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COMMUNITY CRYPTOCURRENCIES FOR SUSTAINABLE PROSPERITY:

A case study of FairCoin

Pritika Kasliwal

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COMMUNITY CRYPTOCURRENCIES FOR SUSTAINABLE PROSPERITY: A CASE STUDY OF FAIRCOIN

Pritika Kasliwal
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ABSTRACT

This working paper was originally submitted as a dissertation as part of the MSc in Global Prosperity. It examines the potential of “community cryptocurrencies” as a tool to reframe the economy for sustainable prosperity. It aims to contribute to the significant body of literature on community currencies for sustainability by examining the role of cryptocurrencies within this space. Cryptocurrencies are a new innovation which have been criticised as unsustainable speculative digital assets characteristic of anarcho-capitalism. The working paper presents a case study of FairCoin, a value-centric cryptocurrency used by the anarchist social movement Fair-Coop, to create a fairer, sustainable, alternative economy. Using diverse economies approach, I identify the shared vision and material practices FairCoin generates and optimistically discuss the possibilities and contradictions of the findings for sustainable prosperity. Data was collected through a range of methods, of which primary data sources consist of eight semi-structured interviews, and secondary data sources include web-based sources and published documents. Utilising a novel theoretical framework, I conclude that it is the community and the social life of the value-centric cryptocurrency which enables its use for sustainable prosperity.

KEYWORDS

Cryptocurrencies, Community Currencies, Finance, Prosperity, Diverse Economies.

CONTACT

E-mail : pritikakasliwal@gmail.com
Address : Pritika Kasliwal, The Institute for Global Prosperity, UCL, Maple House, 149
Tottenham Court Road, London, W1T 7NF

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INTRODUCTION

1.1 CURRENT CONTEXT

The 21st century has witnessed a cacophony of global crises. Notably the double crisis of neoliberal capitalism and anthropogenic climate change (Rockström et al., 2009) has led to a proliferation of literature on the unsustainability of the current economic system (Jackson, 2009; Stiglitz et al., 2009). Its neoclassical growth model, proxied by GDP, conflicts with and undermines our ecological and social systems as it assumes infinite consumption in a world of finite resources (Jackson, 2009; Raworth, 2018; Greenham and Ryan-Collins, 2015; Meadows et al., 1972). Our monopolistic growth-debt based fiat money system¹ is understood to be an ‘aggravating factor’ (Greenham and Ryan-Collins, 2015). This occurs through two features i) loan-based credit creation and ii) compound interest. It has been identified that on average 97% of the money supply in the economy is created privately by commercial banks when they extend credit (Ryan-Collins et al., 2011). Moreover, money creation by banks is pro-cyclical, exacerbating boom and bust cycles and creating damaging credit shortage in times of recessions (Dunne and Lietaer, 2013). This credit is issued as interest-bearing debt, entrenching inequality (Bendell and Greco, 2013) and incentivising social and ecological detrimental behaviour by powerful commercial banks (Ryan-Collins et al., 2011). It is the process of servicing compound interest-based debt that creates a fundamental growth imperative,

requiring a continuously growing economy to repay it. Logically this imposes that money only comes into existence when someone promises to pay an even larger sum back (Douthwaite, 2006; Farley et al., 2013).

Thus, it is argued that the “mechanisms by which money is created and allocated” are the underlying cause of national debt, unemployment, income inequality and environmental destruction (Bendell and Greco, 2013).

Dissatisfaction with the inherent structural flaws and inequalities of the current fiat money system has led to a new salience for reform and an appetite for alternatives. This is signified by a proliferation in organisations and initiatives advocating for change. In the UK prominent examples are Positive Money, NEF, Finance Innovation Lab and Transition Towns. While alternative systems of provision and exchange have been known to exist throughout history, the current crisis has reinvigorated debates and practices around currency innovations (Bendell, 2017). Since 2009, a new type of digital virtual currency has emerged – blockchain-based cryptographic currencies (cryptocurrencies), based on the open-source code of Bitcoin (Nakamoto, Unknown).

¹Fiat money refers to the current form of interest-bearing credit that has no intrinsic use-value, instead it is underwritten by the government as legal tender.

Bitcoin was created as a “counter-power to the powerful cartels of banks” (Scott, 2016:8). It was the first to combine blockchain, a peer-to-peer network and a cryptographic proof consensus mechanism to create a new way of transacting data online commonly referred to as ‘Blockchain Technology’ (Maas, 2018). For cryptocurrencies this is data pertaining to monetary transactions. The main innovation is the disintermediation of transaction processes which introduces the ability to replace certain institutional, legal, financial, and political intermediaries (Brekke, 2016). Thus, Bitcoin refers to two different uses, bitcoin as a type of cryptographic blockchain protocol and its implementation as Bitcoin the currency (Roio et al., 2013: 11).

Over the past decade, there has been a proliferation of new types of cryptocurrencies, all evolutions of bitcoin’s open source code. At the time of writing, there are 1921 coins on the market with a total value of \$204, 926, 055, 838 USD (Coinmarketcap, 2018). They have been widely criticised as unsustainable speculative assets that are characteristic of the “hyper-individualism of conservative libertarianism” (Krugman, 2013; Scott, 2015). However, this should not dismiss them as a form of alternative currency and a social technology for rethinking the economy. A few studies within the social and community currencies literature have alluded to the potential of cryptocurrencies as positive and sustainable disruptive innovations (Greenham et al., 2014; Scott, 2016; Gloerich et al., 2018). In this paper, I pursue this line of inquiry further and investigate the role of cryptocurrencies as a novel community currency innovation.

1.2 AIM AND OBJECTIVES

This study aims to contribute to the growing body of literature on ‘sustainable prosperity’ by investigating the use of cryptocurrencies as a tool for reframing economies. It responds to the request for more studies on the diversity of social monetary innovations that are already responding to the ‘paradigmatic crisis’ the world faces today (Gibson-Graham, 2008; North and Scott Cato, 2017; Seyfang and Longhurst, 2013a; Singer and Primavera, 2017).

To my knowledge, no other study has yet examined the relationship between community cryptocurrencies and sustainable prosperity. I aim to address this research gap by investigating the following main research question:

How can ‘community cryptocurrencies’ be used as a tool for sustainable prosperity?

To answer this question, I adopt a diverse economies approach which posits that visions of sustainable prosperity leads to the performance of such economies, thus placing importance on the ‘doing’ of sustainable prosperity. I seek to make visible a marginal social experiment that enables us to imagine and enact alternatives for sustainable prosperity (Gibson-Graham, 2008: 619).

Thus, I will answer my main research question by exploring the following sub-questions:

- 1. How is sustainable prosperity envisioned within community cryptocurrencies?**
- 2. What material practices do community cryptocurrencies use to perform sustainable prosperity?**

To answer my research question, I will interrogate the possibilities and contradictions present in community cryptocurrencies for sustainable prosperity (Richardson, 2015). Ultimately this study hopes to:

Identify and define the novel social innovation “community cryptocurrency”

Identify possibilities and contradictions in support of sustainable prosperity.

1.3. SCOPE AND STRUCTURE

It is beyond the scope of this study to make presuppositions regarding the whole body of cryptocurrencies that exist in a variety of forms. Instead, I have chosen to focus on the single case of FairCoin, the cryptocurrency used by the social anarchist movement FairCoop, to create a fairer and more sustainable alternative economy (FairCoin, 2018b). Drawing on the community currency and sustainable prosperity literature, I have chosen an initiative that seeks to change the economy through alternative economic practices and values. Previous studies have indicated the importance of measuring impact. However, due to the novel nature of cryptocurrencies this was not deemed feasible (Place and Bindewald, 2015). Instead, I use a 'weak' theoretical approach, seeking not to judge the outcomes of FairCoin, as a post-capitalist project and social experiment, but to explore the 'openings' it provides for the study of sustainable prosperity (Gibson-Graham, 2008: 619).

This paper proceeds with a theoretical review, to provide a clear rationale for investigating 'community cryptocurrencies' as a tool to rethink and reframe economies for sustainable prosperity. In doing so, I will present the post-development concept of sustainable prosperity and clarify the following key terms, "diverse economies", "community currencies" and "cryptocurrencies". The third chapter outlines my research design and the rationale for the use of an optimistic diverse economies approach to analysis. The penultimate chapter presents new empirical evidence of how sustainable prosperity is envisioned and practiced in the FairCoin economy. I then discuss my findings by interrogating the possibilities and contradictions present in FairCoin. The final chapter summarises my analysis and concludes with a reflection on the broader implications of this research for sustainable prosperity.

2

LITERATURE REVIEW

2.1 DIVERSE ECONOMIES FOR SUSTAINABLE PROSPERITY

One of the prevailing organising concepts to fight the global ills of economic growth has been ‘sustainable development’. Sustainable development seeks to highlight the interdependencies between our economic, environmental and social spheres. However, a decade on from the financial crisis, GDP remains the most dominant proxy for indicating a nation’s overall societal progress (Raworth, 2018). It is increasingly criticised as an ‘ecological modernisation’ approach, co-opted by neoliberal institutions, asserting that such “green” growth strategies are failing to produce the apparent ‘win-win’ solutions and dual benefits they had claimed (Bina, 2013; Jankovic and Bowman, 2012). At the core of the critique, is that the approach is fundamentally flawed as it leaves the underlying economic model intact (Raworth, 2012; Moore, 2015). To move “beyond GDP” requires a new vision of progress, that is more able to meet the “needs, concerns and aspirations” of society (OECD, 2011). In response, ‘sustainable prosperity’ seeks to combine criticisms of ‘sustainable development’ with a comprehensive multidisciplinary reading of “progress”, to redefine prosperity as a shared vision of a “good life” (Jackson, 2017). Prosperity, a post-development concept, is a contextualised and values-centred approach that enables humans to flourish within the bounds of planetary limits (Moore, 2015).

It is a social and political project that challenges our existing institutions and practices, to move beyond our current universalising models. For Jackson, prosperity builds on Sen’s notion of ‘capabilities’ such that it is our ‘bounded’ ability to participate meaningfully in society (Jackson, 2017: 121). Sustainable prosperity encompasses and builds on concepts of sustainability, well-being, happiness, and social progress to incorporate values, culture and agency (Spinozzi and Mazzanti, 2017; Moore, 2015; Jackson, 2017). It seeks to generate new visions of progress, authentic well-being, and environmental integrity by affecting our behaviours, societal structures and lifestyles (Moore, 2015). For Moore (2015), there is no single route to prosperity - it is a bottom-up, co-designed and co-produced vision of progress.

As a plural concept, prosperity emphasises diverse forms and mechanisms of flourishing. Pursuing sustainable prosperity should act as an enabler, ‘an experimental nexus’, to reframe and reconfigure our economies and values (Moore, 2015: 804). This includes recognising that forms of diversity already exist around the globe. An initial justification is identifying the ‘capitalist market economy’ as a social construct that has come to be universalising. In this regard, the seminal work of Gibson-Graham (1996, 2008) has aided in dislodging the centrality of the ‘capitalist economy’ as a formidable force. Building on feminist analyses, they have successfully revealed diverse forms of practices and activities that already exist under a hegemonic capitalist framing of the economy².

A salient example is that of labour.

A 'capitalocentric' reading of the economy values wage labour, disregarding and demeaning other forms of paid (e.g. self-employment) and unpaid (e.g. domestic) labour. By practicing a theory of 'economic difference' one can recognise economies as "intrinsically heterogeneous spaces composed of multiple class processes, mechanisms of exchange, forms of labour and remuneration, finance and ownership" (Healy, 2009: 338). Thus, in its current form, the economy is a set of values and framing devices that privileges certain 'capitalist' practices over others, distorting our values in favour of profit maximisation and rationality, such that the market has perversely come to regulate our social relations (Moore, 2015).

Recasting the economy requires acknowledging the contribution of environmental, social and public economies and re-centring them (Seyfang and Longhurst, 2013: 67). This necessitates privileging certain economic practices over others, such that what is 'valued' in society reflects our contextual realities for sustainable prosperity. This involves incorporating the "complexity and diversity of individuals, aspirations, experiences, capacities and circumstances" of different communities and societies (Escobar, 2011 cited in Moore, 2015: 807). For example, wealth could be redefined, determined by the conservation of our environment instead of its destruction. To see beyond our existing cultural forms requires creativity and social innovation as "without waiting for new models and ideologies to change there is a lot that can be done in the meantime to reform economic structures and rebuild social institutions" (Jackson, 2017: 221). Correspondingly, a diverse economies approach focuses our attention on alternative models and networks of exchange (Gritzas and Kavoulakos, 2016). Gibson-Graham posit that reading for difference has 'performative' effects and reinstatement of diversity is a 'performative' act of other world-making (Graham, 2012: 17). Moreover, they adopt an economic ethics which asks, "how shall we produce, exchange, consume and maintain the public sphere we all share?" (North, 2014: 247).

It enables an optimistic approach to reframing the economy for sustainable prosperity by offering openings beyond capitalism rather than viewing them as "capitalism in another guise or as always already coopted" (Gibson-Graham, 2008: 618). In support, Carnegie (2008) showcases how non-capitalist practices can contribute to improving the well-being of a community, as well as generate income to cover material needs. Other prominent examples of recasting the economy are Doughnut Economics (Raworth, 2018), the Circular Economy (EMF, 2015) and New Economics of Sustainable Consumption (Seyfang, 2011; Jackson 2009). A tool advocated for re-imagining and changing the economy are alternative currencies or parallel money systems as novel ways of capturing, using and exchanging resources (Seyfang, 2011; North, 2014; Moore, 2015: 808).

² See Appendix A for a diverse economies framework

2.2 COMMUNITY CURRENCY: A TOOL TO REFRAME THE ECONOMY

The rationale for the use of alternative currencies lies in their ability to overcome the limitations of fiat currency, given that if money is a 'social technology' it can be constructed in a way to achieve specific social objectives (NEF, 2015; Diniz et al., 2018). This assertion is entangled in a broader debate around the nature and role of money. The orthodox view is that money is a 'neutral' technology' that is at once: a means of exchange, a store of value and a unit of account (Jevons, 1875: Ch3). This has long been disputed by academics within many disciplines from history, anthropology, sociology, ecology and economics (Bandelj et al., 2017). A direct criticism reveals the theory is deeply flawed, as the 'store of value' function incentivises saving or hoarding which simultaneously undermines money's function as a 'means of exchange' (Keynes, 2007; Gesell, 2007). Broader critiques question the validity of money as neutral, when the negative externalities of the dominant monetary system have been identified as affecting our societies and environment (NEF, 2015). Thus, it is argued that money is not a "thing" that should be defined by its functions alone (Lietaer, 2001; Dodd, 2017). Rather money can be said to have a social life, it's "value and existence rests on social relations between its users" and hence "money can play a constructive role in imagining and shaping alternative economic futures" (Dodd, 2014: 9). Viewing money as a social relation that is embedded in historical, geographical and political processes, enables a deeper understanding of how money comes to be an agreed upon 'claim of value' by society to be used as a 'medium of exchange' (Scott, 2016; Lietaer, 2001).

Alternative currencies enable different forms of transactions and credit creation, defined as "common tender" as opposed to the national fiat currency system ("legal tender"). These currencies are often referred to as social, local, community and complementary currencies. While the typology is contested (Dittmer, 2013; Blanc, 2011; Place and Bindewald, 2015), they have traditionally fallen into four broad categories with many existing as hybrids (Collom, 2011): barter markets, service credits,

mutual credit systems, and geographically-bounded currencies. Barter markets are held at specific times and locations enabling direct exchange. The most common are the "Redes de Trueque", which emerged in the midst of the Argentinian economic crisis to create local networks of exchange using credit vouchers (Hughes, 2015:3). Service credits are linked to time-banks, such that one unit of credit is equivalent to one hour of work. The benefits are that credits can be saved, exchanged for services, or donated to promote social inclusion (Seyfang and Longhurst, 2013b). Mutual credit systems are typically associated with the Local Exchange Trading System (LETs) which emerged in the 1980s. They work as closed systems, in which virtual credit/internal currency is created in the moment of exchange. They aim to support local economies mostly through building social and community capital (Seyfang and Longhurst, 2013b). Lastly, geographically-bounded currencies are used within a limited area, rising to prominence after 2008 as a protectionary move to localise economies (Marshall and O'Neill, 2008). Thus, studies reveal they have broad aims depending on their type, context, and the values embedded within them (NEF, 2015: 44; Seyfang 2011).

It is disputed whether the success of these currencies is dependent upon their degree of alterity with respect to fiat money. For some, success is contingent on providing forms of exchange relations and production that are 'oppositional' to the 'capitalist' system (Singer and Primavera, 2017: 199). In response, Weber (2015) argues they will never be viable as they are rejected by the government for tax, limiting their scale and scope. Thus, it is suggested the value of such currencies lies in their complementary nature, as 'special-purpose money' that fulfil particular roles that fiat currency cannot, increasing resilience in the system by creating a monetary ecology (Lietaer et al., 2012). A diverse economies approach moves beyond such ideological binaries, utilising a non-capitalocentric lens, to show a wide range of economic exchanges undertaken by 'alternative currencies' (Gritzas and Kavoulakos, 2016; North, 2014).

Of importance is understanding both the conditions that enable and maintain alterity, and the internal contradictions, external constraints and power relations which may conversely reinforce hegemonic capitalist practices (North, 2014; Gritzis and Kavoulakos, 2016; Fickey, 2011). Thus, alternative currencies provide an 'alternate' means of exchange and create new 'circuits of value' outside of the existing money system. Of importance is whether this value can be created and redistributed for sustainable prosperity. In this study, I adopt a broad definition of "community currency" as an alternative currency with explicit social goals, adopted by a specific demarcated community to form an alternate exchange network (Diniz et al., 2018; NEF, 2015; North, 2007). I invoke the idea of community that is not fixed by identity or bounded by locality, but a 'process of co-producing togetherness' (Gibson-Graham, 2018). I additionally draw on the notion that as a grassroots exchange networks, built through collective action, community currencies should be considered social movements (Collom, 2011; Seyfang and Longhurst, 2013a). The focus is not the individual 'type' of currency but the systems and relations they create (Blanc, 2011).

2.3 CRYPTOCURRENCY: A NEW COMMUNITY CURRENCY INNOVATION

As mentioned in the introduction Bitcoin has pioneered Blockchain Technology. This has created a false equivalence between the different types of transaction data 'Blockchain Technology' can hold and 'cryptocurrencies' as a currency innovation. Thus,

“it is important to distinguish between the technological platform it has created and the design of the particular currency”

(Greenham et al., 2014: 16)

Blockchain technology has since advanced, by designing different consensus mechanisms and increasing the capability to hold different types data.

It has grown rapidly, heralded to disrupt many industries as a new form transacting, recording and storing information (Tapscott and Tapscott, 2016). Some second and third generation social blockchain technology innovations, beyond digital currency, are crowd-funding, credit unions, participatory governance systems and community-owned energy systems (Santos, 2017). Their primary outcome is not a currency system and may only use 'tokens' to raise investment or facilitate transactions within their platform (Roio et al., 2013: 23). Overall, the main innovation is the disintermediation of transaction processes by utilising cryptographic consensus mechanisms, introducing the ability to replace certain institutional intermediaries (Brekke, 2016).

Cryptocurrencies are a novel currency design: (i) they provide a new form of credit creation and (ii) they can combine both an issuance and a payment mechanism (Greenham et al., 2014). When a new cryptocurrency is created and spent in the economy, new purchasing power is created, reliant upon the recipient 'buying into' the values of the cryptocurrency, accepting it as a means of payment and thus deeming it 'credible'. The 'issuance' of a currency covers the rules that govern the issuance of money, the factors that determine its quantity, and the mechanism by which it comes into circulation (NEF, 2015). These are design parameters that are determined by the creators or community that govern/own the cryptocurrency and can be encoded into the consensus protocol. Thus, "the opportunities are endless, as cryptocurrencies can be designed to implement any sort of cryptographic protocols and money creation policies whatsoever" (De Filippi, 2015: 475). It enables new trust mechanisms capable of transforming our social relations through new ways of doing, thinking and organising (Santos, 2018). For instance, the bitcoin protocol uses a competitive proof-of-work consensus mechanism. It is a "system for electronic transactions without relying on trust" (Nakamoto, unknown). This ties the issuance of new Bitcoin with the creation and verification of new transactions on its blockchain, creating an incentive to maintain the integrity of the network.

Dominant critiques are that they are: (i) unsustainable, (ii) speculative digital assets and (iii) characteristic of anarcho-capitalism (Krugman, 2013; Scott, 2015; Dodd, 2017). Firstly, Bitcoin's annual electricity consumption has been estimated to be 73.04 TWh which is 0.33% of the world's electricity consumption, the same as Austria (Digiconomist, 2018). Secondly, they are considered tokens that only fulfil the 'store of value' function of money, not widely accepted as means of payment or 'legal' tender (Dabrowski and Janowski, 2018: 5-7; Weber, 2015). Finally, as competitive speculative assets that seek to exist outside of the state, they perpetuate "anarcho-capitalism". There are many cryptocurrencies on the market (Coinmarketcap, 2018). A few of them attempt to address these critiques through their design, but most maintain them (Scott, 2016).

An alternative currency provides an 'alternate' means of exchange and creates new 'circuits of value' outside of the existing money system. Given this definition, it could be argued that some cryptocurrencies should be deemed an alternative form of money. A growing number of merchants have started accepting cryptocurrencies as a direct means of payment (online and offline), such as expedia.com, Microsoft and Shopify (steemit.com, 2017). However, they are mostly tied to our current money system as a form of "countertrade" or advanced barter whereby the overall exchange is in fiat currency with only 'goods' being exchanged. Furthermore, new production and consumption activities are principally limited to the "black market" for illegal goods such as drugs and arms (Scott, 2018). New consensus protocols such as proof-of-stake-time attempt to address the inherent unsustainability of the bitcoin proof-of-work algorithm. Some also address the anarcho-capitalist tendencies of cryptocurrencies by utilising different incentive mechanisms to reach consensus. Crypto-economics has emerged as a new discipline specifically to study the design and behavioural incentives behind different blockchain protocols.

By extending the definition of community currency to include cryptocurrencies, I will investigate FairCoin the community cryptocurrency utilised by FairCoop (FairCoin, 2018).

3

METHODOLOGY

3.1 RESEARCH DESIGN: CASE STUDY METHOD

I will investigate how a cryptocurrency used by a social movement may reveal credible diverse practices used to change economies for sustainable prosperity (Gibson-Graham, 2008: 623). I invoke the notion that community currencies should be considered social movements such that the unit of analysis is the systems and the relations they create (Blanc, 2011; Collom, 2011). Following Thomas (2011), I have chosen to focus on the 'quality' of my case study. The crux of Thomas' argument is that a case study focuses only on one thing and it is this singleness that is important, not its reproduced reliability and validity. Instead, Thomas argues the focus should lie in the 'quality' of the choices made with regards to the case, focusing principally on its interpretative aspects (2011: 66). Utilising a 'creative' approach (Gibson-Graham, 2008), I sought out examples of value-centric cryptocurrencies utilised by communities engaged in performing diverse economies. The process involved a participatory approach, engaging with potential cases, and was further supported by a web-based search. Thus, I chose FairCoin, the cryptocurrency used by the FairCoop community, a social anarchist movement. The decision to study FairCoin was reinforced by adopting an 'ethical' approach to my research and understanding that my role as researcher is also as an activist performing new worlds for sustainable prosperity (Gibson-Graham, 2008: 629).

3.2. DATA COLLECTION AND METHOD

I have used a standard qualitative deductive analysis method, applying a diverse economies theoretical framework, to identify key themes related to sustainable prosperity throughout my case study (Yin, 2018; Bryman, 2015). A combination of primary and secondary data was collected. Analysis leaned heavily on semi-structured interviews as realised accounts of FairCoin activity and were appended by secondary data as required.

3.2.1. PRIMARY DATA COLLECTION

I conducted eight semi-structured interviews with FairCoop members: an elite interview with Enric Duran, a co-founder of FairCoop, a facilitator of the Circular Economy working group and seven local node founding members from York, Jura, Catalonia, Galiza, London and Milan. Interviews were designed using a semi-structured format to explore topics related to the research questions, while still enabling interviewees to raise interesting or relevant points³. Interviews were deemed necessary to gain rich contextualised data of the shared visions FairCoin generates, and accounts of its use in practice. Crucial to the analysis was obtaining interviews with activists from different contexts, to truly gain an in-depth understanding of the core possibilities and contradictions inherent in FairCoin. Analysis was further enriched, as several of the local node members also worked for FairCoop in other capacities. Interview details are specified in table 1.

³ Please see Appendix B for an example list of questions

TABLE 1. INTERVIEW DETAILS

Date of Interview	Interviewee Profile	Reference code
04/07/2018	Enric Duran – Co-founder of FairCoop	A
09/07/2018	Local Node members (two)	B
12/07/2018	Local Node member	C
14/07/2018	Circular Economy working group facilitator	D
15/07/2018	Local Node member	E
16/07/2018	Local Node member	F
16/07/2018	Local Node member	G
21/07/2018	Local Node member	H

3.2.2. SECONDARY DATA COLLECTION

Secondary data included published documents such as the FairCoin Whitepaper (König et al., 2018) and information available in the public domain limited to the FairCoin and FairCoop websites, organisation blog articles and the FairCoin Wikipedia page. As a plural concept, prosperity emphasises diverse forms and mechanisms of flourishing. Pursuing sustainable prosperity should act as an enabler, ‘an

3.3 SCOPE AND LIMITATIONS

This study placed particular importance in the performative actions of FairCoin and FairCoop in creating economic alternatives. This delimitation impacted my choice of interviewee subjects, a particular sub-set of FairCoop community based in Europe, actively working on practicing alternatives in their communities. Analysis therefore may be biased and not reflective of the community as a whole. Furthermore, it was beyond the scope of the study to explore all the activities which are currently in progress, in order to remain focused on the ‘performed’ use of the cryptocurrency. Additionally, by utilising only published information, I was not able to capture the vast nature of activities which occur every day across the 55 individual local nodes and working groups that go unreported. FairCoop is a rapidly evolving entity. This working paper should be taken as a snapshot of the most salient factors relevant to the research questions. Under a weak theoretical approach, I do not wish to ‘generalise’ my results but only modestly extend my preliminary findings by drawing attention to current performative actions being undertaken.

3.4 ETHICS

Ethical considerations have been taken throughout the case study. Primary data collection was consented to by all interviewees and they were willing to have their transcripts disclosed within this working paper. Primary data observed in my capacity as a participant has not been disclosed within the study and has only been used subjectively to inform my research focus. All secondary data is available in the public domain.

4

FAIRCOIN CASE STUDY

4.1 BACKGROUND

In 2014 Enric Duran⁴ bought FairCoin, a ‘defunct’ cryptocurrency available on the cryptocurrency markets, approximating a total of 50 million Fair. FairCoin was initially chosen for its name, its low market price and its ‘ecological’ consensus mechanism. The founding of FairCoop was marked by an initial ‘fair’ distribution of FairCoin by airdrop⁵ to 49,750 addresses, on March 2014, at a rate of 1000 FairCoin per hour and 9 million Fair have been kept aside for the future development of the FairCoop ecosystem⁶. In 2017, FairCoin transitioned to a new consensus mechanism, delinking the issuance of FairCoin from block generation and freezing the supply at 53193831.467966 Fair⁷. FairCoin has two prices the official community price of 1 Fair = 1.20 Euro and a market price of 1 Fair = 0.21 USD⁸. The community price ‘never devalues’ and is agreed upon at monthly general assemblies utilising a consensus decision-making process⁹. The developers of FairCoin have enabled four different methods of payments: QR codes using a Smartphone Wallet App, FairPay NFC card (contactless card), on the computer (similar to an online transaction), and a Paper wallet (FairCoin, 2018a). In just over four years the FairCoin economy has grown to have fifty-five local nodes¹⁰. Notably, the most active areas are in Spain, Italy and Greece, the hardest hit by the austerity measures of the 2008 financial crisis.

4.2. FINDINGS AND ANALYSIS

4.2.1 A SHARED VISION OF PROSPERITY

Social and political innovations for sustainable prosperity require an impetus, an organising force – a shared vision. A performative approach recognises that practicing a diverse economy requires linking the stories of the economy we tell with the knowledges we construct (North, 2014; Richardson, 2015). To research my first sub-question, I will identify how sustainable prosperity is envisioned in FairCoin, by detecting what values are placed at the core of productive life in order to start changing the economy (Moore, 2015).

FairCoop is a global, self-organised network grounded in local communities with members from different cultures, countries and socioeconomic contexts. Interviews revealed many drivers for seeking change. The most significant were, political disillusionment - “shit Brexit, shit elections – let’s go back to what matters!” [G] - social and community disengagement, and a loss of faith in the state following the migrant and austerity crisis. For one activist, a lack of jobs and a requirement to ‘make a living’ was a driving impetus to join the movement (Fickey, 2011). While specific reasons differed, they all converged upon a general economic critique of society stemming from the ‘capitalist economy’, and its disregard for environmental protection and social inequality.

⁴ With others, notably Thomas König - Head Developer of FairCoin and co-founder of FairCoop

⁵ An airdrop is a free distribution of cryptocurrency to the wallets of specified users. See: <https://hackernoon.com/what-are-airdrops-in-crypto-world-6ce97d5bb17b>

⁶ Split over three funds: Global South fund, the Commons fund and the Technical infrastructure fund

⁷ See FairCoin block explorer for more information: <https://chain.fair.to/>

⁸ See CoinMarketCap for the most up-to-date value: <https://coinmarketcap.com/currencies/faircoin/>

⁹ There is no voting, only acknowledgement by the entire group that a proposal is minimally acceptable to everyone in the sense that no one strongly objects it (Graeber, 2002: 71).

¹⁰ See FairCoin statistics: http://statistics.fairplayground.info/chart.html?s=localnodes_growth

Reclaiming Control

“we really want to change our lives...we want to be the agent of the change and not just waiting that everything will go down”

Dissatisfaction with the state and private interests has motivated the activists to reclaim agency, power, and control, through an act of ‘financial disobedience’. Their main strategy involves using FairCoin, which explicitly aims to create an alternative and post-capitalist economic system from the bottom up (FairCoin, 2018b). They will use FairCoin to reclaim power, bypassing state institutions and regulation as its value, issuance and governance are all sovereign to the FairCoop community. It is a vision of going beyond existing economic structures, including its interdependence on the financial system and the interest-bearing debt-money engine on which it runs - “money has become its own thing, it is not just a means of exchange but a means of making more money” [E]. Another activist states, “[fiat] money is a tool for control over people” whereas FairCoin is “the tool we will use for our changes” [F]. They believe as autonomous individuals they will be able to regain control over the economy and therefore their lives. The value of the currency is said to be derived from the community, as “the value without the community is nothing of course!” [H]. This is signified by the use of an internal ‘community price’ and an external market price. Thus FairCoin, as a community cryptocurrency, is a tool to build a ‘fairer’, value-centric society.

Cooperation Vs Competition

The FairCoop operating principles are derived from the progressive concepts of integral revolution, P2P cooperativism,

and hacker ethics, which can be summarised as (FairCoop, 2017):

- **Redistribution and economic exchange between equals**
- **Open political participation**
- **Decentralization of organizational forms**
- **Production of commons**
- **Sharing and distribution of open knowledge**

These all converge upon the organising concept and shared vision of cooperation. At the core of the activists’ critique are capitalist economic processes and its assumptions around agency that create a behavioural imperative for competition. In response, every member I engaged with invoked cooperation, as a binary oppositional force against competition to drive the new world they envision. One in which there is cooperation in managing the commons over private property, cooperation with our environment over its exploitation, and cooperative employment over exploitive labour. Activists envision a new ‘cooperative world’ using FairCoin for like-minded projects and “products that are kind to the environment and kind to the communities”. It acts as an “ethical label highlighting the shops, products [and community] which are working towards a more fair and sustainable economy” (FairCoin, 2018a). It is also considered a space for experimentation and innovation around different types of sustainable production, such as platform cooperatives, permaculture, dynamic demand-driven supply [D]. They have extended the cooperative notion to include their governance system adopting an open, horizontal, participatory political structure. Decisions are made at open assemblies utilising a consensus decision-making. As one activist expresses, “anybody can propose anything and that I think it’s (sic) beautiful. Its super open, open cooperativism”

[G]. Thus, the notion of cooperation is ubiquitous throughout FairCoop, personified in their discourse, reflected in their organisational structure and embedded within the design of FairCoin.

A Tool for Cooperation

FairCoin have implemented their own innovative “social P2P consensus mechanism”, proof-of-cooperation (König et al., 2018: 4). The previous mechanism was a competitive mechanism that incentivised participation through wealth accumulation. The FairCoin blockchain is now secured and validated by a limited number of “cooperatively validated nodes” (CVNs)¹¹ that are operated by active members of FairCoop, thus ensuring they align with cooperative community values. Block creation is done in a round-robin manner every three minutes, with a micro-transaction fee for running the CVN, requiring a fraction of the energy consumption of other consensus mechanisms (König et al., 2018). The FairCoin blockchain has evolved to include different payloads, including dynamic chain parameters that are managed by chain admins on behalf of the community. Furthermore, Duran [A] reveals a project being developed called FairChains that will enable other community currencies to build onto and run in the existing FairCoin blockchain. This “will create connections and collaborations with social currencies around the world” [A]. It is a vision of a global monetary ecology, in which the FairCoin blockchain forges a deep and resilient connection with other social exchange networks. Thus, cooperative values drive the economy such that economic actions are motivated by mutualism and collaboration for the greater benefit of the FairCoop ecosystem. The activists seek to build cooperation at scale using localised knowledge, a resilient monetary ecology,

sustainable production and an exchange network for sharing collaborative value.

4.2.2 MATERIAL PRACTICES FOR SUSTAINABLE PROSPERITY

Envisioning an alternative society is not enough. Can FairCoin be used to ‘do’ an alternative cooperative society (Richardson, 2015)? In this section, I explore the material practices of the FairCoop community using FairCoin to build an alternate means of exchange and generate ‘circuits of value’ for sustainable prosperity.

A significant project is the creation of, the pragmatically-termed, “circular economy”. It attempts to create closed-exchange loops, whereby any value and productive output that is created in the FairCoin economy is retained and redistributed, such that “one should be able to re-consume within it” [D].

Building the FairCoin Exchange Network

Activists are self-organising around the construction of the FairCoin economy. Integral to the circular economy is building the ‘real’ local economy and network, galvanised by the actions of local nodes. For many this is the strength of the project, “It is a way of integrating a distributed virtual community to the real world” [B]. The local node physically grounds the FairCoin economy it is “the actual community element” [H]. Local nodes endeavour to share their practices and activities online, following the open knowledge principles of FairCoop, on GitHub, blogs, their Wikipedia page and on Telegram¹². Some of the largest local economies are in Southern Europe - Greece, Catalonia, the Iberian Peninsula and Jura. A member of an Iberian node excitedly stated, that in just over a year 45 merchants have started accepting FairCoin, including a hairdresser, a printing business

¹¹ There are currently 18 active operating CVNs with a maximum limit of 100

¹² “Telegram is a cloud-based mobile and desktop messaging app with a focus on security and speed” (Telegram, 2018)

and a dentist. Further, FairCoin has been made inclusive and accessible to all in the community by developing non-technological methods of payments. The local node strategy is in line with creating convivial economies for sustainability (North, 2014), creating localised economies and utilising the global network predominantly as a tool to share knowledge and connect to the FairCoop governance structure. FairCoin is more than a neutral means of exchange. It is a relational tool and a boundary object, by which diverse and geographically distant communities can coordinate action and communicate with each other (Akkerman and Bakker, 2011). The process of building a local economy is not easy. Activists claimed it requires a lot of time and energy, which is hampered by a lack of clear documentation and clarity of governance processes: “the problems that can arise from a movement that is trying to self-organise with people from different cultures” [F]. However, this does not deter the activists: “you can find people working every day” [F]. It is the shared vision of creating an alternative society which motivates action, to promote FairCoin and build relationships. Duran [A] hopefully states “perhaps they will create new cooperatives or new spaces, new relations”. Hence, FairCoop are slowly building local FairCoin exchange circuits.

Virtual Economy

The FairCoin economy extends beyond the local to the virtual. The FairMarket is the organisations e-commerce platform with an important difference to business-as-usual platforms. It “promotes an economy based on demand, not supply” (FairMarket, 2018). It only accepts FairCoin and all items are listed at the community price to enable a stable valuation of goods. It has listed a cumulative total of 366 shops stretching as far as Guatemala and Kurdistan. Enlisting is subject to approval to ensure merchants are “in tune with the principles of FairCoin” [F]. Merchants list a variety of ‘fair’ goods: non-perishable, artisanal, organic, Fairtrade, up-cycled and technological items utilised mostly for singular or novelty purchases [G]. Some have even listed their homes as an alternative to the “extractive” platform Airbnb (Srnicek, 2017), playfully

named Fairbnb. As an alternative to Uber they have created “Common Routes”,¹³ a car-sharing app, to help reduce the overall environmental impact of the FairCoop ecosystem. Thus, an online marketplace is created. Feedback reveals the user-experience is “clunky”. This contrasts with the efficient “user-friendly” experience of capitalist platforms that conduct transactions almost instantaneously. As the platform is still in a beta phase this should not come as a surprise. However, the lack of efficiency extends to the organisation’s other practices. For instance, exchanging fiat money for FairCoin through the official getfaircoin.net takes between a week and a month due to a low labour force handling exchanges. While considering these faults, many of the activists proclaimed, “we are in the process of transition” [F], “it is all in a state of alpha” [E]. This may reflect the slow development process of self-organised projects, in which initial participation by members is often voluntary or ‘subsidised’. Beyond superficial technical issues merchants face liquidity problems. As indicated above the FairCoin economy is still being built and most transactions that occur in FairCoin are a form of countertrade. The extent of this problem varies, whereby, active nodes with more advanced exchange networks report lower concerns. Thus, efforts are focused on building up the productive base of the FairCoin economy.

Closing the Glocal Loop

As the FairCoin exchange network grows, the FairCoin economy is concentrating efforts on covering more of the everyday needs of its users to create closed circuits. Thus, new production activities have been limited to food such as flour, bread, eggs and vegetables [A], or local small-scale production of goods such as home-made soap [D]. Duran [A] explains that as production is slow, many regions are focusing their energies on creating local distribution networks. Recently, the nodes along the Iberian Peninsula, “a natural bioregion”, completed their first ‘circular’ trade route moving 4000 Fair through eight nodes. In their report, they reflected on the ‘sustainability’ of such routes down to the type of fuel used and the distances covered. There are many examples of such semi-closed loops and

¹³<https://fair-coin.org/en/our-first-app-transport-sharing-ready-common-routes-app-available-now>

internal FairCoin economies, but ultimately most are still limited by the need to exchange to fiat money due to pay suppliers, utilities and taxes. This is further hampered by a lack of diversity of goods and services available in the FairCoin economy. Promisingly, the Milan node has been experimenting in both inter-regional and inter-currency trade. They have created a supply chain for produce from Sicily, “which you for sure will not find in Milan” [H] for a weekly market in Macao. FairCoin acts as a “bridge” between “the CommonCoin”, a private social cryptocurrency for the internal economy of Macao, and the Euro.

Another step towards closing the loop has been to “pay members for their activism” [E]. Members who work on behalf of FairCoop are paid in FairCoin for tasks such as facilitating working groups, development and translations. There is also a ‘Sustainability Fund’ which has been formed to support local nodes in their first six months of setting up so that they are more able and motivated to encourage new merchants and producers to accept the currency, build-up a local network and forge relationships with the community [A]. All payments are handled by FreedomCoop, an arm of FairCoop that provides legal tools by which to avoid state tax payment and ‘self-tax’ (FreedomCoop, 2018). It also offers a Virtual Bank Account, beneficial for those who are excluded from the current system such as refugees. Each member pays a fee, proportional to their profit, that is redistributed back into the FairCoin economy. Local nodes receive 60% and the rest is used for FairCoop’s global expansion. In just over four years they have started forming an ecosystem around the cryptocurrency, seen in figure 1. In this way, FairCoin is being used to create closed ‘circuits of value’ for sustainable prosperity through building up resilient FairCoin exchange networks and limiting the requirement to exchange out of FairCoin to fiat money.



FIGURE 1. INFOGRAPHIC OF THE FAIRCOIN ECONOMY (FAIRCOIN, 2018B)

4.3 DISCUSSION

In this section, I investigate the main research question by examining both the conditions that enable and maintain alterity, as well as, the contradictions and constraints that may undermine the performance of a FairCoin economy (North, 2014; Gritzis and Kavoulakos, 2016; Fickey, 2011). The use of FairCoin is an act of financial disobedience. Bolstered by weak regulation, it operates within a grey area and ‘hacks’ financial value from the capitalist economy. Cryptocurrencies are initially valued in terms of fiat money by their market price. They extend credit through their issuance, deriving ‘value’ from their scarcity. FairCoop used this to their advantage while the crypto-markets were doing well. They invested in themselves, using FairCoin to fund the construction of a self-reliant economy, as opposed to other grassroots schemes which are dependent on either state or private funding [A] (Schroeder, 2015). However, this paradoxically conflicts with FairCoin’s desire to exist outside of prevailing structures.

As an open currency it is valued by, and beholden to, forces in capitalist markets creating constraints within its economy. This is exemplified by the current discrepancy between the market and community price. Since the cryptocurrency market crashed earlier this year (Rizzo, 2018), the difference has become a point of contention within the community. Cryptocurrencies are notorious for their volatility. Thus, an innovation of FairCoin was to create two prices. The community price helps to create a 'stable' value such that it can be used as a reliable means of exchange and to reduce its use as a speculative asset. Nonetheless, such a large difference distorts the value of the coin. This problematically affects the purchasing power of those within the FairCoin economy, especially as FairCoin is yet to cover most basic needs. It could also attract "bad actors" [E] (profit-maximisers) and thus competition into the system. For instance, individuals could profit by buying goods cheaply in Fair on the FairMarket and re-sell them outside for a higher price. Further, it may reduce the number buying from the official exchange, "getfaircoin.net", instead buying on the cryptocurrency markets which exacerbates liquidity problems. However, low market trade volumes and anecdotal accounts reveal these issues seem to be smaller than suggested. Thus, a limiting factor is an inability to gain full autonomy from the markets as "you never know when it's going to crash, and the liquidity starts to leak out of the system really quickly" [E]. This is a threat to the economy. Users, especially merchants, could lose trust in the value of FairCoin and the ability of FairCoop to underwrite it, such that "people will be trapped within the FairCoin economy" [E]. Most exchanges occur informally within the community and the general rules for exchange are deliberated within assemblies. Merchants currently have no maximum limits and can freely exchange to fiat currency.

However, in practice big exchanges require exchanging directly with Duran. Thus, he was likened to a central bank, that holds all the power and wealth, underwriting the whole FairCoin economy, but with an important caveat "one that we can trust" [B]. The community's solution to ensure long-term prosperity is creating "real use-value" through the circular economy but conversely the price discrepancy acts to limit its development. Real value is "to build up a community and have it be a coin that people really use day to day". This is in contrast to other cryptocurrencies which "aren't really used for anything...just for speculation or tax avoidance" [E]. In the meantime, solutions focus on mechanically increasing the market price of FairCoin by manipulating the markets. This is executed mainly through the stability fund. The fund buys back FairCoin, available on the crypto-markets and secondary exchange markets, increasing its demand through scarcity and therefore its price. The main contributors to the fund are investors within the community and there are considerations of future partnerships with the ethical finance sector [A].

Problems and contradictions that the community face are discussed in assemblies through an open participatory process. Solutions surrounding price stabilisation form a salient example. Some within the community think FairCoin should remain open and be listed on more markets, while others believe the solution is to close off the currency even further by delisting it. Adding context to this debate, an activist explains "some of the FairCoin investors are not really into FairCoop... they've got their perspective and they are putting in their opinion" [E]. This reveals how the differing socioeconomic contexts of individuals in the community can affect the global level governance of FairCoin.

Further, as most of the community's efforts revolve around developing the circular economy, another interviewee questioned, "why had there not been more investment in large-scale productive activities?" [B]. It was explained – "the idea is to wait till they are more valuable...till the project has grown to the point where these funds can have much bigger impact" [C]. Thus, there are indications that within its flat non-hierarchical structure there are centralised pockets of power whereby the choices of the few can become equivalent to 'consensus'. This is at odds with FairCoop's equal, decentralised vision. Thus, in practice assemblies can be time-consuming, end in deadlocks and are highly dependent on the participants present in meetings. However, simultaneously this process can aid in preventing concentrations of power and enables individual members to voice their opinions. As one activist acknowledged, value is derived from the conversations in themselves - "an assembly with a hundred people are (sic) crazy, but it's interesting that you can use consensus...really get in touch with people that have different experiences, they can teach you a lot and then you can teach them something" [H]. Ultimately, decisions can be made conscientiously, building trust and reaffirming the values and shared vision held by the community.

Furthermore, as each local node is self-managed many uncertainties can be answered applying local logic while still adhering to the global principles. This is reflected in FairCoop's open criteria for participation. During my analysis, it became clear that within the self-organised, diverse structure of FairCoop, the intricacies of creating a fair and sustainable economy were open to interpretation. This affects decisions throughout all the practices and activities of the economy. A few salient examples were: is organic meat 'ethical' even if it is produced in a 'sustainable' manner? Is it better to include a local independent shop even if it is not a worker cooperative?

Is it acceptable to receive investment from ethical finance? Such multidimensional questions are open to interrogation and rely upon the opinions and governance of those in the community. These quandaries are critical, as certain choices could undermine FairCoop's principles and conversely reinforce capitalist structures. Furthermore, in FairCoop's current drive to grow, the barriers to entry are low and participation in local economies is encouraged. An activist mentioned a supplier who repeatedly asked for immediate exchanges back to euros and customers only willing to buy at the market price [H]. This lack of engagement with the purpose and vision of FairCoop could detrimentally hamper the longevity of the project. However, all the activists noted that transitioning to an alternate economy is a gradual process: "we're building the puzzle pieces of a new economy – a process that will not happen overnight" [C]. Of importance is staying true to the shared vision of the economy and its cooperative values. It is an open process: "we are dependent on trust... anything that people think do not fit the criteria can be discussed" [A]. One can investigate how certain processes can be gradually changed. For example, investigating if it is feasible to switch suppliers to more local and sustainable products, or if employees could be paid in Fair.

An interviewee recalls the success of a farmer who now only accepts FairCoin and is actively seeking out suppliers to spend his FairCoin with, a sign of his commitment to FairCoop's decentralised and cooperative vision [H]. Conversations and relationships reveal who is motivated and will engage with the community, finding ways of spending their FairCoin for the success of the project and driven by its shared vision (North, 2014). Furthermore, fostering local relationships can prevent practices within the economy from reinforcing capitalist logics by utilising community logic.

Thus, exhibiting differing forms of economic practices and is the start of changing processes (Gibson-Graham, 2008).

It is the FairCoop community which embeds trust in FairCoin, promoting its use and maintaining the longevity of the project. This is key as “if any currency loses the trust of its users, it stops being accepted as money” (Roio et al., 2013: 11). Initially this is proxied by trust in the government as the value is held in terms of fiat money and thus underwritten by the state. Enabling convertibility helps maintain confidence and trust but is threatened by the volatility of the crypto-markets. However, FairCoin differs from other purely ‘capitalist’ cryptocurrencies as it has a ‘real’ community using it. Ultimately it is the community that underwrites the value of the currency. It acts as a protective membrane that enables value to enter in and prevents value leaking out [C]. For instance, while bad actors may attempt to enter and profit off the price discrepancy, they have to interact with the community to gain any real benefit, be it enlisting on the FairMarket, discussing delivery locations, or even being restricted by liquidity issues. The circular economy project strives to create real use-value by increasing the productive base of the FairCoin economy and cover the basic needs of its users. Its success depends on the ‘buy-in’, motivation and thus patience of its users. FairCoin’s “limitations... contradicts fundamentally a mere self-interest and opportunity-optimising attitude” (Thiel, 2012: 95; North, 2014). Thus, it is the shared vision of a cooperative, decentralised future that simultaneously reinforces and drives the creation of the circular economy.

Participating in its construction helps to build a community identity and enables understanding that the true benefit of the FairCoin economy is not in monetary form but the relations it creates. Ultimately, the value of the currency is decided through both its ability to cover our basic needs and the social relations it enables (Fickey, 2011: 242; Lee, 2006). The key innovation of FairCoin is that it is a community cryptocurrency which is embedded in real social relations within the economy.

5

CONCLUSION

In this paper, I have sought to explore how community cryptocurrencies could be used as a tool for sustainable prosperity. To do so, I undertook an in-depth case study of FairCoin, a cryptocurrency utilised by FairCoop, an anarchist social movement, analysing my data using a novel theoretical framework. I am now able to answer my research questions:

How is sustainable prosperity envisioned within community cryptocurrencies?

I found that FairCoop generates a shared vision of sustainable prosperity by organising around the concept of cooperation. Re-centring cooperative values within their exchange relations generates visions of economic difference relative to competitive economic practices and hierarchical structures. As a decentralised tool it enables activists to reclaim power and control and become active agents of their own economy and society. The decentralised, cooperative vision is further enabled by the inherent features of FairCoin as a cryptocurrency. Cryptocurrencies have features which “allow for non-hierarchical self-organisation and peer-to-peer collaboration within a communitarian network” Scott (2016: 10). This perfectly reflects the ideals of FairCoop. Moreover, cooperation is further embedded in the design of FairCoin using an innovative proof-of-cooperation consensus mechanism, operated by active members of the community, limiting the negative externalities

of the payment system.

Long-term integrity of their alternative economy is envisioned through ethical engagement, both within and between communities (Moore, 2015). Within communities by working cooperatively through environmentally and socially-responsible cooperative structures, and between communities by linking with other social currencies and projects to build a resilient ecosystem of a socially-oriented collaborative economy.

What material practices do community cryptocurrencies use to perform sustainable prosperity?

FairCoop has endeavoured to materialise their vision of an alternative economy using FairCoin as a catalyser for change. It has provided an initial source of credit and purchasing power by which to build their economy. Currently, the FairCoin economy cannot meet all the ‘life-sustaining’ needs of those who participate in the economy, hampered by a lack of productive base (Jackson, 2017; Lee, 2006). However, they are in a process of transition and while new value is yet to be generated on a large scale, utilising an optimistic reading of my findings, I stress that the full potential of the FairCoin economy is yet to be realised.

Promisingly, in just over four years they have

grown to have fifty-five local nodes, created online and offline markets and developed four methods of payments. Thus, they have promoted inclusivity. Anyone who aligns with the values of the community is welcome to participate and engage with the economy. Furthermore, the core FairCoop organisations and processes are cooperatively managed by open-participatory governance and profit is reinvested and redistributed within the FairCoin economy, ensuring its long-term sustainability. Thus, FairCoop have started creating a viable parallel money system outside of fiat money. The commitment to each other indicates a new culture of care and investment in the flourishing of the community. To truly gain the value of participating in the FairCoin economy requires integrating into the community and transitioning practices towards cooperativism. It is cooperative values that drive the economy such that economic actions are motivated by mutualism and collaboration for the greater benefit of the FairCoop ecosystem.

Main research question: How can 'community cryptocurrencies' be used as a tool for sustainable prosperity?

Key to the evaluation of the main research question for sustainable prosperity, is whether it is the difference from or difference within capitalism that should be emphasised (Richardson, 2015)? Researchers have questioned the longevity of such community currency projects, fearing they are vulnerable to being co-opted by capital and the state (Amin et al., 2003).

Thus, I looked at the conditions which maintained alterity and the constraints and contradictions present within the use of FairCoin as a tool for sustainable prosperity. I found that the use of FairCoin is an act of financial disobedience to fund the construction of their alternate economy. This is innovative as it removes reliance on external funding sources and simultaneously subverts power relations (Schroeder, 2015). However, it simultaneously creates constraints in the operations of the economy,

as FairCoin's value is intrinsically tied to its market price. Their long-term solution is to construct real use-value through the circular economy. The hope is this will raise its perceived value on the market and enable FairCoop members to further escape the capitalist market, increasing the longevity of the project. This is bolstered by using open participatory governance structures that prevent concentration of power and builds trust within the community, maintained through a commitment to cooperative values. Additionally, the FairCoin blockchain is integrally sound. It is sovereign to, and governed by the FairCoop community, has dynamic chain parameters and capabilities to be developed further. Altogether this enables proactive management of a complex FairCoin economy, "keeps options open and enhances learning capacity" creating enabling conditions for long-term sustainable prosperity (Moore, 2015: 809). During this transitional phase FairCoop must be cautious not allow the market economy to distort values and relations within the FairCoin economy by placing trust in their community and shared vision.

Of importance is the social life of FairCoin, the conversations, community and values that drive the transition. Thus, FairCoin contributes to sustainable prosperity by re-centring values, creating new cultural forms and agency within the economy.

In conclusion, this study reveals that community cryptocurrencies are a novel social innovation which could be used to reframe economies for sustainable prosperity. I have extended the definition of community currencies to cryptocurrencies, defining "community cryptocurrencies" as an alternative cryptocurrency with explicit social goals adopted by a specific demarcated community. As cryptocurrency technology evolves, this research indicates that they can enable conditions for sustainable prosperity, such that they are both internally and externally coherent and their design doesn't undermine their intention or the social system on which they depend (Bendell and Slater, 2018). It does so by embedding values in its design and governance and vitally forming a community around the currency. Furthermore, I have confirmed that issuance can be sovereign to the community and if combined with owning the resources within the economy, enhances

the ability of the currency to create new “circuits of value” and parallel money systems for sustainable prosperity (North, 2007). Ultimately, it is the community and the social life of the cryptocurrency that enables it to be a tool for sustainable prosperity. Further research should focus on understanding the degree to which open community cryptocurrencies can create alternative exchange networks that displace rather than reinforce capitalist structures (North, 2014).

Additionally, studies should explore how different designs of community cryptocurrencies such as asset-backed cryptocurrencies and alternative social consensus mechanisms could be used to reframe our economies for sustainable prosperity.

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APPENDICES

APPENDIX A

Enterprise	Labour	Property	Transactions	Finance
Capitalist	Wage	Private	Market	Mainstream Market
Alternative Capitalist State owned Environmentally responsible Socially responsible Non-profit	Alternative Paid Self-employed Reciprocal In-kind Welfare work	Alternative Private State-managed assets Customary land Community land trusts Indigenous knowledge (Intellectual property)	Alternative Market Fair Trade Alternative currencies Underground Market Barter	Alternative Market Cooperative Banks Credit unions Community-based financial institutions Micro-finance
Non-Capitalist Worker cooperatives Sole proprietorships Community enterprise Feudal Slave	Unpaid Housework Volunteer Self-provisioning Slave labour	Open access Atmosphere International waters Open Source IP Outer Space	Non-Market Household sharing Gift giving Hunting, fishing, gathering Theft, piracy, poaching	Non-Market Sweat equity Family lending Donations Interest-free loans

Source: Graham, K (2012:17)

APPENDIX B

Semi-structured interview questions

1. What are the problems do you think FairCoin addresses?
2. Why use FairCoin – benefits/limitations?
3. What are the aims of FairCoin?
4. Why a cryptocurrency?
5. How are you establishing an alternative economy? What are the main barriers?
6. What new value and/or new modes of exchange and production are created using FairCoin?
7. What are the types of goods and services available in FairCoin and what would you like to see?



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**Institute for
Global Prosperity**

The Institute for Global Prosperity
Maple House, 149 Tottenham Court Road
London, W1T 7NF

CONTACT

www.londonprosperityboard.org

 igp@ucl.ac.uk

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