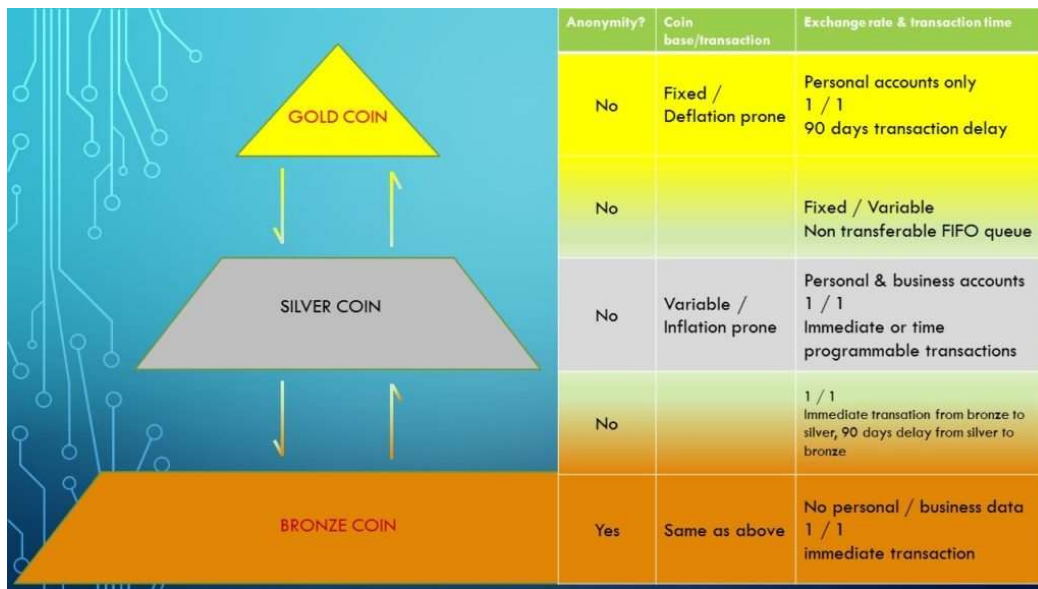


Chapter 2

New currencies for a new era



In this Chapter we will show how currencies and their use spontaneously emerge within groups of people as dictated by forces of necessity and the biological hardwired need for societal stratification. The shape a currency will take is a function of the technological development (stratification) of a certain society thus feedbacking the loop of an even more sophisticated currency system projecting society toward greater levels of complex organization and advancements.

We will subsequently introduce a three-layer crypto currency model designed to satisfy a broad range of standard and special societal needs and capable of advancing human society beyond what the current FIAT currency systems can possibly do.

Evolution of currencies

The first practical form of currency ever developed by mankind was barter.

It was a bulky and cumbersome way to do business, not to mention the risk of goods being stolen or lost and the inherent need to be on guard and protect your property and goods at all times.

Barter was good for small groups of people and could only support a simple and mildly stratified society.

Currency technology made a big leap forward with the invention of **price which is made up of a number followed by a symbol either physical or abstract**. Numbers are easier to trade, count and multiply simply on the tip of your fingers as opposed to making ratios between quantities of different goods or commodities among parties with different interests and appetites.

The **price-number** must be followed by a **price-symbol**, a token for the price to be functional, and back then the symbol was a physical coin because it was easier to CARRY as opposed to physical goods and also easier to COUNT in quantities above your finger count. The use of price instated a symbolical barter or trade which was more efficient and convenient than the bartering of hard good ratios.

The invention and practical use of prices was only possible alongside the development of basic mathematic such as addition, subtraction, and multiplication. The increased use of mathematic for trade purposes furthermore contributed to abstract thinking development within the primitive human brains.

Why gold and not titanium?

When people had to forge the first coins, they would have liked to make them out of platinum or titanium (rare, shiny, non-perishable, non-oxidating / chemically stable), but unfortunately these rare titanium metals and steels need quite a sophisticate technology to refine the ore and then bring them to melting temperatures, not to mention the fact that they are incredibly hard materials so very difficult to forge into coins.

Gold on the other end along with silver and copper were easy to extract, low melting temperature and soft, hence easy to forge into coins and with it came their popularity as first medium of exchange.

A small market with a small quantity of people trading and bartering countable pieces of metal as opposed to physical goods in different ratios eventually caught the attention of nearby groups of people which immediately found this system revolutionary and convenient so they also started adopting it, and the price (number + token) went viral across different societies and all over the world.

As the currency system increases its penetration within society so does social stratification. We no longer need to be all hunters/gatherers but we can specialize ourselves in different jobs and skillsets and we can optimize and sophisticate our products and services and on the long run we develop and refine technology and stratify society even more.

The need for stratification and specialization

The need for hierarchy and societal stratification appears to be somewhat hardwired within our genetic make-up (see the work of Jordan Peterson) and past attempts to tamper this balance in the name of better and more communistic societies as proven disastrous. Still these stories can serve as cautionary tales for other more successful social engineering experiments as we shall see further below.

In this regard we can look back at what the late Roman emperors did toward the end of the empire, which was to dilute the currency (coins) with more vulgar elements such as silver first and copper later thus inducing inflation and triggering malinvestments of all sorts. However, when people saw their currency getting diluted with copper, they didn't abandon it but they kept using it in a business as usual fashion.

Imagine if you are a baker and you make bread, every day, in your shop. Clients come in to buy from you but you look at the currency in their hands and you say it is no good because it is too greenish-copperish and you want something in silver or gold! Well rest assured that this baker will go out of business very soon since not many (or no one) carries gold coins anymore.

In this example if our baker is too picky, he won't be able to pay his suppliers or for his own food and soon enough he will have to revert back to a hunter/gatherer level using rudimentary items and crafted weapons. In short, he will have to live on the edge of the societal stratification curve and further away from the technological comforts offered by a stratified and specialized society who can handle currency even if symbolic or FIAT in nature.

From coins to paper

The next step in currency evolution is printed currency made available by the invention of paper and printing machines. Carrying chests full of gold and silver is not as easy nor practical as opposed to carry countable numbers written on pieces of paper, which are way lighter to carry, they can be concealed more easily than coins, hence paper currency is harder to steal and safer than hard metal coins!

Even today the coins in your wallet have less value than the paper bills sitting next to them despite the coin value in metal weight is far greater than the weight value of a piece of paper thus reflecting the victory of convenience and technology above physical heavy pieces of metal.

Of course, we still have the problem that paper money can be taken and stolen like coins, so we need something more convenient than a physical form of currency, and before you notice we have currency numbers traded within hard drives of computers by means of chipped pieces of plastic (credit cards) throughout a worldwide interconnected IT system.

This Internet form of money is adopted more and more because of its convenience as opposed to paper or gold money. It is safer, easier and lighter to carry around as opposed to more primitive forms of currencies hence it is widely adopted out of the combined forces of need and convenience.

Different currencies for different purposes

Not all currencies are created equal or are used in the same way across different groups of people.

Imagine you are a drug or arm dealer or a simple John looking for adventures... You need to be able to make deals and move currency around, but you don't want your transactions to be noticeable or logged with your real name or surname on it.

Ideally one currency should allow some degree of privacy or anonymity as there will always be a certain ratio of economy wishing to stay under the radar.

Attempts to eradicate this hidden side of economy are socially unpractical and such efforts will only spur the development of alternative or parallel currency systems and exchanges to satisfy and stratify this kind of economy like the Bitcoin used to do in its early days.

Once you start having unregulated and anonymous alt-coin exchanges you will for sure have hacks and all sorts of financial scams and cons (again see the Bitcoin frenzy & Co.) as opposed to guaranteeing a safe space for this part of the economy within a main Blockchain Currency System (BCS).

Imagine next that you are a law-abiding citizen and you like to save your money for the future. You will want to stash some cash for your retirement, and you don't want to expose your savings to inflation. In

this case you want to have some form of gold currency in your hands (fixed quantity) so that your savings don't get eroded by inflation over time.

Lastly there are the everyday transactions based on standard fiat currency models which are quick and convenient if it wasn't for the fact that the currency base MUST expand depending on how much the economy grows each year, thus underlying inflation and the need to keep money and economic activity moving at all time to stay on top of the inflation curve.

Understanding currency base expansion

The need to expand cash is not well understood by many and some suggest our currency base should be pegged against a fixed mass of valuable metal and this will be far more convenient than having a currency base changing at the whim of central bankers or governments.

If we were to adopt a currency system based on gold whose quantity is virtually fixed, then deflation will grow rampant and the price of common goods and items will look like 0.00000000000157 (1.57 E-12) nano-grams of Gold because the number of goods and services worldwide gets bigger and bigger every year, but the total currency base is stuck with the total gold mass available on Earth.

In this system instead of counting price numbers on the tips of your fingers you will end up making operations with negative logarithms in base 10, hence we are losing the counting simplicity and ergonomicity of transactions which must be within grasp of the average person math capabilities.

Also consider the transactability, in the sense that measuring out and transferring across nanograms of gold on each transaction is a lot more challenging technically as opposed to trading numbers on pieces of paper (or numbers on screen of computers), so again the paper or fiat currency wins the day in terms of practicality, speed, simplicity.

Last point against gold as currency is the fact that it can be physically stolen, whilst stealing from encrypted and password protected bank accounts is much more complex feat as long as the underlying currency software is solid.

Who owns gold?

OWNING physical gold in your house is a bit like having a horse "parked" next to your car as a backup because horseback was the most convenient way to travel for many centuries before other more practical means of transport were available. Maintaining and moving around on horseback is quite impractical and inconvenient as opposed to other transport technologies available nowadays.

Most of those who claim to own gold nowadays in their investment portfolio, in fact they only own pieces of paper or digital files claiming they are owed a certain amount of physical gold if ever they want to claim it and have it delivered at their house.

But even then no one wants his/her gold to be delivered at his/her house because it is costly to have it delivered and then it is very risky to store it within your premises unless you live in a fortress, so again these so called gold owners only own and trade pieces of paper rather than real physical gold. Once again paper or better say digital information and convenience win the day as opposed to physical goods or metals.

On another note, if you are planning to use gold in its paper or digital forms to stabilize a financial portfolio then gold does have a purpose, but only among other financially educated people who can afford this sophistication and spare some of their excess wealth into diversification, not certainly for everyday transactions.

Of course there have been historical cases where gold and jewels have been used to escape wars and prosecution. I would call these events and gold usage exceptions rather than the norm, but still a possibility if you don't have a more advanced financial system to back up transactions efficiently and in a decentralized fashion.

When society collapses

A society collapses financially when the people of that society no longer keep their bums on their seats and they no longer believe the currency system has a value. Then the societal stratification supported by the currency also collapses, meaning the society scales back to more scattered and smaller hunters/gatherers type groups and all the complex skills to support complicate systems and technology is forgotten or superseded by everyday basic needs such as food/water/shelter/survival.

IT and Internet are the structures with more sophistication and harder to maintain so these will be the ones to collapse first. After that more basic and life supporting ones will fail such as electricity, running water and lastly farming is superseded by pillaging leading to furthermore collapse of population and capability of supporting life sustaining forms of technology.

Eventually the humans are hardwired for stratification as this is the most efficient way to produce more advanced technology and comfort, thus allowing for greater odds of genetic survival of the specie.

Even in these primitive or decayed societies a currency will sooner or later arise once again along with stratification, first locally and then globally.

The future of currency

By now we have highlighted how currency is a feat of human stratification and technology progressing over time and it is dictated by forces of genetic necessity.

As technology moves forward and becomes lighter, more powerful, and efficient, also the currency will eventually evolve for the better and allow greater development of human society.

Such advanced currency system should be:

- 1) Based on block chain & IT technology and guarantee a null transaction cost to all its users
- 2) Should have three layers to allow for the three types of basic economic activities described above (black market transactions, everyday transactions, higher financial transactions)
- 3) It should include not just monetary transactions but also deeds, medical records, public statements, possibly some high-end email communications, geolocation data, etc
- 4) Maintain anonymity of transactions and personal data but also allow users to program their own privacy settings, automatic payments, writing and execution of wills, etc as well as allow superuser privileges to undo fraudulent transactions or allow authorities to access personal data within the framework of criminal investigations.
- 5) Allow for free and anonymized data mining and modelling thus helping social engineers and governments to effectively measure and implement social policies

6) **The Blockchain Currency Software also called the Blockchain Currency System or BCS for short,** should be an open-source software. Calibration of the operating parameters or modifications to the software shall be enforced to all users after democratic polling of proposed modifications. No currency hard forks allowed!

For simplicity we shall refer to this hypothetical currency software as the **Linux-Coin** or **LC** for short to stress the open source and the user centric nature of this monetary system.

No need for currency mining

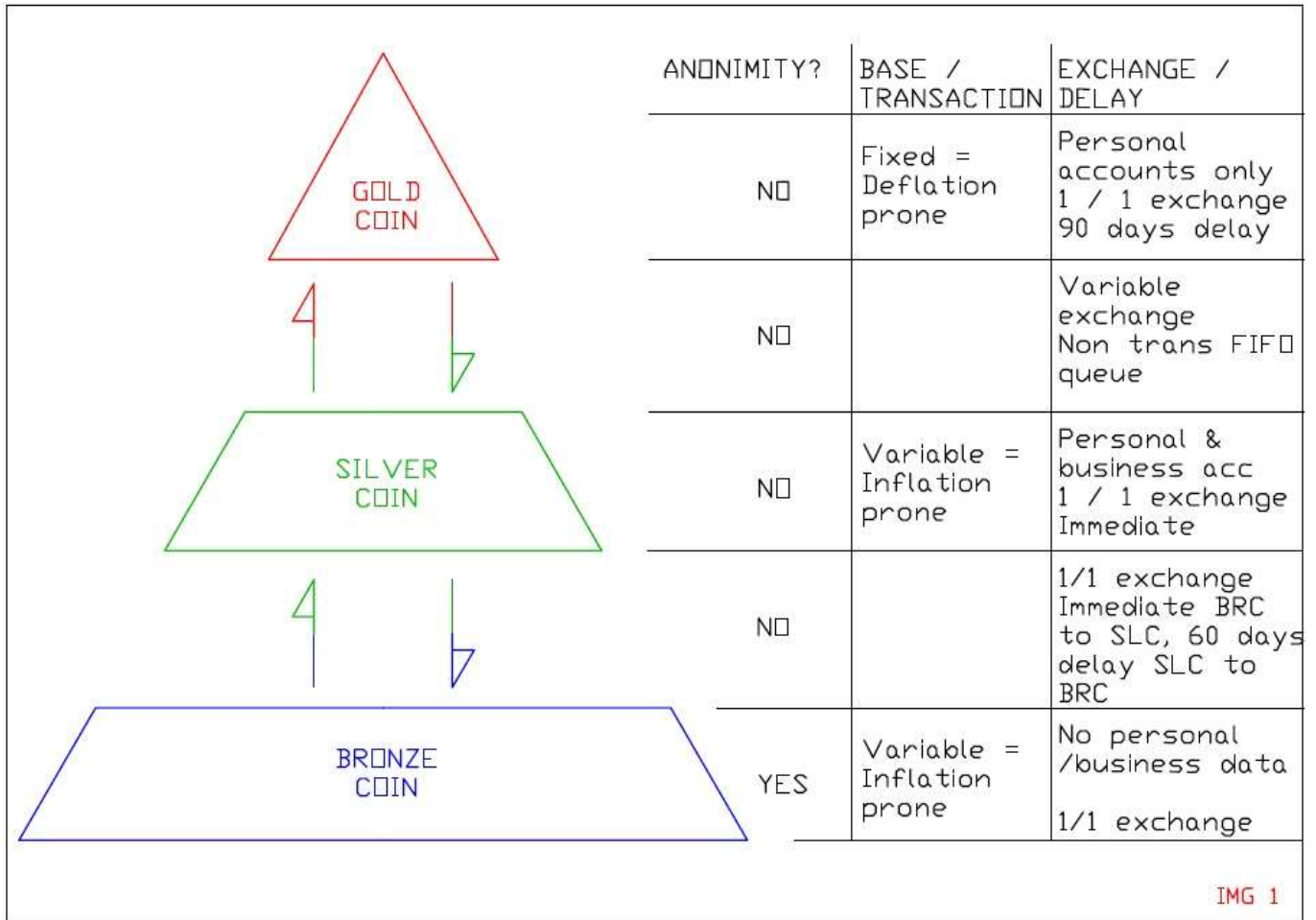
Currency mining as intended today, (either POW or POS) is a useless waste of energy and hard disk space. The purpose of this barbarous process in the first digital currencies was to incentive people to keep their computer ON with blockchain based software online in order to make sure the currency network was always available to process and record new transactions.

In a modern blockchain currency system there is no need to have multiple distributed backups of the blockchain file, only a small number of centers might be required for this purpose same as it is done by other infrastructural data networks such as FB, Google, etc.

Still people should be allowed to maintain a local hot wallet backup of their data or even a full sections blockchain file if required. Still it is not very practical to store zetta-bytes of information in your home computer HD but it might be useful to speed up custom datamining queries and analysis within universities and other datacenters interested in econometric analysis.

A practical example of a Linux-Coin System

In the image below we highlight a three layers crypto currency system and some possible ways in which it could work, leaving aside the part which records deeds and other notary acts for the moment.



At the top of the pyramid we have the **goldcoin**. It doesn't mean there is any physical gold behind it, it only means that its quantity is fixed, the total number of goldcoins circulating within this currency space is equal (for argument sake) to the number of physical people (no aliases!) registered into the system.

The way it works is that every time a human is born his or her certificate of birth is registered within the Linux-Coin (LC) database, in that moment a LC record is created on his/her name.

This new LC file contains various personal information, a default FORMAL email address associated to a physical person and its default privacy settings (editable by the parents or registered legal tutors) and most importantly a goldcoin wallet is created on his/her name. In this new goldcoin wallet, one goldcoin is freshly minted FIAT into that account by the LC software.

It is a bit like being born and having a winning lottery ticket already in your pocket, registered under your name, but since goldcoin is a high form of currency, it should have some restrictions to limit its use to higher financial transactions only.

Such restrictions could be something like: Limiting the age at which that goldcoin can be cashed in (ie no sooner than 21 years old), or limiting its use to pay for higher education, can be used for the purchase of your first house or to setup your own company.

Other limitations on goldcoin transactions to prevent speculations and exploitation of the system could be delaying goldcoin transactions by 90 days and transactions can be cancelled at any time by the seller any time within these 90 days waiting period.

The delay in the transaction is not because the LC software cannot process the transaction immediately but to prevent goldcoin to be used for everyday transactions such as grocery/restaurant bills/etc and dissuade speculative operations.

When someone dies, and its certificate of death is registered into the LC DB by a certified officer (LC superuser), in that moment a goldcoin is erased directly from his/her goldcoin wallet. If no goldcoin is present in said wallet then one goldcoin is erased proportionally from all the goldcoin wallet balances in excess of one goldcoin (daily fractional adjustments on goldcoin wallets due to population fluctuations).

The fluctuation adjustments to goldcoin wallets due to population fluctuations can be programmed in a progressive way in order to preserve the wealth distribution curve shape of the goldcoin wallet population (more on this delicate issue later on this paper).

The balance of the goldcoin wallet in excess of the one goldcoin erased will be distributed to the heirs in accordance with payment programming rules set up by the deceased person in his/her will LC DB file.

Another recommended rule is that goldcoin wallets should be personal only (no company accounts or aliases), we shall see the reason behind this later on.

Silvercoin

Eventually people will be allowed to sell their goldcoins to other parties and transfer their goldcoin to other goldcoin wallets in exchange for Silvercoins.

Silvercoin wallets are like goldcoin wallets, they are created at the time of birth and registered to a person but their balance is ZERO, meaning you have to work or get donations and save to turn a balance into it.

Another thing you can do to turn a balance into your silvercoin wallet is to sell your goldcoin to another goldcoin wallet in exchange for a silvercoin influx to your silvercoin wallet.

The goldcoin to silvercoin exchange rate is variable depending on the ratio between existing goldcoins (people) and existing silvercoins (variable monetary base) and the gold-to-silver transactions are processed within a non-transferable FIFO queue.

These LC rules are needed to prevent speculations such as people upselling or downselling their goldcoins or silvercoins because of unbalances in sellers to buyers ratio on the gold-silver exchange.

People can use their silvercoins for everyday purchases and transactions since transactions are processed immediately within the LC system.

Transactions and balances are registered in your silvercoin or goldcoin hot wallets and within the main Blockchain file, however this sensible personal data IS NOT publicly visible by anybody as it is on the primitive Bitcoin currency system.

Personal financial data is however accessible by investigators (superusers) within the work frame of investigations, or you could grant temporary access to your LC data to a financial advisor and allow him or her some degree of superuser privileges to allow programming of your LC file in a desired way.

If someone claims to be victim of a fraud or invalid transactions, then it is possible to freeze the amount under question on the receiver end until the issue is resolved privately first or in a court until said amount is refunded or the transaction confirmed as legitimate.

Bronzecoin

Third level of currency is the so-called Bronzecoin and it serves that part of economy who wishes to stay below the radar for whichever reason.

Bronzecoin is pegged 1 to 1 against silvercoin. A silvercoin is converted to a bronzecoin when transferred to a bronzecoin wallet which does not hold the ledger part related to physical name and surname of the owner, **bronzecoin pecunia non olet!**

Bronzecoin wallets can be created anonymously or with an alias within the LC and they are by definition anonymous, they can be pay as you go / top up chip cards and transactions are still recorded within the blockchain file for statistical treatment purposes.

Bronzecoins work the same way as paper money does in the sense that if said chipped card is stolen, lost or the password on bronzecoin wallet is hacked then said bronzecoins are lost and there is no way to undo these transactions by means of superuser privileges or fraud investigations.

What is a fraud and why should we care

As per earlier, an economy based on physical gold transactions is an economy where crime does pay because it is relatively easy to steal physical gold by brute force attacks on wealthy citizens.

One convenient feature of our current banking system is the possibility to file for frauds and obtain court justice wherever foul play has been determined by a court of justice, but who decides what should be condemned and what not?

An example straight from the hardest times of the covid lockdowns in Canada was the government seizing bank accounts of citizens who donated to those protesting against the lockdown policies and restrictions. Was this fair and was that a state sponsored fraud?

Canadian government wasn't any better (according to some) than tugs on the streets taking your money by brute force, so why should people play by the rules of an unfair centralized banking system as opposed to go full cash and avoid such grievances?

Criminal investigations and frauds must be judged in a way perceived fairly by majority of society, or else big swats of the population will simply move their funds into Bronzecoin wallets which have no name, no geolocation or date stamp, but also mature no interests (AKA "Minting" as opposed to POW algorithms, when citizens maintain the some degrees of the blockchain DB locally on their devices).

Establishing what is fair and what not is a delicate balancing act but the final judge is the user deciding to change his currency usage and type preference. On the other end, rewarding people with maturing interest or access to credit within the Silvercoin layer is a fair way to pay for the societal privilege of having a clear blockchain file that can be analyzed by any private or public entity and determine anonymized economic and material streams to different places and economic structures, thus allowing better predictive strategies to improve the economic tissue of society or determine best improvement and investment strategies to strengthen the resiliency of the economic system.

The end of hard cold cash

A fourth layer could be a paper type of currency namely the cashcoin. It looks like the paper and coin currencies we use nowadays, it is pegged 1 to 1 to bronzecoin and it provides the ultimate peace of mind for anonymity.

This requires the maintenance of an ATM network and currency printing infrastructures but it is a needles precaution since the LC is an open source software and anybody skilled in the art of coding can verify bronzecoin transactions and wallets are de facto anonymous.

Hot and cold wallets

The implementation of a LC requires IT infrastructures to ensure connectivity of the systems and terminals at all times. Electricity and Internet connections are implied.

What happens if one or the other (mostly Internet) are down?

One solution is for LC transactions to be registered and stored within cold wallets or cold transaction queues stored locally into the devices and terminals registering the offline transaction locally among themselves. **This is where storing a local cold backup of your BCS file and wallets can come in handy!**

Offline transactions will be processed automatically by terminals and registered onto the global blockchain file once Internet connection is restored to one terminal or another.

Exploiting cold transaction queues to spend more money than what you have in your LC wallet(s) is eventually a felony and superusers will intervene and program a repayment plan associated to your wallets. Crime does not pay.

What if Internet and electricity are down for prolonged periods of time like months or years?

In that case societal stratification collapses back to a hunter gatherer type society, not just because the LC cannot operate properly offline for extended periods of times, but also because all our society and technology is based on continuous exchange of information, if that stream of information or energy collapses, then a lot of our technical advances collapse with it too, not just the currency.

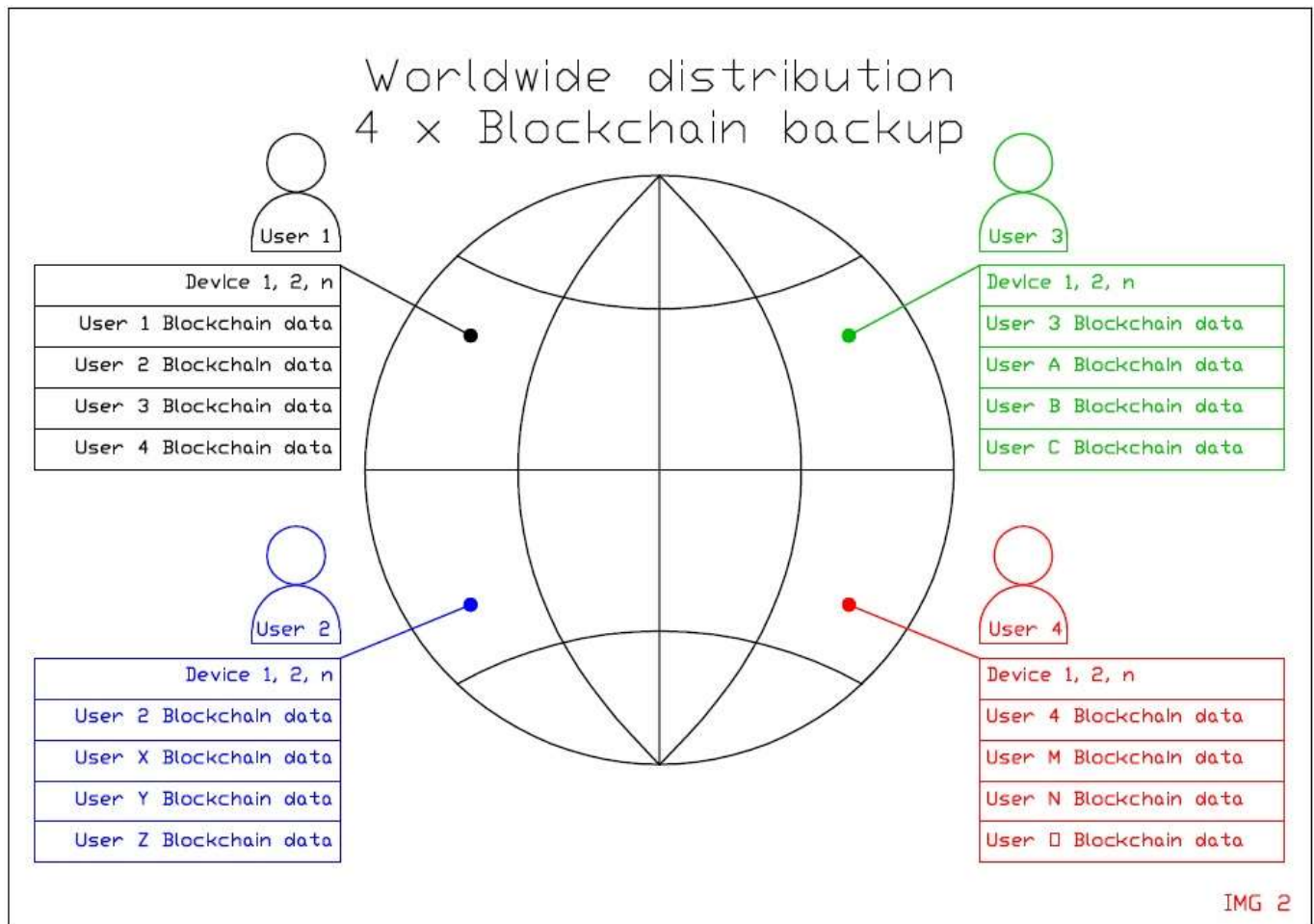
The societal efforts shall go into restoring Internet connection first. Using paper currency to operate all financial transactions will work in an offline world for sure but it is unpractical (like horseback VS car example earlier on).

Paper currency wins the day against digital currencies in all these societies not progressed and developed enough to be able to maintain IT infrastructures.

Blockchain file backup

The blockchain file of a cryptocurrency keeps getting bigger and longer every day as more population and more transactions are added every day, this in turn poses challenges in terms of finding enough HD storage space to safely and reliably backing up this information.

One approach could be to have some centralized data centers (ie at least 4) placed in different geographic locations to maintain all hot wallets of all users. This in turn requires personnel, hardware, electricity, and all the costs associated to maintain this. Live expenses of such datacenters could be backed by a primary monetary stream generated by the blockchain software itself.



Another possibly simpler and more robust approach is to have the blockchain file distributed across multiple devices and multiple users as per the image 2 above.

Since the currency system itself needs devices on which to run the LC software, a certain HD space is reserved to store an encrypted version of each user blockchain data.

The same user could have multiple devices syncing dynamically with his or her own credentials similarly to other software (ie Dropbox, Google Drive, etc).

However each user is also dynamically backing up the encrypted blockchain data of other 3 unknown users in a worldwide file distribution network so that at least 4 back ups of your personal data exist into at least 4 devices worldwide.

In this way we don't need to store all the transactions of all the users all the time, we only store our own blockchain ledger file along with 3 other unknown ones to maximize reliability and availability. Of course there might be universities, sociologists and other governance centers who might call for queries to gather anonymized blockchain files of users by geographical location/age/health/income for statistical elaboration purpose. In this case then more than just 4 copies might be statistically available for each LC user.

It must be noted than even in this 4 x distributed backup system, the amount of old data relative to ancient transactions or relative to people long dead will eventually require more and more space. This old and no longer active data could be purged off the blockchain files or otherwise be stored by other parties for statistical analysis of past econometric events.

An example of this kind of approach is the following: If you have 20 \$ bill in your pocket (LC device) and you want to use this money to buy a T-Shirt, you don't need to produce all the chain of events which brought that "digital bill" in your pocket, you only need to make sure that the currency software who brought that balance into your device hot wallet is genuine.

Currency generation and destruction

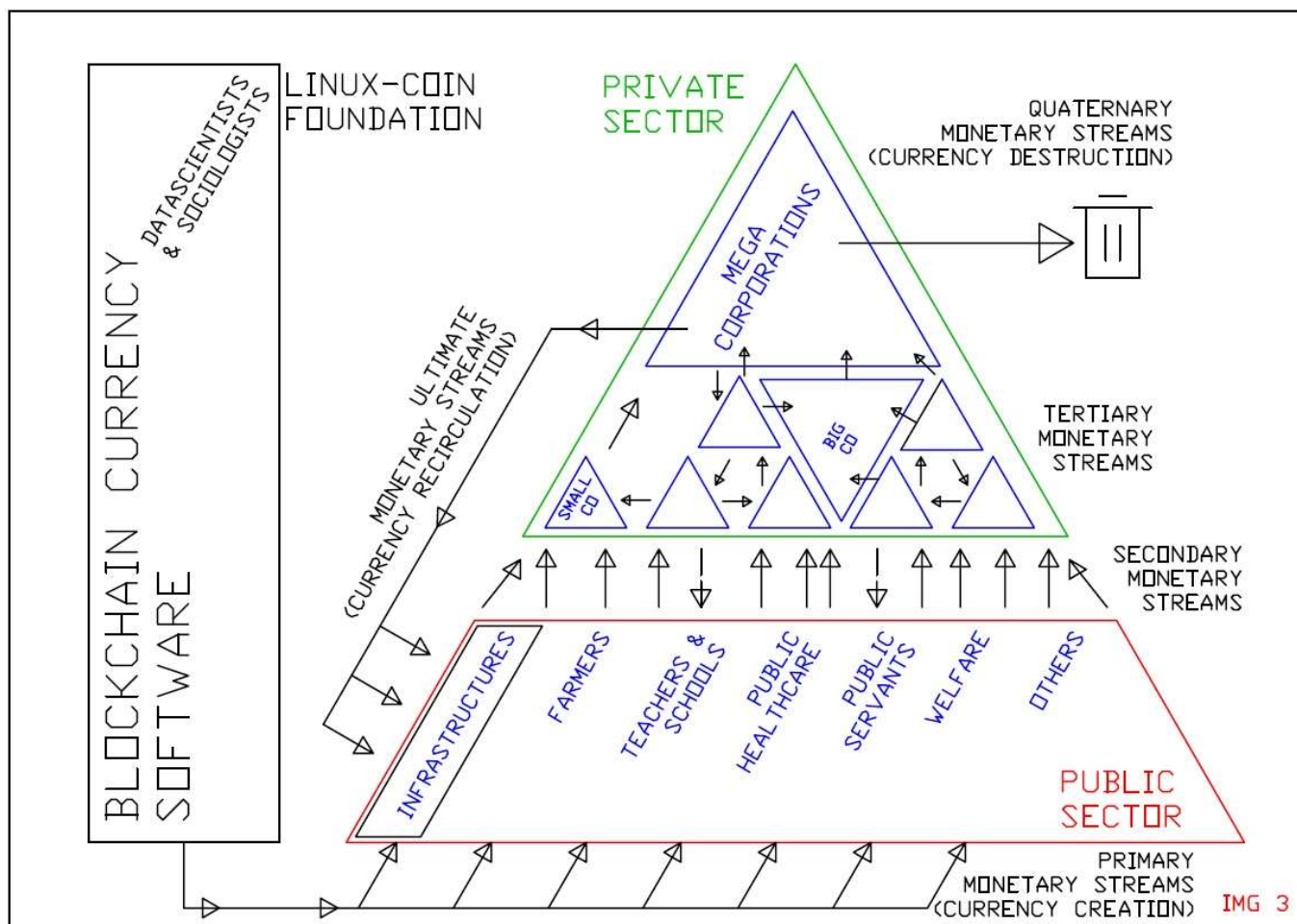
Currency must be created or sometimes destroyed depending on economic expansion and contraction to maintain inflation goals or ensure the grocery bill stays within your fingertip counting capability.

It is also necessary to maintain certain basic infrastructures such as electricity, connectivity, blockchain file storage centers (maybe) and LC software engineers (for sure).

The list of basic infrastructure and societal needs could be extended to include also farming, schooling, healthcare, public transport, housing, etc

These are all fundamental subsystems of an advanced and sophisticated society and we must maintain them the same way we would maintain the IT infrastructures to support the LC.

The LC should be programmed in such a way to automatically maintain itself and societal stratification in a new and creative way as illustrated in the schematic below (image 3).



Here we can see how the LC can be programmed to automatically wire money into silvercoin wallets of public servants and other economic and social actors deemed essential.

In a growing economy and expanding technological base it is expected that these baseline or primary monetary streams will ultimately trickle up toward the private sector (secondary monetary streams).

The public sector is made up of many different company sizes from small all the way up to mega corporations, all operating within the framework of a silvercoin or bronzecoin type currency system.

It is expected that greater amounts of private sector monetary streams (tertiary streams) will trickle up toward hyper integrated megacorporations which will be sucking up most of the free circulating currency and funnel it within few very wealthy silvercoin wallets.

This is the natural stratification shape and destiny of a stratified society and currency system.

Silvercoin currency sitting idle within massive balance accounts of mega corporations causes the speed of money to decrease and can lead to deflation if it wasn't for the fact that currency is freshly minted and "fiated" within public sector accounts thus stabilizing price of base essential goods and services.

A practical way to prevent unnecessary accumulation of power and money within few hands and corporations is to destroy the excess currency and profits of these wealthy accounts (quaternary streams).

Alternatively, a corporation could decide to forfeit its excess earnings and profits and donate them back toward the public sector or take charge and foot the bill for all kind of deductible infrastructural projects.

The goal is to prevent a corporation to grow above a certain size as this could lead to monopolies and malinvestment practices, and it promotes tertiary stream exchanges and higher speed of money to maintain a healthy distribution of company sizes and wealth distribution for all entities operating within the private sector.

One last note about inflation is that in an ideal/**non energy** constrained world, the long term inflation should be ZERO or slightly negative as infrastructures and production efficiencies grow, however central banks' only tool to achieve inflation goals nowadays is to toggle interest rates up or down in a broad "one size fits all" monetary policy adjustment which impacts all industries and economic sectors in the same way.

Ideally only certain industries might need monetary policy adjustments and be cooled down, whilst others should benefit of more lenient or even expansive policies. The possibility to have different interest rates for different economic actors should be studied and calibrated carefully.

No more taxes?!?!

You can see that nowhere on this paper we have discussed the issue of taxes.

Taxes are today a barbarous process required for these state nations which do not own the currency they use, similarly to the needless blockchain currency mining processes.

Taxes are not required within the LC system since currency can always be created to support essential services and infrastructure development without the need for middlemen taxmen, central bankers.

Currency generation to foot public sector bills is not something new and it has in fact been around for a long time since no advanced nation is actually paying back its public debt, public debt is always increasing to support base services, no one is ever paying that money back because no politician is willing to be unpopular and raise taxes and he can simply push the button of free money printing.

Currency is destroyed or erased from the silvercoin wallets of mega corporations to promote a certain wealth distribution and maintain economic dynamism, not because it is needed to balance public spending in any way.

The Linux-Coin foundation

This new form of currency is not owned by private entities nor nation states, it belongs to mankind, it is a fundamental infrastructure and no one can claim ownership or superuser rights on it the same way no one can own the language being used by people, nor the air they breath, nor the things people know within their brains, or claim rights for the genes in our cells.

The LC is a fundamental human right, the base upon which a better society can be built upon, a mean to rid society of unnecessary speculative currency streams thus allowing people to focus on more productive and creative endeavors.

Still the system itself needs maintenance and care. Social and software engineers need to work on monitoring LC streams and societal trends, identify and eliminate bugs, etc.

Fine tuning of financial policies (primary and quaternary streams) is to be discussed by politicians or subject to democratic polling by LC users.

Underfunded and overfunded for dummies

Discussions about which service or industry (or individual) shall be granted a credit line (primary monetary stream at no interest rate) is in fact a matter of delicate econometric measurement revolving around the concept of overfunding or underfunding of a system.

An example of modern overfunding today could be the FED happy printing and financing of any spending of the US government. In turn the US can hire bureaucrats and create all sorts of agencies, some of which provide fundamental and valuable services to society, other agencies not so much.

When a system is overfunded then people are allowed to thrive whilst sitting idle and without doing anything useful with their time and productive capacity, which is what we call misallocation of resources AKA malinvestment.

On the opposite side of the scale we have countries like Greece or Italy which no longer own their currency, therefore they need to beg the EU central government to disburse some funds, and these usually arrive too little, too late, and with caveats attached.

In this case then the State has no cash to sustain its base operations and services, and people are forced to focus on very basic survival activities as opposed to focusing to more productive and valuable activities which valorize their abilities and skills.

This is when a system is underfunded and it cannot produce at the optimum of its potential capacity.

Maintaining a healthy balance between underfunding and overfunding of a certain essential system is a very delicate topic for economist to define and program within the LC software.

Personal and corporate credit at the time of Linux-Coin

Individuals and private entities (companies) might find themselves in a situation where they are underfunded or overfunded for the goods and services they provide.

We have discussed earlier on how private citizens can cash in their Goldcoin into Silvercoins to finance their own business and operations, still there might be instances where this financial relief might not be sufficient to maintain and expand economic activity.

In all these cases then access to additional credit combined with maturing interests on Silvercoin accounts could also be performed by algorithms of the LC as a function of your credit score which boils down to an underfunded/overfunded calculation based against your blockchain file statistics.

Companies also need funding to finance their operations, they also have a certain credit score a measurable function of their operations, how many people they employ, how many goods and services they produce and at which operative margin.

Hence again we have a new sort of money multiplier/fractional reserve type circuit which could be the domain of LC algorithms based against measurable blockchain data and statistic of a person or company trying to maintain each actor within a productivity sweet spot (not too underfunded, not too overfunded).

Even in this currency system dominated by algorithmic credit, nothing forbids a private entity or bank from lending its silvercoin reserves to debtors with an interest rate attached to it.

Should this private entity have the power of fractional reserve currency multiplication?

Would this human approach to lending be more efficient and spur more productivity than an algorithm based approach, or will it set the stage for malinvestment and misallocation of resources like we are seeing already in these times of financial bizzaro in the stock markets?

Our suggestion is NOT to allow for fractionalization of the credit so a private bank can borrow only silvercoins that it actually owns 100%. You see how the stakes here are high for investors as they need to very carefully select those investments and ideas deemed more productive and rewarding as opposed to a more slack and careless approach to investment.

Another efficient way for investors to rack up capital is through Goldcoins (which are private wallets only tradeable to silvercoins private people wallets only and with a programmed 90 days delay!!!).

In this case wealthy goldcoin investors decide to pay managers and other key personnel of a startup company in Goldcoins.

This approach allows goldcoin currency recirculation streams from wealthy wallets back down to lower grade wallets and as we have seen before an healthy society is a society where currency streams flow circularly from one class of society to the others as opposed to currency concentration and currency stream constriction.

Cautionary tales about malinvestment

In this image we illustrate few wealth distributions curves or rich/poor distribution.

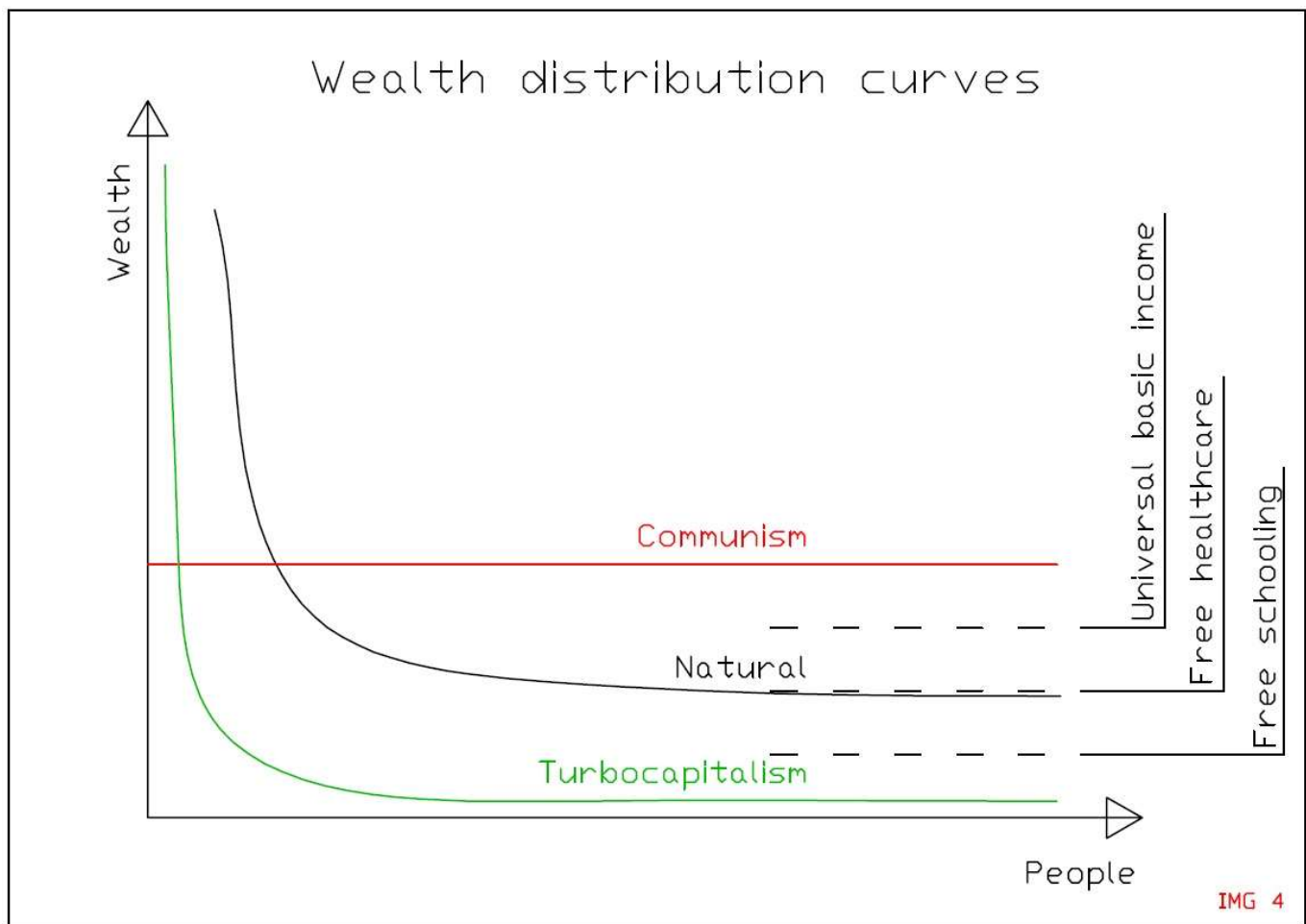
Typically, a society has many poor, some middle class and few rich people.

There is a natural organic distribution of wealth also function of technological development and penetration, average schooling and knowledge penetration, etc.

Bottomline: A primitive society cannot be very stratified and we are all hunters or gatherers; A highly advanced society is naturally more stratified and allows for people to thrive better.

A society can collapse when the organic and natural shape of this curve is twisted or disrupted by acts of war, revolutions, political upheavals or by simply not allowing the curve to evolve in accordance with new technological and economic conditions of said society.

When a revolution or an act of war or a pandemic takes place, a lot of people are thrown into financial uncertainty and this causes emotional strain because people can no longer understand their place within the disrupted wealth distribution curve as opposed to their original position and status.



A society can grow past its stability point and collapse if said curve is twisted and exasperated by malinvestment policies.

Few examples of decayed or decaying societies are:

- 1) The communist party mandating societal equality in Russia with disastrous consequences in terms of loss of lives and economic output until a new stratification was restored in terms of political position within the newly reformed society.
 - 2) Excess stratification with too many poor, a handful of middleclass and few rich within an educated or technological society will lead to riots and overall destruction of societal tissue; it is an involution of society toward a primitive hunter/gathering state in order to reset and equalize the curve and allow a new fresh start to most members of society.
 - 3) Excess or abuse of welfare programs can dissuade people from joining the workforce thus undermining societal dynamism and wealth creation.
 - 4) Happy money printing of FED & Co or other helicopter money strategies allow zombie companies to endure and prevents creative destruction of capital thus undermining innovation and economic advance.
- On these last two points I shall refer you to Jared Diamond book "Guns, germs and steel" and lead us to a discussion about why China is more advanced than Silicon Valley in the development of 5G and other advanced technologies.

The shape of the wealth curve and its evolution could be set as targets or be operating parameters of the LC. In any case human intervention will be needed for calibration of the system since humans are the only ones capable of imagining the kind of society we want to live in.

International currency exchange

Finally we shall address briefly the issue of exchange rates with other states or financial systems using different currencies other than the LC one.

Here the issue is about establishing an exchange rate between different currencies (states).

These exchange rates might be pegged against inflation statistics and relative cost of life between the two nations gauging their currencies (again an algorithmic issue with minimal human intervention).

Imagine next a foreign tourist wishing to visit a LC operated state, he then needs to convert some of his foreign currency into silvercoins to be able to “tourist” around. An exchange transaction could be programmed so silvercoins are fiated on a personal tourist account against some of its foreign currency transferred into a LC foreign currency account. Once the foreign currency is transferred out of the foreign state account this foreign currency is destroyed (deleted) from the LC record, aside from the ghost transaction image useful for statistical analysis and trends.

This provides a one way only exchange direction from Foreign currency to LC currency!

This is because LC only recognize itself as the main currency, it needs not to intervene or influence foreign nations and actors by fiatting foreign currencies toward foreign nations.

One risk here is also that a foreign nation will inflate its currency and buy more and more fiated silvercoins in exchange for a less and less valuable currency. This is once again a malinvestment inflationary practice comparable to stealing. Nations engaged in such practices shall have their currency banned from any Foreign-to-LC transaction, thus effectively banning an entire nation from conducting business with a LC operated state.

It is a modern form of monetary embargo so to speak and a cautionary tale for all leaders to wisely operate their financial system. A financial embargo needs not to last decades, it could just last few days, weeks or more for recurring offenders, just enough to cause discomfort to a foreign nation, it is not meant to be a punishing tool to penalize millions of people for the sins of their politicians.

On another note, shall a foreigner or outsider be allowed to register himself as a LC user and have an extremely valuable Goldcoin fiated onto his name?

This is strictly related to citizenship issue, if you can make it to become a citizen of a LC organized nation then you should be rewarded with a goldcoin same as if you were born in this State.

Finally a tourist operating within a LC system shall be allowed to visit foreign nations operating with different currencies, but they cannot trade their silvercoins for local currencies.

People and companies of said foreign nations shall have Silvercoin wallets registered to their names to be able to receive Silvercoin (or Bronzecoin) payments.

Silvercoin and Bronzecoin wallets have no boundaries so to speak, require no proof of citizenship, can be registered to both physical persons, aliases or companies thus allowing for expansion of the LC system toward other nations.

Unresolved technical issues

LC system needs to allow for quantic encryption since this will be the next great technical disruptive force in IT technology, but otherwise the technology required for LC implementation is already at hand.

Secondly the implementation and deployment of LC is expected to encounter much political resistance as it implies a shift of power from central bank board rooms to working-from-home IT geeks.

It is not likely that central banks will allow such a system to become a reality ever, not on their watch.

Secondly we shall highlight the fact that allowing policies to be implemented through polling and voting of LC users shifts the power from governments back onto people hands.

Imagine the possibility of laws being directly created by users and subsequently voted globally by LC user polling. Everyone can vote YES/NO/WONT SAY to a law (poll) and this value is anonymously stored within the system so a law is valid and in effect. Over time people might change their opinion and switch their vote back to NO, or back to YES.

This practice encourages the formation of direct democracy and new distributed ways of social activism with a plethora of influencers rather than politicians operating within this new digital ecosystem of direct decision-making processes.

However innovative and appealing this new system Direct Democracy (DD) may seem, beware that Devil is in the details. DD could lead to disastrous rules and regulations, a highly uneducated and unsophisticated population is most likely going to rule itself into oblivion through implementation of popular but disastrous laws. A system of checks and balances must be studied carefully for such a DD system to work effectively and efficiently in the best interest of Society!!!

Imagine the DD polling will lead for sure to great malinvestment practices. For example, everybody will for sure vote in favor of “money for nothing” and other happy direct money printing policies thus leading to malinvestment.

Some kind of superuser powers over DD lawmaking appears to be needed until a better system is found once society has evolved long enough through the