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Expert Comment

Fragments of an ecology of care: Basic income beyond the nation-state

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Abstract

The present paper proposes the creation of a basic income system that is constituted outside of and beyond the realm of the nation-state, as a means of changing humanity's relationship to itself, inside the sphere of the commons. It argues for a dis-embedding of work (time) from wages, through a reformulation of the production of money in the form of an income that is distributed as an equal share to all those who are part of the global commons, unconditionally and universally. The monetary system for this basic income is designed in a way where money is created constantly and equally among all but decays when it is not used as a means of preventing accumulation (demurrage). Through a reformation on the structures that create money, the paper sets out to draw the 'fragments of an ecology of care', which rests on an argument that the establishment of free relationships is underpinned by a flourishing of relationships that foster mutual care and that these practices of caring are a precondition to the creation, expansion and maintaining of the commons, which are mediated through money. The circles system is outlined as one of the first exercises at trying to put this theory into the practice of embedding money within the sphere of the commons, produced and administered democratically, from the bottom-up.

Keywords: basic income, commons, ecology, care

Introduction

The circuit of capital, identified by Karl Marx's formula M-C-M' denotes the fact that, under the capitalist mode of production, money begets more money through the exchange of commodities (Marx, 1894/1982). These are produced through a mixture of humanity's labour power and nature i.e. the means of production, all mediated by money given as an interest-bearing debt.

The endless expansion of economic growth using this type of money leads inevitably to ecological disaster, as enclosures on land become the means of money's infinite reproduction, making wealth inevitably accumulate at the top 1% (Lietaer, 2002). This happens through the issuance of interest-bearing debt, which makes money scarce and hence competitive for people to obtain, tying humanity's fate into an expansive spiral of destructive growth. As it is widely known, we cannot have infinite growth in a finite planet (Meadows, 1972).

More recently, feminist autonomous Marxist intellectuals like Silvia Federici, among many others, have traced the historical changes in the circuit of social reproduction and its relationship to the circuit of capital, namely women's historical central function in the process of primitive accumulation as the producers and reproducers of the most essential capitalist commodity: human labour power (Federici, 2014; Praetorious, 2015). Historically, the enclosure of the commons and of women's bodies was the pre-condition for the rise of capitalism. As historian of the commons Peter Linebaugh puts it: "Reproduction precedes social production. Touch the women, touch the rock" (Linebaugh, 2008, p. 244).

The rebuilding of the commons as a viable political project has been defined and practiced dispersedly around the world. This essay is an attempt to deepen the imagination of the economic self-reliance of the commons. As Federici herself notes, talking about the recent appropriation of the commons discourse by hegemonic forces:

> …while international institutions have learned to make commons functional to the market, how commons can become the foundation of a non-capitalist economy is a question still unanswered (Federici, 2011).

It is partly through their insights that this paper builds upon a theoretical formulation that allows for the commons to become "the foundation of a non-capitalist economy".

The present paper proposes the creation of a basic income system that is constituted outside of and beyond the realm of the nation-state, as a means of changing humanity's relationship to itself inside the sphere of the commons. It argues for a dis-embedding of work (time) from money, through a reformulation of the production of money in the form of an income that is distributed as an equal share to all those who reproduce the commons.

It is argued here that if we are to fundamentally revert the crisis of today, there is three-fold task at hand that is needed in order to create what we tentatively call an 'ecology of care':

1. **Money commons**: This implies a re-appropriation of the money system outside the realm of the state and banks and into the commons, where wealth is defined, reproduced, shared and maintained by all, beyond the borders of nation-states.
2. **Multiversal basic income**: A recentering of care and awareness as the source of the value in work, which decouples labour from income can be achieved through the distribution of a basic income given to people unconditionally, just because they exist. This formulation of this basic income system is epistemologically different from nation-state proposals, as it views each individual as a unique, interdependent and diverse universe, each with distinct sets of values, emergent within another universe *ad infinitum*.
3. **The ecology of money**: in order to encourage self-reliance for all within planetary boundaries, a money system which is *alive* and hence decays when it is not used is proposed as the bases for the creation of a different type of money system. Money today is created with a positive interest to be paid back and it is the basis for economic growth. Ecologies of money means creating diversity of monetary ecosystems as a way of healing the harm done by today's money monoculture, where money is created as a form of a debt with an interest on people's times. Making money alive means creating money within and for the commons to have the life needed for them to achieve a viable economic alternative, in the present.

The ecology of care rests on an argument that the establishment of free relations is underpinned by a flourishing of relationships that foster care work and that these practices of caring constitute a means to the creation, expansion and maintaining of the commons, each with their own specific structure as well as the material and immaterial elements that constitute them. These three prospects are therefore to be seen as implying each other and as a whole, each forming a leg for a table which cannot do without one of its three pillars.

Care as a Precondition for Freedom

The field of economics, regardless of the sub-school, treats the work of social reproduction as invisible, making this type of labour valueless and unaccounted for in the current economic paradigm. This labour is treated as pre-economical and is therefore not measured in metrics like GDP. Today, this care or reproductive labour falls predominately on women and its invisibilisation is constructed through a hierarchy of value which dualistically divides between some forms of labour as material (and hence productive) and others as immaterial (and hence communicative or 'feminine') (Yanagisako, 2012).

This is not a casual theoretical mistake. The invisibilisation of reproductive work completely decenters what constitutes the processes that make human life possible by putting them outside the sphere of what is considered to be part of the economy. In fact, what we call production is only a secondary moment in the process of social reproduction, of the production of people (Graeber, 2013). Any economy is fundamentally a human economy (Hart and Laville, 2010), and it is only by making things like reproductive work invisible that capitalism can justify its costs of production and pretend that the economy is about things and not social relations (Federici, 2014).

In reality, the freedom of the proletariat to sell his labour is only possible because of the unfreedom of the housewife which subsidises their reproduction for eventual capitalist exploitation (Mies 1998). As some note, the level of freedom in a society can be measured by the level of freedom that women have (Öcalan 2015). Hence, without the systemic liberation of women and all others who perform the basis upon which life is built, and hence the reproduction and defense of the commons, society as a whole cannot be liberated.

It is therefore through a fostering and encouraging of care work as a source of the value in work that another world can be built: a care centered economy (Praetorious, 2015). This implies a shift from valuing the end point of things, as done under capitalism, to a valuing of the processes that make life possible to begin with. It is a counter-movement against the accumulation through care to a circulation of care as the basis upon which to build the commons.

An economy based on care, or the care economy, is a response to capitalist and patriarchal systems of domination. The care economy tries to recenter the value of care labour (as these reproductive activities have come to be known) at the center of the human economy, or rather, an ecology[1] for human relations that is strengthened through their

[1] "What is the difference between economy and ecology? Considered etymologically, the terms 'economy' and 'ecology' are closely related: both refer to the *oikos*, the household, the community household, the world

interdependence. Thus, the reproduction of human processes is the first step and precondition for the production of what is known under capitalism as the production of 'goods and service'.

Underpinning this ecology is an ethics of care, a moral system which recognises the interdependence amongst humans and their capacity to autonomously decide which relations they wish to enter, change or exit. Most importantly, it is based on the universal experience of being cared for and the giving of care. At its core, an ethics of care is about "attending to and meeting the needs of the particular others for whom we take responsibility" (Held, 2006).

As argued below, this type of morality is embedded within a reformulation of how money is created, to a system which provides every human being with an amount of money necessary to live in harmony with nature and within planetary boundaries.

With this in mind, we can think of the three-legged table, the ecology of care, as a condition where human relationships are directed at mutually making each other free through an acknowledgement of our interdependence and the care that goes into making us who we are. Care is therefore a precondition for free relationships to be established.

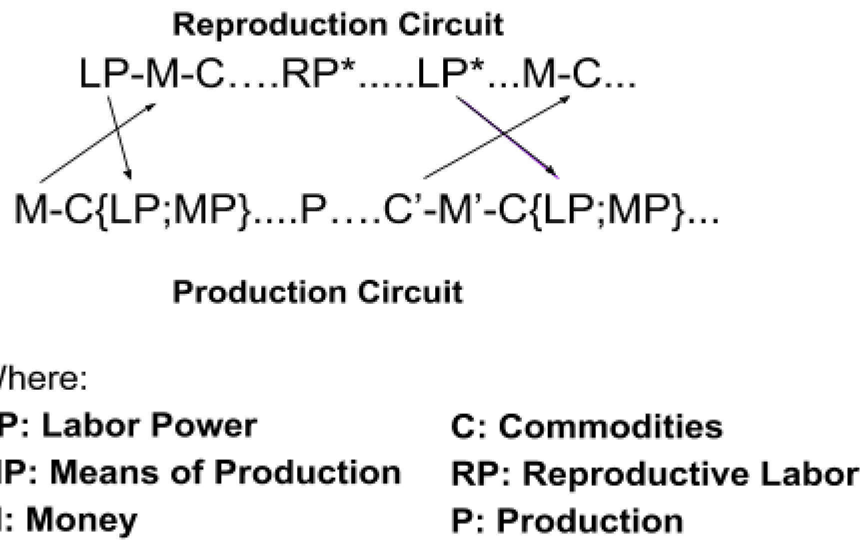
(Re)production Circuits:

In this section, I rely on Massimo De Angelis' study of the commons as social systems, where he analyses the processes and complex dynamics that go into the creation and reproduction of the commons and the different values and practices embedded within such processes (De Angelis, 2007). In *Omnia Sunt Communia* De Angelis outlines the circuit of social reproduction as a moment in a set of moments that reproduce the commons and its relationship the circuit of capitalism (De Angelis, 2017).

The relationships between the different moments in the reproduction and capitalist (production) circuits are outlined as follows:

household; both are concerned with the regularities of keeping house. There is a significant difference, however, between -nomy and -logy, *nomos* and *logos*: nomos refers to human-made rule and agreement, while logos refers to divine law, or, in more modern terms: natural law, world reason, philosophy, the meaning of everything" (Praetorious, 2015).

Table 1:



Coupling Between Production and Reproduction Circuits (De Angelis, 2017)

In the reproduction circuit drawn in Table 1, the money (M) obtained *in exchange* for labour power (LP) is used to buy commodities (C). These commodities are then processed in the household through an expenditure of reproductive labour power (RP), usually done by women, which allows for the physical and psychological reproduction of the labour power (LP*) of people, which is then sold to capitalists in order to make more commodities. Similarly, In the capitalist circuit of production, the M-C-M' formula is expanded to take into account the means of production (MP) and labour power that goes into the production process (P), in order to produce more commodities.

The reproduction circuit is here expanded from the C-M-C formula used by Marx to show "the general metabolism of the reproduction of labour power, but also the circuit of production of commodities involving self-employed, petty producers, craft people, small organic farmers, reclaimed factories, water associations and so on" (De Angelis, 2017, p. 192). This is only but a moment in a larger set of moments of social reproduction. Unlike the production circuit of capitalism, the reproduction circuit serves as a means and not as an end. Taking a broader view, the reproduction circuit at large could be conceptualised as a set of moments that recreate the commons (De Angelis, 2017, p. 193).

As seen from Table 1, the sphere of reproduction is inevitably tied to money that is created outside of it, hence making its reproduction depend on the circuit of capital for its survival. Conversely, we can observe how capitalism and patriarchy are subsidised by and depend at large on reproductive labour (mostly done by women today), for them to continue functioning. This is at the root of what maintains the economic system running.

Critical to our argument is that money in this graph flows from the sphere of production to that of reproduction. Money today is produced in the form of debt by private and central banks. By merely typing a number on a computer screen, they both produce money out of thin air. The Latin word *fiat* is used today to denote the type of money made by nation-states: fiat money. The term can be found in Genesis i.3 - “let there be light” or *fiat lux* - denoting the making of something out of nothing.

There is no coincidence in this. The so-called divine power once used by temples and priests to create something out of nothing today rests in the hands of private bankers, who issue money as debt, and ultimately with nation-states, whose sovereignty guarantees that they can perpetually issue money without having to pay it back, as neocharlatists or modern monetary theorists (MMT) have argued, synthesising both state and credit theories of money[2] (Mitchell-Innes, 1914; Knapp, 1924).

Karl Polanyi defined human work (labour), nature (land) and money (capital) as three fictitious commodities (Polanyi, 1944). He defined them as fictions because they did not inherently exist within the realm of markets but were artificially put into the market mechanism through enclosures of land and violent enforcement, turning peasants into the proletariat. Historically, it has been states that create markets in places where they were not before. According to Polanyi, before the rise of markets as an ordering principle for society, these three fictitious commodities were not treated mainly as commodities but were *embedded* within social relations, meaning that they were managed by communities, religious beliefs and local systems of morality.

Human beings have been socialised for hundreds of years to accept money in return for our work in order to attain a living in the form of a wage. The saying “work makes you free” is the ultimate expression of this type governmentality.

Key to this story is the notion of primitive accumulation as a precondition for the existence of capitalism, which starts not in the colonies through the extraction of raw materials but in women's bodies, throughout the witch hunts and the breaking up of the commons during the middle ages in Europe (Linebaugh, 2008; Federici, 2014).

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[2] In contrast, our approach puts forward a credit theory of money managed through principles of direct democracy, the commons and a system of morality based on care and interdependence, rather than a system of law regulated by a state.

The link between human work and the money received for the labour expenditure is part of the mechanism through which systems of exploitation are reproduced today. Decoupling work from income would mean that the energy expenditure and resources that goes into reproducing existing systems would decrease and fundamentally change the arrangement of the systems themselves, as people are free to decide what they wish to spend their time on without the pressure to gain an income. This decoupling also implies a change in the source of monetary creation as the basis for a new economic paradigm.

Thus, the links between labour and money must be severed in order to create them a new, with radically different values and practices that follow an ethics of care to emerge from the already existing spaces where the commons live. This can be done in the form of an unconditional income that favours the circulation and the sharing of wealth, rather than its accumulation.

A reduction of 'the 5-day-work week' would take place under such a system, as the hours it takes people to get a wage in order to live, would dramatically fall beyond what any conceivable social policy today can achieve. The amount of material output and energy embedded within labour conditions today would also fall as a result of this common dividend.

As I will argue, through a universal dividend that is managed as a commons, it becomes possible to change the design of money itself, whilst distributing communities with a share necessary for social reproduction to take place without the need for wage labour. The aim is for society to embed the economy within planetary boundaries, achieve self-reliance and scale down today's systems of production and enter a realm of distribution. The three legs of the table are outlined below as follows:

1. Money commons

The commons can be defined as a complex relationship between interdependence and autonomy. According to De Angelis, the autonomy of commons can be derived in two ways.

The first is through the point of view of a social system vis-á-vis others, where autonomy defines the dynamic of the commons in relationship to other systems in their environment i.e. the state and capitalism. In this sense, autonomy is understood as a political struggle, a struggle over the values that constitute different social spheres (De Angelis, 2007; 2017, p. 226). The politics of the commons are not one of patriarchal productionism but a politics of distribution, which acknowledges the reality that today's systems of production have cut off and do not need human labour power as they once did (Ferguson, 2015). In this sense, the autonomy of the commons is the ability to re-appropriate and to redistribute the wealth produced inside of them.

The second notion of autonomy is a property derived through the internal workings of the commons, whose components recursively interact in such a way that the network that produced these interactions is regenerated and a boundary is defined (Varela, 1981, p. 15). The commons are therefore also interdependent to the constituent parts that reproduce it, which at times might in turn be dependent on the state, capital or other structures for their reproduction. The interdependence between the commons and capitalism today ensures the reproduction of capitalism at the expense of plundering the commons. The Lauderdale Paradox, as this has come to be known, is a relationship that must be severed for the survival of the earth's natural ecosystems.

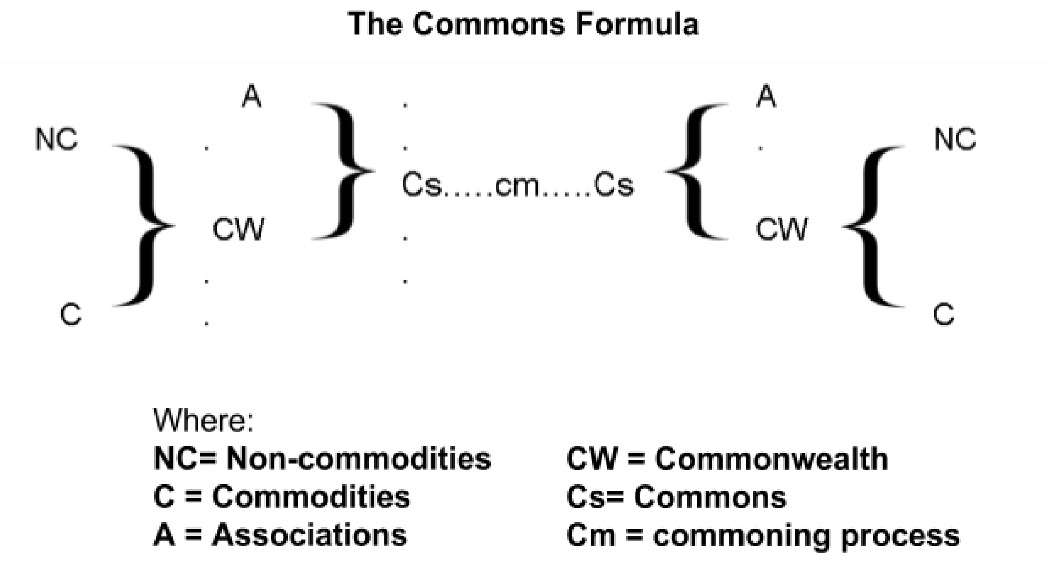
Money is the medium through which capitalism and the state lives within the commons. This money nexus hinges on the reproductive capacity of the commons to become a viable alternative, as the people who are often involved in their reproduction rely on wage labour for their livelihood.

Making money a commons means severing money's long standing relationship to states and banks and bringing its very creation to the realm of people. Divided as an equal share of the total wealth, money in the commons is transformed into what could be called autonomous or libre money[3], as it is produced from within the commons themselves and for the commons to use. Before expanding on this point, let us first outline how the commons are reproduced.

The Commons Formula, drawn by De Angelis, is as follows:

Table 2:

[3] Today, there is already an autonomous monetary movement all over France called Libre Money, where people issue their own money on an equal basis from the bottom up, based on a peculiar 'Relative Theory of Money', which uses Einstein's theory of relativity to produce money. See: https://duniter.org/en/



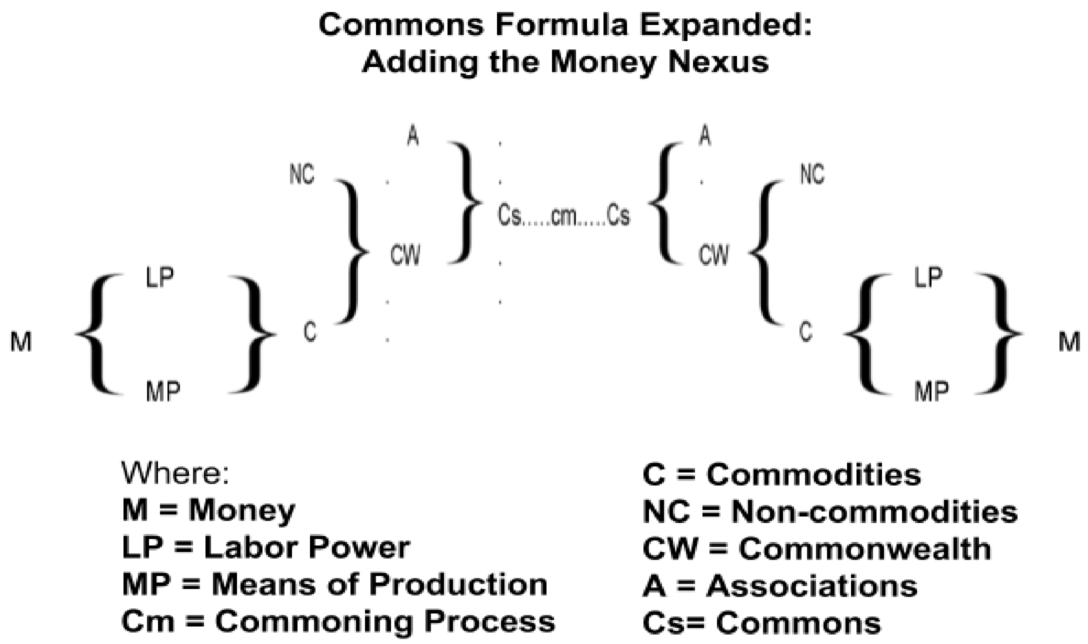
The Commons Circuit (De Angelis, 2017)

The commons (Cs) come into contact with the outside world either as buyers or sellers (left and right side of the picture). Commons are constituted by people's associations (A), understood as any group with common goals, practices and values, together with the commonwealth (CW) they hold, which is in turn made up of both a mixture commodities and non-commodities like knowledge, dexterity and public spaces (De Angelis 2017: 193).

The process of commoning (cm) is inherently a social process that takes place whenever all these aspects come into play. Yet this picture still misses the relationships that make commodities come into being i.e. the circuit of capital.

Table 3 adds the money nexus that connects the circuit of the commons to that of capital:

Table 3:



The Commons Circuit Expanded (De Angelis, 2017)

Expanding the commons formula, we come back to the question of commodities and the material forces that go into their production. As noted above, it is through the mixture of labour power (LP) and means of production (MP) that commodities are produced. But the precondition for these two forces to mix, the root link that ties them together, is money.

The only missing part of De Angelis formulation of the commons is the root of all money. As mentioned, the institutions that are responsible for the production of money are private banks and states. Capitalists who pay wages get their money, at some point or another, from banks and high-finance, which lend it to them at an interest.

Finance, as some note, is in fact an appropriation of the commons (Hart and Negri, 2009). Inverting the question of money and the commons, Hart and Negri frame the question as follows: “Might the power of money (and the finance world in general) to represent the social field of production be, in the hands of the multitude, an instrument of freedom, with the capacity to overthrow misery and poverty?” (Hart and Negri, 2009, p. 295).

The sovereignty of millions is bought and sold every day by the institutions that control the flow of money. Without properly addressing the question of the production of money, any revolutionary project which aims at changing the system is doomed to failure. Without dis-embedding money from capital and the state, the enclosure of the commons will continue until full collapse. How, then, to make money a commons?

2. Monetary creation: Multiversal basic income

From the archeological record, we know that money historically emerges in human civilisation from our social relationships of debt. Underpinned by violence and mathematics, the usage of debt has been employed by states throughout history as a mechanism of enslaving human beings under their domain, from ancient Sumeria to today's International Monetary Fund and World Bank (Hudson, 2004; Graeber, 2011).

Traditionally, kings and bureaucrat priests who had power over the hegemonic ideology would pair up with armies in order to enslave people into becoming their subjects through debt-peonage. Thisphenomena could be described as the Military-Coinage-Slavery complex, whereby the sovereign would hire an army to subject a people to their command, enslave them and make them work in mines in order to pay the wages of their soldiers in newly minted coins (Graeber, 2011, p. 229; Ingham, 2004, p. 99). The history of debt is thus a history of patriarchy, defined here broadly as the rule of fathers. This complex has continued to exist until today, with elite groups controlling the production of money, making everybody else indebted and enforcing payment through state violence. Banks are thus the temples of today, where the debts of the many get accumulated by the few.

It would seem that today, those who possess money and reproduce these cycles of accumulation often take the ability of those with none of it to reproduce their livelihood; through the repayment of debts, wage-slavery, rent, and interest rates, money's relationship to human beings has been, for the most part of the last 5,000 years, one of domination and exploitation. The long structures which underpin this logic of domination, the long durée of money, have remained roughly the same, oscillating between virtual and bullion money, varying according to the different systems of morality and philosophy of the time (Graeber, 2011). But the question remains: what is money?

Money as a mutual promise

Economic textbooks define money as a neutral thing: a means of exchange, a store of value and a unit of account. This formulation assumes that money to be constituted has to achieve one of these characteristics, with people often arguing about one of these as the aspect what makes money 'real'. But this is not what money is, this is what money does, i.e. the functions which it can perform depending on its design (Lietaer and Dunne 2013). Money is in fact just a set of promises we make to one another (Graeber, 2001, p. 2011). It is fundamentally a social convention or agreement (Aristotle, c. 340 BC/1954), both an IOU and a commodity. Most authors, including Marxists, have thought of money as either a commodity or a thing and not as both. This false dichotomy in the understanding of money is part of the reason why we cannot seem to imagine a different alternative.

Money as a mutual promise is based on an arrangement that acknowledges a debt owed to the other person. This is why it is often argued by anthropologists that money is a form of debt, a promise held between two or more people about a given social arrangement with a number attached to it. Money is therefore fundamentally a social process before it is a thing or a commodity.

Take for example the word in German *schuld*, which is used for both debt and for guilt. This 'demonic ambiguity' as Walter Benjamin called it, is why money has such a powerful effect on human beings (Benjamin, 1996). According to Benjamin, it is the buildup of the internalised structures of guilt in human civilisation that upholds the agreement which underpins the way money works, from early Sumeria, to Christianity, to the Protestant working ethic, until today. The promise which underpins this system is based on an acknowledgement that if one does not work for money, one will ultimately starve. This is ultimately what reproduces the moral economy of debt which capitalism is based upon. Money is first a social relation, a process which ties us together, and then a commodity-like thing.

Today, the people responsible for upholding this civilisational guilt are private banks. A paper from 2014 by the Bank of England, titled Money Creation in the Modern Economy, explicitly admitted that "most of the money in circulation is created, not by the printing presses of the Bank of England, but by the commercial banks themselves: banks create money whenever they lend to someone in the economy or buy an asset from consumers" (Mcleay, et al. 2014, p. 25). In Britain today, 95% of all monetary creation happens through private banks (Pettifor, 2017).

In contrast, making money a commons means demystifing the traditionally 'divine' power over monetary creation held by the sovereign. It would mean decentralising and redistributing this power to all humans from the bottom-up, without intermediary banks but by the people who want to collectively share the commonwealth of society as a whole. This new promise is given individually to everybody, distributed constantly and equally, and governed by the principles of the commons and direct democracy[4]. It is an attempt at explicitly sharing the burden of existence interdependently. Most importantly of all, it is not

[4] The Bank of the Commons has already started being argued and practiced by communities of artists and activists in countries like Italy. See: https://bankofthecommons.coop/

tied to the protestant work ethic (Weber, 2001) but is given unconditionally of one's actions, *just because we exist*.

This universal dividend is a share of the wealth of the collective and it only becomes basic once it can pay for people’s basic livelihood needs such as food and housing, which in turn is inherently embedded with the reproduction of the commons. As some note, the emancipatory value of a basic income is higher than its monetary value (Standing, 2017). The gradual production of this new money thus aims at challenging the long-standing guilt over money, work and wealth, through its equal and unconditional distribution. It is therefore an attempt at reformulating the relationships we have with each other and to the world. This formulation of a basic income is epistemologically different from nation-state proposals, as it aims to go beyond and within its boundaries. It views each individual as a unique, interdependent and diverse universe, each with a distinct set of values, emergent within another universe, making up a multiverse of values and practices that unite to reproduce the commons.

3. Towards an ecology of money

The way that money works today follows a logic that goes against “the natural economic order”, whereby money can infinitely make more money through the purchase of commodities (Gesell, 2007). Making money a commons, distributed as a basic income is still not enough, as money’s ‘nature’ itself also has to be changed in order to avoid the need for growth in the system and the destruction of the world’s diverse ecosystems.

Indeed, the devastation to the environment is a consequence of how money works today. As the social ecologists remind us, the very notion that men can dominate nature is rooted in the real domination of men over other men and over women (Bookchin, 1982). The extraction of nature’s resources for the sake of short-term profit and people’s capacity to reproduce and produce their life is organised by how money works. Money does not merely institutionalise social relations but shapes and reinforces them. The currency system and the social order are thus deeply interrelated and are in fact a reflection of each other.

Money affects natural ecosystems through the hierarchy and domination existing within social systems, which in turn mean more exploitation and accumulation of our bodies and the earth. But while the ecosystem might recover without us as a species, we will certainly not recover without it.

This is all embedded *within* the design of money itself and the rules by which we use and ‘earn’ it. But it is precisely because money is a social construction that it can be fundamentally rethought and reformed.

This logic of accumulation is at the root of how the system has managed to reproduce itself through our actions. The economic system today counts with only one universal tool to deal with life’s diverse processes: state and bank money, which is a type of money that is given at an interest while only the principal is created. The ecology of money today is therefore one of a ‘monoculture’, where we use the same type of money to arrange everything in our lives, from education, to housing to the marketplace. While it might be efficient, money without a break or escape valve is dangerous as it makes the system in which we live in very fragile (Lietaer and Dunne, 2013).

Silvio Gesell is considered to be the first person in the modern era to think about the idea of demurrage, or letting money age or rot. Just like red blood cells which are created in the bone marrow with the purpose of supplying the entire body with nutrients which then die and are discharged with time, so should money also help to nurture people’s livelihood and compost after some time.

Of course, we know from thermodynamics that energy can neither be created nor destroyed, just transformed. When one spends money on something today, this money does not disappear; it just gets turned into, say, an interesting-bearing asset, leaving a lot of waste and energy expenditure through the transformation of material. In this sense, wealth is waste (Dodd, 2014, p. 163). Money today does not die but only expands through an interest-bearing debt which can take any form. As money gets accumulated into more and more abstract capital without end, the earth and our bodies face endless extraction.

The way this type of money works also affects our perceptions of time itself, as the short term is valued over the long term. Any investment which provides profit faster is taken over long-term planning. Any private investment beyond 30 years is usually discarded regardless of how ‘safe’ and ‘low risk’ the investment might be. Because money is made scarce through the production of credit, people have to compete over the interest, making their time on earth and endless cycle of *schuld* (debt/guilt).

Demurrage is a way of changing the social energy of money by putting a limit on the amount of time it can carry value. In other words, demurrage is when the value of money decays through time, making it perform the function of a means of exchange, constantly being issued and constantly decaying. Using the words of an economist, we have a situation where money has a negative interest rate embedded to its very creation. This is fundamentally a different type of money which has the potential to make our human ecosystem more resilient as a whole through its introduction as a basic share of the world's wealth (Lietaer and Dunne, 2013). The yield that comes out of the commons goes back to the commonwealth and the assemblies that reproduce it.

The ecology of care thus aims at giving people money unconditionally, with the goal that income is divorced from work and people do not have to rely on a wage in order to get what they need to reproduce their daily life. Because a basic income is distributed constantly, the issuance level necessary for people to have self-reliance should be equivalent to the price of the material conditions needed to meet people's basic needs: housing, food, education, health, etc. Ecological money is democratic money. The process of deciding what constitutes 'basic' should be the people whose lives are affected by its issuance.

Making money alive through demurrage means that money will also gradually die when not in use. Adding demurrage as the last step of the three-legged table allows us to limit the extent to which accumulation can take place in the system and instead foster circulation and exchange within the values of the commons. Like this, both the issuance and the decay of money take places constantly and adapt to the seasonal needs of people who govern it, following the principles of the commons outlined by Östrom and others (Östrom, et al, 1990).

The Circles system

Circles is one of the first exercises at making a complementary, cooperative currency that can be distributed as a basic income from the bottom up, independently from state and bank issued money. While the democratic money tradition is long, this is one of the first attempts at making a complementary currency that aims at providing people with enough purchasing power to achieve a basic livelihood, through a system that is both local and global, governed as a commons[5].

Traditionally, complementary currencies have remained local to the region that their participants belong to. Critically assessing the politics of technology (Winner, 1985), Circles tries to embed the ethics, values and practices of the commons into blockchain technology to allow for communities to connect and engage in local trade, scaling organically at their

[5] The distinction of local and global should not be seen as a false dichotomy as we can have a system that is democratically controlled at the local level (municipality), whose larger structures (regional, confederation) serve to maintain the will of the base.

community and beyond (district, city, canton, confederation, etc.). This implies an analysis of the political economy of the means of the production of money, to ensure it is collectively maintained and in control by the people who are affected by the system.

The Circles system aims at localising the value generated by the different peers in the network where it was (re)produced, so wealth does not leave the spaces where it was generated. This is essentially people's powered money (Lietaer, 2002) and it is not tied to the type of debt bank money of today, but is more in line with the tradition of mutual exchange credit systems and time banks, which fundamentally aim at challenging the temporality of capitalism through a different money system (Karatani, 2003).

Through Circles, everybody in a community is given a basic income. The goal is for money to circulate in order to provide a robust ecosystem where people's basic needs can be met, which is not only a technical nicety but part of the governing process by which the circles monetary system can nurture the commons. This distribution of circles can thus only be called basic when the ecosystem reaches a level when it can cover for people's basic livelihood, which happens gradually as the ecosystem becomes more resilient.

As Simmel argued, money is a claim upon society. The value of money therefore comes from its social life i.e. the myriad processes through which money goes through, the social relationships involved in its reproduction (Dodd, 2014). People are thus issued mutual currencies to exchange with whoever they trust.

The monetary mass created in the Circles system is distributed equally and on an individual basis. As the monetary mass increases, people still hold an equal share of the whole, which is expressed both in absolute terms, as a universal income and in relative terms, as the money is increasingly being created and destroyed.

Because demurrage is embedded within the circles money system, the value of the currency decays over time after its issuance. But this value is always relative to the share of the money mass. The symmetry in the equal production and distribution of money amongst each user in the ecosystem allows for stable prices to be expressed in the amount of universal incomes it takes to buy something, which are given constantly and equally to all. Prices are thus determined by people and not 'market forces'.

Transitive Exchange

For money to work, trust in the currency is essential. Money flows opposite to trust. For a promise to pay to take place, one must first trust the person who is issuing this promise.

Hence, if I give somebody my trust, I can thus receive their money. Reciprocally, they can in turn trust me so I can give them my tokens of value. This is how the Circles system works.

Because everyone is issued an equal share of the money mass, money as a whole, distributed in the form of an income, is made in common. The boundaries through which people can exchange are as complex as people's political associations. This is exemplified by the notion in Circles of 'transitive exchange', where one person can exchange something by swapping another person's tokens through them, in order to trade with people where no direct relationship of trust exists.

A person's money is therefore exchanged for the next one in the web of trust until it reaches the person it was meant for. Like a mutual credit, the circles system is guided by people's relationships within a village or town but with the possibility of expanding beyond the borders of the nation-state, depending on the local politics, people's relationships and the will to trade beyond their surroundings. This is both a political and a technical aspect of the system. Significantly, this allows for money to be both personal and impersonal, which is a precondition for money to function as such (Dodd 2015).

The notion of the six degrees of separation that exist between all people in the world is a good analogy to exemplify transitive exchange. This principle says that anybody is connected to all of humanity through their direct social relations, if one goes far enough. These are the different degrees of separation (or unity) that connect us as humans in a planet.

In the circles system, people can potentially limit how much others can transact with their coins through them in order to create boundaries based on the different material conditions of each unique local or personal politique. In this sense, one persons' income is not only equivalent to others but their money is only real *in relation* to others within the web of trust. Circles is both hyperlocal and potentially global, existing within the two as a means of creating spaces for the commons to become a viable economic alternative.

The aim of the circles system is to make money democratic, guided by a bottom up process based on council systems for decision making in order to enable ecologies of care to emerge. To localise value creation, for people to take back power and govern their own communal wealth, democratically deciding the boundaries of their own autonomous spaces outside the architecture of global financial speculation and the state, this is what the circles system aims to do.

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