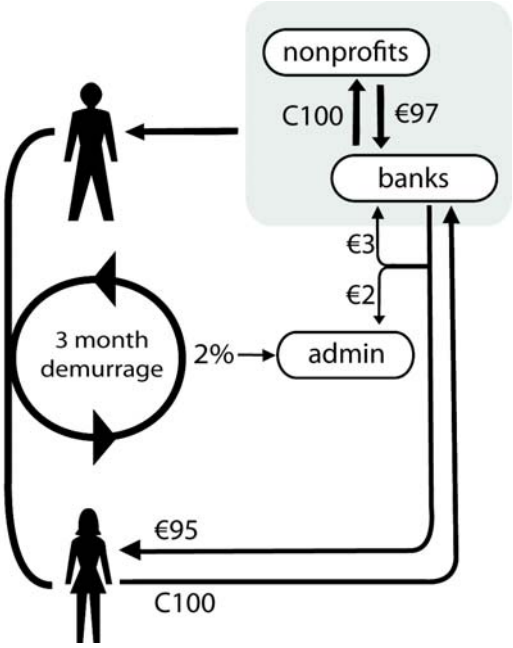


While developed countries like Japan are reaching the heights of their aging crisis, developing nations like India have a very young population, and will experience an equal or greater challenge in the future.[33]

Regional Currencies

One advantage of many of the currencies that have come about is that they promote local economic health and self-reliance. While they range from the scale of a few participants to whole nations, some have focused specifically on making money circulate in a region. While the

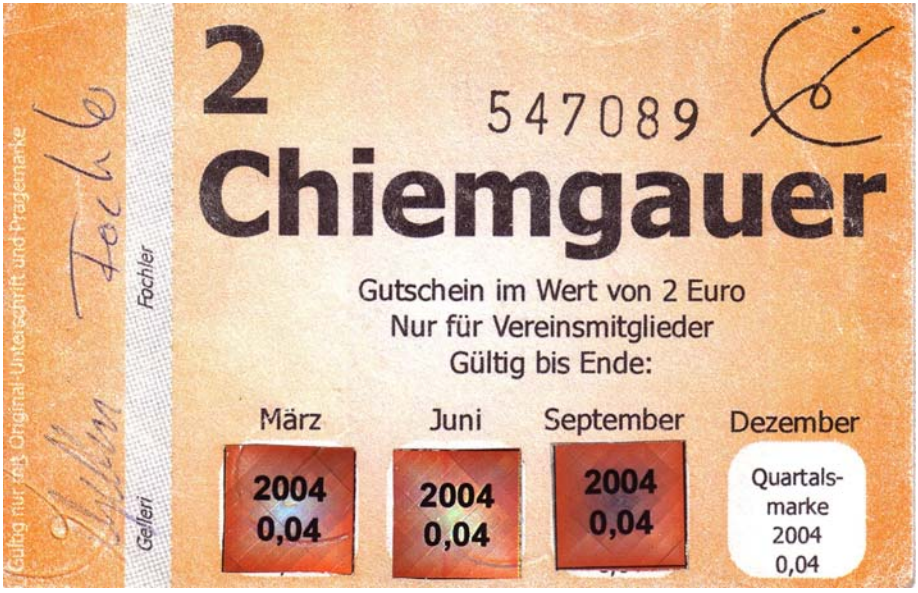
Euro has promoted a pan-European identity, people have started to create regional currencies to foster local identity and well-being. In Germany, a currency called the *Chiemgauer* was created to promote trade in the Chiemgau region of Bavaria, near the border of Austria, only 30 miles from Worgl. People can buy Chiemgauer at participating banks, which give them 97 Chimegauer for every 100 Euro.[34] Or, nonprofits can buy Chiemgauer at participating banks, where they receive 100 Chiemgauer for every 97 Euro they pay. People can in turn purchase Chiemgauer from the nonprofits for 100 euro for every 100 Chiemgauer. People in turn use the Chiemgauer for the value of the Euro, but if they ever wanted to exchange it for euro, they would receive 95 euro for every 100 Chiemgauer. This mostly again goes to nonprofits, while the goes to administration costs, and is intended to be an incentive to



keep it. Finally, a Chiemgauer has a demurrage fee attached, which is 2% every 3 months. Advocates say that the Chiemgauer circulates 2.5 times faster than the Euro. In 2010, 600 businesses and 2,500 people regularly used the Chiemgauer, generating 5.1 million Euro of transactions and 100,000 euro for nonprofits.[35] [36] As the currency is tied to the Euro and its scarcity, the people who use the Chiemgauer are mainly concerned with keeping money in the area, which it promotes in a more effective way than a typical “buy local” program. As the currency has been a great success, it is believed that it may circulate much more widely than it already has, representing a substantial portion of the area's economy. Dozens of initiatives have begun or are in development across Germany.

Similar initatives have begun in many places across the world. In Brazil, branches of Banco Palmas have sprung up that provide microloans with local currencies, which are also backed by the Brazilian Real. Like the Chiemgauer, there is small built-in incentive for anyone who holds the currency to continue to use it, and for people to give the Palma in place of

the Real. In the tight-knit community of Palmeiras, where the initiative began, many primarily use the currency for most of their needs, and they can use it at local stores. The community has created thousands of jobs.[37]



The Digital World

There are still a more wide variety of currencies, many of which are used online for a variety of purposes, in a free-floating market. There are gaming currencies such as *facebook credits*, which can be purchased and accumulated by playing games, like a form of gambling. Users can purchase items in online stores using their credits, or exchange them back into dollars. In the case of *World of Warcraft (WoW)*, a popular online game, people have literally created sweatshops of workers in China to accumulate WoW "gold", which has a market value for the game, and can be sold.[citation needed]

People have begun to create digital currencies that are particularly unique. Someone with the alias "Satoshi Nakamoto" created *bitcoin* in 2009, a heavily encrypted digital currency that cannot be counterfeited. While any computer connected to the network can create bitcoins, it was engineered so that only a certain number of bitcoins were allowed to be created, and thus be inherently scarce and hold value. This generated a lot of buzz, and the market value fluctuated considerably as people started using them, but also as news got out of hackers stealing hundreds of thousands of dollars worth of bitcoins from people, which were, like cash, inherently untraceable. Because it was impossible for anyone to control or trace, bitcoin even came under government scrutiny in the US, as it was used to purchase shipments of drugs.[38]

Nearly all currencies in use today exist in some digital form, whether they are newly created, or gold backed in warehouses, or conventional currencies, and all of them can be exchanged with one another to varying degrees. Online clearinghouses exist, from the typical eBay auctions to websites devoted to buying and selling certain currencies. One business called *Points.com* is devoted to users exchanging corporate currencies, such as miles of one airline with the other, or even for conventional money. Users can enter in their miles or loyalty numbers, and clearly see everything they can trade. As more value is added to various currencies, they are becoming more liquid to varying degrees, and the future may hold a world where one currency can be easily exchanged for another. The world of digital complementary currencies has become an increasingly surprising and dynamic, and we have only begun to see what people will create.

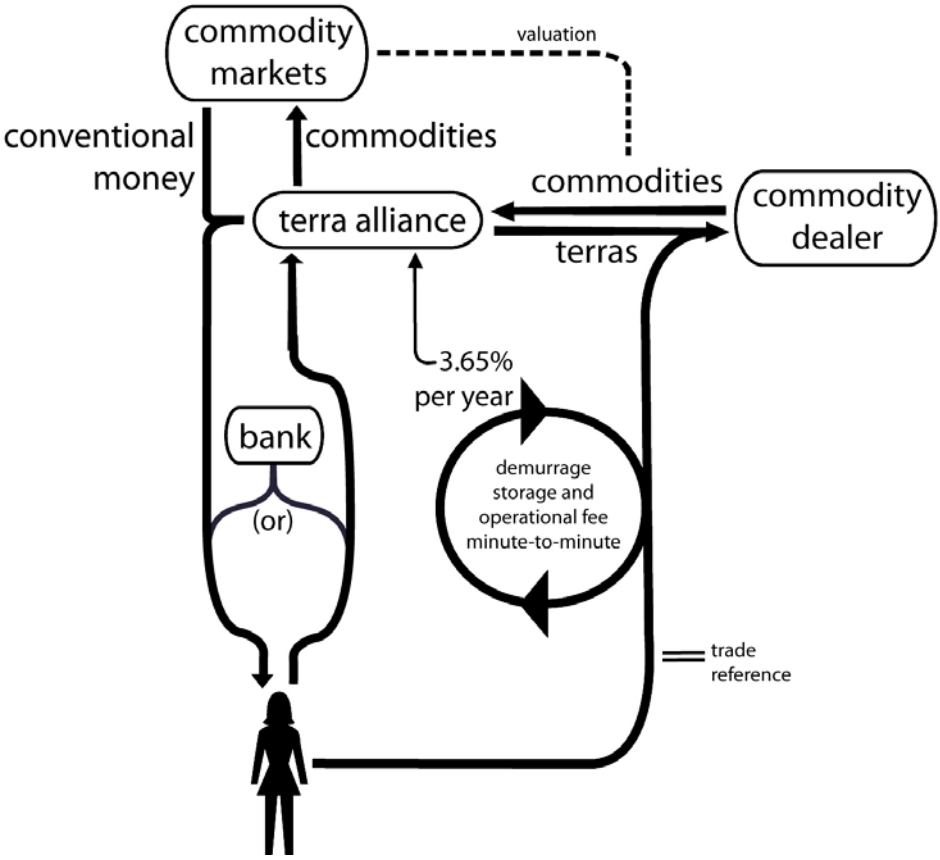
A chart that shows the fluctuation of bitcoin on open online markets.[39] Complementary currencies are already being exchanged in online clearinghouses like these.

Commodity Currencies

While many currencies are being tried and tested today, there are many promising ideas that have yet to be implemented at all, most notably currencies backed by commodities. While commodity currencies were the earliest and the most widespread, only gold and silver are in any way alive as currencies today. Together with mutual credit, commodity currencies hold the greatest promise for being widespread and beneficial. Lietaer has proposed a very powerful commodity currency that would function as a self-sustaining medium for global trade, called the *Terra*.[28] It would be

backed by a basket of dozens of commodities, from gold and silver, to coffee and grain, to coal and oil, to time on network television. It would be generated by a proposed Terra Alliance, which would purchase excess inventory of commodities in commodity exchanges, and give Terras that would serve as receipts. A demurrage "sustainability fee" of perhaps 3.65% would be attached, or 1/100 of a percent per day, which can be applied automatically down to the minute. This demurrage fee would pay the costs to store the commodities. This would promote its circulation, and a 2% fee would be charged when someone tries to redeem Terras, further incentivizing their continued use. When someone redeems their Terras, they could receive a delivery of commodities or another currency the Alliance accepts, conventional or otherwise, for which the Terra Alliance would have to sell commodities.

The Terra and its sustainability fee would promote greater foresight and consciousness on a global scale. It would be anti-inflationary, as the value would be fixed to the basket of commodities, which are used everywhere for a wide variety of purposes. As it circulates, it would become a global trade reference currency, as people would start denominating the value of contracts with it, whether or not trade is



ultimately conducted in other currencies.

Many ideas like this have been proposed by many economists, but none of them were intended to complement conventional currencies. Ideas like this hold a great deal of promise, and after any inherent drawbacks are considered, if they are still as beneficial as they are in theory, they must be put to practice. As commodity currencies and mutual credit proliferate in the world of monetary currencies, it may balance self-dependence with inter-dependence, competition with cooperation, short term thinking with long term thinking, and scarcity with abundance, as well as create a generally stable and dynamic world. In a world where these currencies are widespread, everyone would perhaps eventually trade primarily in mutual credit currencies, whether local and regional or on a larger scale, while currencies like the predominant central bank money of today or commodity currencies would be for longer distance trade.

Creating Our Own Money

We all use money, because it is what we use to get almost anything we want. But if any of us were stranded on a desert island, no amount of cash would be worth more than fuel for a fire. As we all use money, we must all become conscious of money as a mutual agreement, and conscientiously decide what kind of society we want it to enable ourselves to create. An individual can do a great deal in how he or she chooses to use a currency, and for what purpose, and a group can furthermore create an initative that produces mutual benefits.

The implementation of a currency might happen in a variety of ways, as it always has. An individual might simply download software and use it in bartering for his own business, or trading hours for baby-sitting and ridesharing. Or they may simply plug into an existing network or decide to simply accept a new currency, which goes a long way in further legitimizing it. In other cases, someone might engineer or mine a currency and set it off in circulation, as is the case with bitcoin or gold and silver. A company might start its own loyalty program, or a group its own small initiative. There is no single way to start a currency. However, there must be a way that we are actively conscientious about the tools and means we use to trade. While an individual can do a great deal in deciding what currencies he or she chooses to use, and direct them for their purpose or with their personal philosophies, as money is a mutual agreement, communities of all scales must actively decide what kind of currencies they wish to use as a whole, and tweak them as time goes on.

As far as currencies that are meant to be broadly used by a community of people or businesses, there are common themes to how a

successful complementary currency initiative is created. In general, an organization might form that steers a broad initiative. It could be a private group, like a barter business or nonprofit. Or, if it were to be widely adopted and considered everyone's currency, like the Chiemgauer, the Ithaca HOUR, or other local initiatives, or it could be more community oriented, and open, inclusive, transparent and consensus-based. The group could actively consider all of the currencies to include in their toolbox, and how to fashion each tool. They may decide to start an initiative administered loosely by a dedicated group of volunteers who maintain a site, or facilitate the creation of a barter bank or regional currency. In the case of the WIR, a cooperative of businesses formed that drove the effort for themselves, eventually hiring people to manage the cooperative network independently.

Whatever initiative it chooses and however the organization is structured, it must be fully dedicated to making it function, which especially for large initiatives means spending a great deal of time and effort. Its dedication must ensure its success, because when initiatives fail, whether a barter business or an online community, people get disenchanted and sick of the idea, and it will be a lot more difficult for people to create an idea next time around. In designing a new initiative, careful thought and research has to be done to make sure there are not unintended consequences. In one example during the Depression, many currencies had demurrage applied at each transaction, and as it amounted to a sales tax, people ended up hating the idea. In 2007, one currency was banned because of how it was designed. The Liberty Dollar was backed by gold with warehouse receipts, and because they wanted people to have the mindset that it was a form of money, they gave it a certain likeness to the US Dollar, as many complementary currencies do. However, it was seen as attempting to counterfeit the dollar and compete with it as “legal tender”, and was raided by the US government.[40] It is absolutely essential for complementary currencies in general that people who start initiatives think things through and go about them conscientiously, with total dedication.

The way any currency is created is the same – people must convince people that it is in their interest to use it. Especially with large initiatives with a community, the dedicated group must actively get individuals and businesses to declare what they need and what they can offer. In the case of the Chiemgauer, it started with a simple class project with a teacher at a public school, and took a great deal of effort to start, with minimal results. Any barter business will tell you that in the first years, you will not make any money. Starting with a worthless currency

and having it gain liquidity takes time. Typically, people have to go from person to person, and business to business, convincing people, having them post what they want and can offer, and then can connect with people who match. After a while, the currency takes a life of its own, and transactions don't require thought, and become like second nature.

As we embark on a path towards going from a total monopoly and singular way of thinking, and as we gain consciousness of how we create and use money, there will be great dangers along the way, that we should likewise be aware of. People relate to the dazzling array of variation in our world moment to moment, and on a case-to-case basis, and they don't compress it all into one experience or one notion or idea or object. Yet when going thorough such a great change, from seeing things in black and white to color, it is hard not to see the color, in all its variety, as one defined, individual *thing*. Likewise, it often becomes hard not to see the old status quo within a box as well. If there is an initiative that is garnering a lot of attention, such as bitcoin or the Liberty Dollar, and they are seen, regardless of what their intentions were, as threatening or detrimental to the well-being of society, they might taint all new initiatives in a bad light. Much of this may be hard to avoid – complementary currencies will likely become a movement of sorts, which is the case any time a major change happens. When the Depression Era stamp scrips were banned, they were first labeled as “communist” by the fascists, and then “fascist” by people in post-war Europe. In the case of the Liberty Dollar, the attorney representing the US government claimed that it was “a unique form of

The Liberty Dollar (left) came in several forms and denominations, from digital and paper receipts to actual coins of gold or silver. One coin bore a likeness to older US coins that went out of circulation, and was used to carry the verdict of being counterfeit.

domestic terrorism."[41] In any case, any initiative should be handled intelligently in how it is seen as mutually beneficial for everyone. Complementary currencies should be seen for what they are, as legitimate means of exhange, just like the conventional currencies, which are also, of course, mutually *complementary.*

The broad theme that is emerging out of complementary currencies is that we need to become individually and collectively aware of how we create and use money. As these initiatives develop, they will and already are loosely forming a movement that is actively considering currencies, while in starting initiatives, trading theory and practice, and developing new technologies. Initiatives are also beginning to link to one another and form networks of networks, such as with timebanks, barter initiatives, and regional currencies. It will likely develop into a constellation of loosely connected movements. Yet this movement, that will be connected to a broad theme, will develop within themselves and inculcate a culture towards actively creating new currencies and wider initiatives, such the Terra. In the end, people will have developed the capacity to create a world that they choose, an idea that would be embedded into the very way we think about money objectively and the culture around how we decide on how to use it together.

Conclusion

"We have it in our power to begin the world over again."
- Thomas Paine, *Common Sense*

"How wonderful it is that nobody need wait a single moment before beginning to improve the world."
- Anne Frank

If we do not all help in creating complementary trade, we will all continue to suffer. By creating complementary currencies, whether it is coordinating and promoting a new initiative, or taking the effort to use it and help ignite its circulation, we will empower ourselves to be responsible for ourselves and the world around us. We have been wasting tremendous time, as we are increasingly at a crossroads with a world that is poised to either break down or break through. Rather than have continued ecological and financial collapse, and a world with continued disparity and artificial scarcity, we can untie our hands in creating a world where we take care of each other and everything, and thrive in a way previously unimagined. We must adopt complementary currencies widely and not make the same mistakes we have made before, being aware of the effects of what we create, and what we want to create.

1 Bernard Lietaer: His work and thought is largely regarded as underpinning much of the theory behind complementary currencies today, likely even having been the one to emphasize the term. His experience in the field is unusually extensive: he was a central banker, designed some of the effective payment systems, co-designed the convergence mechanism that led to the Euro, has been appointed a professor at several universities, acted as a consultant, created investment funds, and in 1992, Business Week called him “the world's foremost currency trader.” He now develops theory and acts as a consultant for the development of complementary currencies.
Read more of his life's story and curriculum vitae at his website: http://www.lietaer.com/about/

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