

# DYNDY.NET

MARCH 30, 2017 | ENGINEERING THE FUTURE OF MONEY FOR DEMOCRATIC ECONOMY

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## FREECOIN – Research, Design and Technical Documentation

October 8, 2015 15:50



During the past two years, the DYNDY crew has been busy researching, designing and coding Freecoin at Dyne.org think&do tank[1] for the EU/FP7 project Decentralized Citizens Engagement Technologies, the D-CENT project.[2]

Within D-CENT, Freecoin is the decentralized way to experiment on bottom up trust management systems through the implementation of distributed ledger technologies.

Freecoin is a software toolkit[3] to build and deploy custom distributed authenticated ledger technologies initially inspired by cryptographic blockchains like Bitcoin.

Having foreseen the success and importance of the Bitcoin project and its underlying **distributed ledger technology**, the Freecoin initiative doesn't aim to be a currency in itself, but to be a base for field experimentation and lean currency design practices based on such technologies. Freecoin is not a currency, but a suite to create P2P currencies, in order to scale bottom up cooperation for the social good Freecoin is thought of as a toolchain: a backend suite of interoperable tools to run free and open source, ad-hoc blockchain systems. The ultimate ambition of the Freecoin Toolchain is, even beyond the span of the D-CENT project, to reach GNU software quality standards to create and operate blockchain systems.

Below, we link you up to relevant documentation from the D-CENT project, wherein one can find all the steps made to

arrive to a minimum viable product, the Freecoin codebase, to prototype with pilot communities in Iceland, Finland and Spain during the first half of 2016.

**They are the deliverables, or project reports, on Freecoin submitted to the European Commission by the D-CENT Consortium.**

D3.5 Framework for implementing alternative credit schemes and digital social currencies[4]

8<sup>th</sup> October 2015

This deliverable documents the state of the art of legal frameworks of implementation both in general, but also particularly for D-CENT Digital Social Currency experiments with pilot communities in Spain, Iceland, Finland and the use case in Italy.

D5.5 Implementation of digital social currency infrastructure[5]

5<sup>th</sup> October 2015

This deliverable is led by DYNE.org and focuses on the implementation of a software toolkit useful to run community owned infrastructures for the digital social currency design schemes envisioned in D4.4 (Design of digital social currency).

D4.4 Design of Social Digital Currency[6]

1<sup>st</sup> October 2015

The Freecoin Toolchain is a toolkit to build blockchains for the social good. It aims to improve decentralised trust and identity management for the D-CENT pilot communities. D-CENT is bringing together complementary currency design and the latest development of digital currencies, made famous by Bitcoin. It will run digital social currency pilots in communities that are already actively designing tools for collective decision-making in local economies.

D3.4 Field Research and User Requirements Digital social currency pilots[7]

9<sup>th</sup> June 2014

This report provides a background for building a framework for implementing and federating digital complementary currency experiences, and for improving their social benefits. Enabling communities to manage exchange using alternative digital social currencies as new tools for growing a civic sharing economy, including a strong role for interoperable digital social currencies remains the principal goal.

*Disclaimer: This reports are currently awaiting approval from the EC and as such cannot be not considered as final version.*

### Links

[1] <http://dyne.org>

[2] <http://dcentproject.eu/>

[3] <http://freecoin.ch>  
 [4] <http://dcentproject.eu/wp-content/uploads/2015/10/D3.5-Framework-for-implementing-alternative-credit-schemes-and-digital-social-currencies.pdf>  
 [5] <http://dcentproject.eu/wp-content/uploads/2015/10/D5.5-Implementation-of-digital-social-currency-infrastructure-.pdf>  
 [6] [http://dcentproject.eu/wp-content/uploads/2015/10/design\\_of\\_social\\_digital\\_currency\\_publication.pdf](http://dcentproject.eu/wp-content/uploads/2015/10/design_of_social_digital_currency_publication.pdf)  
 [7] [http://dcentproject.eu/wp-content/uploads/2014/06/D3.4-Field-research-currency\\_FINAL-v2.pdf](http://dcentproject.eu/wp-content/uploads/2014/06/D3.4-Field-research-currency_FINAL-v2.pdf)

# The Freecoin ToolChain

May 21, 2015 20:50

The experimentation on the **Digital Social Currency Pilots** in D-CENT[1] can be conceived as an open-source approach to decentralized complementary currency design, which becomes ever more relevant where pilot communities are already actively designing tools for collective engagement and decision making on monetary economic matters affecting their communities.

D-CENT is going to prototype the Freecoin Toolchain[2] as a set of features that are apt to advance the state-of-the-art in two domains of social innovation: complementary currencies governance systems and decentralized trust management systems.

The basic tenet to consider is social currency as reputation management that can inform the money supply of a complementary currency in terms of tolerance to credit risk. Secondly, since both trust - or a 'promise to pay'/IOU - and codebases are virtual, running trust management on a Blockchain[3] is remarkably worth a try. Finally, trust management can be seen as a symbol-based automation of social decisions related to trust, where **social agents instruct their technical representations how to act while meeting technical representations of other agents.**

The Pilot experimentations in D-CENT can be summarized as follows:

1. Iceland: a blockchain enabled municipal currency inspired by the case studies from Libra Circuit or the SoNantes (France), and coupled with use-cases like the HullCoin (United Kingdom). Iceland is offering the best suitable social environment for a Lean UX development of the currency software toolkit in D-CENT. We aim to facilitate the usage of cryptographic blockchain technologies by co-designing Social Kronas, a reward system for political participation integrated in Betri Reykjavik in collaboration with the Municipality of Reykjavik.
2. Spain: the Eurocat complementary currency has already been launched in Barcelona on April 2014. We conducted an in-depth research on the status of the project, acknowledging that Eurocat needs a digital decentralization strategy to secure its resiliency and the reliability of its digital commons. We intend to envision and facilitate the evolution of its existing technical architecture to foster stewardship of shared data among

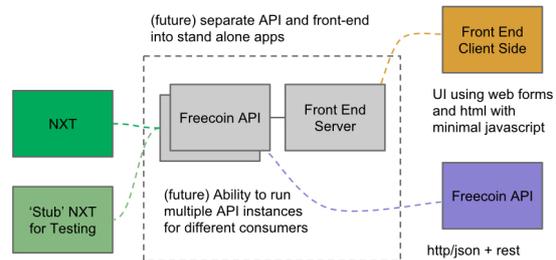
participants. The aim is to decentralise the storage and distribute the responsibility of service hosting and data custody.

3. Finland and Italy (Milan): a decentralised social remuneration system that can reward the contributions that members of Helsinki Urban-Cooperative Farm perform to the common interest of the cooperative, i.e. Multapakku. This model will be also piloted in Milan, at Macao, an HUB for cultural workers of the city.

The common characteristic of the different pilots is the need to strengthen the democratic debate necessary to consolidate and preserve the management of economic transactions, especially those with a social orientation and impact, inside the local monetary circuit.

Indeed, it is only through a democratic and participatory deliberation system that citizens can collectively define bottom-up their social needs, also in terms of monetary needs, and inform the choices made not only on resource allocation, but also about investment in social objectives and ethical criteria, **i.e. digital social currency experiments to foster direct democracy across Europe.**

We experiment in a scenario whereby human decisions deeply influence the behavior of algorithms and not the opposite.



Contrary to what happens in most crypto-currency design approaches, which tend to privilege the role of software and marginalize human contribution to a mere servomechanism - see the 'machinic economy' manageable only by an elite of engineers or the myopic limitation of the money supply to fixed numbers of coins that creates structural inequality and entry barriers in a white male dominated environment[4] - **the Freecoin Toolchain puts humans back at the centre of the currency creation stage, without color, gender or social status distinctions.**

How? The literature review on the blockchain technology, its bio-political critique and promising implementations for the social good, make emerge a new way to look at **the relation between the participatory democratic process and the blockchain technology** in the context of the governance of complementary currency systems. Within the scope of the D-CENT project, the Digital Social Currency pilots will experiment and test a new notion of proof-of-work: **the Social**

**Proof-of-Work**, which is roughly the proof that a member in the system is endowed with coins as a reward to an action in the real world while abiding to community rules and enhancing collective values.

Beyond inflation and deflation, the Freecoin Toolchain is an experiment in decentralized digital currency design that aims to contribute to the development of a self-adjusting money supply by harnessing the inputs of users of a currency system. By linking democratic deliberation with currency creation through the Social Proof-of-Work, systems can be designed to enable a flexible currency supply set in real time at the light of users trust management dynamics.

Exploitation of the Freecoin tools and features ranges from use-cases that may run in parallel with new governmental innovations for the recovery of national economies such as Greece (FutureTax-Coin[5]) or the trust management dynamics shaping the governance structure of the financial services industry at the aggregate level.

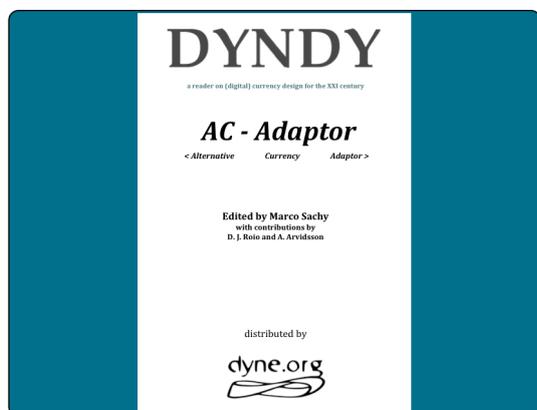
From a technical design point of view, we believe that even beyond the span of this research and its application to pilots it **can be of great interest, both for business and social potential, to develop and document a Freecoin Toolchain software kit based on Bitcoin Core 0.10** and capable of bootstrapping the genesis of new ad-hoc blockchains, integrating the work done in the e-democracy D-CENT pilots and the Social Proof-of-Work concept, therefore implementing a more desirable - read democratic - mode of operation of the blockchain, also environmentally sustainable.

#### Links

- [1] <http://dcentproject.eu/>
- [2] <http://bit.ly/1PydxuO>
- [3] <http://bit.ly/1PYb5J4>
- [4] <http://ow.ly/NdZai>
- [5] <http://ow.ly/NdZli>

## DYNDY Reader AC-Adaptor 0.8

November 28, 2013 13:54



[Click here to download](#)

[1]The crisis goes on, and so does DYNDY in its effort at proposing new effective landscapes for **structurally**

**counteracting the institutionalization of austerity.** The goal is to set viable standards for beginning **to live the future of money, in the present.** During the past year, DYNDY has been critically active within Hacklabs, **Social Centers** and occupied theaters, alongside with international policy institutions like the **United Nations**, academic circles, the **Complementary Currency Movement** in Europe, South America and Africa, and the **Bitcoin** cluster of currencies. In Spring 2103, thanks to a hectic networking hacktivity, DYNDY finalized and then adjudicated funding from the **European Commission** for the research, design and implementation of two web applications, Freecoin and Threadgate. They will be the part of the output of a 7<sup>th</sup> Framework Program research project named Decentralized Citizens Engagement Technologies, **the D-CENT project.** As we are starting the core activities within D-CENT, we thought to gather and frame both academic and blogging production related to DYNDY. And as for the **free-software spirit coding Dyne.org's DNA**, we are now offering that **chaosmic order for free to you, the Commoners.**

After a selection of the best pieces that we have humbly put together to date and together with a most welcome contribution from Prof. Adam Arvidsson, the result is **AC-Adaptor or Alternative Currency Adaptor, the DYNDY Reader for Digital Currency Design.** True, the theoretical and political reflections emerged in more than three years of conferencing, networking and study had brought us to crossing the threshold with the real socio-economy. Designed around a 'lean user experience' methodology, D-CENT is a project that will create a virtual pan-European Collective Awareness Platform hosting tools for aggregate democratic decision-making to the benefit of social movements in Spain[2], Iceland[3] and Finland[4]. On top of the CAP, a second pilot on **Social Digital Currencies** will see **Freecoin** - a Bitcoin based client for customizing the genesis block in order to issue alternative and complementary digital currencies while adding tailor made modules **conditioning** the currency and communicating with the blockchain, and **Threadgate** - a geo-localised market place for the horizontal exchange of value among D-CENT users.

AC-Adaptor is both the end of the theoretical era of DYNDY and the beginning of the application and testing of DYNDY findings, belief systems and design principles together with socio-economic values and novel governance constituencies for making this a better place. Conscious that DYNDY does not have the solution to all money problems of this world in its pockets, we nevertheless continue to strive, self-reflect, put to trial and **share** what we consider to be **the tools that will unavoidably replace the ones currently dominating monetary life and impairing our Freedom of Economic Interaction worldwide (only in this sense the global crisis is a desirable event).**

Through D-CENT, we are going to put in practice with **energy** our advocacy for an explicit participation of society at large - the Multitude - to the decisions that mostly affect individuals in Europe (and worldwide) today, ie user data protection and privacy at the service of **P2P monetary transactions in transparent circuits of mutual trust.** This is the first building block for avoiding by design the hubris of speculation and utility maximization at all costs (as for the core of single-currency thinking) in favor of **a polidoxo in human-friendly money and payment systems design for the creation of a G/Local**

## multi-currency system co-owned and co-managed by the users.

Here the link to Dyne.org Download Zone[5], where the DYNDY Reader is parked in its version 0.8.

We whereby invite DYNDY readers to share this and D-CENT partners to contribute to drafting a paperback version of this text edited by Radium for a D-CENT's kickstart (sic!).

### Links

[1] <https://files.dyne.org/dyndy/AC-Adaptor-0.8.pdf>

[2]

<http://www.democraciarealya.es/manifiesto-comun/manifiesto-english/>

[3] <http://citizens.is/>

[4] <http://www.forumvirium.fi/en>

[5] <https://files.dyne.org/dyndy/>

## Bitcoin, the end of the Taboo on Money

April 6, 2013 10:52



Bitcoin is a decentralized system of digital authentication that facilitates the circulation of value on the Internet without the presence of any intermediaries, a characteristic that has often gained it the definition of digital cash or crypto currency, since it can be used as money for payments.

This article consists in a technoetic inquiry into the origins of this technology and its evolution. This inquiry will take in consideration the biopolitical dynamics that govern the Bitcoin community as well specific characteristics of the technical realization, aiming to provide insights on the future of this technology as well a post-humanist interpretation of its emergence.

Download the full article (PDF)[1]

The most powerful forces, those that interest us the most, are not in a specular and negative relation to modernity, to the contrary they move on transversal trajectories. On this basis we shouldn't conclude that they oppose everything that is modern and rational, but that are engaged in creating new forms of rationality and new forms of liberation.

(Negri & Hardt, 2010, "Commonwealth")

This article doesn't aim to describe what Bitcoin is to the reader: there are several information sources that already accomplish that, starting from well designed video animations, vast numbers of press and academic articles listed on the wikipedia entry, and even a rather positive dramatization in an episode of the popular TV series "The Good Wife".

Rather than divulging the functionality of Bitcoin or its vulnerabilities, or even building an interpretation of it according to economic theories, this article investigates historical and philosophical aspects related to the emergence of this technology. In order to do so, the writer has been involved for more than two years within the Bitcoin community, engaging in both cooperative and critical exchanges with its peers.

Money is a fundamental medium upon which to build constituency and consolidate sovereignty. This research investigates the need for such a constituency, its urgency and emergence as a form of subjectivation. Ultimately this article provides a picture of the cultural context in which Bitcoin was grafted and has grown up to what it is now, offering keys to interpretation of its social and political aspects.

### Links

[1]

[https://files.dyne.org/readers/Bitcoin\\_end\\_of\\_taboo\\_on\\_money.pdf](https://files.dyne.org/readers/Bitcoin_end_of_taboo_on_money.pdf)

## Designing the Credit Commons: Autonomist Cooperative Direct Credit Clearing

June 3, 2012 16:07



The under performing state in which the global monetary system finds itself today invites to seek for more viable alternatives to

perpetual repayment of compounded interest-bearing debt. The **Credit Commons in the form of re-appropriation of the means of production /creation of money** are the natural evolution to a post-capitalist economic system, and society. The goal is to democratize money by reverse-engineering the existent clearing system and eliminating the need for third parties and design the system around users: **from High Frequency trading to Optimal Frequency trading**. Instead of 'private', **Cooperative Corporations**[1] give the blueprint of a juridical form for the transformation into commons of the means of production of every good and service plus the networks that enable their exchange, namely monetary and payment systems.

Throughout the past few centuries the clearing process has been used by banks and conventional clearing houses[2] continue to operate. The Ammers' *Dictionary of Business and Economics* defines a "**clearing house**" as "an association of commercial banks, brokerage houses, central banks or other institutions[3] established to settle simultaneously the claims of its members to one another". For instance, the central bank is the clearing house of commercial banks, albeit price stability remains the primary function of a central bank. However, the process can be scaled to new financial scenarios.

#### **Direct Credit Clearing is not mere barter:**

The clearing process may be applied among buyers and sellers of goods and services to directly offset their respective claims without the use of intervening banks or conventional currencies. In the clearing process each participant effectively pays into or takes out of a virtual "pool." [The] important point to understand is that in multiparty clearing what you owe to one party can be cleared or netted against what some other party owes to you.

(Greco, 2009)

In *The End of Money and the Future of Civilization*, Thomas Greco[4] stresses from a business oriented perspective that "ultimately it is your sales that pay for your purchases". In turn, from an **Autonomist Monetary Economic** point of view, other than sales, there is **labour itself to pay for one's purchase of goods and services**. What's more interesting for discovering a breakthrough and go beyond capitalism, he adds "**Direct credit clearing makes the use of any third party credit instrument (money) unnecessary.**" The prospects for the organization of production and growth, together with those around **the property of money**, are very impressive:

"A Credit Clearing Association based on an arrangement in which a group of traders, each of whom is both a buyer and a seller, agree to allocate to one another sufficient credit to facilitate their transactions among one another. The rest is merely bookkeeping. In such a system, the total amount of credit outstanding at any point in time can be thought of as the money supply within the system."

(Greco, 2009)

For instance, in order to exit the present impasse, a nonprofit banking financial institution openly monitored by the public on a computer network with transparent audits could serve as desirable clearing house. By expanding the vision even further, in a P2P environment with a pretty autonomist background, this

means that buyers and sellers would include **entrepreneurs and workers** in the same set, namely the set of **peers**, those who can buy and sell on a common platform in which there will be represented all the goods, services and commodities on indexes such as the CPI[5], with one fundamentally safeguarded inclusion: **'labour' as the commodity sold by workers on the common G/Local market**.

Another achievement of such systemic organization for the monetary system would be the end for the necessity of endless exponential growth. Indeed, the consequences for the quantity theory of money would be that **the 'money supply' "need not be an ever-increasing number**. Conversely the quantity of money in the direct credit clearing system is "**self-adjusting in accordance with the trading needs** of the associated members, and does not play the same crucial role as in a commodity money system where the money supply is relatively inflexible."

What about checks-and-balances? **To avoid unmanageable chaos and secure a steady economic system, it is important to refine two more structural factors:**

1. **Balance Limits:** "the maximum line of credit on any account should be decided on the basis of the amount of that member's sales of goods and services [**including labour**] average over some recent time period."
2. **Settlement:** "to settle accounts, those who have negative balances would put enough cash to zero their account balances, while those with positive balances would draw out enough cash to bring their account balances to zero." When visualizing the process with the conventional system and procedures eventually out of the picture, one starts to really appreciate Jonh Kenneth Galbraith once claiming that "**The process by which banks create money is so simple that the mind is repelled**" (Galbraith, 1975).

Moreover, **Direct Credit Clearing makes the decoupling or exodus from the commercial banking system a question of functional efficiency of the new configuration:** "While periodic cash settlement might be used initially to build confidence in credit clearing as a viable alternative payment method, even that degree of dependence on conventional money is not a functional necessity and should eventually be eliminated." This will favour both autonomist and democratic features of the system.

Finally, Direct Credit Clearing systems' design must provide **strong authentication and surety of contract**. In fact, the primary goal of a clearing system is to secure authentic *reciprocity* to all the members of the supply chain, from consumers / workers, to retailers /craftsmen, wholesalers, manufacturers, and the producers of basic commodities. To assure safety of contract, both **collateralisation** of assets that set balances' limits and **co-responsibility** schemes in the form of 'self-help' or 'affinity groups' are sound design instruments of trust to implement.

To sum up with Greco:

A mutual credit clearing union can reclaim a part of the credit commons from monopoly control, enabling members to act independently of the banks in allocating their credit

and conducting businesses and trading.”

(Greco, 2009)

The final step, **Direct Credit Clearing in a P2P economic system**, can “with relative ease be implemented at all levels to the economy, from the local to the global. [The] main obstacles that are likely to be encountered are political ones, as vested interests try to maintain their privilege and prevent the emergence of competition.”

It therefore behooves us to act quickly in the establishment and proliferation of alternative exchange mechanisms so that they will achieve widespread patronage and support sufficient to resist those attempts.

(Greco, 2009)

#### Links

[1] [https://en.wikipedia.org/wiki/Mondragon\\_Corporation](https://en.wikipedia.org/wiki/Mondragon_Corporation)

[2] <https://www.youtube.com/watch?v=2hp9w-gXRjM>

[3] [https://en.wikipedia.org/wiki/JAK\\_Members\\_Bank](https://en.wikipedia.org/wiki/JAK_Members_Bank)

[4] <http://www.reinventingmoney.com/>

[5] <http://www.bls.gov/cpi/>

## Occcu: Occupy Currency – Basic-Income Global Community Currency

February 6, 2012 20:48



Alternative forms of money are designed to compete directly against global financial power, and this is a good news. Indeed, on 28 January 2012 at the gates of the World Economic Forum held in Davos, it was presented to the media a new version of community global currency, i.e. the **OCCupy-Currency or Occcu**[1]. The project has been developed in Austria by a team of students led by Roland Alton Scheidl[2] at Vorarlberg University of Applied Sciences with the aim to offer **a Basic-Income answer** as the present double dip recession gives sign of shifting into the Greatest depression.

Starting from a background whereby WEF members gathering in **Davos** tried to direct the ongoing slow-motion global financial meltdown through the report Global Risks 2012[3], **a more valuable contribution for the solution to the crisis came**

**from the demonstrators camping outside the venue of the Forum.** The features of the Occcu are explicitly inspired by those of the Terra, a project of a Trade Reference Currency (TRC)[4] and the GraDiDo system[5] and allow to promote **concrete monetary fairness**:

“No interest rates[6] and no bubbles;

Fixed fee generating taxes (demurrage[7]) ;

Motivate to spend[8] or donate and not to accumulate;

Value creation by individuals and their community work[9].”

Put it simply from Occcu documentation[10]: “A cheque in your wallet allows you to agree on a payment anywhere.” Indeed, **Occcu is a P2P horizontal market where anyone** – in principle either big or small players – **can buy or sell goods and – or services.** The core principle leading the designers of Occcu is a principle already formulated, for example, in the ethical architecture of the **Italian SCEC**[11]: **Basic Income as a fundamental principle of currency design.** Any member of the Occcu network receives a **monthly amount of 100 Occcu** (SCEC ‘s network members receive a *periodical* contribution from the issuer of SCECs). Finally, an up to date information system cheaply run the operation of the **Occcu payment system**

**All the elements** are thus there **for overcoming the present monetary paradigm and shift to a new and better one**, whereby **efficacy rather than efficiency is the goal.** In order to reach such objective, **one only needs to occupy herself** by stopping to protest in the streets as the prerequisite for allowing oneself to start to adhere to ways for dealing with money, which are **open to the adoption of the Occcu-like systems while simultaneously migrating from the conventional one:**

“For example, if you are protesting the banks – put down your sign and think about ways of eliminating banks in your life. Get rid of your accounts, pay off loans and don’t get anymore, cut up credit cards, and only use cash. I have done this myself in Canada for a while. Yes, its a pain in the ass to go into a bank and cash a cheque from a bank you are not a member of – and yes, they charge you for this service – yes, they look at you suspiciously – yes, they will try and get you to open an account – yes, you will need to store your cash at your house – yes, you will need to make sure you have enough money on your person when you go out. I know its sounds like a hassle but how much are you going to give up in the name of convenience? Take your power back. Boycott all you can. Its where your power is.”[12]

It won’t be the easiest thing to do for everybody, but the direction is becoming every day more adamant.

**The Multitude has the technology for monetary autonomy and must start to use it. Why?**

[It] will be only then that we may see what it truly means for the working class not just to have power, but to be in power”.

Marazzi et al, 1995.

#### Links

[1] <http://occcu.com/do/login>

[2]

[http://www.wizards-of-os.org/archiv/sprecher/a\\_c/roland\\_alton\\_sc.html](http://www.wizards-of-os.org/archiv/sprecher/a_c/roland_alton_sc.html)  
 [3] [https://encrypted.google.com/url?sa=t&rct=j&q=global%20risks%202012&source=web&cd=2&ved=0CD8QFjAB&url=http%3A%2F%2Fwww3.weforum.org%2Fdocs%2FWEF\\_GlobalRisks\\_Report\\_2012.pdf&ei=2BowT43EK9SwhAeFi-XsCg&usq=AFQjCNEGSPEPG9gibLSas7\\_00lJKTN3imA&sig2=J0ltzuOHTfauk7qQjCZ8cg&cad=rja](https://encrypted.google.com/url?sa=t&rct=j&q=global%20risks%202012&source=web&cd=2&ved=0CD8QFjAB&url=http%3A%2F%2Fwww3.weforum.org%2Fdocs%2FWEF_GlobalRisks_Report_2012.pdf&ei=2BowT43EK9SwhAeFi-XsCg&usq=AFQjCNEGSPEPG9gibLSas7_00lJKTN3imA&sig2=J0ltzuOHTfauk7qQjCZ8cg&cad=rja)  
 [4] [https://en.wikipedia.org/wiki/Terra\\_%28currency%29](https://en.wikipedia.org/wiki/Terra_%28currency%29)  
 [5] [http://gradido.net/en/Gradido.Team/c/11/common\\_good\\_currency](http://gradido.net/en/Gradido.Team/c/11/common_good_currency)  
 [6] <https://www.youtube.com/watch?v=1Ixgt4syL9U>  
 [7] [https://en.wikipedia.org/wiki/Demurrage\\_%28currency%29](https://en.wikipedia.org/wiki/Demurrage_%28currency%29)  
 [8] <http://www.dyndy.net/2010/11/wir-switzerland/>  
 [9] <https://www.youtube.com/watch?v=TwmM5Nb6hiE>  
 [10] <http://ethify.org/files/1/occcufolderv3.pdf>  
 [11] <http://www.dyndy.net/2010/11/scec-italy/>  
 [12] <http://www.sasqwach.net/?p=68>

## Towards Money as a Common: the Digital-Coin Rule for a Free Society

November 26, 2011 13:52



**The issue around the nature of money is critical in present economic times. We are in a situation whereby the incapacity to re-define how we deal with money could resolve in an a severe damage to society as we commonly refer to it: contrary to what happens with information systems, there are no backups with money systems. Since the Internet revolution - and also as parts of national communities - we are almost unconsciously as well as coercively using national currencies.**

“Of the many ways of organizing banking, the worst is the one we have today”.

- Mervin King, Oct 25<sup>th</sup> 2010.

We either agree to pay with or are obliged to acquire something, which is not - by law - our own property: it is a fact that the legal owner of our money is the banking system: central banks, commercial banks and international banking institutions such as the IMF, the World Bank and the Bank for International

Settlements are the legal entities literally in charge on economic and juridical levels. Indeed, as the recent draft of the European Stability Mechanism[1] shows, such organs of society enjoy **discretion, inviolability, immunity and almost total unaccountability** to independent auditing authorities for each and every operation that they engage in.

What’s more, in the current bank-debt system where conventional national currencies flow, we find ourselves to be in a slightly uncomfortable juridical situation: we are citizens using exclusively national currency for the clearing of debts and the payment of taxes. Therefore, it can be of help to seek solutions by borrowing a pattern from monetary theory, viz. the Neo-Chartalist approach[2] in money systems design:

We are locked into a one-dimensional monetary and fiscal system, where “That Which is Necessary to pay Taxes”, or TWINTOPT is issued, administered and enforced top-down (Wray, 1998).

As a consequence of the 2008 meltdown nation states are systematically increasing their public debts and, in order to do so, they ask new loans to central banks, the latter pretending some form of collateral for risk aversion purposes. The interesting part is that under current law, i.e. Maritime Admiralty Law[3], **citizens are used as collateral**: every time there is an increase in government indebtedness, taxpayers are obliged by law to agree to clear such expense through fiscal and monetary policies. For instance, the US have now some 14 trillion dollars of debt and each American citizen roughly bears 30 thousand dollars to pay back, and it is going to get worse and worse as quantitative easing practices are probably on schedule at the FOMC[4]. Such rationale holds in every nation where central banking and the monopoly of a single type of currency are the normal monetary regimes, with Europe in pole position.

Since we are migrating toward a cashless society, to develop a cartography of the territory where monetary theory and policy and law cross with technology is of fundamental importance, if we are to avoid non-democratic and hyper-centralized regulation of the monetary system switching to the cyberspace.

The thesis about the **Digital-Coin Rule for a Free Society** takes the pace from philosophy of economics and technology both applied to draw the lines of the juridical innovation *via* a bottom-up **direct vote by the population of a P2P G/Local multi-currency system**. In such monetary network, different types of currency would constitute different lines of credit apt to relieve our and future generations from the burden of a staggering volume of debt, because the **government would accept a diverse ecology of currencies in payment of taxes**. With the political instrument of **vote by referendum** citizens will decide how to earn money and what types of currency to use in payment of taxes.

By a democratic deliberation, it is possible to have back the property of money and to reform the license of money creation while ending the age of ever-growing debt. Currencies designed for environmental purposes, social purpose currencies, B2B currencies, just to mention some non-conventional currencies already designed and in operation worldwide, will have legal tender power, i.e. they will be used in parallel with conventional money in payment

of taxes .

Thereby, central banking, commercial banking and the financial system would lose strategic monopolistic power while society will experience a **P2P G/Local decentralized monetary system**: from a new inflation-proof global reserve currency (preferably an asset-backed one, e.g. the TERRA[5]), through re-designed national currencies[6] and an increase in commercial credit circuits for the business sector, **to community and complementary currencies for protecting local economies from external economic perturbations**. In such scenario, 'peers' will be macro-economic regions, nations, businesses (from SMEs to big businesses), and individual persons, respectively.

All the peers belonging to a tier of the multi-currency system will operate in a **P2P network** where transactions will be transparent in a similar fashion with respect to how the **Bitcoin's Blockchain**[7] works. In turn, a **horizontal and a-centered framework** will take the place of the vertical centralized one enforced today by current laws. This will open the possibility to institute an automated social, juridical and economic cyberspace where transaction **fees will be drastically reduced** since the role of third parties for clearing operations will be decreased for transaction costs issues and efficiency reasons: even in this case **Bitcoin is an exemplary pattern to implement for money systems designs**.

Finally, **citizens will control their money more effectively than today** and will be far less dependent from the competitive and exclusive marketplace in that they will not be anymore a mere form of collateral recorded on ledgers. By contrast,

we will be free to cooperate in a system akin to Karl Polanyi's gift economy where money will be a public good, or better, a common.

#### Links

[1] <http://www.dyndy.net/eu-rope/>

[2]

[https://encrypted.google.com/url?sa=t&rct=j&q=wray%20chartalism&source=web&cd=2&ved=0CCQQfjAB&url=http%3A%2F%2Fwww.cfeps.org%2Fpubs%2Fwp-pdff%2FWP10-Wray.pdf&ei=VurQTrrVLM6r8QPusYjkDw&usq=AFQjCNHkdlCwnZiIkODchHo8zE\\_bkiV8Pw&cad=rja](https://encrypted.google.com/url?sa=t&rct=j&q=wray%20chartalism&source=web&cd=2&ved=0CCQQfjAB&url=http%3A%2F%2Fwww.cfeps.org%2Fpubs%2Fwp-pdff%2FWP10-Wray.pdf&ei=VurQTrrVLM6r8QPusYjkDw&usq=AFQjCNHkdlCwnZiIkODchHo8zE_bkiV8Pw&cad=rja)

[3]

<http://www.youtube.com/watch?v=jm9my4ujKrc&feature=related>

[4] <http://www.youtube.com/watch?v=tVfqF6DfWsk>

[5]

[https://secure.wikimedia.org/wikipedia/en/wiki/Terra\\_%28currency%29](https://secure.wikimedia.org/wikipedia/en/wiki/Terra_%28currency%29)

[6] <http://www.youtube.com/watch?v=CrKV6bfqOck>

[7] <http://www.youtube.com/watch?v=hdNRw-LWDUY>

## Our Future, Our Money: the Design of Currency Systems

August 8, 2011 21:14

"The only way to learn is by doing. [The point is] to learn in order to realize goals that were previously considered as unimaginable".

Michael Hardt and Antonio Negri.



**Capitalism is ontologically (and almost economically) dead**, thus we do not need the kind of transitory revolutions that characterized the relation of opposition between those who produce real value and those who simply invest capital for production to occur. **Another transitory revolution would cause a temporary resurrection of capitalism**: indeed, capitalism can exist only if something else, us - or the multitude, continue to fight against it. By contrast, the singularities composing the multitude should have the interest on putting their hands on the *dispositifs* of the State only for dismantling them. A better strategy is a **non-reactionary exodus from capital towards a self sustaining, horizontally developed and cooperation-inducing G/Local multi-currency system**.

There is the need for a **revolutionary transition**. What does this mean?

Essentially, insurrection in terms of creating new types of currencies against that which has traditionally been called 'money power' must be directly anchored to the decisional process informing the institutionalization of a form of money system suitable for all and not just serving the private interest of a few.

Since modern fiat money, or capital, has been historically determined, and since it is the global cause of the disease of our economies as a factor penalizing our personal well-being through scarcity, inflationary pressures, devaluation, perpetual interest-bearing debt and the like, it does make sense to look for criteria to adopt for the design of better performing currency systems. Thereby, we need different types of currencies to use and earn in direct relation to the full expression of our potential in the context of a **multi-layer P2P network horizontally connecting agents who participate into the economy**.

In currency systems design, at the light of the slightly poor performance of modern money (nowadays, the dollar does not even value the paper onto which is printed), the main goal is therefore to **design alternative and better currencies apt to guarantee the preservation of biological material commons** (e.g. access to water, assets for clean energy production, etc.) while promoting the **increase of biopolitical production of immaterial commons**: codes, images, ideas, habits, knowledge and forms of life, which we can think of as 'alter-modern'.

Currencies are to be invented in order to promote “biopolitical production, where labor is more and more responsible for the creation of cooperation [and] becomes more and more autonomous from the commands of capital”. (Negri and Hrdt, 2010)

Autonomy from behavioral pressures exerted on the public by modern money and cooperation between peers members of a horizontally developed economic network connecting the multitude are the assumptions to take into account when designing currency solutions for the exodus from traditional proprietary money: **Bitcoin is a breakthrough in the juridical context of the property of money**, now belonging to the miner or buyer, but not anymore legal propriety of a central issuing institution such the IMF, World Bank, BIS, Fed, ECB or the EFTS. More in general, **the conscious creation of currency systems for open P2P transactions is fundamental** for what Negri and Hardt call “**the institutional development of the forces of social cooperation** (*Ibid.*)”. In fact, the only way to make monetary, financial and banking crises like those we are experiencing nowadays a mistake of the past, we need to create a financially sustainable monetary system that will consider in its design features, the economic needs of all the population while giving at the same time the means of payment for maintaining and improving the commons.

Such framework instantiates itself when the singularities shaping the multitude, i.e. us, stop to see **institutions** as a constituted power, but start to see them as a **constituent power**. **DYNDY perspective on currency systems design** takes this into account by considering the exodus form proprietary money as an asymptotic process towards the **DIY-development of the necessary telematic infrastructures and social capabilities of the multitude to begin and master a politically democratic and economically interconnected decisional process** not based on traditional political representativity. If money can be the catalyzer of competitive behavior in a fiat-money world, it is also possible to design it to **serve desirable interests of cooperative users inhabiting a different monetary world**.

Thus, the disentanglement from the constraints of conventional money and the construction of an alternative way to deal with currency systems design are now **two faces of the same coin**: **DYNDY thrive for the bottom-up insurrection against the former coupled with the institution of the latter in an auto-catalytic process of mutual reinforcement**. Starting to design new money systems by learning the lessons from nature and the past are two processes leading to the same result: giving people **a way to constitutionalize the revolutionary process into a viable form of self-government through the help of currency systems designed to work for the multitude**.

In order to reach such result, we need “the sustain of a constitutional, governmental and juridical structure”. Hence, in the process of currency system design, DYNDY endorses a “Rechtswollen, i.e. an institutional and constitutional willingness apt to articulate in parallel the singularities of the multitude together with the heterogeneity of its own instances of revolt and rebellion instructing a powerful and durable process. (*Ibid.*)”

## Links

# The Solution offered by the Analogy with Process Ecology: CCCs – Community and Complementary Currencies

July 26, 2011 11:34



In the money creation process, the monopoly of a **monoculture of national currencies** frames a system, which is constitutively characterized by a **significantly fragile structure**. The eventual focus on the efficiency of the system in processing higher and higher volumes of national currencies toward necessary growth for increasing the size of total global trade has meant the total distraction from the care of those systemic parameters, which are necessary to safeguard a sustainable system.

In other words, monetary economic orthodoxy fosters the development of ‘bonding capital’ through the adoption of a single type of money. Conversely, **community and complementary currencies – CCCs – focus on the value and cultivation of**

‘social capital’, which “[is] a form of capital based not on money but on relationships” (North, 2010).

For more efficiency triggers more brittleness than reducing it and since another monoculture of currencies will resemble the present systemic framework without improving it, what is therefore **the parameter to take into account for correctly designing an alternative framework** of the present monetary system?

The answer is to increase systemic **diversity**:

more diversity means “an increase in structural interconnectivity with the deployment of several types of currencies [put in circulation] among people and businesses to facilitate their exchanges, through the implementation of [community] and complementary currencies. [These] different types of currencies are called ‘complementary’ because they are designed to operate in parallel with, as complements to, conventional national moneys” (Lietaer, Ulanowicz et al., 2010).

Thus, the implementation of different types of currencies will change the structure of the monetary system and, by definition,

**such change will ameliorate the level of overall systemic resilience.** This in turn will increase the sustainability of the monetary system. In a nutshell, the possibility to make more connections through the use of different types of currencies will **enhance the potential capability of every economic agent to virtuously respond to unexpected or unpredicted systemic failures** in the domain of modern bank money.

Therefore, CCCs are a monetary device for effectively reframing the structure of the monetary system. Indeed, they are negotiable instruments designed in order to facilitate trading by virtue of enhanced interconnectivity of the system as a whole, esp. in those situations in which the supply of conventional national currency is tight. But more than a useful cushion in times of shortages of money, complementary currencies are remarkably significant agreements, because

CCCs “facilitate transactions that otherwise wouldn’t occur, linking otherwise unused resources to unmet needs, and encouraging diversity and interconnections that otherwise wouldn’t exist” (Lietaer, Ulanowicz et al., 2010).

Put it in another way, **the possible implementations of CCCs is potentially equal to the all possible social interactions, which are measurable in terms of value.**

The new narrative constructed on the assumption of process ecology allows a systemic re-framing by organizational means, which will re-structure the network that shapes the monetary system toward enhanced sustainability. Although it may be counter intuitive from an orthodox perspective devoted to a narrative descending from the epistemology of classical physics, **a critical meta-theoretical shift leads to the observation that CCCs are a remarkable and desirable discursive improvement for monetary economics** with regards to whole system’s sustainability.

#### Links

## The Analogy with Process Ecology applied to Monetary Economics

July 24, 2011 23:43



The analogy between process ecology and monetary economics will give those required **underpinnings for allowing a smooth monetary shift from a mature industry society to a new post-industrial one** through the definition of **new kinds of agreement**, which will

complement the conventional one. Indeed, by the endorsement of newtonian physical determinism, industrial society stood on the assumption that the world is predictable and, therefore, information for its management has to be centrally administered by ‘experts’.

By contrast, Lietaer argues that

“in an era characterized by uncertainty it is necessary to consider the re-formulation of organizational assumptions.”

(Lietaer 2001: 288)

And, as for DYN DY approach, **in the direction of a monetary system managed and organized by prosumers** (rather than experts).

In process ecology Total System Throughput quantifies in a single metric the throughput efficiency of a natural network of transfer of material and energy. In an *analogous* way, national Gross Domestic Product - the total value of goods produced and services provided in a country during one year - is the **correlative** element in economics. Indeed, orthodoxy prescribes exclusively quantitative measurements for assessing an economic system. Such state of affairs makes the system prone to poor performance with concerns toward systemic resilience and sustainability.

Thus, on the one hand reality offers uncountable examples of natural ecosystems that have been successfully enduring in the long run with both efficiency and resilience steadily in the value range of the window of viability. On the other hand, artificial systems such as conventional monetary systems show simultaneously high efficiency, but very low levels of resilience because the latter is not included as a valuable parameter in orthodox monetary theory for systems design:

“GDP and TST, however, are both poor measures of

sustainable viability because they ignore network structure. They cannot, for example, distinguish between a resilient economy and a bubble that is doomed to burst.”

(Lietaer, Ulanowicz et al., 2010: 7)

The analogy is further developed by arguing that

money “is to the real economy like biomass in an ecosystem”.

(*Ibid.*)

However, **speaking of an analogy is reductive**. Indeed, by applying information theory to the study of ecosystems, there is the mathematical demonstration that **monetary systems** - in order to be sustainable - **must mimic Nature’s parametric values** relating to efficiency and resilience/interconnectivity.

An exclusive focus on systemic efficiency will irremediably lead to the creation of the kind of boom-and-bust economy that the exclusive implementation of modern bank money brings about. In fact, the primary importance that orthodox economists accord to the efficiency of the monetary system is expressed also through the adoption of a single type of money, namely modern bank money in the form of conventional national currencies.

Accordingly, monetary orthodoxy focuses on the ‘node to node pathway steps’ of the network resembling the monetary system, while there is an underestimation of the importance to have the sufficient amount of ‘**links per node**’ for a sustainable complex flow system to obtain. The result is that low diversity of moneys is the catalyst for high efficiency at the expense of an optimal level of resilience.

Thereby, **the only rational movement is a backward one in the direction of more resilience in order to keep the system as whole steady in the range of the “window of viability”**. At a glance, the term ‘backward’ may seem reactionary, but in our case the meaning of the term acquires a fully purposeful semantic: a move backward means firstly to take the pace toward reaching optimal levels of sustainability through the enhancement of systemic resilience by **the implementation of agreements emerging from discursive practices other than the conventional one**.

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