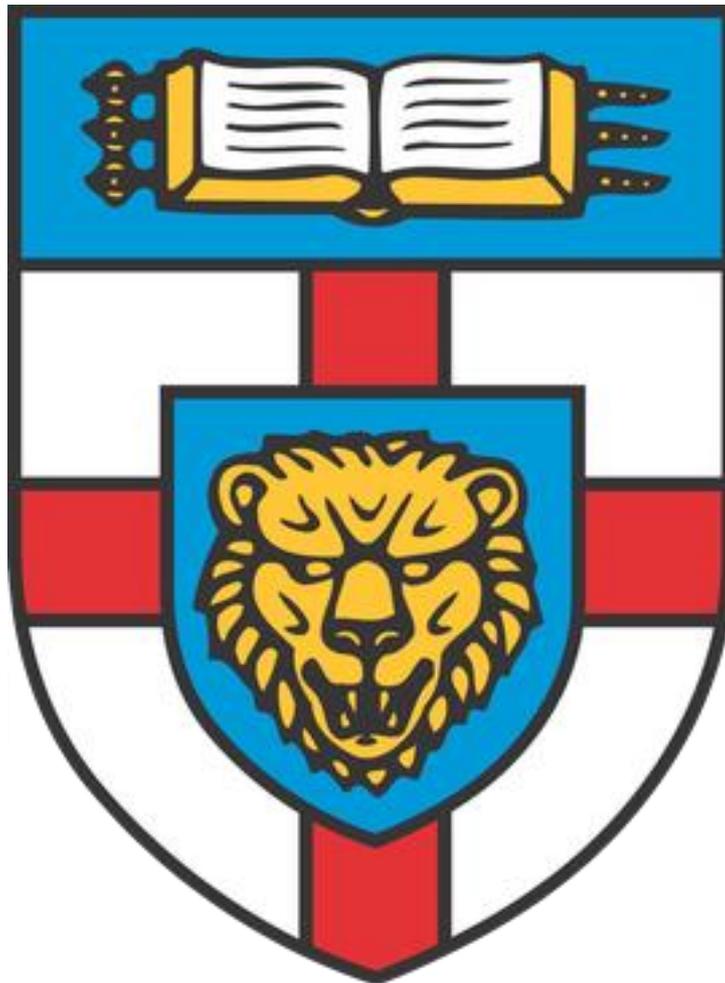


Thinking with Uncertainty: Scaling Up and Down in the Cryptocurrency World



A Thesis Submitted for the Degree of PhD
at Goldsmiths, University of London

By Yathukulan Yogarajah

Declaration of Authorship I, Yathukulan Yogarajah, hereby declare that this thesis and the work presented in it is entirely my own. Where I have consulted the work of others, this is always clearly stated.

Signed: Yathukulan Yogarajah Date: 5th August 2022

For

அம்மப்பா and அம்மம்மா
(Ammappa and Ammamma)

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Abstract

Against a background of uncertainty, this thesis draws on an understanding of anthropology that disturbs the rushed neoliberal temporality, and looks for mushrooms (Bear, 2014, 2020; Tsing, 2017). It looks closely at the strategies and relations used by occupants of the cryptocurrency space to make habitable a highly volatile and uncertain world. My research participants occupy the heart of contemporary capitalism: in start-up spaces and banks, and also the peripheries: as multi-level marketing investors and 'noisy' retail traders (Preda, 2017). They are united in their engagement with a highly volatile market and uncertain space. They turn to practices of storytelling (Jackson, 2002); take to stages to scale themselves up and scale the world down (Hart, 2014; Tsing, 2012); 'cook money' (Carsten, 1989); form arborescent and rhizomatic networks (Strathern, 2017); and take chances in the face of 'wage slavery', in order to scale their knowledge of the cryptocurrency world.

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Historical Prologue

“Consider Alice has 5 Bitcoins and Bob has 2 Bitcoins”, Roger invited me to imagine. “If Alice pays Bob 0.01 Bitcoins for pizza, the blockchain ledger will minus 0.01 Bitcoins from Alice’s account and add 0.01 Bitcoin to Bob’s account”. Roger went on to point out how this would leave Alice with an UTXO (unspent transaction output) of 4.99 and Bob with an UTXO of 2.01 Bitcoins, providing of course Bob started with 0 Bitcoins. Roger like many others I knew went straight into a technical explanation when I asked him what Bitcoin is. Near the start of my fieldwork, most of these technical explanations would go over my head. I would respectfully follow along; however, it was inevitable I would get lost at some point. At that point, I would politely nod along, and take a few sips of my drink – paraphrasing and mirroring to show I was still in the conversation.

Roger and I were both at a cryptocurrency community meet-up near the Old Street roundabout – or the Silicon Roundabout as it is sometimes known - with around 70 or so other people. Most of the attendees were men. We were taking advantage of the free pizza and beer on offer and chatting on one side of the room. Roger was giving me a lengthy and technical explanation of the workings of Bitcoin, the role of ‘miners’, and other technical governance structures under which Alice and Bob could transact without a middleman. Indeed, this was the key for many – to transact without a third party. “Crypto” [as cryptocurrency is often colloquially expressed] “is going to revolutionise finance and money”, Roger argued. The implicit argument was that people like Roger, who worked as a developer for a cryptocurrency start-up project, would be the harbingers of this new revolution.

After the technical explanations subsided, I asked Roger who the benefactors of this ‘revolution’ would be. He gave an answer that typified the response of many. He argued that this revolution would greatly benefit migrants wishing to send money back home; it would help ‘bank the unbanked’, and moreover, he felt that it would allow individuals all over the world to transact without the state prying or intervening. In relation to migrant remittances, some pointed out that \$500 billion a year (a popular number often cited) was sent by migrants back home, and that payment companies such as WesternUnion and MoneyGram were taking far too large a slice of this. Crypto

with its promise of low-cost transfer could ensure that more money would reach its intended recipient and thereby help to alleviate poverty.

On summer weekends over the last several years, I have played football with members of a local migrant and refugee community centre. Last summer, I remember some players staring at their phones intently after the game, and when I overheard that they were talking about the cryptocurrencies they held, I was excited. Finally, migrants using cryptocurrencies in the way Roger had talked about, I thought. I had been asking migrants I knew from the Sri Lankan community, of which I am a part, whether they were using cryptocurrencies, their answer was always in the negative. When I asked the footballers whether they were using cryptocurrencies to send money back home, their answer was also in the negative. They, like the Sri Lankan migrants I knew, highlighted that they have other ways of moving money. The footballers were using cryptocurrencies in much the same way as many other non-migrants – to make a lot from a little.

The story of ‘migrants’ as one of the great benefactors of the cryptocurrency revolution seemed to typify the ‘straw manning’ of who the beneficiaries of the ‘cryptocurrency revolution’ might be. That is, often explanations of what cryptocurrency is, who this ‘revolution’ was for, what the benefits might be, were discussed in both a highly technical, speculative, and imaginative way. These imaginations did not seem to be based on how people were using cryptocurrencies now, but on a pre-conceived idea of how people act, what they want, and how they come to know the world. Near the Old Street roundabout, where I conducted much of my offline ethnography, no one really discussed at length with me the topics of real people, who was using crypto now, and how they were using it. They seemed much more pre-occupied with who the future actors coming in might be, and how they might use cryptocurrencies in the future. The technical puzzle (computational, financial, economic) was to be solved first, then the consideration of people would follow. In this thesis, I focus on the users and producers of cryptocurrencies who are active now.¹

¹ This is not to argue that ‘migrants’ (as if this were a homogeneous category) would not eventually use cryptocurrencies - they might or they might not. They might fold it into the diverse sets of practices they are involved in to decentralise the role of the state or financial structures, or they might not.

In this thesis, I use 'crypto', 'cryptocurrency', and 'cryptocurrencies', interchangeably, as they were in my fieldsite. They have the same general meaning. 'Crypto' is a shortened version of cryptocurrency that is often used by those within the space, by news outlets, and amongst others. It denotes some familiarity with the space. Cryptocurrencies are the pluralisation of cryptocurrency. Initially (2009-11), there was only one cryptocurrency: Bitcoin. However, at the time of writing there are over 18,000 cryptocurrencies.

Technical history of cryptocurrencies

Discussions that took place within my field-site were quite often ahistorical in nature.² There was a distinct lack of consideration concerning how cryptocurrencies fitted within a wider political and economic arc. Ideas of decentralising powerful structures were discussed as if no one had ever had these ideas before. As David Golumbia (2016, p. 28) points out, 'most people' within the cryptocurrency space 'don't know the history...when people want to advocate it for their own political projects, then I think they owe themselves to do some investigation' of what has gone before. It is in consideration of this view that I wish to begin this thesis by providing a brief historical arc of the evolution of cryptocurrencies. However, it is crucial to note that this is by no means, *the* historical arc, and indeed later in the thesis I describe some alternatives. Throughout this thesis, I resist the idea that there is a single history of crypto waiting to be told.

The historical account below outlines some key events, such as the technocratic solutions proposed by a network of people to solve what they saw as the problem with money. It briefly highlights some ancient historical comparisons to highlight that the strategy of employing cryptography is an ancient one. Such comparisons are made to contextualise and temper the claim of 'newness'³ often cited within those working at the frontier in this economy.

² By ahistorical, I mean they did not have an understanding of the political and economic history that undergirded this space.

³ A category to be questioned in the thesis.

*

Cryptocurrencies emerged amidst a time of profound uncertainty and precarity in the wake of the financial crisis in 2007-8, to offer seemingly 'new' possibilities for some. The origin story often told is through the birthing of a paper titled *Bitcoin: A Peer-to-Peer Electronic Cash System* (published on 31st October, 2008) by the pseudonymous and prophetic figure of Satoshi Nakamoto (2008). In this paper, the unknown figure of Satoshi Nakamoto provided a blueprint for the construction of a system that attempted to emulate the privacy of physical cash in the digital world.⁴ It is the paper that launched a thousand projects, allowing people to begin to imagine alternate ways of creating value, governing, and organising.

Cryptocurrencies are undergirded by blockchain technology that Satoshi proposed as a solution to the seemingly almost 'paradoxical and impossible demands' for creating digital cash within a decentralised network of actors, without any centralised state, or other, intermediaries. Digital cash must be readily available yet scarce, 'unique and anonymous but identifiable and reliable, and easy to transmit but impossible to copy' (Brunton, 2019, p. 1). All this was set against the background of existing technologies designed to make perfect copies in both form and content. Blockchain, rather than relying on a central bank, clearing house, or other centralised government-backed institution to guarantee the transaction between two people, uses code to intermediate this process. It uses cryptography to assure a pseudonymous status to the transactor.⁵

The historical arc of cryptocurrencies as emerging out of the 2007-8 financial crisis can, however, be elongated considerably if we consider the use of cryptography as a political tool. The first written down and recorded use of cryptography explicitly intended as a political tool can be traced back to the 2nd century BC, when Kautilya an ancient Indian philosopher, economist, and general royal advisor authored the

⁴ Satoshi communicated with others working on the Bitcoin project via email till 12th December 2010. After this date, he stopped corresponding to emails, and disappeared. His identity and whereabouts are still unknown.

⁵ I say pseudonymous rather than anonymous because transactions you make are identified by a Bitcoin address – should this address become related to your real-life identity, it would be possible to identify all transactions made by a particular person

Arthaśāstra, a treatise on matters of statecraft, economic policy and military strategy (Kauṭalya & Rangarajan, 1992). Going back even further, in 100 BC, Julius Caesar employed a simple letter-substitution cryptographic technique to communicate with his generals (Copeland, 2006). Herodotus writes of how a revolt against the Persians was set in motion by cryptography (Singh, 1999).

Histiaeus shaved the head of his most trusted slave and tattooed a secret message on to his scalp, waited for the slave's hair to regrow and sent him to his son-in-law, the tyrant Aristagoras, who then then shaved the slave's head to read the message, which urged revolution in the city of Miletus (Kahn, 1996). According to Kahn (1996, p. 151) 'one of the most important messages in the history of Western civilisations was transmitted secretly'. He is referring to the encrypted message that Demaratus, who was in exile in Persia, sent to the Greeks, warning them of Xerxes' plan to invade Greece (Kahn, 1996, p. 262). This message played a crucial role in allowing the Greeks to halt the advancing Persian army. There are numerous other stories in the Greco-Persian wars of using cryptographic techniques to transmit secret messages.

In the Second World War cryptographic techniques played an important role once again. Technical actors were involved in sending complex messages across enemy territory and deciphering intercepted messages. As has been exhaustively covered in history and popular culture, cryptography played a particularly crucial part in the Second World War. It was the breaking of the Zimmerman Telegram, proposing an alliance between Germany and Mexico, that brought the Americans into the war (Kahn, 1996). The Second World War also marked an important point in the tale of cryptography: the digitisation of cryptography – creating the potential for distribution to unlimited audiences, unfettered by material limitations.

It would take the expansion of the internet to a mainstream audience in the 1990s for the power of digitised cryptography to capture the imagination of a movement. Bitcoin emerged from conversations between members of the cypherpunk movement that initially congregated in a few houses in Silicon Valley, and then continued their discussion through mailing lists and online forums. This highly technical community had an anarchic leaning, and wide-ranging interests: 'cryogenics, transhumanism, technological singularity, Libertarian politics and Money' (Brunton, 2019; DuPont,

2019a). Many shared an interest in using digital cryptography to wrest control and power from governments and other centralised authorities.

The cypherpunks were influential in 'releasing and proselytizing' Phil Zimmerman's 'Pretty Good Privacy' (PGP), a contentious encryption software that provided powerful encryption techniques to the public (DuPont, 2019a). The cause of contention in the 1990s was not how PGP was made, but how it was distributed. After the Second World War, the US government 'defined cryptography as a weapon; like any other munition, cryptography was subject to the Arms Export Control' (Nakamoto, Bridle, Brekke, & Vickers, 2019, p. vi). Governments were concerned about the possible consequences should advanced encryption techniques be acquired by enemy states. Zimmerman distributed the PGP software to his friends to (in his words) 'strengthen democracy, [and] to ensure that Americans could continue to protect their privacy', prompting the US government to launch an investigation into Zimmerman for exporting munitions without a license (Sussman, 1995).

This was a crucial moment in the story of Bitcoin. It provided a cause around which digital activists mobilised and framed the discussions around the rights of individuals to protect their own privacy. It sparked into life questions surrounding the ability of code to undermine hegemonic powers. In response to the government's reaction, and taking advantage of the fact that books were protected by the First Amendment, Zimmerman (1995) published the software in a book titled *PGP: Source Code and Internals* – buyers of the book could type up the code themselves (Nakamoto et al., 2019). Shirts bearing parts of the code were widely sold: they bore the message, 'this shirt is classified as a munition'. Others went further and had a few lines of the code tattooed onto their arms and chests. The so-called 'Crypto Wars' continued throughout the 1990s, with cypherpunks playing an important role in protesting both the government's monopolising of use of cryptography, and its use of cryptography to intrude into the lives of citizens (DuPont, 2019a, p. 47).

Discussions during the Crypto Wars also focused on money, which had been for so long the exclusive tool of the government. Since the creation of ATM machines in the 1960s (Nakamoto et al., 2019) money had been becoming increasingly mobile. The digital revolution of the 1960s created networks and pathways along which money

could be moved around. Cypherpunks were concerned. The new digital roads that were used to send money – essentially messages – could be patrolled by any Xerxes-wannabe, to keep tabs on citizens and organisations.

It was the awareness of the potential for this kind of world that led David Chaum, computer scientist and one of the early cypherpunks, to propose a technical solution: DigiCash - a protocol that used cryptography to transfer funds across an encrypted channel between two people. The sender and receiver would both sign a transaction using a private key, similar to an unforgeable signature. However, the idea did not catch on. Various reasons have been given as to why, perhaps the most plausible is that people were simply not aware of the problem or issue at hand: it was simpler to use credit cards. As one *Forbes* article put it, 'A brave new currency for a brave new world, with only one problem: No one wanted it' (Pitta, 1999). In focusing in on the technical problem, Chaum failed to pay attention to the world around, and the kind of people that might use his technical solution. As Chaum himself noted, 'I was asking the world to change the way it did things so that there would be perfect privacy...the average level of sophistication of users dropped [as the internet expanded] ...it was hard to explain the importance of privacy to them' (Pitta, 1999).⁶

Despite failing, these efforts encouraged others outside the mainstream, who were technically savvy, to question the mystical foundation of money's authority. Why should money be the sole property of the government? How do you prevent the government from using money as a tool to conduct state surveillance? The momentum surrounding these questions grew during the 1990s and 2000s. Within the cypherpunk network the story of money put forward by the nation state and economists seemed uncertain and other possibilities seemed plausible.⁷ The publication, *A Cypherpunk's Manifesto*, in 1993, articulated the main rallying cry behind the cypherpunk movement,

⁶ Chaum was not the only one experimenting using cryptography to bring about a new age of digital cash as there were other projects going on around the same time: e-gold (Douglas Jackson and Barry Downey), B-money (Wei Dai), Bit Gold (Harrison Szabo), Hashcash (Adam Back)(DuPont, 2019a).

⁷ This is not to suggest that state money has ever had absolute power – as Dodd points out. Arguably the power of state money had been declining before the emergence of the cypherpunk community. Dodd questions 'if there ever has been a golden era of state-issued money'(DuPont, 2019a, p. 65).

that is, firstly, privacy is crucial for an open society, and secondly that 'privacy on the electronic networks could only be achieved using cryptography' (Nakamoto et al., 2019, pp. xi–xii).

The politics and problem of money seemed to occur at the transactional level for the cypherpunks, and the 1990s were full of experiments to disintermediate money from both the bank and the state. The metaphors they employed to think through the problem evidence this. For example, the cypherpunks often employed a military metaphor, 'the Byzantine General', to conceptualise the problem of how to transact with one another when corrupt individuals were present amongst the ranks (i.e., the state and banks). The metaphor goes something like this: imagine two armies at the opposite ends of a city: the city can defend itself against one of the armies, but not if both attack together. To overthrow the city, the generals can send a messenger through the city, however, the generals have a problem. There are some members of their army that they cannot trust and traversing the city to get to the army on the other side runs the risk of the messengers being detected or turned. This metaphor helps us to think through the issues of trust that are involved in keeping a decentralised ledger. If there are potentially bad actors in a decentralised network, how do you ensure that only legitimate transactions are kept on the ledger?

The technical 'solution' to this problem, and other technical problems, namely the 'double spending'⁸ problem, came on 31st October, 2008, in the form of a paper titled *Bitcoin: A Peer-to-Peer Electronic Cash System*, published by Satoshi Nakamoto (2008). Nakamoto employed what is now referred to as 'blockchain technology' or a 'decentralised ledger' to solve the problem. A blockchain is a digital file that is distributed to everyone that is in the cryptocurrency network. The blockchain acts as a ledger, keeping a track of everyone's transaction. Anyone can look at the blockchain

⁸ The double spending problem is the risk that a digitally issued currency can be used twice. Unlike physical cash, a digital token can be duplicated with great ease, leading to the difficulty of differentiating between original and duplicate. Technical solutions to the issue of decentralised digital money had to solve this crucial issue.

to see what transactions have been made.⁹ The blockchain is sealed using cryptography so that no one can tamper with it.

What made this attempt at cryptographic digital cash/money better than others? Why did Bitcoin succeed where other currencies did not? Was it simply that Bitcoin had a better solution to the double-spending problem? Why was there a wider audience for the values of the cypherpunk movement portrayed through Bitcoin rather than through David Chaum's DigiCash, for example? The discussion is a complex one that I do not enter into here, but at least part of the answer to this question is to be found by looking at the moment when Bitcoin was released.

The first block to be mined on the Bitcoin network was on 3rd January, 2009. A blockchain consists of series of blocks connected by a chain in chronological order, each block consists of a list of transactions. Embedded in the first block lies the following message:

*The Times 03/Jan/2009 Chancellor on brink of second bailout for banks*¹⁰

This was a message from Satoshi highlighting how the state-run monetary system had failed us all, and a reminder to everyone of what the blockchain project is about. Part of the reason for the greater uptake of the cypherpunk message can be attributed to the (2008-2009) financial crisis. The seriousness of this crisis disrupted peoples' understanding of the world, their place within it, and created a space of uncertainty that helped to direct greater attention and appreciation towards alternative ideas of money. The financial crisis also helped to highlight the corruption that can take hold of centralised systems and how this can affect us all. For some, Bitcoin's message of

⁹ If you know the address that is. An address would look something like this: '1A1zP1eP5QGefi2DMPTfTL5SLmv7DivfNa'

¹⁰ A post by Satoshi (2008): 'The root problem with conventional currency is all the trust that's required to make it work. The central bank must be trusted not to debase the currency, but the history of fiat currencies is full of breaches of that trust. Banks must be trusted to hold our money and transfer it electronically, but they lend it out in waves of credit bubbles with barely a fraction in reserve.'

decentralisation seemed like the cure – something, as Chaum pointed out, that people were not able to envision during the release of DigiCash.

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Figure 1: The first block of Bitcoin.

Other events also played an important role in Bitcoin’s rise. After the initial release of Bitcoin, it was essentially worth nothing - in March 2010, Bitcoin was trading at \$0.003, mainly within a small community. However, it slowly picked up momentum and made a massive jump in price after WikiLeaks – itself a product of the cypherpunk movement – came to international attention by publishing US military secrets to the public in 2010 (DuPont, 2019a).

Once again, issues of secrecy and principles of cryptography took centre stage. As a result of the publication of state secrets, pressure was put on the monetary structures – by the US government - allowing for the funding of WikiLeaks. The US government attempted to choke all points of financial support for the organisation: the PayPal account associated with WikiLeaks was frozen; Julian Assange’s (founder of WikiLeaks) Swiss Bank account was frozen; Mastercard and Visa refused to process any more transactions for WikiLeaks (Huang, 2019). In light of this financial suffocation, WikiLeaks turned to Bitcoin to accept donations to continue funding the project, so as to carry on being able to publish state secrets. In 2017, Assange took to Twitter to post: ‘Bitcoin is the real Occupy Wall Street’. The case helped to emphasise the problem associated with state issued currency, the power it has, and also helped

highlight Bitcoin's ability to undermine that power. The price of Bitcoin around the time of WikiLeaks, 2010 - 2011, ranged from \$0.08 - \$31.

*

Fast forward to July 2022. Bitcoin is now trading at above \$20,000 (it was trading over \$68,000 in November, 2021), and now there are over 18,000 cryptocurrencies, 500 market exchanges, and the total market cap of cryptocurrencies is over \$1trillion (it was over \$2 trillion in November, 2021). There are individual users of Bitcoin who have never heard of DigiCash, Phil Zimmerman, David Chaum, Eric Hughes, or Timothy May – pioneers of the cypherpunk movement, or indeed the cypherpunk movement itself. And at the other end of the scale, during fieldwork I attended meetings in London where, to my initial surprise, the largest and most powerful banks in the UK – HSBC, Morgan Stanley, Barclays, to name a few, were asking questions about crypto and thinking about how they could get involved. Venezuela and Dubai have already launched their own cryptocurrency; El Salvador has made Bitcoin a legal tender, and many other states are looking to follow suit albeit with some significant modification (Ellsworth, 2021). Amidst this activity there are still those flying the cypherpunk flag high, who remain focused on building privacy focused payment systems.

In this thesis, I do not begin my exploration of what cryptocurrency is or could be from the perspective of the technocratic vision highlighted above, as so many have done before me. I do not interrogate the technical infrastructure of cryptocurrencies, the governance structure, or the philosophical implications of the ideas put forward by the cypherpunks – there are many other excellent works that have explored such issues already (Brekke, 2019; Dodd, 2014b; DuPont, 2019b; Maurer, Nelms, & Swartz, 2013a). Since Satoshi published the Bitcoin whitepaper in 2008, there are, as highlighted above, new actors, with different ideas about what cryptocurrency is or could be. Rather than starting from the vision of the cypherpunks, in this thesis I start by exploring the activities of those I encountered on the ground. I look at how they are using and producing cryptocurrencies. Rather than reducing cryptocurrencies to a transactional level, one to be carried out between 'Alice' and 'Bob', I employ ethnography to consider the people within the cryptocurrency space, and what they are up to.

Introduction

Migrant mothers: thinking with uncertainty

My mother, sister, and I came to London from a small village in Sri Lanka. We were all much younger then - my sister was eleven, and I was eight. We came to join our father who had fled Sri Lanka much earlier due to the political troubles brewing in our homeland. We moved to London, in light of perhaps frustrating and nagging questions proposed by sister and me as to the whereabouts of my father, and also in search of a new future and possibilities, faced with the harsh realities of living in a country at civil war.

I clearly remember the week before we left. My family: aunts, uncles, cousins, and relatives I was not sure how I was related to, yet called by kin terms, were part of the packing committee. Collectively, we speculated as to what was being worn in London, with very limited knowledge. Phone calls were made to family friends, relatives, to other Sri Lankan migrants who lived abroad, to ascertain some knowledge as to the lay of the land. We imagined what particular foods were lacking: would they have dried fish? Would they have cashew, ground spices or mangoes that tasted as nice as the ones we grew in our garden (they did not)? This packing committee huddled around late into the night working under candlelight (the power would often go out), placing the items bought in polythene bags and sealing them by wrapping a mini saw blade around the plastic and placing the serrated side near the fire. The plastic responding to the heat would push into the serrated edge, sealing the bag and its containment: our tastes, desires, and imaginations.

Despite the best efforts of the packing committee, our imaginations of London did not square with the realities of life as lived there. Many difficulties were encountered, especially in the first few years – no more so than with money and education, the latter being a primary concern for my mother. My sister attended a state school where she encountered racism and bullying for the first time. Financial difficulties meant we had to be placed in social housing, and my mother and father had to take on extra jobs. In those early years we could feel ourselves pressed uncomfortably against the serrated edge of this new and uncertain frontier, and part of ourselves became sealed upon contact with it. Part of our selves, who we were to be and might grow up to be with the aid of our family and ways of being close by as handrails serrated on contact with this land, and like Hardy's Drummer Hodge, that self was buried beneath foreign constellations and strange stars amid the gloam.

What I want to foreground here is not the part that was sealed, but another part that was opened – and the navigation of those foreign constellations. I want to foreground my amazement at how my mother was able to negotiate this difficult period, to learn of the new land she had come to, and to and look for possibilities within it. She became attentive to this uncertain place. Drawing on relations with other migrants, she looked for alternative schooling for us. She would go to the temple, talk to other parents there, be on the phone to others from Sri Lanka here, and drew on support and knowledge from her family back home. She would call local schools, councils, education authorities, and talk to their staff at length. Like countless other migrants, by engaging in social relationships around her she came to know a part of this place and the possibilities it offered from where she stood, and through coming to know London in this particular way, she came to form what London was for her. It was much the same for my father too as he navigated and steered us through a period of great uncertainty, in a different part of our lives. Both my parents thought with uncertainty and the possibilities it offered, as they came to know the world around them.

My mother, along with other migrants from my part of the world, saw possibility in education, a way to move beyond cultural and financial barriers. She figured out what private schools were, and, undeterred by the high fee barrier, she found out that scholarships could be won to remove the barrier. However, there was one problem: I had shown no academic promise, barely knowing how to read and write in Tamil let

alone in English, whereas my sister was academically talented but knew little English. Collectively, we learnt the language of this new land from my grandfather's 1950s Tamil to English LIFCO dictionary, learning arcane metaphors and odd terms that still colour my world.

Many years later, having got into that school and graduated from university, I tutored the children of recent Sri Lankan migrants for their scholarship exams. As my mother had before them, aunties, not by blood, found me by talking to the active network of migrants at temples, weddings, funerals, supplementary schools, and through word of mouth. I have a vivid memory of a dance with one mother: she - resting her shoulders against the hallway, her cash to pay me clenched tightly in her fist in a way that seemed so Sri Lankan to me, me - hopping around on one foot trying to put my shoes on, eager to leave and purchase some Mango Rubicon from a shop nearby. The transfer of her hard-earned cash to me by the opening of her clenched fist was an act of hope, speculation, and imagination. At that moment, she asked questions about how the classes were going, what was the next step? What jobs might her daughter get after studying various subjects? How did I get to university? She too wanted to know the lay of the land from where she stood. She too thought with uncertainty.

The navigating of this new frontier by my mother, by the auntie mentioned above, and by countless other migrants I know, reminds me of the way Caroline Islanders navigated the open treacherous ocean. For them 'the horizon is not subjected to [a] magisterial map or compass' instead the Islanders continually assess their voyage 'as multiple coordinates shift around them and potential dangers are averted' (Guyer, 2009, p. 356). Those on the boat are to remain still, paying close and careful attention to the ocean's swell, the wind, birds in flight and their movements, and a solitary referential island – it is the horizon that moves towards them. They, like migrant mothers I knew, navigated frontiers by being attentive to the constellations and stars they now found above them. By being grounded and seeking connections, they came to know the world around them and discovered new possibilities to pursue.

Jane Guyer uses the navigational technique of the Caroline Islands' master seamen as a theoretical anchor to think through the turns, storms, and crises that anthropology navigates, so as to think through what is meant by the discussions of possibility that

happen during moments of crisis. Reflecting on a long lineage of thinkers that have focused on anthropology's deep relationship to possibility, she argues that perhaps, to truly invoke a sense of possibility within our field, we need to learn from these navigational techniques, grappling attentively to the swells rather than 'posturing in the prow' (Guyer, 2009, p. 357). I learned similar lessons from migrant mothers, and employ them in this thesis to explore how we might navigate uncertainty that seem deeply embedded in our everyday lives.

*

Admittedly, this is a strange introduction to a thesis on cryptocurrencies, often a highly technical space where people talk in strange mechanical and procedural terms – this difference manifesting as strangeness, I hope, however, can be productive. I share this story with you, the reader, for various reasons. To reminisce and reflect upon a journey, perhaps self-indulge a little, but also to highlight the most vivid example I have in my memory bank of a spark that drove me to write this thesis in the way that I have. To highlight those who shaped my way of thinking more than any academics I reference in this thesis – it was not Malinowski who first gave me a glimpse into ethnography (though it is worth remarking that Malinowski himself was a migrant).

I recount this story to highlight several questions, in a literary way that goes to the heart of this thesis: How do we understand our position in the world, from where we stand in an 'age of uncertainty'? The increasingly uncertain conditions in which we live invites constant reflection on the world around, constant formation of what Stephen Gudeman (2001) might call 'folk models' to think about the spaces we inhabit, and the opportunities presented to us. How do we seek possibilities at this uncertain frontier? How do we engage with the indeterminate quality of the future and with uncertainty more generally? How might we think *with* uncertainty to unearth new possibilities in a world that seems increasingly uncertain, in a way that is neither naïve in its free-floating optimism, or fatalistic in its structural despair? I wish to suggest that thinking with uncertainty to unearth possibilities entails a comparative, historical, open ended, non-linear approach to engaging with the unknown and uncertain world around. I speak here of an epistemic uncertainty that pertains to knowing the world around us, and the uncertainty the future contains – connected ideas. If Anna Tsing (2017) has for resources mushrooms that grow in human disturbed forests and capitalist ruins to

think out against fatalistic futures, to identify possibilities, it is in a similar vein, and with a similar gesture of hope, that I foreground migrant mothers and turn to uncertainty. Such modes of knowing they exhibited, including thinking with uncertainty, strikes me as increasingly relevant in a world where technocratic solutions are often put forward as the solution to poverty, inequality, and society's most pressing issues. Where, as Appadurai (2013) points out, politics of possibility are converted into politics of probability.

Silicon city revolutions

'Silicon cities'¹¹ promise to disrupt and revolutionise countless issues: how we eat (Zimmeroff, 2021), medical care (Carreyrou, 2019), supply chains (Johansson, 2022), and now more recently through cryptocurrencies, money. In doing so they come with the promise of, as Susi Geiger (2020) argues in *Silicon Valley, disruption, and the end of uncertainty*, of putting an end to the age of uncertainty by writing the right code, and bringing about the 'revolution'. Solutions to conditions of inequality, austerity, and politics more broadly, are sought by rupturing a 'new world' into being, leaving the problems of the old world behind. In this imaginary, code, a smart idea, capital, finance, are some of the tools which can potentially rupture this 'new' and 'self-evident' life into being. Such revolutions are accompanied by narratives which claim to reduce the complexities and uncertainties of age-old problems by the fastest means possible. They seem so sure in the solutions they put forward.¹² The quest seems to be, as Geiger (2020) argues, to achieve some sense of certainty that has eschatological leanings.

Such a quest, however, seems to flatten out the bumps, including people, leaving room for only the imaginations of an elite few, often sanctioned as 'economic reason' or 'logic'. These ways of thinking are reductive of the invitation to imagine alternative futures, possibilities, and horizons – they think against uncertainty. Albert Einstein's

¹¹ As discussed in chapter one, there are over 70 cities with 'Silicon' as their prefix: Silicon Cape, Silicon Savannah, Dubai Silicon Oasis, Brazilian Silicon Valley, Silicon Vineyard, Silicon Alley, Silicon Bayou, Silicon Forest, Silicon Harbor, to name only a very few.

¹² This is not to argue that people act assuredly or with a sense of certainty in their work, in practice. Rather, this seems to be the ideal world represented.

famous quote comes to mind: ‘the problems that exist in the world today...cannot be solved by the level of thinking that created them’ (Einstein, n.d.). Or as Strathern puts it in an interview with Joanna Latimer:

‘[...] it’s as though there hadn’t been 150 or 200, 300 years of argument and debate and dispute and alternative ways of thinking, so on and so forth. And we still produce the same problems for ourselves precisely by these habits of thinking. And that matters desperately’ (Strathern & Latimer, 2019, p. 487).

Against this background, I advocate for thinking with uncertainty in coming to know the world around, to think about what cryptocurrencies are and what they might be. In this thesis the term ‘thinking with uncertainty’ has a double meaning: to think with uncertainty as a concept and to think with uncertainty, in the sense of being unsure or indeterminate. In taking such an approach I construct one thread of this thesis, one that questions and disturbs three normative ideas surrounding the ‘cryptocurrency revolution’.

Firstly, I disturb the idea that the ‘cryptocurrency revolution’ (whatever that may be) is taking place in any one place or time. My encounters with cryptocurrencies showed that there are numerous sites: online forums, multi-level marketing projects, that are often concealed as well as processes that are reversed or repeated. Secondly, I disturb the normative conceptualisation of ‘revolution’ and the related terms, ‘newness’ and ‘self-evident knowledge’, that are at stake within the cryptocurrency revolution. Furthermore, against the idea of the ‘cryptocurrency revolution’¹³ overriding the social and political, and disembedding money from the state and the bank, I highlight the inevitably socially embedded nature of cryptocurrencies. To borrow Martinican poet Édouard Glissant’s metaphor, crypto is not simply a boat that exists in the skyline that is steered by the open skies – code, economic reasons, or logic (Glissant, 1997). There are real people huddled in its belly that operate the oars and move the boat –

¹³ The idea of disembedding cryptocurrencies from the state and bank is more part of the early technocratic pioneers’ understanding of the cryptocurrency revolution. Those who came later, after 2017-2018, had a different relationship with the state and bank.

often invisible, or rather, concealed. This thesis highlights the work of those who brandish the oars.

*

In this thesis, I explore the complex and nuanced ways in which people engage with the heightened levels of uncertainty that seem constitutive of the cryptocurrency space. I think with uncertainty as a concept. Though a diverse range of actors inform this thesis, occupying both online and offline spaces, I reflect on three specific groups of people: 1) users of the start-up space in the 'Silicon Roundabout' (Old Street) in London, 2) amateur or retail traders who take to online forums, and 3) investors in Multi-Level Cryptocurrency projects.

These actors occupy a space that is constantly in the process of being made, broken down, and remade, where the value of any cryptocurrency can grow and decline exponentially. This is a space where projects can be made redundant due to shifts in a volatile market – cryptocurrencies can lose most of their value overnight – a space where exchanges can get hacked leaving you with nowhere to go (there is no back up or centralised authority to appeal to), where you can get scammed, where you can lose your life savings (as some of my participants did). However, this is also a place where you can rework conditions of inequality, unsettle relationships between small and big money, and short-circuit the seemingly fixed relationship between £100, £1,000, £1,000,000 that is implied by wage work.

The actors I highlight in this thesis are involved in doing work. That is, they are expending creative energy to bring about some version of what they think the good life to be (Narotzky, 2018; Narotzky & Besnier, 2014). Their work involves attending 'community' gatherings in Silicon cities, taking to online forums, acting as 'scam hunters', and attending large and lavish cryptocurrency-related events. In this thesis I explore how people work to uncover and create possibilities at an uncertain frontier. I reveal the very human and collective strategies that they use to better know the cryptocurrency space. Under conditions of heightened uncertainty, it is not the technocratic and self-evident forms of knowledge, so often put forward by the designers of this space as carving out a 'new future', that have traction, but rather, social and relational modes of knowing – ways of knowing that resonate with

anthropological praxis. I explore this resonance by folding the practices of my participants back into anthropology.

The chapters within this thesis are largely organised around scalar concepts that highlight the relational ways in which people come to know 'crypto' and seek to act in its space. In chapter one, I describe how, under uncertain conditions, people gather and organise themselves through a particular idea of 'community'. In chapter two I take to online message boards to trace how digital folk tales allow a fluid and intersubjective movement between the individual and the collective. Chapter three explores the story behind Gamestop and how 'trickster'-like small-scale investors managed to change the stock price in defiance of dominant market logic. Chapter four turns to history, placing cryptocurrency alongside lotteries and other deliberate engagements with risk that attempt to alter life's odds. Chapter five unpacks the idea of the crypto 'revolution' and explores strategies used by small scale investors to 'scale the world down, and scale themselves up' (Hart, 2014). Chapter six concentrates on some of the rhizomatic and arborescent networks that are used to learn about 'crypto'.

By scaling up and down, possibilities are encountered and knowledge is created, that can, at times and perhaps fleetingly, challenge the hegemonic reasoning of financiers and economists. However, crucially, and at the same time, these strategies are also folded back in as sites of capitalist extraction. Within this thesis I aim to highlight spaces, strategies and practices set in motion by engaging with uncertainty – all characteristic of an increasingly financialised and neoliberal world – that both affirm and subvert neoliberal power structures. In doing so, I highlight the relational and emotional labour of ordinary users who are driving this process, and who have generally remained invisible. It is important to note that the use of the term neoliberal in this thesis is not employed as an analytical term, but rather is used as an ideology of separation and of the pervasive influence of the untrammelled free market.

The heightened uncertainty characteristic of the cryptocurrency world is not an exception to an otherwise stable world, but part of an 'age of uncertainty' (Nowotny, Scott, & Gibbons, 2011). In the next section I attempt to place the volatility, indeterminacy, and uncertain conditions of cryptocurrencies within broader historical trends. By paying attention to political, cultural, and knowledge economies I draw

relations between shifts on the global political stage in the 1970s to the conditions of uncertainty under which we seem to be living today. Such conditions are perpetuated by ecological disasters, crises of all kinds, and the marriage of technocratic and marketised solutions to the most complex issues within societies.

‘Age of uncertainty’, coming of the New Economy, and technocratic ways of knowing

The 1970s are often described as the decade when the centre of gravity of the world economy shifted from nation states to an increasingly global marketised world. It was a decade when actions coordinated through a centralised authority, such as the state in matters of the economy and society, was seen as being increasingly problematic. The state, in the control of a few (albeit democratically elected) individuals, could be corrupted – or so the critique went. The free market was already permeated with the knowledge required for the solution of complex problems – it just had to be set loose. Hayek and Friedman advocated for the retraction of the state and aided in deregulatory processes, allowing for the expansion of the markets into everyday life. For this endeavour, each won the Nobel prize in economics, Hayek in 1974, and Friedman in 1976.

Keynes, Friedman, and Hayek were deeply interested in the idea of uncertainty, and how it should be managed. To them, uncertainty was an epistemic issue, one that pertained not only to the future, but also to how we should understand the world around us. Interconnected ideas - how we understand the world around us, relate to how we understand the future. Whereas Keynes advocated for the state to play a role in engaging with uncertainty, Friedman and Hayek, advocated for the market (Davidson, 2014; Hayek, 2001; Keynes, 1921). The market and its behaviour was to be listened to through statistical modes of reasoning, mathematically inflected understandings of economic reasonings, responding to yield curves, and financial Chartism (C. Zaloom, 2009). Future economists, trained in Hayek and Friedman’s vision, were set loose in Chile to privatise national infrastructure; similarly, they entered post-Soviet states to bring the ideology of the free market to millions; their activities helped build the futures market, and influenced the thinking of British, US and other governments and the policies they enacted (Hickel, 2017). Creating the theoretical frameworks, structures, and conditions where a few strokes of a keyboard

can result in the building of a bridge in India; where the purchasing of complex financial product by Baltimore under the guidance of a global elite bank results in water shortages for the poorest in the city; and where the financier class can hold nation states to ransom (Greece and Goldman Sachs) (Reich, 2015; Wayne, 2009). An unprecedented 'multiplicity of threads links these high-end risk-takers to the everyday bearers (and victims) of risk-based strategies in every society' (Appadurai, 2013, p. 4; Goddard & Narotzky, 2015). Friedman and Hayek's vision of 'the market', framed as an animated entity existing outside society and as the solution to the epistemic issue of uncertainty, brought about a reconfiguration of the relations between the material and non-material, the economic and social, and marked a drastic shift on both the global stage and within everyday life. However, ironically, such an approach brought about instability, lack of fixity, indeterminacy, and indeed chaos, to the lives of many, initiating what Galbraith (1977) called the 'The Age of Uncertainty'.

Indicative of this shift was the leaving behind of traditional industries that had spurred on the advancement of early 20th century capitalism. Between 1910 and 1960 the US Steel Belt manufactured much of the world's steel and was 'the core and pulse of world capitalism' (Mollona, 2005; Narotzky & Goddard, 2018, p. 1). Cities such as Detroit, firmly within the belt, attracted labourers from across the globe. However, 60 years later, Detroit has filed for bankruptcy, the steel belt has become 'America's Rust Belt', and there is now a shift in focus from iron and carbon, to 'silicon' – symbolic of the 'New Economy' (Bowen, 2014; Goddard, 2018, p. 1). A New Economy, brought on by developments in ICT, deregulation, and neoliberalisation, gave rise to 'technopoles' and 'Silicon cities' – areas where the latest technological advancements, chips, computers, software were being manufactured. These were areas strategically designed to be in 'clusters', near universities to attract bright students, near areas of affordable housing, so that workers could work for less whilst pursuing their dreams that would eventually materialise and reward them for confronting uncertainty with work (Porter, 2000; Volpicelli, 2020). For countries across the globe 'Silicon Valley' was the model to replicate to grow empires dented by the decline in traditional industries such as steel, or for emerging economies to overcome systemic inequality. Numerous 'cluster theorists' emerged in the 1990s to describe how cities could be reshaped to cultivate 'creativity' and 'diversity' for the purposes of extracting capital (Volpicelli, 2020). Silicon cities became intimately intertwined with logics of

financialisation and marketisation that were essential for its exponential growth. In the UK, Minister of State for Brexit Opportunities and Government Efficiency Jacob Rees Mogg's vision for post Brexit United Kingdom is 'Singapore on the Thames'.

Academics in the 1980s and 1990s that attempted to make sense of this global political shift highlighted what they theorised as a reduction in fixity. A greater emphasis was placed on movement, and 'career', characteristic of what Sennett describes as 'flexible capitalism' – involving a lack of attachment to a particular place of work, a readiness to abandon the strategies, products, and people we work with (Sennett, 1999). The median time someone stayed in their start-up job in London was two years, with many leaving within the first year (Sullivan, 2018). Similarly to Sennett, Appadurai (2013, p. 241), in thinking through movements within the global cultural economy, argues that such movements have the effect of 'unsettling points of reference, frustrating the search for certainties and displacing *habitus* with conscious choice, justification and representation'. Sennett, and many others, proposed that under these conditions, uncertainty became intimately woven into the social fabric of everyday life, arguing that with flexible capitalism 'uncertainty [is] no longer a concomitant of extraordinary events' but is interlaced into the 'everyday practices of vigorous capitalism' (Amit & Dyck, 2006, p. 90; Boholm, 2003; Narotzky & Besnier, 2014; Nowotny et al., 2011; Sennett, 1999, p. 31). According to these arguments, instability, indeterminacy, and uncertainty are the new norm, with 'Schumpeter's entrepreneur served up as an ideal Everyman' (Sennett, 1999, p. 26).

As well as producing fundamental instabilities and a lack of fixity in everyday life, for miners, those working in steel industries, farmers, and others in more traditional industries, the so called 'New Economy' produced a new class of workers, entrepreneurs, that valorised uncertainty and looked for it as a 'resource' (Esposito, 2011; Goddard, 2018; Irani, 2019). For this class of workers, uncertain frontiers were not only a cause for anxiety, but also a site of possibility from which fortunes could be made. For some, so the argument went, navigating heightened uncertainty, conditions of extreme precarity, often without the support of the state, could potentially reap large rewards (M. S. Fisher & Downey, 2006b). The 'age of uncertainty', it could be argued, created at least two new classes of workers, or perhaps two arenas of work. In one, uncertainty was a source of possibility, and profit (F. H. Knight, 1921), and in the other

uncertainty was the source of instability, precarity, marginalisation, a place where the safety net was retracted (Goddard & Narotzky, 2015). As this thesis highlights, working under conditions of heightened uncertainty can involve oscillating between these two realms (Appadurai, 2013, p. 247; Brouwer, 2002; F. H. Knight, 1921).

The future, the uncertainty of it, its indeterminacy, became a site of fascination, imagination, hope and speculation for many. Within this thesis I describe precisely the group of actors that work under heightened levels of uncertainty *qua* cryptocurrencies. Uncertainty pertaining to the future itself became material, a 'cultural artifact', from which profit could be mined (Appadurai, 2013). A new class of workers: financiers, 'quants', traders, those who worked in tech cities, and economic theoreticians, all looked to guide individuals, companies, cities and nations, through periods of uncertainty. They did so by bringing market solutions to problems – as Hayek and Friedman would have prescribed.

It is perhaps then no great surprise that the 1980s and 1990s also saw the rise of academic works that drew attention to 'technologies of risk' that sought to govern and profit from uncertainty within the 'New Economy'. This was a technocratic approach to engaging with the unknown and uncertain, that, as Appadurai (2013, p. 5) argues, brought about a shift from the politics of possibility to the politics of probability. The New Economy was also constructed by the knowledge economy. Technologies of risk attempted to scale those complexities and uncertainties encountered within local, national, and global domains to the market. Those in finance and economics were adamant that the future and the possibilities it contained could be sifted through with economic and technocratic modes of governance. Ulrich Beck's (1992) and Anthony Giddens's (1990) seminal works on 'risk' were crucial in highlighting that 'risk' was not something inherent in the world but was manufactured in an increasingly marketised and financialised world and through a technocratic mode of knowing and governance. Technologies of risk were much more about social imagination and speculation rather than some 'celestial mechanism' that allowed for the extraction of uncertainty from our daily lives, to be dealt as risk in an external market (Shackle, 1979).

Instead, such attempts to extract uncertainty from our daily lives through technocratic modes of knowing frequently led to the creation of increased uncertainty (Nowotny et

al., 2011; Strathern, 2004). In this thesis, I frame my thinking around ‘uncertainty’ rather than ‘risk’ for the simple reason that the situations faced by those in the financial world, and the actors I describe in my thesis, are all too often acting under conditions of radical uncertainty. They are not engaging with uncertainties that can be reduced to measurable and quantifiable outcomes – as Knight and Keynes might point out – they are not dealing with ‘risk’ (F. H. Knight, 1921). This is in line with recent works of scholarship that have similarly shifted focus from ‘risk’ to ‘uncertainty’ so as to destabilise the assumptions of mainstream economics, finance, and a general technocratic approach to understanding the world around us (Bear, 2020; Beckert & Bronk, 2018; Esposito, 2011; Samimian-Darash & Rabinow, 2015; Tellmann, 2020). Moreover, as will be made evident in this thesis, it is precisely the shift from risk to uncertainty that allows me to look further afield in my anthropological comparisons.

*

Explanations and descriptions of tech-revolutions, including those offered by early pioneers of cryptocurrencies, seem to resonate strongly with the neoliberal economic rationale / logic outlined above (Golumbia, 2016; Irani, 2015). Whereas Hayek and Friedman argued, *contra* Keynes, that the uncertainty of the future, and complex issues of austerity, were best left to markets rather than to planned interventions by a centralised state, a new class of entrepreneurs within Silicon cities, claimed that uncertainty and complex issues are best handled through the combination of writing just the right code, and neoliberal markets (Irani, 2019). The 1990s saw the convergence of information and communication technologies (ICT) and neoliberalism most notably in Silicon Valley, home to numerous start-ups and projects aimed at disrupting and bringing about ‘new frontiers’. Such forms of disruption, and their connection to newly created Nasdaq and financial infrastructures allowed for various actors in the 1990s to intervene in a process where capital grew exponentially (Boyer, 2018, p. 50).¹⁴

¹⁴ As Robert Boyer puts it: ‘The narrative of the New Economy permeated society as a whole, intangible capital frequently eclipsed typical equipment goods; start-ups dictated the speed of the economy; and when they converted into public firms quoted on the stock market, their capitalization exploded and often superseded those of the old economy’ (Boyer, 2018, p. 50).

Early pioneers of cryptocurrencies, and Bitcoin, put forward cryptography as the key means that would enable individuals to interact with each other in a truly free market (Golumbia, 2016). Implicit in this understanding is a centralised notion of power that can be overcome by the writing of the right code, and a 'double disintermediation' from both the bank and the state (Dodd, 2017; Irani, 2015). If Alice and Bob can transact and exchange privately without any surveillance or intervention, then this could potentially be 'revolutionary'. Cryptography enabled politics to be overcome – or so many early pioneers argued (Brunton, 2019; Golumbia, 2016). The complexities of cash, money, politics, and the economy are reduced to challenges that can be 'handled' within an exogenous realm of code, technocracy, and neoliberal markets: within this realm the complexities of money and politics are reduced to a transaction between Alice and Bob – at least in representational form. Such a teleological way of understanding the world, where data and metrics are often put on a pre-destined horizon, are, as highlighted in chapter one, antithetical to building new worlds, and unearthing new possibilities (Geiger, 2020).

*

As many who have worked on technological or economic frontiers have highlighted, there are of course gaps between the models proposed and what actually happens on the ground. To generalise, within this literature, the often invisible cultural and social work that is required to translate social relations into technocratic forms of knowledge is foregrounded (M. S. Fisher & Downey, 2006b; Holmes & Marcus, 2006; Islam, 2015; Riles, 2004). 106 million people now use cryptocurrency exchanges across the globe. A large part of existing scholarship on cryptocurrencies has focused on the 'technocratic dream' of the early pioneers of this space (Brunton, 2019; Dodd, 2014a, 2017; Maurer, Nelms, & Swartz, 2013b; Swartz, 2017). This is hardly surprising since when Maurer and Dodd were writing there were less than a million crypto wallets, and those who were using cryptocurrencies were harder to reach. Discussions of cryptocurrencies were confined to niche forums and mailing lists online. However, since that time, there has been a 'Cambrian explosion' in the number of users (Nelms, Maurer, Swartz, & Mainwaring, 2018, p. 14). Adverts inviting people to partake in the cryptocurrency revolution are plastered around cities across the globe. It is within such a context that I suggest that to focus solely on the technocratic dream would be to play a part in replicating it; to have a pre-destined idea of what cryptocurrencies are; to be

teleological (Riles, 2004). What is needed within this emerging scholarship, as DuPont (2019a) points out, is an ethnographic involvement with those who are using and engaging with cryptocurrencies on the ground.

‘Thinking with uncertainty’

Uncertainty is a polysemous and tricky term to engage with. It can prove slippery, and agile when we try to narrow it down – it is perhaps for this precise reason that it has been of political and ethical interest to many (Critchley, 2014; Derrida & Kamuf, 1993). It can imply a range of emotions: anxiety, anxiousness, hopelessness, hopefulness (Massumi, 2015). It can highlight the failure of a certain form of knowledge to capture something (Strathern, 2004), and it can highlight the indefiniteness of the future (Beckert & Bronk, 2018). It exists in close relation to a state of ambiguity, waste, or indeterminacy (Alexander & Sanchez, 2020). It can imply the partiality of connections of all kinds (Strathern, 2005). It can refer to a vertiginous range of possibilities, or the lack of them (Kierkegaard, 1849). It can imply the unknowability of someone else’s mind (Robbins, 2020). It can imply the site of justice and messianic comings (Derrida, 1998; Derrida & Kamuf, 1993). Or it can simply mean we do not know.

‘Uncertainty’, in common with any other term that finds great quotidian use, such as ‘society’, ‘revolutions’, or ‘community’, exists in relation to varied sets of meanings that become clearer upon knowing context and the conversation taking place. Untangling these various sets of meaning to offer an ‘analytic’ or ‘heuristic device’ might be unproductive and is not the aim of this thesis. Instead, I have drawn attention to the regular use of the term as a mark of its importance, its worthiness of further exploration, and its relevance for this thesis. Emulating much the same tactic as Cherstich, Holbraad, and Tassi (2020) in exploring ‘Revolutions’; Amit and Rapport (2012) in exploring ‘Communities’; and Graeber (2001) in exploring ‘Societies’, I highlight that uncertainty - as Amit argues regarding ‘Communities’ - might be ‘useful to think with’.

‘To think with uncertainty’, is then to accommodate the diverse sets of meaning and possibilities that the term offers. ‘Thinking with uncertainty’ is double-edged in this thesis. It means not only to think with uncertainty as a concept, but also to think with various possibilities and the sense of uncertainty this provokes. Furthermore, it

involves perceiving the indeterminate aspect of uncertainty as an invitation to pay attention to wider context and conversations taking place – much like the Caroline Islanders, mushroom pickers, or migrants mentioned earlier¹⁵ (Alexander & Sanchez, 2020; Derrida, 1992; Tsing, 2017). Extending this approach, I think with uncertainty about cryptocurrencies. I pause the discussions that seem sure of what cryptocurrencies are, and what they offer, and instead approach cryptocurrencies as a site of epistemic uncertainty, to be navigated by paying attention to the activities of those on the ground.

Having argued for a fluid and intuitive understanding of uncertainty, some rough guidance, or situating, might be useful. Uncertainty in this thesis broadly refers to the unknowability the future brings, and the epistemic uncertainty that is part of understanding a system, world, place, or network. Such uncertainties can seem more pressing under a particular political economic system. Like my participants, I approach uncertainty as a cultural or social fact; as something that both acts and presses on individuals, and as something reproduced by actors within a particular system (Appadurai, 2013). In this sense, I depart from approaches that highlight the ‘reduction’ of uncertainty through performativity, narrative economics, psychological approaches, or models (Callon, 2010; MacKenzie, 2008; Shiller, 2019; Tucker & Nelson, 2017; Tuckett & Nikolic, 2017).

In this thesis I draw inspiration from literature that in the past decade has shifted from engagement with risk to uncertainty – to affirm what is at stake (Appadurai, 2013; Bear, 2020; Esposito, 2011; Hart & Ortiz, 2014; Miyazaki, 2013; Riles, 2011; Caitlin Zaloom, 2006). To focus on uncertainty, a subject matter that – as even those within mainstream economics admit – proves difficult to deal with, might be of strategic interest to those critiquing power structures within a neoliberal world (Davidson, 2014; Kay & King, 2020; Keynes, 1921; F. H. Knight, 1921). The concept proves tricky to a discipline that values neat, immediate resolutions to ground decisions to aid in the process of collapsing time and space (Harvey, 1989). Yet, on the other hand,

¹⁵ Though the thesis does not unpack this in great detail, the idea of thinking with uncertainty has been influenced by Derrida’s (1992) work, *The Mystical Foundation of Authority*, in which he argues that for the condition of possibility for ‘justice’ to come one must feel the uncertainty present within the ‘decision’.

anthropology, without the requisite to provide grounding for such immediate actions, has explored the complex, nuanced, and open-ended ways in which people engage with the uncertainty and various related terms.

As Dein (2016) points out in a review article, anthropology has a long history of engaging with uncertainty. Mary Douglas (1985) famously argued that uncertainty can be lived and worked with in diverse sets of ways depending on political and cultural conditions, or on whether people live in egalitarian or hierarchal, collectivist or individualist societies (Douglas, 1985; Scoones & Stirling, 2020). Many have highlighted how statistical configurations of lands, cities, forests are themselves bound up in state activities intended to create certainties where there are none (Hacking, 1990; Scoones & Stirling, 2020; Scott, 2000). Anthropologists exploring post-socialist states have focused on 'uncertain transition' (Burawoy & Verdery, 2000) when 'everything was forever, until it was no more' (Yurchak, 2006). Migration has spurred a great deal of work on complex entanglements of uncertainty, hope, waiting, and 'paused' subjectivities (Elliot, 2015; Pine, 2014; Reichman, 2011). Other anthropologists researching enduring violence have explored storytelling practices as political strategies for coping with disjuncture, crisis, and uncertainty (Jackson, 2002; Liber, 2021). Chance, luck, fortune, and related terms used elsewhere, such as *hasina*, *śakti*, *baraka*, *orenda*, highlight radically different ways of engaging with the uncertain and the unknown giving rise to 'cosmological economies' (da Col, 2012; Graeber, 2012). Works on revolutions have highlighted that when people lock arms and hold hands in defiance of the tyranny of present governance structures, uncertainty is felt as an electric potentiality (Liber, 2021). Literature focusing on the interface between rituals and revolutions has provided rich and complex understandings of the non-linear operation of time that comes alive in uncertain moments (Cherstich et al., 2020). There are of course too many works to highlight here, but many of these approaches share common ground in taking a non-reductive approach to uncertainty. This thesis draws on this rich literature.

Socialising ‘chance money’

In the following section, I will give a brief outline of the anthropological literature on money which this thesis draws on. This section will also provide context for ethnographic and analytical arguments I make throughout this thesis.

*

Proposals to reform the monetary system have, historically, focused on two kinds of disintermediation: from banks, and from the state (Dodd, 2017, p. 6). The Positive Money campaign in the UK, Gode Penge in Denmark, Fair Money in Australia, the Chicago Plan of Frederick Soddy (1926): these all aimed to remove the ability of the banks to print money (ibid). Alternatively, Hayek’s proposal was to denationalise money, and movements under the rhetoric of ‘free market money’ sought to disconnect money from the state. Bitcoin, as it was proposed by early technocratic visionaries, was aiming to disintermediate from both (Dodd, 2017).

Anthropologists and sociologists have of course been quick to point out that Bitcoin and cryptocurrencies are embedded within social relations (Brunton, 2019; Maurer et al., 2013a; Maurer, Swartz, & Mainwaring, 2018). As Dodd (2017, p. 1) puts it, ‘if Bitcoin succeeds in its own terms as an *ideology*, it will fail in practical terms as a form of money’. This thesis certainly agrees with the proposition that money and cryptocurrencies are socially embedded, but crucially it also expands these discussions.

This thesis updates Dodd, Swartz, and Maurer’s depiction of cryptocurrencies within the technocratic communities,¹⁶ and highlights the many other communities in which cryptocurrencies are embedded. Cryptocurrencies are not simply the product of technocrats. Moreover, in this thesis I demonstrate *how* they are socially embedded, and the value and meaning cryptocurrencies have for the people that use it – it is the latter that I wish to consider further here. That is, if crypto is a kind of money, what kind of money is it? Here, in this thesis, I wish to be provocative.

¹⁶ Indeed, at their time of writing, Bitcoin was largely employed by technocratic communities.

There is an idea of money that is relatively unchallenged, even by anthropologists, who have shown the greatest degree of flexibility in thinking about what money is (mussel shells strung on strings, large disks made of limestone, and indeed people) (Fitzpatrick & McKeon, 2020; Patterson, 1985; Zelizer, 1997). It argues that the value of money should be to some extent durable, or perhaps that it is desirable if it were so. The value of money today, should be the value tomorrow. How else can you plan? How else can you buy bread and milk? How else can you quantify the value of someone's labour? How else can you save for the deposit on a house?

Zelizer (1997, p. 25) points out that people create currencies, and ' earmark ' them, when they face difficulties. This is a powerful insight that disturbs the idea of a uniform and fungible money. Zelizer and others highlight the numerous ways that money becomes embedded in the households, prisons, in religious ceremonies conferring new meaning to money, and how it may be spent (Parry & Bloch, 1989; Taussig, 1977; Zelizer, 1997). For example, Dua (2015, p. 510) in discussing money earned by Somali pirates, highlights that money earned through piracy is *haram* and thus is only spent on *haram* activities. In a similar manner, as will be highlighted in chapter four, cryptocurrencies seem to be earmarked as chance money, as money that is useful in thinking through transactions at the limit of wages, and the beginning of one's dreams and hopes. They are not used to buy bread and milk, rather they are, to borrow Bohannan's term (1955, p. 60), employed in a different 'sphere of exchange', in a sphere where what you might wish to purchase: home, car, financial freedom, cannot be purchased by conventional means. In an unequal world, an idea of money that has value is one that exists in an unstable relation to itself, where the fixity of relations between £10, £1,000, £1,000,000 as implied by wages and the official exchange rate, can be reworked.

Zelizer and others who highlight the plurality of money that arises from being socially embedded draw, directly or indirectly, on Karl Polanyi's (1957) '*The Great Transformation*'. Polanyi's work disturbed Simmel's (1900) idea of money as detached from us, as something that eliminates the social and personal nature of transactions. Anthropologists have been greatly influenced by Polanyi's approach, and have, as Hart (2010) and Pickles (2019) point out, attempted to constantly 're-entangle or re-embed the juxtaposition' of impersonal and personal money (Pickles, 2019, p. 57). In

chapter one, I draw influence from this literature to highlight how those within the cryptocurrency start-up space seem to ‘cook money’ – they attempt to socialise the impersonal and ‘acidic’ qualities of cryptocurrencies *qua* money.

These conversations surrounding money as something detached from us versus embedded in social relations, are also entangled in historical discussions surrounding money as corrosive to social relations, and money as potentially liberatory (Hart, 2001). Simmel (1900) for example argued that money’s abstraction and anonymity liberated humans from age-old distinctions of status perhaps but also eroded traditional social relations. Similarly, as Maurer (2013a) and Hart (2010) argue, anthropologists since Mauss and Malinowski have been money sceptics, and have highlighted how money has eroded traditional social relations on the ground. For example, Bohannan within the context of central eastern Nigeria highlighted how ‘general purpose money’ was supplanting the special purpose money of the morally charged spheres of exchanges he studied. Anthropologists since the 1990s however have increasingly pushed back against money as corrosive to social relations, most famously Bloch and Parry (1989) who identified money’s depersonalising effect as a ‘Western folk theory of money’ (Maurer, 2005b). Contra money as corrosive to social relations approach, Hart (2014) argued that ‘money is how we learn to be human’, it extends our sociality, and connects us to one another, and holds great potential to liberate us from structural inequality.

However, such an approach of attempting to re-entangle ‘impersonal money’ in social relations can at times seem to ‘reinforce Simmel’s original position’, in a constant game of cat and mouse (Hart et al., 2010, p. 34; Pickles, 2019). The idea of re-embedding an impersonal money, at the same time as highlighting the social contingency of money, also highlights the divide between money and the people that use it. As Strathern (2020) puts it, ‘a bridge can bring people together as well as divide’.

Focusing on online forums and storytelling practices as a fluid intermediary between the individual and world writ large, chapter two highlights that the stories told online come to influence the value of crypto. That is, stories are not simply capturing esoteric views of some external currency (that needed re-embedding) but are actively part of forming it. Stories of despair, comedy, and courage (*hodl*) can come to have a

significant impact. The ability of memetic stories to do this is often highlighted through the term ‘meme coins’, ‘meme currencies’, or, as crypto is sometimes spoken of in online forums, ‘magic internet money’. This is not to deny the materiality of crypto: the huge amount of energy required, the cables, the satellites; the labour involved; or the bigger forces at work: regulation, state intervention, and so on. These are a crucial part of the story. Rather, in a provocation designed to disturb the idea of an ‘external’ money that needs re-embedding, I argue in chapter two that crypto, and money, might also be considered as constituted by the stories we tell.

Finding my field – actors working with uncertainty, and methodology

My fieldsite is not a geographically bounded space, as is common in contemporary ethnographies. It unravelled and formed a heterogeneous network that traversed online and offline spaces often in quite fluid and distinct ways. It was formed by serendipitous encounters, by following conversations, tracing stories, and being moved by the forces I encountered. In this section, I expand upon the various sites and actors, and explain my approach to engaging with the field.

I interacted with people both online and offline during my fieldwork from July 2018 – July 2020, for a period of 24 months. My offline fieldwork was more conventional participant observation based in London, primarily, near the ‘Silicon Roundabout’ in Old Street where many of the crypto start-ups were based, and where many of the ‘cryptocurrency community’ meet-ups happened. These communities are introduced in a greater depth in chapter one. By attending these meet-ups, I got to know a diverse range of actors: lawyers, cryptocurrency consultants, cryptocurrency educators, bedroom traders, ‘community’ managers, event organisers, ‘miners’, regulators, coders, developers, personal assistants, the curious, multi-level marketeers, derivative traders, a cryptocurrency rapper, ‘scam hunters’, amongst others. The majority of these actors were men. As my fieldwork progressed, and ‘smart money’

came into the space, the demographic of the spaces I occupied within the Silicon Roundabout seemed to become less diverse. These actors make up chapters one, five, and six. During my time in the field, I worked as a 'resident anthropologist' at perhaps the oldest (since 2012) cryptocurrency meet-up in the UK: Coinface (chapter six). In this role, I helped organise events, conducted interviews with others in the crypto space to be uploaded to Coinface's social media and website. Conducting fieldwork in this way, in the offline space in the Silicon Roundabout, I got to know a network of actors who, like me, were circulating around such social events in order to come to know the space.

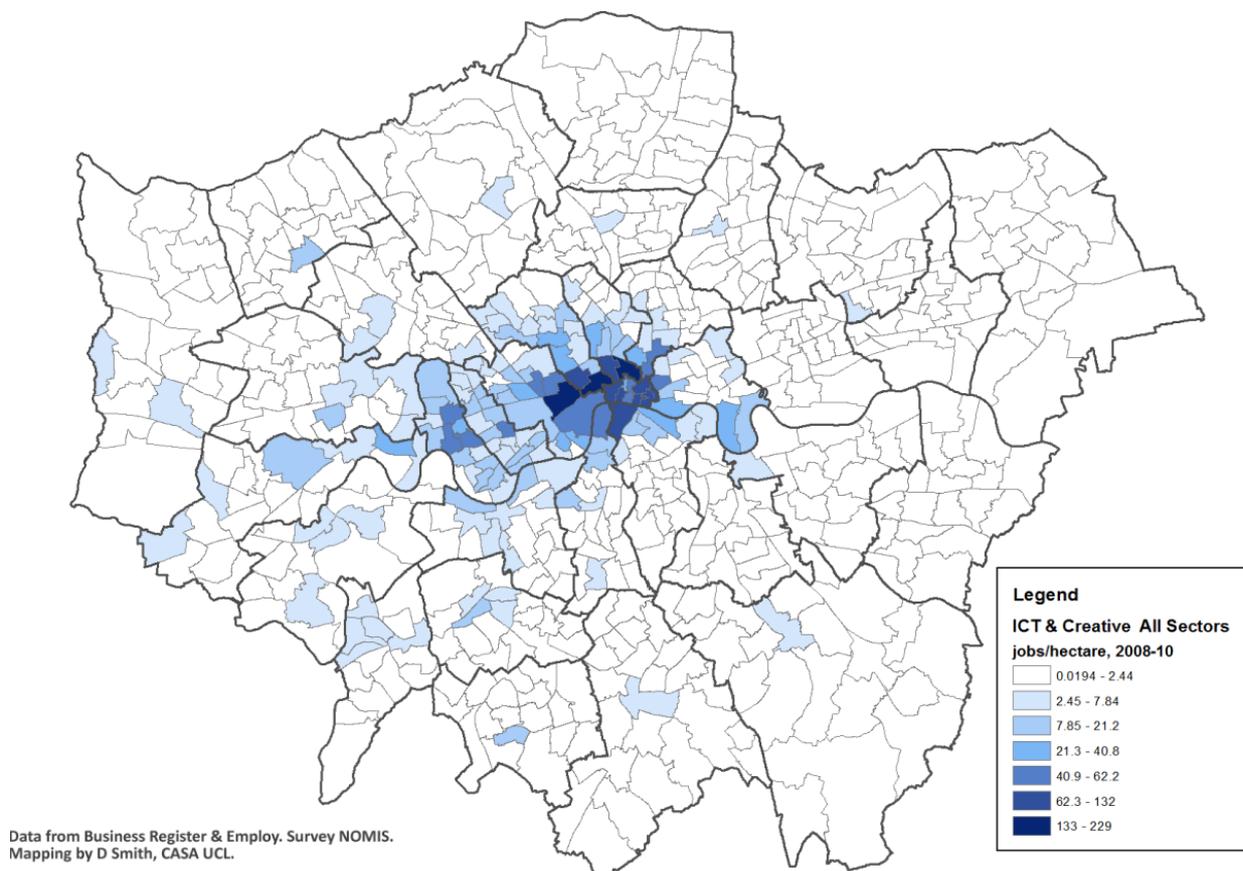


Figure 2 : Map of London with ICT and creative sectors¹⁷.

Many of those I met were working to manufacture 'new frontiers', and to dismantle 'old' ways of doing things. They were inhabitants of a space that as Schumpeter (1950, p. 83) might put it, was in a constant 'process of industrial mutation...incessantly revolutionizing the economic structures *from within*'. To use Beckert and Bronk's

¹⁷ The dark patches correlate with the start-up space I inhabited during fieldwork.

(2018, p. 2) terms, they were driving economic systems towards ‘constant change, novelty, and unending disruption of the present’.

Working with uncertainty, configuring, and building these ‘new frontiers’, it was not ‘technology’ or ‘technocratic’ forms of knowledge that seemed crucial: instead, it was attending the social events, ‘community’ meet-ups, highlighted above. Engaging with these events was vital to forming a knowledge of the patchy and uncertain terrain of a world being built, and to constructing the ‘new frontier’. Perhaps slightly confusingly, to me at least, people seemed to be engaging in a social and relational way to form an understanding of the space. Many *seemed* to be advocating for openness and for non-teleological ways of thinking, a feature that surprised and confused me. The actors also seemed to be engaging in a practice that had strong parallels with ethnography – albeit with some important differences, as I show in chapter one. I explore the parallels or areas of overlap by invoking the term ‘para-ethnography’. Chapters one and six work in tandem to highlight how social relations that are mobilised to engage with uncertain conditions exist in parasitic rather than parallel relations to capital. Creativity and world-building activities fostered by rhizomatic networks are pruned into arborescent forms, as I show in detail in chapter six.

*

The second group of actors I highlight in this thesis are those who take to online forums: 4chan (specifically an influential sub-board called /biz) and Reddit (specifically, a sub-thread called WallStreetBets (WSB)). These actors feature in Chapters two, three, and four. These digital spaces are where what Aris Komporos-Athanasiou (2022) describes as ‘speculative communities’ gathered to discuss the volatile cryptocurrency market. As Komporos-Athanasiou (2022) argues, the vast majority of these actors are young, male, working with uncertainty as a resource, engaging more creatively than the authors of the grand narratives of neoliberalism and financialisation might imagine (*ibid.*). The uncertainty with which these actors work elicits and activates people’s hopes, dreams, anxieties about life, all elements that are present in the stories they tell when they take to online forums. The digital sites I have chosen are immensely important in gaining access to an obscured world that is often difficult to access: people trading from their bedrooms late into the night.

Recent scholarship exploring social digital worlds has focused on various notions of ‘publics’ gathered online as constituting potentially political spaces that mediate between the private and public realms. Terms such as ‘networked publics’ (Varnelis, 2012; Zayani, 2015), ‘hashtag publics’ (Rambukkana, 2015), ‘ad hoc publics’ (Bruns & Burgess, 2014), ‘calculated publics’ (Gillespie, 2014), and ‘engineered publics’ (Holtzhausen, 2016; Tufekci, 2014), are indicative of the increasing power that digital infrastructures such as Twitter, 4chan, Reddit, have on convening people to collectively discuss and coordinate. Such coordinated actions can come to have influence in the offline world – whether to disrupt Trump rallies (Lorenz, Browning, & Frenkel, 2020), organise protests (Bonilla & Rosa, 2015), or to adopt 3,500 gorillas as part of an elaborate online joke (Vincent, 2021).

My explorations of the online forums 4chan and Reddit may be seen as contributing to the literature on ‘publics’. However, rather than identifying these spaces as ‘publics’, I follow a more classical route in identifying these online spaces as some kind of ‘commons’. Indeed, this conceptualisation of a ‘commons’ is also relevant for the offline Silicon city spaces I describe - an idea I discuss in more detail in the thesis Conclusion. In chapter six I translate some of the ideas around the ‘commons’ so as to parallel discussions around rhizomatic and arborescent networks. I choose to use the term ‘commons’ rather than ‘publics’, because the latter could be argued to place less importance on the values, practices, and the ‘folk knowledge’ produced in online spaces. By referring to these spaces as some kind of ‘commons’ I wish to highlight the continuity in practices between people both on and offline. I highlight how the stories told on online forums can travel and come to have profound effects in the offline world: a process of oscillation between on and offline that many others have written about (Alex Golub, 2010; Parks & Floyd, 2006; Reed, 2008; Rheingold, 1994, 2002).¹⁸

¹⁸ In this thesis, I am committed to highlighting the complexities of the spaces that emerge around cryptocurrencies, and as such I do not do extensive analytical work to fold my ethnographic data into the rich literature on the commons. Nevertheless, I wish to tentatively highlight the significant overlap that exists between the spaces I describe and literature on commons.

There were numerous methodological challenges in carrying out this fieldwork. The most pressing perhaps was in considering how to deal with actors on online forums who are anonymous (and indeed on 4chan they refer to each other strictly as ‘anons’). These are actors whose behaviour we cannot observe in the offline space, and who deliberately thwart attempts to know them through their particular brand of humour.¹⁹ For example, in one survey that was sent out to 4chan users to get a sense of their demographic, the results were suspected to be falsified. As one journalist put it, ‘if anyone is going to [deliberately] skew a survey it’s 4chan users’ (Tsotsis, 2010).²⁰ Bearing this warning in mind, I have attempted to interpret the statistics generated about this space based on my experiences.

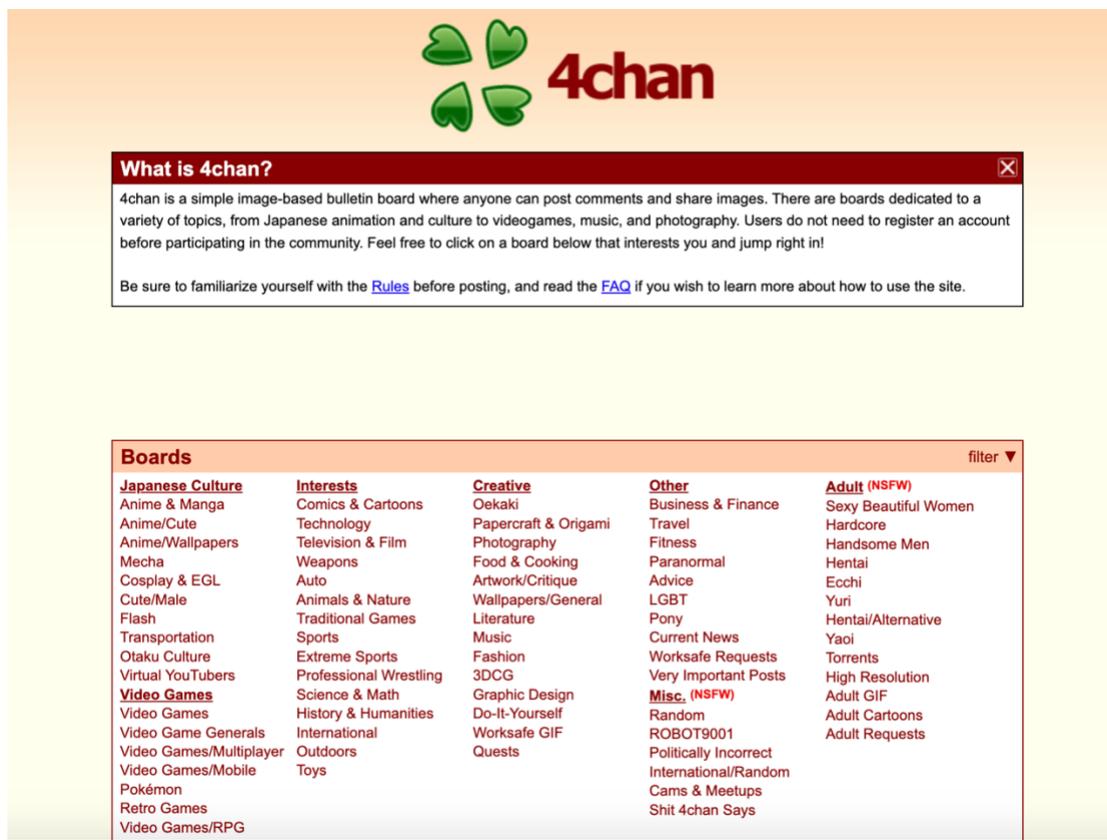


Figure 3: Anons commenting on the price of Ethereum (a cryptocurrency).

¹⁹ This brand of humour is the subject of Chapters two and three.

²⁰ Christopher Poole, founder of 4chan, commenting on the veracity of these types of surveys to unveil the anonymity of 4chan users notes that the results should be ‘taken with a massive grain of salt’ (ibid.).

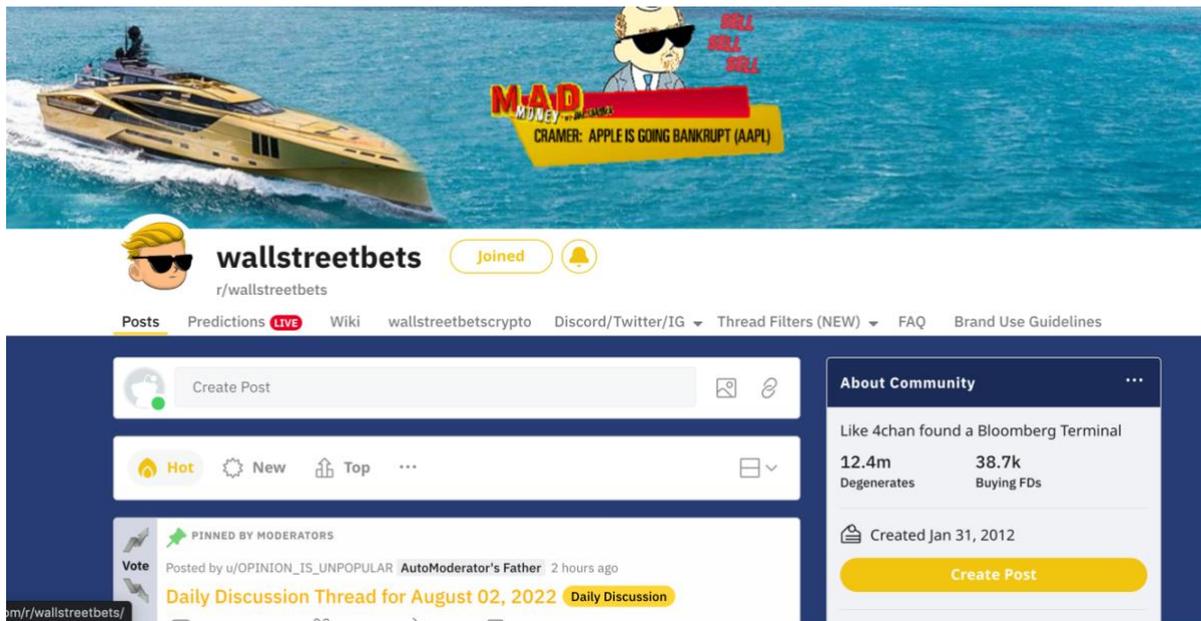


Figure 4: WallStreetBets (WSB)

Those who inhabit the online forums I describe are predominately men – around 70-80%, and white – 70-75% (on both Reddit and 4chan). The age range of those on 4chan appears to be younger. 70-75% on Reddit are between the ages of 18-29, whereas on 4chan 80-85% are between the ages of 18-29, with 4chan having a lower mean age. Most people accessing 4chan do so from their household and bedroom – 80% (data unavailable for Reddit). Those who go on these online forums are mainly from the USA, Canada, UK, Germany, and Australia (genkouhande, 2010; Tsotsis, 2010).

Against this background of anonymity, I did not focus directly on querying the identities of those who inhabit online spaces, but instead focused on the practices of memetic storytelling that seemed crucial to the sociality of the space. Storytelling seemed to create some coherence in what initially seemed like chaotic spaces (4chan and WallStreetBets). Furthermore, by focusing on these stories, glimpses of detail could be gained as to the kinds of people occupying 4chan and WallStreetBets. Chapters two, three and four work together in a layered fashion to offer ‘thickness’, and different categories and analytics by which to understand the previously anonymous online figure. Chapter two offers the figure of ‘the precariat’, chapter three the figure of the

'trickster' and 'noisy trader', chapter four the figures of a 'chance worker' and a 'bedroom trader'.

I engaged with these online forums through 'the digital equivalent of 'deep hanging out' otherwise known as 'lurking' (Coleman, 2015). The latter is an emic term that emerged from 4chan that describes passive observation. By 'lurking' one learns the institutional memory, collective knowledge, and cultural capital needed to inhabit the online space. My ways of engaging with 4chan and Reddit were much the same as those of Coleman (2015), Kozinets (2010), Schimkowsky (2020), and others who have conducted ethnographies of online forums. It involved checking these online forums daily in the morning when I woke up, and in the evening before going to bed. In between these times I would go online frequently to see the reaction of 4chan and Reddit to the happenings of the crypto market. As with Coleman, 'lurking' involved keeping handwritten notes of my observations and maintaining a digital archive. Many of those I knew in the offline space who were engaging with cryptocurrencies frequently joined online forums to engage with the cryptocurrency space, or in passing conversations, they would reference something they read on these forums. As Christina Hine (2015) points out, the internet, and the various digital places that are fostered there, are embedded in social practices that cannot be understood as only being confined to either online or offline spaces.

Crucially, as Tom Boellstorff (2012, 2015b, p. 60) argues, this does not mean that online and offline spaces are now converging – 'online worlds have their own integrity and their own intertextuality'. As chapter two shows, the online environment I describe, owing to its fast paced and anonymous communication style, requires distinct modes of communication, namely memetic storytelling, that are particular to these online spaces. And as participants of 4chan and to a lesser extent WSB point out, these are spaces away from normative discourse – they are not meant for 'normies' (Nagle, 2017). These are discourses had in the fringes and on the boundaries of society – as it is put both by those that inhabit these spaces and by those within the traditional financial world. As such, these are digital 'places of imagination that encompass practices of play, performance creativity, and ritual...the social lifeworlds that emerge within them are very real' (Boellstorff, 2012, p. 1). As I will show, the stories they tell, and the terms they use (e.g., 'hodl', 'meme coins', 'diamond hands') come to have an

impact on both the cryptocurrency market and the traditional market. These are digital places where folk knowledge is formed about the market.

In chapter four, I turn to a combination of ethnography and auto-ethnography and offer up my bedroom – and my experiences of trading cryptocurrencies in it – as a site for ethnographic exploration in order to highlight the social embeddedness of online practices. It was often from my bedroom that I accessed these online forums or read about the recent developments within crypto via CoinDesk, Decrypt, Cointelegraph and other crypto news platforms; I checked the markets; and traded cryptocurrencies. It was from my bedroom that I got to know that ‘bedroom traders’ – often a dismissive term employed in public discourse to describe actors who turn to online forums and trade on hearsay and incomplete information – are in fact working. By offering up my bedroom for ethnographic exploration I also highlight the encroachment of financial logic into the intimate realms of our lives and locate the bedroom as a site where uncertainty is reproduced. My approach coincides with Horst’s in their ethnography of teenagers in Silicon Valley, in ‘include[ing] the bedrooms in which teenagers are located’, thus foregrounding the intimate spaces from which we gain access to online communities and digital worlds. As in Horst’s work, my attention to intimate space highlights the collapsing of work and non-work that is so characteristic of contemporary life (Horst, 2012, p. 61).

Discussions had with ‘bedroom traders’ I describe in chapter four were often highly personal in nature, and many seemed – understandably – hesitant in sharing these stories. Though most said they were happy for me to use their stories with anonymisation, I often sensed some hesitation, and a wanting of assurances as to how their stories would be used. To avoid giving away too much knowledge that was personal and intimate, I amplified the parts of my trading and other experience with the community that mirrored that of my interlocutors.

In chapter five, similar sensitive stories were also uncovered in working with ‘scam hunters’. Here, people were hesitant to share their stories as many scam hunters were those who had been previously ‘scammed’, and many had received threatening messages and emails whilst carrying out their ‘scam hunting’ activities. As a result of this, and because scam hunters are in the background rather than foreground of

chapter five, I draw on my own personal experiences of working as a scam hunter and mirror the experiences of my interlocutors (similar to what I do in chapter four).

There are also other ethical issues that emerge when conducting fieldwork with bedroom traders through online message boards, Telegram groups, and phone calls. Nominally, it becomes harder to negotiate consent over a period of time as some people tended to disappear after a few months of conversation and reappear later on. It was difficult for me to go back and ask whether they were still happy for me to use their stories as part of my research. To deal with these issues, I only used the stories of those who I was in regular contact with, and once again, I used mirroring techniques (amplifying the parts of my experience that mirrored that of my participants).

With some who I had only been in conversation for only a brief while (less than a week), it was difficult to get a feel for whether they were ‘trolling me’ – i.e., being deliberately misleading, or telling genuine stories. This is a particularly important issue to consider when conducting research with online communities. To deal with these issues, my research never relied heavily on any individual story, but looked for resonances between stories I was told.

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Finally, I would like to highlight WhatsApp and Telegram – instant messaging services – as key digital infrastructures that allowed me to inhabit various online and offline worlds. These apps are increasingly important for anthropologists (Hine, 2015; Williams et al., 2022). As I highlight in Chapters one and five, these groups were important in finding familiar faces at conferences, gauging the reaction of others to the happenings of the cryptocurrency market, making contacts, and finding participants. By the end of my fieldwork, I was on ten cryptocurrency WhatsApp groups that I checked frequently (plus 14 others I checked less frequently), six Telegram groups that I checked frequently (and over 100 other Telegram groups I checked much less frequently). It was these groups that I used whilst I was on the move, checked when I woke up, and before I went to bed. The level of immersion, and reflexivity that these groups allowed for whilst I was on the move meant I was never too far from the grip of the cryptocurrency space and the market. WhatsApp and Telegram are exemplary of ‘digital spaces [that are] inextricably woven into our everyday practices of

consumption, [production], work, play and politics' (Ash, Kitchin, & Leszczynski, 2018; Williams et al., 2022).

Broadly speaking, the WhatsApp groups were for people that I engaged with in the start-up space in London and were composed mainly of people I met at the various events in and around the Silicon Roundabout. The Telegram groups I was part of could generally be joined by anyone. While WhatsApp had a limit of 257 participants who could join a group, a Telegram group could theoretically be joined by 200,000 people. During my time in fieldwork, for a period of 16 months from November 2018 to March 2020, I took up a role as an 'administrator' for a group on Telegram. This group, consisting of 500 people, aimed to help people who were 'scammed', or who were in the process of being 'scammed' by fake cryptocurrency projects. Working as an admin for the group and engaging in 'scam hunting' (as other administrators of the group put it) my activities involved listening to the stories of those who had lost significant sums of money, investigating suspicions raised through the group, and providing general advice to those who had been scammed as how to identify fraudulent projects. This work involved countless hours talking via Zoom and Telegram to the many people involved in MLM projects. I was also in touch with other scam hunters who worked in offline spaces in London, and online spaces elsewhere. 'Scam hunting' provided the network of participants (both online and offline) that I draw on to compare Multi-Level Marketing (MLM) cryptocurrency projects with cryptocurrency start-up projects.

Chapter summaries

In chapter one I foreground 'Silicon cities' as an important node in the neoliberal capitalist system where 'revolutions', 'newness', 'frontiers', and 'the cryptocurrency revolution' are being manufactured. I look at one particular Silicon city where this dream is being unpacked: the Silicon Roundabout in London. I describe the relational and collective strategies my participants use to build the 'new frontier' including 'cooking' money. Chapter two focuses on stories told on 4chan.org/biz. I argue that stories told on online forums – key infrastructures within the cryptocurrency space – can be productively understood as digital folktale, and a means of forming folk knowledge. I describe three types of commonly told digital folk stories that highlight

different aspects of this space: stories of despair, comedic stories and stories of courage. These stories highlight the emotional labour that must be expended to engage with the volatile cryptocurrency market.

Chapter three builds upon the previous chapter to focus on another forum – WallStreetBets (WSB). Here I highlight how retail traders, commonly conceptualised as ‘noisy’ traders, were able to amplify this noise through a particular kind of digital story, to coordinate on WSB to briefly disrupt the stock market, through the purchasing of GameStop shares. Members of WSB banded, or ‘hodled’, together to increase the share price of GameStop resulting in huge losses for certain hedge funds. Deploying the classical anthropological figure of ‘the trickster’ this chapter thinks through both the practices of those who take to this forum, and how we might understand this moment. Chapter four highlights how in London, at various times, chance has been a strategy employed by the poor to renegotiate the limitations of wage work and conditions of inequality; by the rich to amass a fortune; and by the state to fund and build infrastructure projects. This historical part provides an alternate history (to the one given by early cypherpunks) within which cryptocurrencies are embedded. It implicitly highlights that crypto cannot simply be understood through some singular historical narrative, but should be understood through the folding in of various historical arcs that converge on this moment. This contributes to the overall argument in this thesis that we should be mindful of the pruning of networks to form a singular idea of economic processes. Part II of this chapter foregrounds the labour – what I call ‘chance work’ undertaken by bedroom traders. The discussion of the labour in this chapter draws on the fieldwork material from chapters two and three.

Chapter five focuses on Multi-Level Marketing (MLM) cryptocurrency projects and Silicon city cryptocurrency projects – worlds that are often presented by Silicon city residents as completely separate. Questioning this idea, I explore their shared concerns about legitimacy, focusing on the questions that absorb both groups: is this real? Is this legit? Employing the idea of ‘stages’ as an ethnographically informed heuristic device and as a pun – as both a temporally bounded region, and a space on which one stands – I highlight unexpected similarities between Silicon city and MLM cryptocurrency ‘revolutions’. In chapter six I return to where I started – the ‘community’ gatherings within the Silicon Roundabout area. Here, I describe the social and

demographic shift that occurred within the social network that I was part of in London as 'smart money' cut into the network. I describe this shift that took place from the perspective of one particular 'community' gathering I came to know well: Coinface – where I worked as a 'resident anthropologist'. Smart money cutting into the network acted to transform it from a heterogeneous network to a more homogeneous one. As a result, the plurality in vision of what crypto is and could be, was transformed into a more totalised and singular vision. A rhizome-like network was domesticated: pruned into a more arborescent network, one where crypto becomes the fruit of the neoliberal market. I describe the effects of smart money cutting into Coinface, as representative of effects felt at other 'community' gatherings I attended.

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In the chapters that follow, ideas mentioned here take root in ethnographic material and grow into new forms, only some of which are anticipated in this introduction. Nestled within these entangled networks are ideas and themes of labour, revolution, commons, and the socially embedded nature of money. In the conclusion I bring some of the ideas and arguments discussed in the chapters into closer relations.

Chapter One:

Cooking Money within a Silicon City

In the fishing village of Pulau, Langkawi, in the early 1980s, Malay men who earned money through ‘relations of exchange’, in this case fishing, saw this activity as ‘antithetical to the house and consanguineal kinship’ (Carsten, 1989, p. 117). Money earned this way had to be mediated by women before it could be actively integrated into the household: it was ‘cooked’ as Janet Carsten famously put it (*ibid*). At about the same time, villagers of Sawaieke on the island of Gau, Central Fiji, under pressure from the existential threat of market relations drank *yaqona* to subvert the power of an impersonal market or ‘the European way’ (Toren, 1989, p. 161). Today, young unaccompanied refugees and migrants are described as creating a sense of ‘community and familiarity’ within a Danish asylum centre through ‘cooking pocket money’ (Versasco, 2022, p. 192). Taking a different approach, in the 1970s, male plantation workers in the southern extremities of Cauca Valley, Colombia, illicitly baptised money to curtail its fecundity for their own ends: to increase their wages (Taussig, 1977).

Anthropologists have of course recorded countless examples of the non-uniformity of money, of people actively negotiating and resisting its impersonal and abstract properties, evidencing its socially embedded (and constituted) nature, or diverting its

'evils' (Parry & Bloch, 1989; Pickles, 2013; Zelizer, 1997). We have an abundance of examples to draw from in thinking about the 'moral economy'. It strikes me as peculiar then that such ideas of money, ideas that perhaps seem 'exotic', are regularly cited as existing 'out there' on the peripheries of empire, often negotiating the effects of capitalist relations. Ways in which people negotiate the impersonality of money, its evils and undesired effects are similarly present within the heart of capitalist enterprise. In this chapter, based on my initial period of fieldwork which took place between July 2018 and June 2019, I show how the power of money, the kind of thinking and practices that it may inform, was similarly attended to by my participants in East London's digital cluster – often known colloquially as the 'Silicon Roundabout'. At this highly technical 'Silicon' site, adjacent to and overlapping with one of the biggest financial hubs in the world, money was 'cooked'. By 'cooking' I mean that work was actively undertaken to divert conversations and practices that may not be conducive to forming the kinds of relations and social spaces that were deemed necessary to engage with the epistemic uncertainty of the space. Money was cooked by many who had come into the space as a result of 2017 'gold rush', of crypto news outlets, online forums, social media, and retail traders, all talking almost exclusively about price, profits, the volatility of the market, and whether the market would go up or down in future. Rather than rely on metrics, data, and technocratic forms of knowledge to understand the space, social relations were deployed to engage with uncertainty, to learn 'the lay of the land' and to make uncertain conditions habitable and productive. As I will show in the latter part of this chapter, emotions played a constitutive role in this abstraction and scaling process.

By cooking money, my participants were attempting to create a 'community' (as many gatherings were suffixed) that extolled values of 'openness', and where people came to form a knowledge of the space relationally. The formation of such relational knowledge at economic frontiers, or within the echelons of economic work, has been described by some as 'para-ethnography' (Holmes & Marcus, 2006; Riles, 2011). Provoked by this, the chapter also describes a second analytical movement where I reflect on and highlight the overlap between the practices that I was involved in (ethnography), with that of my participants, by foregrounding our relationship to uncertainty. As Strathern (2004) has emphasised many times, under conditions of deep uncertainty something resembling ethnographic practices can prove useful. In

the final part of the chapter, I highlight the differences between my practices and those of my participants, and question the extent of ‘openness’, as extolled by my participants, by highlighting the gendered nature of the network. Under conditions where neoliberalism looks increasingly outwards to various practices, including ethnographic-like practices, to deal with its contradictions and fissures, where capital exists in ‘parasitic’ rather than ‘parallel’ relationship to social relations and commoning strategies, I suggest we might wish to highlight these significant areas of non-overlap.

Roadmap

Part I of this chapter opens with a brief geographical and historical location of the kind of space where the infrastructure of crypto is being built – within Silicon cities and technopoles. It foregrounds an ethnographic encounter with a participant who championed the necessary conditions for an ‘open community²¹’ and a general non-teleological approach to engaging with the epistemic uncertainty of the cryptocurrency space. I then highlight the role food plays in marking the boundaries of this ‘community’, and close part I by comparing other actors that engage in ethnographic-like and ethnographic practices under conditions of uncertainty: migrants and anthropologists.

Part II of the chapter focuses on poker nights at the Hippodrome casino in Leicester Square. It highlights the coming together of a group of people to laugh, play, joke, and engage with the emotional aspect of working with uncertainty. By comparing strategies used in poker and *kwin* (a popular card game played in Papua New Guinea), I highlight the constitutive role emotions play in coming to know the cryptocurrency space. In highlighting this point, I draw attention to Euro-American assumptions that emotions are separate and separable from the abstractive processes through which we come to understand the world.

Part III of this chapter considers the overlap between the practices I was involved in and those of my participants. I consider this overlap by exploring the idea of ‘para-

²¹ In this chapter, I deploy and think through ‘community’ as an indigenous term employed by my participants rather than take anything for granted, unless otherwise stated.

ethnography'. I highlight the parasitic relationship between capital and commoning strategies (Narotzky & Besnier, 2014), and argue for a more nuanced understanding of ethnography in the current political economic climate (Ingold, 2014; Shah, 2017).

Part I

Manufacturing revolutions in Silicon cities

In 2010, then prime minister David Cameron stood on a stage in Shoreditch, less than six months into his job, to give a speech to the start-up and tech space. "Silicon Valley is the leading place in the world for high-tech growth and innovation...but there's no reason why it has to be so predominant...something is stirring in East London", he claimed (Volpicelli, 2020). The message was clear: the UK could learn from and build on the successes of Silicon Valley. Cameron's speech and subsequent policy papers were influenced by the 'cluster' theorists of the 1990s, as with many other political leaders across the world. In the 1990s, Michael Porter (2000, p. 700), a professor at Harvard Business School, published several important articles that argued that a country's economic success in the 'New Economy' was not determined by individual companies, but rather by clusters or 'geographic concentration of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions [universities, standard agencies, trade associations]'. He argued, as have many sociologists and anthropologists in the past, that a paradox sits within the era of globalisation: where one might expect a dissolution of location and place, we find in reality that instead there has been an amplification of the importance of specific geographical locations. Porter highlights 'Silicon Valley' as one of the 'world's best-known clusters' (Volpicelli, 2020). In his article, Porter carves out a role for governments and politicians to remove obstacles that may be in the way of the growth of clusters. His amplified words have reached the ears of many a politician, Cameron being just one of many.²²

²² Though as Max Nathan (2014) points out the intervention of Cameron in particular into developing clusters seems to have had little effect - he merely became a cheerleader for a process that was already underway.

Today, over 70 places now have been dubbed 'Silicon' something – Silicon Savannah in Kenya, Silicon Oasis in Dubai, Chilean Valley in Chile, amongst many others (English-Lueck, 2017; Volpicelli, 2020). Manuel Castells (1994), sensitive to the development of these clusters in the 1990s, terms these sites where clusters took root 'technopoles', areas promoted by some combination of central and local government working in association with private companies and universities. Castell's insights are still as relevant as they were in the 1990s, when he argued that many parts of the world dreamed of becoming the next Silicon Valley. Many cities looked to develop areas with concentrations of high-tech firms with 'an opportunistic consultant at hand to provide the magic formula: a small dose of venture capital, a university (invariably termed a 'Technology Institute'), fiscal and institutional incentives to attract high-technology firms, and a degree of support for small businesses' (Castells & Hall, 1994, p. 8).

One common thread that runs across these various Silicon cities is their marriage of entrepreneurialism and technocracy. This marriage is envisioned as the solution to many of the most complex problems in societies (money and digital cash being the interest of this thesis). Lilly Irani's (2015) work for example highlights the playing out of this marriage in India. Her participants orient themselves to Silicon Valley models to envision social change at a rapid pace as opposed to the slow 'contestation of mass democracy or the...coalition across difference' (Irani, 2015, p. 799). These entrepreneurs, 'technical rather than political' (or so they claim), look to crack complexity through writing of just the right code. As ethnographic work by Irani, English-Lueck, Castells, Darrah, and Saveri highlights, these technologically-minded entrepreneurs are 'vigorously denying that they are condemned to live within the old logic of spatial divisions of labor, that locks them into particular functions determined by events long ago' (Castells & Hall, 1994, p. 8; English-Lueck, Darrah, & Saveri, 2002; Irani, 2015). Unmoored from the past through the power of technocracy, these Silicon cities are the contemporary factories where 'new economies', 'new technologies', 'new ways of working', newness – 'de novo' - itself is being manufactured. It is a self-proclaimed site of innovation, where actors are in the business of 'changing the world' (English-Lueck, 2017, p. 9). It is within such a site that I interacted with actors who were attempting to bring about the 'financial revolution' through cryptocurrencies.

Indeed, it is within such a city, the ancestral home that is Silicon Valley, that the cryptocurrency project is rooted. As Redman (2015) points out, ‘the Cypherpunks ideas were born in the heart of Silicon Valley’, early pioneers such as Timothy May, Eric Hughes, St. Jude, and John Gilmore, met and exchanged ideas in a small room in this infamous Silicon city before taking the conversation online to the Cypherpunk mailing list. Further in-person gatherings occurred at various sites around the Silicon Valley (Rose, 1993).

Having taken flight from Silicon Valley, cryptocurrencies are now being unpacked at the Silicon Roundabout in London. Almost three decades after the early meetings organised by Timothy May, people interested in cryptocurrencies gather at ‘community meetup’ events to talk and think about cryptocurrencies. As Max Nathan (2014, p. 5), an Economic geographer who has explored the Silicon Roundabout notes, ‘perhaps paradoxically for a sector built around the Internet, tech companies often prefer face-to-face interaction – especially in their early stages’.

In the rest of the chapter, I explore how a group of actors I came to know within the Silicon Roundabout – a demographic composition oscillating between the technical and non-technical – came to engage with the high level of uncertainty that comes with envisioning alternate ways of doing things and attempting to bring about a ‘financial revolution’. I explore how they come to know this space using methods that seem discordant with the technocratic representation of the world they put forward, that at times seems more ethnographic rather than technocratic.

‘The gold rush’

When I started fieldwork in 2018, there were more varied actors within the space than I had perhaps initially anticipated from conducting a literature review (Dodd, 2014b, 2014a; DuPont, 2019a; Maurer et al., 2013b, 2018; Swartz, 2017). From initial readings, I had expected to meet a largely technocratic crowd: coders and developers, the cypherpunks, and the cryptoanarchists, dedicated to the sole purpose of bringing about a decentralised future. Upon entering the field, I certainly came across this group of people, however they were not the only or main group. The 2017 meteoric rise in

the price of Bitcoin had brought forth a large crowd of people into the cryptocurrency space (this diversity however did not extend to gender). The price of one Bitcoin was under \$1,000 at the beginning of 2017, rising to \$19,000 near the end of the year (Coinmarket, 2022). It was also the year of the infamous Initial Coin Offering (ICO) – the ‘gold rush’ as many of my participants put it. Anyone with an innovative idea could raise money for their project by issuing a token. The rise in price, and the ICO gold rush, brought a large range of actors to this space.

When I started fieldwork in 2018, there were the technical actors one might expect within a Silicon city: coders, developers, and CTOs (Chief Technology Officers) with experience working in financial technology; technical actors within the crypto space from Silicon Valley, Berlin, Switzerland, and India passing through; actors organising hackathons; and computer scientists designing quantum-proof blockchain, amongst others. But attending the gatherings described in this chapter were actors that I had not expected: bedroom traders; ‘scam hunters’; university students running mining rigs from their bedrooms and participating in cloud mining; lawyers offering advice within the regulatory grey area in which people often worked; consultants who had transitioned from more traditional institutional firms like Deloitte; and actors who had migrated from more traditional financial setting such as hedge fund managers, traders, and venture capitalists, to name just a few. Then there were actors who did not work in the space but were curious: students from local universities; those who came after work to events to get to know what the buzz was about; a cryptocurrency rapper; and artists and journalists, among many others.

Although the range of actors coming to occupy the Silicon city was large, and my initial experience of this space was fragmented and chaotic, there were actors within this space attempting to carve out a ‘community’, one they imbued with values of ‘openness’ and sociality. These actors were largely those building the infrastructure of this space – the wallets, the custody solutions, the exchanges, and so on.²³ Despite many of these actors having come as a result of the ‘gold rush’, the actors here were attempting to create a social space where conversations surrounding money, particularly excessive discussion about the price of coins, were to be diverted. By

²³ See glossary for explanation of terms if needed.

envisaging and attempting to create this social space (that wasn't focused exclusively on cryptocurrency price fluctuations) they were, I argue, attempting to cook money.

As with the Malay villagers described by Carsten, money and the relations it induces are seen as being antithetical to the buildings of a space or a form of 'commons' that could aid in the building of the 'New Frontier'. In the case of the Malay fishing village, 'commercial relations of fishing are opposed to the values of reciprocity and equality and the kinship morality of the Malay community...money itself is 'hot' and in some sense 'anti-social' – and as a result it has to be 'cooked' (Carsten, 1989, p. 136). In the case of those within the Silicon city, the kind of relations cryptocurrencies enter into in the market, their awesome fecundity creating opportunities for wealth to be generated, and the stories and conversations that are engendered around price, was similarly seen as being antithetical to the building of a space or a form of 'commons': one that allows people to engage with the uncertainty of the space in a fruitful manner. Money here was similarly 'anti-social' and had to be cooked and kept at bay to allow people to engage with the uncertainty of the space in a fruitful manner. The formation of such a space was necessary to form an understanding of crypto; to come to know and form a knowledge of the space that could be utilised to build the 'New Frontier'.

As I describe in the sections below, the impersonal qualities of money had to be kept at bay through discourses of 'openness', 'community', 'having a curry', eating pizza, drinking beer, playing poker, through WhatsApp 'community guidelines', and through congregating together in an open and friendly way that could not be reduced to the logic of the market (as conventionally understood and reproduced in traditional financial models).

In the following section, I describe an encounter with a participant who was among the most enthusiastic champions of this approach to 'community'. As I emphasise in my description, he seemed to be engaging with the Silicon city in a way that bears some peculiar resemblance and overlap with the work I was engaged in — ethnography.

Postcard²⁴ from the field: a chance encounter with a practitioner of ‘something-like-ethnography’

On the tube journey to meet Harrison, I think long and hard about the questions to ask him and jot them down on my phone. I arrive at the address Harrison posted on the active crypto WhatsApp group that we are both a part of. I head to the members’ lounge and notice that Harrison is sat at the far end with a couple of other people that have also agreed to meet him for a coffee. He is wearing a suit, with the blazer on his chair, a marker of someone — as English-Lueck (2004, p. 24) highlight in their ethnography of Silicon Valley — who has ‘power but [is] without technical competence’. He represents the group of people in this space that I interacted with that are not technically-minded in terms of coding and computing, but are entrepreneurs attracted to the building of this technical infrastructure. I introduce myself and sit down at the table, as the people already there get ready to leave. Harrison explains to me that he has commandeered this desk today to talk to and interview people in the crypto space. “Ah, that’s what I’m here to do!”, I tell Harrison.

Harrison is a prominent and well-known figure in the crypto space. He created the WhatsApp group that we are both in and invited a number of people, and then asked those people to invite interesting people they knew into the group – this is how I got an invite, through a chain of serendipitous encounters. A few hours ago, on a weekday around 2pm, Harrison posted on the group that he would like to meet someone, anyone, in the ‘crypto community’ in London. He was perhaps complicit in what English-Lueck (2004, p. 24) might call the ‘Silicon Valley two-step...just dance with everybody [until] eventually you are player’. Seeing the message, I had an instinctive reaction to put my digital hand up — to be open to these kinds of offers is, of course, part of fieldwork.

I ask Harrison about the WhatsApp group — why did he start it? He tells me about Dunbar’s number. Robin Dunbar is an anthropologist of course, who proposed that humans can only maintain 150 stable relationships. Weirdly, Harrison is not the only one in the space who has used Robin Dunbar to talk about sociality and community,

²⁴ Postcards in this thesis are written more directly from field notes, and as such is written in the present tense to convey a sense of the moment.

it's a number that others in the space have also brought up when discussing the role of community. He extrapolates from this idea to justify why he uses WhatsApp over other chat mediums: Telegram, Discord, Reddit etc. There is a level of sociality that is achievable through WhatsApp. Harrison interacts a lot with this group, he's always posting, acting as admin, commenting on others' posts. Harrison doesn't just have one WhatsApp group like this, he has over 200 groups, each with 257 people, each group pertaining to a different field. But he tells me the cryptocurrency group is the most active by far. He's almost taken aback by its effervescence.

Harrison tells me that he is trying to create a sense of 'community' around this WhatsApp group, and the guidelines he imposes upon the group reveal important aspects of his understanding of that term. When I first joined the group, the guidelines were posted often to remind everyone of the rules of engagement. One of the main rules was that there was to be 'no shilling' – no direct selling of oneself or one's projects. Instead, there was to be an 'open discussion' that could not be had with people posturing in the prow. A shill-er was seen as disrupting the flow of a conversation, with their own agenda, not thinking about the community as a whole. It was someone not to be trusted, too obviously driven by money, too teleological — shillers were not open. Closely tied to shilling is also the discouragement of discussions of price. Again, discussions of price were not seen as conducive to building an open community – such conversations were deemed too emotionally volatile, circular in nature, and unproductive.

This policy of 'no shilling', policing excessive discussion of price, and the extolling of the value of 'open discussions', were common to many other self-proclaimed 'communities' both on- and offline that were attempting to build the infrastructure of the crypto space. 'Shilling' was well established slang used to describe a person who promotes a project for their own interest without contributing to the discussions of the 'community'. Transgressions of this rule were gently, or not so gently, corrected.²⁵

²⁵ When, for example, an active crypto group was having a discussion concerning the recent fork Ethereum was to undergo, and someone who had not contributed much to the group chat posted a link to a project they were working on without much contextualising and socialising, another person posted

The policy of 'no shilling' and excessive discussion of price was set against a backdrop of an incessant focus on the price – by those who were not building the infrastructure of the space in the Silicon city but using the cryptocurrencies for speculative purposes (as we will see in later chapters). Speculation was much more openly admitted as the main reason for purchasing cryptocurrencies in most online forums, WhatsApp, Telegram, TikTok and by users of crypto I knew offline (outside of workers in the Silicon city). Everyone working within the Silicon city was part of these groups, and many claimed that excessive discussion of price, the emotional rollercoaster this invoked, was not becoming of a nuanced discussion, or productive in building the space. Whereas many speculators talked of 'hodling (holding on to dear life)' to deal with a volatile market – an important idea discussed in greater detail in chapter two – those building the infrastructure in the Silicon city emphasised the value of 'BUIDL' (a deliberate misspelling of build). BUIDL was the rally call to forget the price, the emotional volatility that came with a wildly fluctuating market, the excessive discussion of price, and focus on building the infrastructure of the space.

In encountering Harrison, I was somewhat surprised that a prominent and well-known figure like him was engaging with 'anyone' interested in the space, including lowly anthropologists, students, and even those without jobs, at 2pm on a working day.²⁶ Having conducted fieldwork with investment bankers and financial lawyers during my master's degree, I was aware how others within a more traditional sector were aware of the costing of their time. I pressed Harrison and asked him why he was interacting so regularly with the WhatsApp group, why he was meeting up with anyone that was willing to meet him? "What's the purpose here? Do you hire people to read these messages?" – I asked. He replied emphatically. "No! – you have to touch the system yourself!" Harrison bends his elbows and brings his hands to his chest level and wiggles his fingers slightly in a playful way to demonstrate touching the system kinaesthetically.

'no shilling please'. The administrator asked the poster to delete the comments – something that has occurred many times, especially in the early stages of my fieldwork.

²⁶ There was indeed as English-Lueck notes within Silicon Valley a blurred boundary between what counted as work, and what did not, within this space (English-Lueck, 2004).

He went on to argue that one needs to be ‘open, random and supportive’ in interacting with people in this space. He tells me that through engaging with the crypto space in this way he hopes to abstract an understanding of the cryptocurrency space, and the complex dynamics that were evolving. Throughout the interview Harrison is sketching notes of our conversations on his notepad, as am I, and near the end of the conversation, he pulls out his phone and asks if he could record a brief interview about who I am and what I do within the space. We do so, and this short video clip is uploaded to the WhatsApp group – so others in the ‘community’ know who I am. For the next couple of months, the WhatsApp group is full of similar interviews with others who work within the crypto space. As I leave the interview and check my phone before getting on the tube, I get a message from Harrison. ‘Remember O – R – S, Open-Random-Supportive’.

Pizza, beer, and curry

The encounter with Harrison was somewhat jarring. It caught me off guard to see something that resembled ethnographic practices being reflected back at me. Harrison’ positioning as an open-minded investigator was unusually pronounced but not unique. It was rather an amplification of a more general tendency within the space that I encountered. There were many others I spoke to at gatherings and individually that put a similar idea of community forward. Moreover, these ideas of an open, social ‘community’, unmoved by excessive discussions of price, were similarly communicated through the ritualistic consumption of pizza, beer and curry, so crucial to life in the Silicon city.

For example, when I first met Lisa, host of Crypto Curry Club²⁷, near the beginning of my fieldwork, I confided that I was struggling to meet people within the space (I did not know at the time that the Curry Club existed). She said something in that first encounter that has stuck in my head ever since. She placed both her palms flat on the table, her eyes wide open, leant forward and said: “everyone knows everyone in this space!” I remember this moment vividly as I was desperately searching for the social, a network of close relations, in what appeared to be a highly technical and dispersed world. I remember Lisa describing her Curry Club as a place where people within the

²⁷ Often people referred to it simply as the Curry Club.

'crypto community' can come and have a chat about what was happening in the place over a curry without people having an agenda. Lisa evoked 'curry' in a way that seemed to imply there were some egalitarian forces at work. I remember the way Lisa portrayed the club, the ease of it, what could be simpler and more social and open than sitting down to have a curry? Despite the term 'Club' appearing in the name of the group, she also thought of it as a place where the 'crypto community' comes to meet.



Figure 5: Crypto Curry Club.



Figure 6: Food at Crypto Curry Club.

At Coinface, a 'cryptocurrency community' I worked for during fieldwork and attended regularly (subject of chapter six), Brian the founder was religiously committed to providing free beer and pizza to the attendees. We would often have around 100 people attend, and Brian pointed out that it was only once that free pizza was not on offer (due to a fault by the pizza company). It seemed to align with Brian's dedication to creating a welcoming environment that would allow conversations and ideas to flow freely, away from the speculative and emotive discussion of prices – something he found abhorrent. He expressed fervently that if this space was going to be built, it would only happen through different groups of people coming together, to talk openly and freely, exchanging ideas and knowledge, not through speculating on what coin was going to move up in price.

As many anthropologists have highlighted, food is of course not simply an inert object to be consumed. It conveys complex systems of meaning, and marks social spaces; 'food categories...encode social events' (Douglas, 1974, p. 61). Levi-Strauss famously points out that certain foods are consumed 'not because they are 'good to eat' but because they are 'good to think' with (Lévi-Strauss, 1964). Pizza and beer were similarly important markers of a space where one could think in an 'open' manner,

think through ideas, and engage in a non-hierarchical manner. It was much the same in other start-up spaces as well. As WeWork, the provider of co-working spaces for many technopoles point out in their tip to create a 'start-up culture', pizza and beer are key: 'time zones, distance, and language may divide us, but pizza, beer, and Sriracha sauce set the tone for our company' (Alroy, 2014). Similarly, Chandi Doulatramani (2019) points out, in Bangalore's HSL layout (another Silicon site), beer and pizza are similarly used to communicate a sense of 'openness' and an 'open door policy'.

Many attending the Curry Club, Coinface, Crypto Poker Club and other events, were like Harrison, coming to get, what one of my participants put as, "the pulse of the community". Others emphasised that attending these gatherings was necessary to get to know what this space was *really* about. Many put forward that this was only possible in spaces like these where there were not excessive discussions or speculative activities taking place. Beer, pizza, and curry were markers of such a space. Through coming together and cooking money in this way, a space was being formed, that would allow for the knowledge required to build the infrastructures of cryptocurrency to emerge.

Ethnographic-like practices under conditions of uncertainty

Harrison, Lisa, and other attendees of Coinface and the Curry Club within the Silicon city were cooking money and turning to social and relational forms of knowledge practices to form an understanding of a world in flux. Depending on metrics, data, and information readily available online through 'the whitepaper' (the technical outlining of the project) was, as some of my participants argued, not only insufficient but potentially misleading.

For example, a friend who worked as a developer for a crypto project told me he felt uncomfortable in having to break down the number of entries he was making to GitHub (an online software development platform used for storing, tracking, and collaborating on software projects) to create the impression there was a great deal of activity and buzz around the project. As chapter five highlights, many start-ups and crypto projects in the space were in the business of, to borrow a provocative term, 'cooking the

books',²⁸ to create an impression that the future being imagined was just around the corner, that the crypto project was doing well. Under these conditions, numbers, data, and metrics, were seen as unreliable sources in coming to know what was *really* happening within the space. 'Cooking the books', telling stories that inflate the value of a company are familiar all over. For example, Boje, Gardner, and Smith (2006) similarly highlight how numbers, data, and metrics were involved in conducting a 'metatheatrical'; telling a story about Enron to attempt to inflate the value of their stock. As Tsing (2000) points out such forms of theatre, spectacles, and problematic storytelling, where the represented world is wildly out of sync with reality, is even more problematic within the start-up world. Moreover, the threat of fake projects and scammers made the problem of coming to know this landscape, and the potential it held, intense to say the least.

There is a great deal of similarity here with the work of Holmes and Marcus who similarly found their actors turning to relational knowledge practices in times of deep uncertainty – a practice they read as 'para-ethnography'. In *Fast Capitalism: Para-ethnography and the Rise of the Symbolic Analyst*, Holmes and Marcus (2006, p. 51) highlight how the Federal Open Market Committee (FOMC), a board of the most powerful central bankers turned to 'para-ethnography', rather than to the vast quantities of data available to them, to make a crucial decision with 'marked anxiety about the state of the economy'. They highlight how these central bankers evoked the term 'anecdotal data' and reports during moments of 'critical deliberation and uncertainty' (Holmes & Marcus, 2006, p. 50). Anecdotal does not mean 'informal observations' or 'casual asides' as the term may suggest but rather these reports 'constitute a sophisticated means of tracking and interpreting the economy and endowing it with social context and meaning' (Holmes & Marcus, 2006, p. 57). The board of directors sought the on-the-ground knowledge of 'informant-bankers, manufacturers, retailers, educators, union leaders, representatives of governmental and non-governmental agencies' (Holmes & Marcus, 2006, p. 60). These interlocutors

²⁸ Cooking the books means to inflate the value of the company through telling a particular story through accounts, numbers, models, and so on. People cook money precisely to divert these kinds of stories that inflate the value of a company, or perhaps give a false impression.

provided the FOMC with knowledge of the 'profound and elusive forces guiding the economy' in a time of uncertainty (ibid).

Holmes and Marcus argue that under conditions of uncertainty and change, incoming data seems to 'lag' and not be enough to make decisions for those subservient to a technocratic ethos. Islam (2015, p. 4) argues 'para-ethnographic analysis allows organisational actors to align their analyses with practice by avoiding the inevitable breaches and lags between formal systems and lived realities'. The 'inherently social character' of the anecdotal reports provided 'agile purchase on the contemporary' (Holmes and Marcus, 2006, p. 61). What made the reports persuasive was the interlocuters' experience, judgement and their 'feel'. A greater weight was given to the 'structure of feelings' that undergirded the economy, crucially, eluded through ethnographic-like practices rather than deciphering vast quantities of data as though an oracle (Holmes & Marcus, 2006, p. 57). Engaging with emotions is part of abstracting an understanding of the economy (see part II). The 'para-ethnography' was multi-sited and, crucially, also allowed them to capture information on the wide, fragmented landscape of the US economy and how it fitted together.

Though Holmes and Marcus do not theorise explicitly, it is striking that in their ethnography, it is in times of deep uncertainty their participants turned to 'para-ethnographic' practices. They argue that when those in the financial and economic world 'anticipate the future' and make the 'future a task that must be confronted now' it can have a 'deeply unsettling effect'. For Holmes and Marcus (2006, p. 54), it is a method that is not simply 'an aspect of expert practice, but rather is inlaid in the architecture of a future-oriented contemporary'. Strathern (2004, p. 5) thinks along similar lines in pointing out that anthropologists coalesce around crisis and uncertainty, at points where existing modes of thinking and reason are disrupted, where a form of knowledge that is based on 'open-ended, non-linear methods of data collection' might be desirable.

In the face of uncertainty and working within a field that is constantly looking towards the future, my participants, most strikingly Harrison, seemed to turn to a social and relational form of knowledge practice that resembled, at least upon initial analytical glance, ethnography. Harrison and others attempted to cook money and mobilised

social relations through invoking the term ‘community’ – beer, pizza, and curry were often the markers of such a ‘community’. Here they embraced values of being ‘open, random, and supportive’, and thinking in a non-teleological manner, to engage with a highly uncertain space to form the kind of knowledge that was necessary to build the infrastructures of cryptocurrency. For Harrison, it seemed, social relations were to be activated and energised through being open in one’s encounters: being open to meet anyone, including lowly PhD students, and others who could not help him in any obvious way.

A slight detour: other ethnographic-like practitioners working under conditions of epistemic uncertainty

At this point I wish to take a brief detour to highlight others who turn to ethnographic and ethnographic-like practices under conditions of epistemic uncertainty: migrants and anthropologists and reflect further on the term ‘para-ethnography’.

The term ‘para-ethnography’ emerged amid ethnographers finding themselves conducting fieldwork within organisational structures. It involves the idea that those in contemporary workplaces are also reflexive actors involved in theorising the cultural world around them. Islam argues that the term ‘explores what it means for ethnographers to loosen their hold on ethnographic authority, and take seriously the efforts of their informants in producing academically relevant knowledge’ (Islam, 2015, p. 2). However, as he notes, it is a term that seems reserved for the professional elite, for those working within the echelons of economic work, and ‘knowledge economies’. It emphasises the struggles of informants working within sites ‘dominated by technocratic ethos’ who often come against the limits of expert knowledge to understand the world around them (Alvesson, Hardy, & Harley, 2008; Czarniawska, 2012; Reichman, 2011, p. 555). However, as Reichman (2011) highlights in his work among migrants in Honduras, it is not just the elite that form ‘paraethnographic’ knowledge as is so often highlighted, but also migrants. He highlights how under conditions of profound uncertainty, migrants leaving from La Quebrada come to form a knowledge of the migratory pathway through turning to a relational form of knowledge and relying upon a sort of transient commons. The knowledge they form is often at odds with armchair non-migrants, who have their own particular

understandings of the migratory pathway. Reichman follows migrants who have fallen on hard times as a result in the decline of world coffee prices, looking to migrate to the US to find ways out of debt. Going out into their 'field' – the geographical terrain that crosses the border — migrants and returnees create knowledge in the face of the uncertainty involved in travel using social relations. In reflecting on their journeys, movement, and social relations, they 'come to form a nuanced understanding of the migratory pathway, and situate their local and personal experiences within broader structural frames' (Reichman, 2011, p. 556). This form of knowledge critiques and 'defetishizes local systems of value' of armchair non-migrants 'through macrostructural relationships' (ibid). That is, the social relationships and immersed experience of migration, formed under conditions of uncertainty, help to draw new structural epistemic relations to understand its experience. Such forms of 'para-ethnographic' knowledge allow for the questioning of existing epistemes and knowledge practices, highlighting alternate possibilities.

Similarly, for us as anthropologists, the field we are to enter *is* a site of epistemic uncertainty – one that we are to engage with via a relational form of knowledge practice we call ethnography. The kind of knowledge that we produce cannot be anticipated from the metaphorical desk or through epiphanies that emerge from staring at fires whilst sitting on sofas on a wintery day. We are often told to engage with the field through being 'open' to our surroundings, and to work against any teleological impulses to construct knowledge along any pre-ordained pathways. We are to perturb those calcifying tendencies that we may have built from writing funding proposals to obtain money – the presence of institutional money, to obtain it, seems to require a certain teleological approach to storytelling, one that is not particularly open to uncertainty. With few exceptions, it would be ill advised to write in your funding application that you do not know what you will find in the field. However, once in the field we also in some sense 'cook money', so that the knowledge we form comes from the ground, from the social life we encounter, rather than from the flow of money. As Strathern (1999, p. 9) puts it, 'the would-be ethnographer gathers material whose use cannot be foreseen, facts and issues collected with little knowledge as to their connections'. The uncertainty of the field refracts our expectations and anticipations to produce a form of knowledge that is indexed by surprise, 'dazzle', and moments of serendipity (Strathern, 1999, p. 11). The relationships we form are to be 'valued for

their own sake, any resulting information is residual – often initially unknown – product’ (ibid). Well, that’s the idea anyway.

These were the values Harrison and others within the field seemed to be extolling in engaging with the uncertainty of the space they found themselves in. ‘Community’ was often evoked in conversation and became used in the naming of various meetups (‘Coinface community’, ‘Ethereum community’, ‘Grin community meetup’ etc.). ‘Community’ was mobilised by Harrison to create his fieldsite of actors within this space, similarly a fieldsite where he was unsure what exactly was to be found. This ‘community’ was to be interacted with via keeping at bay a certain kind of teleological thinking that accompanies money and leaning into a sort of thinking that anthropologists should be familiar with, or at least aspire to – one that is social, open-ended, and non-linear. In taking such an approach, Harrison, Daniel Reichman’s returning migrants, and Marcus and Holme’s FOMC committee, were mapping and coming to know the world around them.

My argument here is not that my participants are engaged in ‘para-ethnography’. Rather, what I wish to highlight is an affinity between uncertainty and something that resembles ethnographic-like practices. This approach engages with epistemic uncertainty in a way that is open, non-linear, and non-teleological, where understandings of the world come from the ground rather than along any pre-ordained pathways. Such an affinity is read by *some* as paraethnographic. I stop short of arguing that my participants are engaged in ethnographic or ‘para-ethnography’ for that matter and take up this affinity and overlap in part III of this chapter.

*

In the next part of this chapter, I paint an ethnographic picture of other actors that came under the banner of ‘community’ at a regular poker gathering in Leicester Square, at the Hippodrome Casino. Actors here similarly espoused the values of an ‘open’ community, non-linear forms of knowledge gathering, to get the ‘pulse’ of the cryptocurrency space. Using this ethnography and employing poker as a simulacrum for the crypto space, I highlight the playing out of many of the values highlighted throughout the chapter, but crucially, I advance the argument by theorising and emphasising the role emotions come to play in abstracting an understanding of the

cryptocurrency space. Cooking money was not simply a strategic way of engaging with uncertainty, it was also necessary to engage collectively with emotions that come from working within a volatile and uncertain environment (Sennett, 1999). Engaging with emotions does not only make the space more habitable but is also a crucial part of coming to know this space.

Part II: Cryptocurrency Poker Club

A Postcard from the field: Crypto Poker Club²⁹

I am at the Hippodrome Casino in Leicester Square navigating through a crowded room. There are plenty of familiar faces here. I manoeuvre through the room with a beer in my hand and find an opportune moment to speak to Rob, the founder of this gathering: the Crypto Poker Club. I have met and talked to him plenty of times before. He is the CEO of a start-up building a cryptocurrency wallet.³⁰ After a few moments chatting, I ask him outright, why was he starting this gathering, considering the amount of labour, time, and resource this would involve? He responds in the following way, with a beer in hand, talking loudly to be heard above the loud chatter in the room.

“The main reason is to support the community. Because people were turning up to events and getting pitched project after project. A few people I know were saying, I don’t think I’m going to any more pitch events, I’ve had enough of it. I was worried we were going to become siloed as an industry...let’s organise something that everyone can enjoy, so I set up an event around poker...someone from the London Blockchain Mafia group [a Telegram group] suggested poker in particular...”

The poker nights happen once a month, a private room is hired within the casino, and 50-60 players from the cryptocurrency space play in a tournament-style game. Those who make it to the final rounds get paid. I look forward to these games, it appeals to the gambler in me. The games are social in nature, but they matter. There is always a

²⁹ The recounting of this event is told in the present tense to capture the scene. Reverts to past tense thereafter.

³⁰ A cryptocurrency wallet is where cryptocurrencies are stored (see glossary for further details).

buzz and general excitement in the air. It costs £70 to access this buzz and excitement – a steep price. Before the games started, we would normally make our way to the top floor of the Hippodrome to have a drink, eat snacks, and the smokers would smoke.



Figure 7: Sign for Crypto Poker Club at Hippodrome Leicester Square Casino

Once inside the private room, waiters criss-cross, serving drinks as people play the game, talk, laugh, and shout. Women in tightly-bound corsets move around the room to offer their service of back massages to the largely male attendees. Every now and then, I hear shouts of “All in!!”, as a player puts all his chips on the line. Sometimes a small crowd might gather around to watch hands unfold. The dealer turns over the last two cards slowly – complicit in the drama unfolding around him. A roar can be heard should a player hit a card they need whilst being probabilistically behind. Should a player bust out, not catch the cards they need, they might turn to play another game that seemed to engage with a similar heightened level of uncertainty: the game of crypto.

“This can’t just be your work”

There was always a great sense of familiarity between the people that attended the poker gatherings. People seemed to know one another, there was more laughing, more drinking where you tip the beer bottle up to finish the last dregs, rather than politely take a sip before placing the bottle on a designated beer mat. There was generally more disorder (in comparison to conferences and networking events) in terms of the flow of people and conversations, as people with jokes or quick retorts butted in to disrupt the flow of someone speaking – disruptions, disorder, and entropy that come from ease and familiarity.³¹ People seemed excited to be there, excited to talk about crypto, their ideas, what was happening within the space, who they suspected of being a scammer, who had a good project idea, what their trips to other conferences and events were like, how to navigate the regulatory landscape, who the good lawyers were, who seemed to know what they were doing, and who did not. There was generally a buzz and excitement in this setting that I had not expected or experienced at other ‘networking events’ I had attended in other industries. Others who had migrated across from more traditional institutional settings to this space similarly affirmed this sentiment.

Near the early stages of my fieldwork, at Coinface, the Curry Club, and Poker Club, there was often a mixture of people from both outside and within the traditional financial and institutional world. Constitution of a space with actors unlikely to meet otherwise was again put to me as a sign of the openness of the space. Gillian Tett (2020b) asks in an FT article titled ‘Suits v Hoodies: the cryptocurrency battle’, if a ‘pinstripe suit can be combined with a hoodie?’, a feat since achieved by the chancellor Rishi Sunak. She uses this question to highlight the mixing of two different groups within the cryptocurrency world. She writes, ‘last year [2019] the central banking community received a shocking challenge [from] Facebook, a tech group with a freewheeling, hoodie-wearing culture’ (ibid). She concludes by wondering what would emerge from the ‘unlikely hybrid of hoodies and suits’ (Tett, 2020b). Though it is

³¹ But it was also not chaos, no one ever seemed to get too drunk, there were also people that came to just show their faces, who seemed to be there for more strategic reasons, who seemed less social, those who were politely sipping rather than unselfconsciously draining their beer and looking for the next.

debatable to what extent Facebook is symbolic of a 'hoodie-culture', Tett does capture the contrasting and surprising mixture of people within the space. This contrast can be scaled down to the self-conscious 'community' that assembled in Shoreditch.

On one particular evening of playing poker, I was seated at a table. To my left was the CEO of a cryptocurrency exchange and to my right was a student running a mining rig from his university dorm room. I entered conversation with both during quiet periods of the game. "This cannot just be your work", said the CEO as he put forward his bet into the middle of the table, before continuing to speak. "If it was you wouldn't last very long here!". The student to my right, and a couple of other players nodded knowingly whilst inspecting the cards on the table. Another player chimed in to comment that "you just end up going to drinks...conferences, pubs with everyone, and sometimes it feels like work, and sometimes it doesn't". Countless others have echoed this sentiment within the start-up crypto space. I remember vividly one participant from the start-up space on stage at a conference in conversation with someone from more a traditional financial setting. He picked up his bottle of beer and took a large sip, before turning to the audience to say, "I'm from the start-up world, I can drink when I want".



Figure 8: Playing poker at Crypto Poker Club.

These comments resonate strongly with English-Lueck's (2004, p. 21) argument that within Silicon cities 'what counts as work has become ambiguous, diverse and subject to interpretation'. Many academic works highlight the strategic importance of such events and so-called communities as part of the 'hidden infrastructure that must be maintained to do knowledge work' in a space that is constantly fracturing and re-configuring (Castells & Hall, 1994; English-Lueck, 2004, p. 22; English-Lueck et al., 2002; Irani, 2015). Through these hidden infrastructures 'intelligence must be gathered about things, people, places, and rhythms' (English-Lueck, 2004, p. 21). This kind of work is what Holmes and Marcus (2006) might term 'para-ethnographic'. This of course fits more broadly within the arc of anthropological scholarship that have highlighted the complexifying and blurring of boundary between work/non-work in the contemporary working environment (Gibson-Graham, 2006; Goddard, 2018). As Auslander (2003, p. 3) notes, since the start of the seventeenth century, 'work' was

put forward as being rational, a place where emotions and the irrational are diverted to separate spheres of the religious and domestic. However, contemporary modern work practices, are 'among the most complex ritual systems ever developed, all the more powerful for their seeming transparency and naturalness' (ibid).

Despite the many social gatherings, attending of events, lengthy interviews with animated participants talking to me about their jobs for hours, I must confess to an emotion that I felt near the start of my fieldwork: boredom and slight puzzlement. Not all the time, just sometimes. "Why did these people not go home after a long day of gruelling work to relax?", I sometimes felt when people were trying to fit in another order of drinks before last orders were called at the bar. Despite policies of no shilling or talking excessively about price, these rules were often broken in drunken moments as people speculated about the price Bitcoin, Ethereum, and Dogecoin will reach in the future. Such lengthy discussion about what may happen next, or what regulations may come in, were tainted with moments of boredom for me (most often during the early stages of my fieldwork).

In the following section, I engage in two movements of spiralling in and out of poker as a simulacrum for the crypto space (and ethnography implicitly). I spiral into the mechanisms of the card game being played above, poker, and compare it to *kwin* (a card game popular in Papua New Guinea) to highlight strategies employed within the crypto space to engage with uncertainty (discussed at length above). I then spiral out to highlight how a mechanism present within this game helped me understand the emotional labour involved in this game, and the feeling of boredom and slight puzzlement I felt at the start. In spiralling in and out of examining the mechanism of the game, I further highlight the relationship between uncertainty, openness, and diverting or subverting the apparent properties of money.

Spiral in: poker and kwin as simulacrum of crypto and the Kula

Poker and speculative capitalism are often compared. Bjerg (2011, p. 199) in *Poker: The Parody of Capitalism* argues that the similarity between the two is so stark that it can be 'difficult to distinguish the play world of poker from the real world of capitalist economy'. I do not think it is a coincidence that the London Blockchain Mafia group

suggested poker as the focus of a social event. As Schüll (2012) points out the games we play provide ‘cultural clues’ to the times we live in, or as Caillois puts it: ‘it is not absurd to try diagnosing a civilization on terms of the games that are especially popular there’ (Caillois & Barash, 1958, p. 83).

I do not try to diagnose this group of people through poker or argue that this game captures exactly the complexity and particularity of the work that my participants were engaged in, but by comparing it with *kwin*, I highlight how both these card games, and their players, seem to embark on remarkably similar strategies to engaging with uncertainty. Through this comparison I draw attention to the similarities in how people think and engage with uncertainty in the economic systems they inhabit (Kula as the case for the Gorokan players and cryptocurrency space for the attendees of Crypto Poker Club).

Many Euro-American scholars have put forward the idea of poker as a game that seems to symbolically represent many of the vagaries, indeterminacies and uncertainties of contemporary life, especially that of an entrepreneur (Bjerg, 2011; Schüll, 2012). The popularity of poker rose significantly in the 1970s and onwards, ushering in a new age of neoliberal capitalism. The game seems to offer players a ‘training ground’ in how to engage with a world where ‘contingency, risk and indeterminacy have become predominant’ (Arnoldi, 2004, p. 36; Luhmann, 1998, p. 95) and to explore strategies, and attitudes that allow one to ‘cultivate...an attitude of subjective equanimity in the face of uncertainty’ (Schüll, 2016, p. 566).

As most poker players or gamblers will tell you, the uncertainty described above — that animates the game — could not be felt without money, without something of value at stake. Poker is not poker unless there is money involved. However, play the game enough and you will come across another seemingly paradoxical idea — playing poker well requires the forgetting of this fact. Or as the 88-year-old Texan poker veteran Doyle Brunson (2018) puts it: ‘in order to be a successful gambler you have to have a complete disregard of money’. Such an idea of diverting the powers of money, and playing with the powers of money, is also present the game of *kwin*.

In poker one has to do work to divert any kind of thinking and emotional affects that may result from too much attachment to the money on the table, that may come from thinking of money as it exists in everyday life. Where losing half your bank balance might result in anger, or gaining large amount of money might cause euphoria, both emotions have to be negotiated within the game of poker as Schüll's (2016) participants note to avoid being on 'tilt'. For Schüll's participants, for countless players that I have played with for over a decade, and in many strategy books for playing poker in real life, keeping an open mind is a crucial way to engage with the uncertainty of the game. Paying attention to the flow of cards is important, rather than being rooted to the statistical conviction that your pocket kings are likely to be good when there is an Ace on the table and the pattern of play seems to suggest otherwise. As Schüll highlights, live metrics and statistical data now available for players to think through questions of 'what cards are others holding? How might they play those cards?' – relating to forming an understanding of the economics of the game – do not 'reduce uncertainty' as they claim to (Schüll, 2016, p. 565). Rather, similar to the example highlighted earlier within the crypto space, metrics and data become gamed, part of the story one may wish to tell about a company, or the economics of the card game. What is valued is the keeping of an open mind, to pay careful attention to the unfolding of the game, to people's activities, their tells, movements, to engage with what is *really* happening within the game. Once again, data and metrics seems to lag in engaging with the economic landscape, with either cards or cryptocurrencies

Poker, however, is not the only card-based gambling game where a diversion of the powers of money, openness of mind, are required to abstract an understanding of the economics of the game. In Anthony Pickles' (2019) *Money Games*, an exploration of gambling games in Goroka, Papua New Guinea, an urban town dominated by migrants, players of the card game *kwin* must — from the flow of cards and actions taken by others – form an *aidia* (idea), an understanding of what everyone may have through paying careful attention to the patterns and flows of the game that change constantly. *Kwin* provides a 'semi bounded refraction of the precarious nature of everyday experience, a kind of distillation of chanceful life into a seemingly more apprehensible form' (Malaby, 1999, p. 158). The most 'prized asset of a player for any game [in Goroka] is mental openness, [an] ability to recognise the total flow of cards laid down, the positions and motivations of other players, and openness to signs' –

virtues and values not out of place within the Silicon crypto world, a game of poker, or ethnographic work for that matter (Pickles, 2013, p. 102). In their striving to 'open their mind' participants try to work against the pull of the money, to forget their desire to win, or 'renounce attachment to how much one is up or down in a game' (Pickles, 2013, p. 103). Through this keeping of an open mind, Gorokan *kwin* players read relations between players, and ideas about the world, as well as relations between the cards, into the game to form ideas about the game and the world around them that ground their actions. It is through social relations, the relations between cards, that ideas are 'abstracted' about the economy of the game (Pickles, 2013, p. 89). As Pickles points out, such strategies form an understanding of the game that similarly maps on to strategies developed to understand the flow of the wider economic system they are part of – the transfer of value through the *Kula* network.

In spiralling back out to engage with the ethnography of the Silicon crypto space, I wish to carry outwards, an insight from Pickle's powerful ethnographic exploration of the playing mechanisms of cards in Goroka. This is an insight that might help better understand the role emotions play in coming to know the crypto space, and help suture the disjuncture between practice and theory, and emotions and abstraction.

Pickles argues that within the card games played in Goroka, coming to know the economics of the game, and mathematical calculations that might aid in this process, are not separate to engaging with the emotional landscape of this space, but fold into the calculations, the economics, and coming to know the landscape of the game, *Kula* and the world around more broadly. As he puts it:

'My material suggests that the use of money is every bit as calculating here as among budget-slashing accountants, at the same time it is based on a system of valuation and calculation which is not distanced and unemotional, but engaged and emotive' (Pickles, 2013, p. 52)

In making such an argument, Pickles explores a problematic assumption readers may take away in reading the classical anthropological texts, and one that exists in Euro-American thought more broadly: abstraction is seen as being distinctly unemotional and the same everywhere. To quote Pickles at full again:

‘Abstraction in Euro-America is seen as emotional distancing or subjectivity, and decisions which are based upon a desire for money prioritise an abstract mode of thought (because money is an ‘abstraction’) that is by definition separated from the emotional of everyday life. The [abstracting or calculating] person is thought of as cold and distant, looking past the virtuous and moral at the numbers’ (Pickles, 2013, pp. 52–53).

Such a powerful reflection is helpful in thinking more carefully and clarifying certain things about the engagement with emotion in poker and the crypto Silicon city. In poker, as Schüll’s participants highlight, emotions are to be kept at bay to think openly about the flow of cards, however, such diverting of emotions is of course never fully successful. The work of attempting to divert the emotions present within the game only makes sense in a landscape where emotions constantly bleed into the game not only through ‘tilt’, but in every attempt to negotiate and counter emotions. Read against this grain, the claim that poker is not poker unless money is involved highlights the importance of emotions and uncertainty that need to be present to make the game meaningful. It is not the successful diversion of emotions, but the constant negotiation with them, that allows one to get to grips with the economics of the game.

Similarly, within the game of crypto, the diversion of emotions is also valorised for open thinking to take root. As highlighted in the earlier part of the chapter, policies of no shilling or excessive discussion of prices, and the discussions of the emotional rollercoaster they evoke are seen as unproductive. However, as was the case with poker, such attempts to disengage from emotional aspect of this space are never completely successful. Like poker, to understand the emotional landscape of crypto in the Silicon city, to understand the work these actors do to engage with uncertainty, and consequentially, to understand the role emotions play in coming to know crypto, one needs to have something of value at stake.

Spiral out: Return to the Hippodrome

It is perhaps for this reason then that I found boredom and puzzlement trickle into late night drinking-and-talking-about-cryptocurrency sessions. It was not until the

recommendation from several participants that I needed to put money into crypto to *really* understand what it was about that I eventually bought my first cryptocurrencies. Crypto was not crypto unless you had some money at stake – or so they seemed to be saying. I did some reading of which cryptocurrencies to buy, and how to buy, and put in around 2-months' worth of rent to start – a not insignificant sum of money for a PhD student – into the crypto market. This was a crucial turning point in my fieldwork, and vital to getting to grips with the cryptocurrency space.

The transition was not seamless, but soon I found myself checking the crypto markets frequently. I tuned in more to discussions surrounding price – it no longer bored me. As discussed in greater detail in chapter four, what initially appeared to be abstract scribbles on a price chart no longer seemed impersonal; now it indexed a journey, emotions, memory, and seemed meaningful.³² It felt as if I could feel the slight vibrations and hear the hum of the engine that drove this space underneath my feet. It felt like an important moment in my fieldwork. The sense of uncertainty I felt – both positive and negative affects – was perhaps not at the same levels as my participants, who had much more on the line, nevertheless, it gave me some insight into the uncertainty that seems so constitutive of this space. It allowed me to connect better with some of my participants in a much more engaged and emotive manner.³³

Such an appreciation of the uncertainty and volatility of the market was important for me to feel the traces of emotions within the Silicon city. At the Poker event in Leicester Square this emotional landscape could be felt through jokes. Jokes — as Onnus Bouwmeester^{17/01/2023 09:10:00} argues in *Consultant Jokes about Managing Uncertainty*, and as highlighted in chapter two — are crucial ways of expressing emotions within a professional space, where one cannot admit to feeling uncertain

³² I felt the conversations around me, details of the space, became stickier – they stuck on my mind more.

³³ Using 'emotions as a method' is something anthropologists have used to better understand their vulnerable participants' stories and things that people do not vocalise in public spaces, however, it is not often used to interact when 'studying up' – with some notable exceptions, namely, Miyazaki (Behar, 2012; Liber, 2020, p. 44; Miyazaki, 2013). As Liber writes of in relation to Lviv, Ukraine, understanding the personal and emotional stories engaged with by her participants was crucial to understanding the broader historical landscape of Ukraine (Liber, 2020).

about what you are doing. “I’ve got as many lawyers as I have programmers...it is not for the faint of heart!” jokes one CEO in reaction to regulatory uncertainty within the space, in between playing the hands. Another jokes “I wonder who would be next to go to the prison within the space when the SEC or FCA come knocking?” – a morbid joke. Regulatory uncertainty is an important concept for those building this space. The telling of jokes (often) requires another person or a group of people – an audience that, in this case, is brought together by the joke, but also makes the joke humorous, i.e., it’s experience of these uncertainties within the crypto space that makes the jokes humorous. The coming together of a group of people under the banner of ‘community’ allows people to express emotions that others are able to understand. The kind of work those in crypto do is highly specialised and technical. A common joke within the space is that family members and friends simply have no idea what they do, they have no idea what a blockchain or what crypto really is – no matter how much my participants explain to their family. The coming together of a group allows these suppressed conversations to find outlets, to connect with others through jokes, the telling of stories of scams you may have heard – as one participant jokes, is almost a ritual or rite of passage within this space.

However, the sociality of this space should not be explained away as a means to reduce or cope with uncertainty. Working under conditions of uncertainty is also exciting; it can fill you with a sense of possibility. As Foucault (2007) points out, interacting with the fertile ground between the present and the future, at the edge of reason, can fill one with a sense of ecstasy. ‘In economic action, the future is the site of unreason, possible futures can be posited or imagined but they can never be known’, engaging with these possible futures can be exhilarating (Caitlin Zaloom, 2006, p. 122). Zaloom (2004) highlights this point ethnographically through her work with traders in the pit who feel an ‘adrenaline buzz’ in engaging with the futurity of the market. The market provides the condition of possibilities for the traders to re-make themselves, test their skills and ability to discipline themselves in the face of uncertainty. Similarly, Luyendijk (2013a) highlights this in his interviews with bankers in the City of London, that the mental rush of work is an important part of why bankers turn up to work every day.

Similar to Zaloom and Lujendijk's participants, those within the Silicon city seem to feel the adrenaline buzz, the mental rush of working with uncertainty. Many of my participants were genuinely excited by the work they were doing; they described experiencing a kind of euphoria simply from discussing the happenings of the crypto currency world, thinking through ideas, and explaining it to others. I remember talking to the CTO of a crypto exchange at the poker game. We talked in between hands about the challenges facing exchanges and I asked if we could meet up outside of the space to talk about his work and thoughts on the crypto space – he was all too happy to do so. We met up at a hotel lobby next to the Bank of England, and a conversation that was scheduled to last an hour went on for much longer — close to two and a half hours. In the end I had to stop the conversation to attend another field working event. I am sure Nick would have been happy to discuss the challenges of navigating through an uncertain regulatory landscape for much longer. There are other similar stories that I could tell of meeting up with others who were genuinely excited by their work and staying much later than I had anticipated. They were excited by encountering new possibilities, building a new world, disrupting a financial structure that no longer contains their ambitions or reflects their hopes. This excitement and buzz travels and gains purchase through networks and social relations brought together under the term 'community',³⁴ which serves as a signpost that requires no further explanation to those who know what it is to experience these emotions.

Like poker and *kwin*, emotions in the Silicon city are never fully kept at bay. Traces of these emotions are apparent and constitutive of the sociality of this space. To link Pickles' argument to the context of the Silicon crypto space, these emotions become part of the way in which people come to know crypto. Engaging with the emotions was crucial to knowing what this space was *really* about.

³⁴ Important to note that this does not mean that this could be expected at all community signposted gatherings.

Part III: Coda

Gendered spaces

Within the Silicon roundabout, in a part of London where technocracy and entrepreneurialism combine, where terms such as ‘financial revolutions’ and ‘new economic frontier’ are common parlance, in a culture where data and metrics are valorised as ways of understanding the world – there are practices and strategies deployed to interact with money and uncertainty which would not be out of place among villagers in Langkawi or Fiji. There was also something superficially familiar taking place: an inquiry into social life that took the form of open questions and engagement. Were my participants conducting ethnography? In this conclusion, I wish to consider this overlap further.

Thus far this thesis has highlighted the opinions and thoughts of those who valorised a particular understanding of sociality that was necessary to build the infrastructures of cryptocurrencies. However, there were many that did not share this view, or were suspicious of it.

For example, when I asked Vivek (a coder and CTO of a start-up) who had been in the cryptocurrency space since 2011 and contributed to numerous cryptocurrency projects what he thought about the ‘openness’ of this space that many extolled, he rolled his eyes slightly. It looked as if to say he had heard all this before. He argued that yes, there were people here passionate about ideas of decentralisation, the principles and philosophy of cryptocurrency, but the vast majority he suggested were simply gesturing, and performing a certain moral stance – this particular idea of sociality and openness being one of them. He went on to point out that many who came into cryptocurrencies with the ‘gold rush’ in 2017/8 came mostly for the money. He suggested, like English-Lueck (2004), that this was part of the ‘theatre of work’ that is common place within the Silicon city. Claims to ethics and morality become performances to demonstrate one’s trustworthiness, contributing to the overall ‘milieux of innovation’ (ibid). As journalist Doulatramani (2019) points out in relation to Bangalore’s tech city, free beer, pizza, and discourses of openness are also about attempting to conceal the exploitative structures of work.

Many others similarly suggested the invitation of openness was selective and perhaps did not extend to everyone. For example, the invitation of openness did not seem to have reached many women. In almost all social gatherings and events I attended the vast majority were men. The women in the room often made up less than 10% of the space. The few women that I interviewed pointed out that sometimes this was not such an open space. Unwarranted text messages are sent, assumptions are made, opinions are belittled. This was and still is a highly gendered space. These stories were harder to access through interviews, but they were very much present. People were more reluctant to tell them, especially to a man. Reputations must be maintained; actors must highlight their entrepreneurial nature rather than 'complain' and address issues of structural inequality. There was after all capital at stake.

I would broach the subject to other men: why was this the case? Why were there no women here? To generalise, the more technocratic crowd pointed out that this was a problem elsewhere, perhaps to do with the educational system, and that this was a place where projects and people were assessed by self-evident skill and merit. This has been the discourse among technocrats in Indian and U.S. Silicon cities as well when asked about the inequality within their work sites (Irani, 2019; Shih, 2006). Since the 1990s, meritocracy and self-evident forms of value judgment were put as the harbingers of gender and racial equality. As one journalist wrote at the time, 'one of Silicon Valley's secret weapons is its openness to immigrants and to women' (The Economist, 1997). As many have of course highlighted such ideas of self-evident skill are anything but. Evaluation of skill and merit are often shot through with racial, and gendered norms (Bear, 2020; Goddard, 2018; Shih, 2006).

Those from more institutional backgrounds acknowledged this was a problem but pointed out that the future coming was brighter, that their company had recently hired more women. The response seemed typical. The politics of the immediate was evacuated, to gesture sweepingly at the horizon that was to bring a brighter future (see chapter five). Much of this of course fits in with the data on gendered discrimination that exists within the Silicon cities. Within Silicon Valley, 2% of global Venture Capitalist money went to all female teams in 2020, 9% to mixed teams, with the remaining to all male teams (Lenhard, 2021). Similar figures are found within the Silicon Roundabout in London: 15% of founders here are women, but this number is

much smaller within the cryptocurrency part of the Silicon city (I do not know any cryptocurrency start-up founders who are women) (Kanze, Conley, Okimoto, Phillips, & Merluzzi, 2020; Nathan, 2011). The ability to take on 'risk', to innovate in the face of an unknown future, to summon capital; as in other financialised spaces, are highly gendered actions (Ho, 2009; Caitlin Zaloom, 2004).

Moreover, cooking money, as is the case in Carsten's article, is a gendered activity, except here it is the men that cook and divert the impersonal qualities of money. The spaces that are formed to navigate uncertainty are largely available for a particular group of people – men. The particular social spaces that are curated, like Poker Club, Beer and Blockchain Club, or the technical crowd of Coinface, seem to be largely for men. After a young woman gave a speech at a tech gathering, I listened as a group of men behind me spoke about her appearance and her attractiveness; men's hands had to be moved from laps; 'three quarter smiles' had to be perfected to gain access to the spaces described in this chapter (Mundy, 2017). Their openness may be more notional than real.

Cooking money ethnographically

As the discussion above of gender highlights, 'openness' is only valuable where structures that allow for capital extraction and accumulation are not questioned. The women who highlighted in private conversations that this might not be such an open space generally seemed to uphold a positive view of the community when speaking in public. People tied to money have a particular worldview to hold and structures to maintain that does not allow for the questioning of them (Cassidy, 2014; Graeber, 2012; Strathern, 2004). As American novelist and social reformer Upton Sinclair (1994, p. 135) puts it: 'it is difficult to get a man to understand something when his salary depends on his not understanding it'. Discourses of openness, a turn to sociality, non-linear forms of thought, should firmly be understood against a background where many of my participants were pursuing large sums of profit. This pursuit of capital, as will be highlighted in chapter six, came to increasingly impact those who came to be in the room, who contributed to the knowledge economy of this space, and how this space is being built.

It is against this background then that I recall earlier discussions on ‘para-ethnography’. Certain anthropological works on economic frontiers and ethnographic explorations of financial professionals working in crisis – both under conditions of epistemic uncertainty – seem to highlight that their participants are involved in something that resembles ethnographic practices: ‘para-ethnography’. Social relations are made use of where models and economic reasoning seem to fail drastically, or where models do not exist. I highlighted that under conditions of uncertainty elsewhere, such as migration, that similarly ‘para-ethnographic’ practices seem to take root. There seemed to be an affinity between uncertainty and some practice resembling ethnography.

Throughout this chapter, I have highlighted this similarity within my fieldsite – the ways in which people turn to social relations at the frontier. However, I have balked at calling this ‘para-ethnography’ for a good reason. Without rehearsing in great detail about what ethnography is, and is not, and its relationship to openness, I wish to put forward more tentatively, that ethnography is most powerful and ‘revolutionary’ – as Alpa Shah puts it – when we unearth silenced and marginalised perspectives (Graeber, 2007; Ingold, 2014; Shah, 2017). When we allow these othered perspectives to deconstruct existing normative structures and offer alternate possibilities (Derrida, 1998). ‘Openness’ – in relation to anthropological forms of knowledge – then is not some self-evident state of being, but something more reflexive, an invitation to pay attention to these silenced possibilities. With the presence of capital, the cost of unearthing alternative possibilities is factored into calculations of ‘openness’ – such an ‘openness’ cannot be openness at all! Cassidy (2014) is able to question gambling companies funding problematic research precisely because she is not funded by these gambling firms; Keynesians like Dean Baker (2002) and sociologist-historians like Immanuel Wallerstein (2003) were able to call out how the tech bubble collapse in 1990s would lead to bursting of the housing and dollar bubble precisely because they ‘had no professional allegiance to the system’ (Graeber, 2012, p. 27). Similarly, I can highlight these gender inequalities openly without fearing repercussions for my job. So called ‘para-ethnographers’ cannot – they have a profitable worldview to uphold. Ethnographers do not. Here lies our ‘revolutionary’ potential (Shah, 2017).

Furthermore, there are other striking differences. Ethnography involves writing about people (Ingold, 2014; Strathern, 2004). Writing does not simply mean we write down verbatim what happened in the field. It involves entering into conversations with others, engaging in comparative exercises, looking beyond our borders, to find these unearthed alternative possibilities. Being open to these possibilities involves being caught in an oscillatory movement between our field, and what happens beyond it – both in a temporal and spatial sense. We compare poker being played in central London with those who play *kwin* in Papua New Guinea; we compare the strategies migrants adopt to engage with uncertainty with those who work in Silicon cities. Rather than focusing on anachronistic interpretations, we look towards history to situate our understandings – I situate the practices I encountered within various historical arcs.

These differences are worth attenuating and pronouncing in a world where social relations, spaces of commoning, and moral economies exist in parasitic relationship to capital. Social relations are increasingly employed to suture the relationship between practice and model that so often fail in technocratic understanding of the world (Narotzky & Goddard, 2018). Such social relations and practice that are activated in times of deep epistemic uncertainty are often recognised dismissively as ‘footwork’ (Irani, 2019) or ‘anecdotal data’ (Holmes & Marcus, 2006, p. 51). This is especially true within a climate where, as Bear (2020, p. 4) points out, ‘the social is being increasingly subsumed to account for the failings of economists’ and technocratic ways of understanding the world, but in a way that does not challenge the authority of such knowledge practices. Moreover, such a social and relational way of understanding finds deep resonance in a world where people are ‘tightrope walking’ in Silicon cities and elsewhere (Bar, 2014). Social relations are employed to shore up the anxieties and issues that arise from working under conditions of heightened uncertainty to reproduce the Schumpeterian entrepreneur. Highlighted above are just some of the areas of considerable non-overlap between the practice I was involved in (ethnography) and that my participants were involved in. It is for these reasons that I suggest we might wish to be more careful about employing the term ‘para-ethnography’.

Under such conditions, where, as others have argued that social relations, moral economies and the commons exist in parasitic relationship to capital, we might wish

to clarify what ethnography is (Hardt & Negri, 2000; Narotzky & Besnier, 2014; Tsing, 2017). For me, and in this thesis, ethnography is writing about what people are up to by foregrounding relational modes of knowing. It is potentialised through being caught in temporal and spatial oscillations; that is, it is a comparative and diachronic endeavour that looks beyond the field. It is a form of knowledge that emerges from conversations with others that have gone before us. It is a form of knowledge that seems to be useful in times of uncertainty, to unearth possibilities, highlight silences, and offer different perspectives and purchases on the world. To end with the words of the late David Graeber seems appropriate.

'I decided to call this collection *Possibilities* because the word encompasses much of what originally inspired me to become an anthropologist. I was drawn to the discipline because it opens windows on other possible forms of human social existence; because it served as a constant reminder that most of what we assume to be immutable has been, in other times and places, arranged quite differently, and therefore, that human possibilities are in almost every way greater than we ordinarily imagine' (Graeber, 2007, p. 1).

Chapter Two:

Memetic Storytelling Practices: Digital Folk and Fairy Tales within a Speculative Community

‘...stories enable us to regain some purchase over the events that confound us, humble us, and leave us helpless, salvaging a sense that we have some say in the way our lives unfold. In telling a story we renew our faith that the world is within our grasp’ (Jackson, 2002, p. 19)

This chapter explores the storytelling practices of those who come together on imageboards and online forums – key infrastructures of the cryptocurrency space - to tell stories using memes about the highly volatile and uncertain world they inhabit. The chapter draws on ethnography conducted with a ‘speculative community’ formed on the /biz/ subsection of the infamous 4chan imageboard (Komporozos-Athanasiou, 2022). These actors draw attention to the speculative practices characteristic of an increasingly financialised world, however, to frame their activities exclusively in this way is to miss something important and valuable. As Komporozos-Athanasiou (2022, p. 12). argues, to examine the workings of power requires a ‘departure from monolithic accounts of negative speculation...and acknowledging the complex sociality of speculative communities both within and beyond financial systems’.

Later chapters will focus on locating these actors, their practices, labour, and stories within broader historic and political economic arcs. But this chapter begins from the ground, with the kinds of stories told on an influential online forum that was very important to my participants as a site of knowledge exchange and creation. By examining the stories told within this space - loosely grouped together under categories of 'despair', 'comedy' and 'courage', and drawing parallels to folk and fairy tales, I highlight the complex and nuanced ways in which speculative practitioners engage with uncertainty. Through stories of despair, characterised by the pink Wojak meme, I draw attention to the conditions of inequality that many of my participants are subject to. Through stories of courage, characterised by the hodling meme, I highlight the various ways in which my participants subvert economic reason. And finally, through comedic stories, characterised by the Doge meme, I highlight the humour and ambiguity that is so characteristic of this space, a form of humour that is both subversive and oppressive. By engaging in storytelling practices, members of /biz/ come to know and understand the cryptocurrency space through what can be described as a kind of digital folk knowledge (Phillips & Milner, 2017). By foregrounding the folk nature of these storytelling practices, I highlight the fluid, intersubjective and collective actions that help to sustain a volatile and uncertain market that is favourable for those who take to online message boards. The stories they tell do not simply react to a market but come to form it as well.

*

A postcard from the field

18th December 2013, a week before Christmas, the price of Bitcoin has dropped sharply to \$500. Only two weeks ago the price was over \$1100. On imageboards and forums where participants come to share their reaction, feelings of joy, excitement and hopefulness are slowly being replaced by despair, dread and anguish. Outside the purview of the conventional financial systems, 'netizens³⁵' are scrolling through and refreshing their screens continuously to see the reaction of the crypto community.

A netizen going by the online moniker 'GameKyuubi' is sat in his bedroom, staring intensely at his monitor. He has had quite a bit of whisky to drink and takes to the

³⁵ A term often employed to refer to those actively involved in online communities

popular Bitcoin forum Bitcointalk.org, to articulate his emotions, thoughts, and rationale in reacting to the rapidly declining Bitcoin price. He posts the following message under the title 'I AM HODLING':

I type d that tyitle twice because I knew it was wrong the first time. Still wrong. w/e [...] WHY AM I HOLDING? I'LL TELL YOU WHY. It's because I'm a bad trader and I KNOW I'M A BAD TRADER. Yeah you good traders can spot the highs and the lows [...] make a millino bucks sure no problem bro [...] I'm not part of that group...Those taunt threads saying 'OHH YOU SHOULD HAVE SOLD' YEAH NO SHIT. NO SHIT I SHOULD HAVE SOLD. I SHOULD HAVE SOLD MOMENTS BEFORE EVERY SELL AND BOUGHT MOMENTS BEFORE EVERY BUY BUT YOU KNOW WHAT NOT EVERYBODY IS AS COOL AS YOU. You only sell in a bear market if you are a good day trader or an illusioned noob. The people inbetween hold.

*so i've had some whiskey
actually on the bottle it's spelled whisky
w/e
sue me
(but only if it's payable in BTC)³⁶ (GameKyuubi, 2013)*

*

One could be forgiven for thinking that this was merely the tale of a drunken man stumbling away from the casino into the night, his thoughts and musings evaporating into the cold December air, almost immediately as he uttered them. However, this story did not simply vanish into the digital ether. It resonated with others on the forum who found it hilarious but also meaningful and was converted to a meme of a Spartan shouting 'HODLING!!!'. GameKyuubi's drunken misspelling of 'hold' as 'hodl', was later acronymised to 'hold on for dear life'.

This is one of the most influential and well-known stories in the crypto world. It named and helped to cultivate a recognisable strategy – hodling - in the face of a volatile and

³⁶ Message has been edited for length and clarity

uncertain market; hodling where those in the traditional financial world would otherwise sell. The strategy has also found expression outside of the crypto markets, in the recent short squeeze of GameStop by members of a Reddit subgroup (WallStreetBets), employed to defy the logic of those in traditional finance.

Within the crypto world, the hodling strategy contributed significantly to the establishment of a market, at the time of writing, worth approximately \$2 trillion, propelling forward the biggest alternative/complement to fiat currency we have in the world today. All you had to do was hodl.

How was the hodling story able to capture the imagination of so many? Why did this drunken tale come to be a crucial part of the crypto landscape? To address these questions, I will first lay down some groundwork, and consider the broader questions of this thesis: how do people come to know the volatile and uncertain crypto space? And how do they make such a place habitable? I will then re-visit the hodling story by considering it as one of many others that I have grouped together under the category of 'courage' and outline in more detail the vital part it has played in the cryptocurrency space. Until then, the reader is asked to kindly hold in mind this story and the many questions that it raises.

History of message boards, and 4chan

Part of the historical roots of Reddit, Bitcointalk, Twitter, Discord, Telegram, other online forums through which the cypherpunks and cryptoanarchists communicated whilst designing Bitcoin, and 4chan – the primary online forum of interest - can be traced to 16th February 1978. This was when Ward Christensen and Randy Suess launched the first public dialup computerised bulletin board system (BBS) (Edwards, 2016). Taking inspiration from 'community bulletin boards that once adorned the entrance of public places like libraries, schools, and supermarkets', BBS allowed actors that were separated by vast distances to send messages to one another. Whereas previously the sending of messages more directly than a letter required a visit to the telegram office, now actors could dial in through their modem from their homes and communicate more directly. Early users of the technology expressed delight at the possibility of communicating beyond their immediate enclaves; to communicate more directly and intimately, to meet actors in the digital space that had

similar interests. One early user reflecting on this period notes: 'dialling into a BBS felt like whole-body teleportation. It was the intimacy of direct, computer-to-computer connection that did it...BBS chats felt like being with someone in person' (Edwards, 2016). Benedict Anderson (1983) talks of the importance of newspapers and print media aiding in the formation of 'imagined communities', however, through the formation of medium in which messages could be sent across the globe, dialogically authored 'communities' could now be formed.

Further iterations of BBS: Usenet, Internet Relay Chat, and others, came to the fore in the 1990s, as people took to these online platforms to scale themselves up from their bedrooms to interact on a global stage (Edwards, 2016). Here they discussed all sorts including the question of money. It is through such digital infrastructure that meetings initially held in the offices and houses of Silicon Valley took flight and captured the imagination of others far away via the cypherpunk mailing list. Through this infrastructure they were able to collaborate on projects, communicate their ideas, frustrations, and understandings of the world. Online historical archives of these early conversations provide great insight into the thinking of these early pioneers and conveys an understanding of how they imagined the world - beyond what is portrayed in technical whitepapers that they produced for public consumption. Similarly, it is through such a digital infrastructure that members of 4chan are able to communicate with one another about the volatile and uncertain marketplace.

4chan was created - inspired by early BBS boards of the 1980s - by Christopher Poole. Its appearance resembles that of early 1990s forums and takes a minimalistic approach to the aesthetic curation of the website. The simplistic appearance belies the cultural, economic, and political significance of this website in the contemporary world. Some media reports and 4chan users claim that the platform was so influential that it 'actually elected a meme as a president'³⁷, it has been argued by many that it is a breeding ground for right-wing extremist ideologies (Colley & Moore, 2022, p. 8; Nagle, 2017; Ohlheiser, 2016). However, not all those who congregate here are right-wing, some are here to troll, for the 'lulz' (bastardisation of laugh out loud), or to follow the crypto markets. Many on 4chan and outside commentators often depict this space

³⁷ The 'meme president' is Donald Trump.

as a place away from the mainstream, away from ‘normies’, a place where stories not fit for daily consumption are told (Nagle, 2017). However, despite it occupying a space away from the main stage, it has greatly influenced the discourse of politics taken up both online and offline, it has given rise to online political strategies of resistance, and as I highlight in this chapter it comes to have a significant impact on the cryptocurrency market. Much of the discussion that gets picked up by mainstream media, and academics, happens on the infamous /b/ (short for random) and /pol/ (short for politically incorrect) board, however, this chapter departs from this and looks to the /biz/ (business and finance) board. It is on /biz/ that much of the discussions surrounding the crypto markets take place.

This group is important for four reasons. Firstly, /biz is seen as a key driver of value. Secondly, it is seen as the birthplace of most cryptocurrency memes (the significance of these memes in the wider crypto space is highlighted later on). The importance of the relation between memes, 4chan and cryptocurrency has been recognised by several cryptocurrency news outlets. Malley (2018) writes: ‘biz Board: Birthplace of Memes and Market insights’: ‘4Chan has become crypto’s ‘largest market driver’ after Chainlink boom. Thirdly, it can be argued that 4chan mimics the social dynamics that undergird the cryptocurrency world more broadly. And finally, 4chan’s anonymity and fast paced discussion provides a digital local simulation of social media at large.

Messages circulate at incredible speed on /biz/ and 4chan. Topics not engaged with drop out of view and are eventually deleted. It is a place of awesome fecundity, the epitome of the new world of Big Data. 4chan receives around 27 million visitors a month, /biz/ receives around 10-20,000 posts a day. 4chan embodies many of the values of privacy and anonymity that numerous cypherpunks advocated for. Unlike most online forums, posts on 4chan are without a moniker. Instead, posts are made under ‘Anonymous’ – identifying by a name is likely to incur the wrath of others (anons), and in keeping with the offensive and problematic language of this digital place, you might well be referred to as a ‘*namefag*’. I was often left wondering: how there could be any sense of community here? The conversation and stories were emotive at times but seemed fragmented and kaleidoscopic, refracting misogynistic and racial slurs, sorrow, depression, moments of empathy, humour, irony and sarcasm. Though things like ‘user data’ are hard to come by in this space where

everyone refers to each other as anons, it is evident from the conversations taking place that these are largely young, white men, with half the users from the US, and the rest are from UK, Canada and Australia (Gonzalez, 2019; Nagle, 2017).

Storytelling and uncertainty

It is against this background that I underline the importance of memetic storytelling practices to this space. Storytelling allows anons to this space to engage with the volatility and uncertainty of the cryptocurrency market and allows for communication in an environment of fast paced discussion, where posts that fall out of favour are consistently 'bumped' (replaced) for newer posts. Before exploring the kind of stories told, I wish to first highlight an intriguing affinity between uncertainty and storytelling that Hannah Arendt (1998) engages with in *The Human Condition* and Michael Jackson (2002) extrapolates in *The Politics of Storytelling*. To put it simply, in times of uncertainty and crisis we seem to turn to storytelling. It is a 'vital human strategy for sustaining a sense of agency in the face of disempowering circumstances' (Arendt, 1998; Jackson, 2002, p. 15). Through storytelling we attempt to make the infiniteness of the world more manageable, scale ourselves from where we stand and attempt to grasp the 'bigness' of the world, or as Hart (2014) puts it through storytelling we 'scale down the world, scale up the self, [and] bridge the gap' (Tsing, 2009, p. 150).

The construction of meaning through stories is however not simply the creation of autonomous individuals or the amalgamation of subjective viewpoints. Rather, as Arendt (1998) points out, stories and their meaning emerge in the flow between the private and public domain. It is crucially in this flow that the political arises. As we will see, stories are never simply or only 'personal revelations' but are 'anchored and authored dialogically and collaboratively in the course of sharing one's recollection with others' (Halbwachs, 1992; Jackson, 2002, p. 22; Merleau-Ponty, 1962, p. 354).

In anthropology, storytelling evokes images of those on the margins telling stories to understand situations of uncertainty, violence, and crisis seemingly beyond control. Under these circumstances, economic anthropologists have focused on how those on the margins tell stories to gain an analytical purchase on the bigness of the world, as they (those on the margins) think through the questions of how to get more money, the best way to invest it, and reflect on where money comes from. Columbian

plantation workers tell stories of how ‘illicitly baptising money instead of a child in the Catholic Church’ begets more money (Taussig, 1977, p. 130); those hoping to gain a small fortune in Nairobi through Multi-Level Marketing schemes tell not ‘scientific stories’ but stories based on experience (Beek, 2019, p. 510); marginalised groups in South Africa tell ‘rag-to-riches stories’ to legitimise pyramid schemes (Krige, 2012, p. 80). Given this affinity between uncertainty and storytelling perhaps it is surprising that the storytelling approach has not gained greater traction within the exploration of practices in finance.

In the lofty world of economics and finance, it is generally frowned upon to construct analysis based on stories. One is to stick to the facts and figures pulled from Reuters and Bloomberg, conducting ‘analysis’ to get to the heart of the matter. ‘Analysis’ is, according to this framing, employed to keep at bay emotions and hearsay. However, as Shiller and Akerlof (2010, p. 54) point out, ‘there is no good reason to be careful about the use of stories’. As we know, the boundary between storytelling and analysis is porous and arbitrary, and often, perhaps for these very reasons, strictly policed.

There have been some attempts to focus on the types of stories told and the work these stories do in the elite world of finance. Caitlin Zaloom’s (2006, p. 134) financial traders tell stories that deconstruct narratives of success and failure to contain and manage emotions that arise from engaging with uncertainty. Notably, Stefan Leins (2022, p. 347) highlights how those in finance engage in practices of ‘storytelling’ to frame and recast insights gained from emotions and ‘feeling’ as economic reason that allows actors to approach ‘uncertainty as if it was calculable’. Leins (2018) explores how financial analysts tell stories in reports they write - stories complex enough to justify their worth, but not so complex that it bores traders with notoriously short attention spans. A sort of complexity or tension is built up in such forms of storytelling, that is resolved at the end, forming a basis on which decisions can be made. As Rebecca Solnit (2020) points out, within financial modes of storytelling a sense of uncertainty is created that is resolved by the Archimedean eye of economic reason or analysis.

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This chapter focuses on a different kind of story as actors within this space engage with an uncertain marketplace. It is one told through memes: a quotidian digital artefact available to the netizen to tell a range of complex stories, that is not so reductive of uncertainty but seems to sustain it and holds in tension differing views and possibilities. In doing so, and for other reasons (outlined below), these stories are much closer in alignment with folk and fairy tales than the kind of storytelling practices Leins' (2022) participants are involved in.

The term 'meme' was initially used by Richard Dawkins, to refer to a cultural unit 'transmission analogous to genes, which are spread from person to person by copying or imitation' (Shifman, 2013, p. 363). This idea resonated with early netizens, who took the term but re-mixed it 'to describe the rapid uptake and spread of a particular idea presented as a written text, image, language move,' or some other unit of cultural stuff' (Knobel & Lankshear, 2007, p. 202; Shifman, 2013, p. 364). Memes are part of the everyday life for the netizen. They may remind us of office procrastination or long train journeys flicking through our phones – disrupting the banality of contemporary life with digital punctuations. But beneath this gloss of banality lie complex social processes, a layering of meaning, and calls to action, that can have a profound effect both online and offline. Successful memes spread rapidly, go viral, to far flung corners of the world across linguistic and national boundaries. They are replicated, shared, remixed creatively engaged with and altered in their life cycle. It is precisely in their ability to avoid institutional conversation, to be part of informal networks of communication and the non-serious, that we can start thinking of memes as part of digital folklore.

Mememes make the highly uncertain crypto world habitable, while allowing netizens to resist, subvert, affirm, critique, parody and play with economic reason and the viewpoints of those from the traditional financial world. Through conducting online ethnography on the /biz/ sub-section of 4chan and Reddit (chapter three), I have identified three kinds of memetic stories typical of the online crypto space that I have loosely put under the categories of despair, courage, and comedy, that evidence this more complex engagement with uncertainty. I draw relations between these memetic stories and folk and fairy tales to both highlight this complex engagement, and to highlight how these stories, as folk stories do, create a sense of belonging in the face of a highly volatile and uncertain cryptocurrency world. In doing so, I build on recent

scholarship that identifies memetic stories told on message boards and forums as digital folklore in the making or as part of '(post)modern folklore' (Phillips & Milner, 2017; Shifman, 2014, p. 15). Like folk tales, memes are characterised by a shared similarity, recognised by a community as they circulate, whilst new details or variations are added. It is this embodiment of a logic of fixity and novelty that aids in 'forming and signifying communal belonging online' (Nissenbaum & Shifman, 2017, p. 485; Phillips & Milner, 2017). Such interplay between fixity and novelty is reminiscent of American Folklorist Barre Toelken's (1996) twin law of conservatism and dynamism identified as crucial to the functioning of folklore. Like folklore, memetic storytelling is often obscene. In 4chan, they critique, parody and play, they can make a particularly difficult place habitable, and be part of building new worlds. As Milner and Philipps (2017) argue, the comparison between memes and folklore runs deep.³⁸

*

In the following sections, I employ stories of despair told through Pink Wojak memes to highlight ways in which uncertainty is not simply managed or reduced but engaged with and sustained. These stories not only allow netizens to express how they are affected by uncertainty but also allow people to experience the volatility of the market in a particular way. Consequently, stories told through Pink Wojak memes often reveal intimate stories, and the marginalised conditions under which people work. Stories of courage told through hodling memes explore how institutional financial and economic reasoning can be re-mixed and subverted to create a market that is favourable for the less wealthy. And finally, under the section of comedy, something that undergirds most memetic stories, I highlight how uncertainty is put to work through decoupling 'reason' from action, to evade the understanding of those from more institutional background.

Three Kinds of Story

³⁸ Approaches that have examined the interplay between folk tales and memes have been particularly insightful and powerful in highlighting the right-wing ends to which memetic stories have been more recently put.

Pink Wojak and despair: uncertainty and inequality

Many popular memes on 4chan are used to tell stories. In this section, I focus on the Pink Wojak meme because it captures something distinctive and important about the 4chan space. Wojak is a character drawn on MS paint that emerged on 4chan around 2010, he is often used to convey melancholy, existential doubt, regret, and loneliness. The meme was creatively adopted by /biz/ members in 2017 who painted him pink to tell stories about the emotions associated with the cryptocurrency marketplace. Pink Wojak is often depicted from the shoulder up, hairless, you can see tension lines on his skull and face. He often has blood streaming from his eyes, perhaps a noose around his neck, screaming in pain, or with his face being ripped off. When I first saw these pictures, I found them to be violent, obscene, and difficult to look at. I was told by an offline interlocuter that was part of the point. It was supposed to be off-putting to 'normies' like me. Obscenity is an important part of folklore, as Toelken (1996) points out, a vast majority of orally transmitted folklore would be considered obscene if taken out of context. That these 'expressions are both soil *and* dirt, indigenous *and* matter out of place, is the most foundational layer of folkloric ambivalence' (Phillips & Milner, 2017, p. 26).

Pink Wojak has become an important way to communicate the outcome of an encounter with uncertainty in a way that simultaneously expresses membership of the crypto community. For example, if you bought Chainlink (a cryptocurrency) and its price plummeted, you might post a picture of a Pink Wojak with your story. Stories are posted about wanting to escape a difficult situation at home - perhaps you are getting physically abused by your parents, in severe debt, or maybe the downturn in the market is making it hard to pay your rent and you want to share your story. Deeply intimate stories are shared, and the market is made personal by the anons of /biz/ using variants of Pink Wojak. Others relating to the pain or 'feels' of the story might post replies empathising, or, equally likely, insulting the anon using a creative mix of racial and homophobic slurs. Often there is a mixture of both. The language employed on 4chan and /biz/ is problematic to say the least and will be revisited later on.

Pink Wojak stories often conveyed the conditions of inequality which many seemed to inhabit. /Biz/ users are often young, male, white, and looking to get rich, though not through being '*wagecucked*' – a term reserved for someone working away at a dead-

creating either personal or social meaning, but an aspect of ‘the subjective in-between’ in which a multiplicity of private and public interests are always problematically in play’ (Jackson, 2002, p. 11).

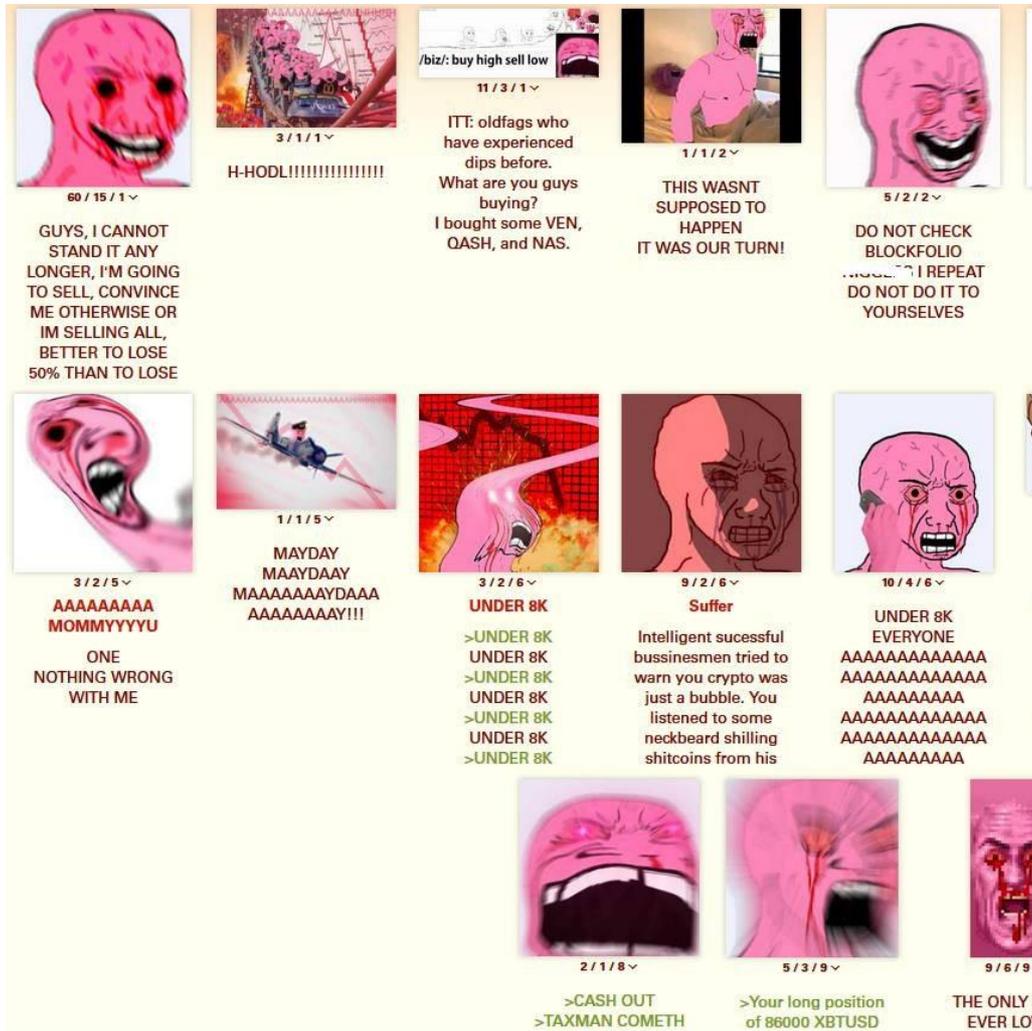


Figure 10: Various depictions of Pink Wojak reacting to the downturn in the crypto market (KYM, 2017).

As with other forms of labour, ‘storytelling is a modality of working with others to transform what is given, or what simply befalls us, into forms of life, experience, and meaning that are collectively viable’ (Jackson, 2002, p. 252). In a chaotic atmosphere, storytelling using memes in accordance with agreed, shared rules becomes an important form of stability. To tell a compelling story, you need to have your fingers on the pulse of the community. This requires immersion within this space, an

understanding of the emotional and general landscape, the biography of the meme, but also demands a creative addition; an interplay of fixity and novelty, of conservatism and dynamism. Telling a story that does not acknowledge the shared memory of this digital place, one invites the wrath of other anons who may hurl insults, or you may be told to simply 'lurk moar' or be referred to as a 'newfag' –expressions used when someone reveals their ignorance of the rules of collective storytelling (Coleman, 2006).

These emotive stories of despair are not only simply expressive of some pre-existing 'feels' about the market, but also come to constitute the market 'feels'. It is not so that 'stories are lived before they are told' rather collective storytelling 'reworks and remodels subject-object relations in ways that subtly alter the balance between actor and acted upon' (Jackson, 2002, p. 16; MacIntyre, 1984, p. 215).

This mode of storytelling radically differs from the abstract and reductive stories told within the institutional world of finance and economics. In these institutional spaces stories are told from an Archimedean viewpoint of what is deemed 'economic reason'. Whereas those who 'invoke reason to legitimise their rule tend to separate themselves and their understandings from the world of everyday experience', attempting to reduce uncertainty in doing so, the collective storytelling viewpoint remains embedded within the world being grasped at (Jackson, 2002, p. 246). In the telling of stories we testify to the uncertainty, 'diversity, ambiguity, and interconnectedness of experiences that abstract thought seeks to reduce, tease apart, [and] regulate' (ibid, p. 247)

In the next story, I highlight the power of this memetic form of storytelling, digital folklore, to subvert economic reason; forces that seek to reduce and regulate the crypto space, to create a market that is favourable for those that take to online cryptocurrency message boards.

Hodling and courage: subverting economic reason

In 2013 GameKyuubi took to an online message board when faced with a crashing market and the pressure to sell his Bitcoins. He rationalised, under the influence of alcohol, that despite the declining price he was going to 'hodl' – a misspelling of 'hold'- admitting he was simply not good enough to beat the professional traders. From this

message the infamous ‘hodling’ meme spawned, initially re-mixed with the ‘This is Sparta Meme’ based on the movie *300* that describes the almost impossible, maddening, feat of 300 Spartans fighting Xerxes’ army of 1 million. Since that moment ‘hodling’ has been the war cry of all crypto enthusiasts during the bear market.



Figure 11: One version of the hodling meme (KYC, 2022).

Hodling – acronymised as ‘hold on for dear life’ – is one of the most important ideas within the crypto world, talked about extensively both online and offline. The ideal hodler is not tempted to trade in the volatile market and will not cut their losses and sell when traditional financial wisdom might say otherwise. Hodling sits in tension with ideas of ‘economic reasoning’, especially when hodling coins that are not among the top in terms of market cap – as many on 4chan and Reddit do. This aspect of hodling – going against economic reasoning – is an important aspect of the story.

The drunken tale of GameKyuubi fits well with many folk tales where those perceived to be weak and disadvantaged triumph over powerful forces not through brawn but through their wit, intelligence, trickery, and calling into disrepute conventional wisdom and understanding. Consider Brer Rabbit, a famous trickster figure in African American folklore who bests larger animals by his cunning and wile. The political value of these stories of larger animals (White people) being defeated by smaller animals

(African Americans) was overlooked at the time as readers focused more on the humorous, fanciful, imaginary world of animals being built (Harris, 2021; L. W. Levine, 2007). Indeed, as we will see there is something similar at play in our final story. Within folk literature often the gloss of the non-serious conceals and preserves insight into the culture and time in which the story was told.

A financial analyst from a more traditional finance world conjured an image of these hodlers for me in a frustrated and jovial tone as people “huddled around a fire, swaying side to side... chanting, *must hod!! Must hod!!*”. This imagery was supposed to highlight a lack of reason brought to the space by hodlers. The analyst argued that not listening to “market reasons [can] really land you in trouble”. He argued that those hodling smaller coins even through the worst market downturn are in real danger. Others in the traditional financial world, similarly, highlighted the ‘lunacy’ attached to hodling as a trading strategy when something loses most of its value.

However, it is precisely this ‘lunacy’ of hodling, going against ‘economic reasoning’ that has played an important part in the survival of cryptocurrencies. In the words of one economic historian I interviewed offline in London⁴⁰:

“In 2018 Bitcoin’s price declined over 80%...so there’s been this incredible volatility... the lesson from the last ten years is...if you sell your Bitcoin and you don’t hodl you often pay the price...it continually bounces back...and this notion of hanging on through this volatility has been very powerful and helpful for continuing to grow the community and manage their ways through these incredible swings in price...other things also see significant decline...it’s not something that’s unprecedented in history...what is unprecedented is that it keeps coming back”

The circulation of the hodling story through memes cultivates a certain orientation and way to interact with a highly uncertain market that was not captured by what economists might describe as ‘economic reason’. Hodling recently found expression

⁴⁰ The interviewee did not make me aware he was a 4chan or Reddit user but worked for a cryptocurrency project and conducted research on consumer behaviour of cryptocurrency users.

in markets outside of cryptocurrencies in the recent infamous short squeeze performed by members of a Reddit board: WallStreetBets (see chapter three). The group shares some cultural overlap with 4chan; under the heading ‘about the community’ is the following descript: ‘Like 4chan found a Bloomberg terminal’ (WSB, 2021). Netizens on this message board coordinated to buy shares of GameStop – a stock that was shorted by many in traditional finance - to ‘screw over’ hedge fund managers.⁴¹ Once again, members were asked to be brave, courageous, and ‘hold the line’ – to resist the naysayers of the traditional financial world. People held the line for many reasons: to make money, to resist the financial world, to troll, to play, and a mixture of the above.

The question at the heart: ‘should I sell or hold?’ is a classical question within the traditional financial world, buy-and-hold strategies are employed all the time. Chants of hodling share similarity with mantras traditional traders tell themselves: ‘the trend is your friend’, ‘buy low, sell high’, to remind themselves of their strategy in the face of an uncertain market (Leins, 2018, p. 100). Hodling is a re-mixing of holding and highlights the general feeling that crypto is, to put it crudely, drunk finance. This drunkenness or subversion of logic is highlighted in one popular comedic mantra on 4chan: buy high, sell low – a reversal of the popular phrasing. The idea of merely ‘holding’ does not highlight the forces experienced by those in crypto, the term somehow seems too neutral, lacking in the emotions associated with hodling, it does not capture the sense of play, magic, or comedy.

It is because people hodl that cryptocurrencies keep ‘bouncing back’ - it creates a ‘price floor’. That is, there are people who will hold onto the crypto through large, ‘unprecedented’ price drops. As one interlocuter pointed out, ‘at this point crypto can seem almost like a religion’. The faith of these hodlers keeps crypto alive, it keeps the community together.

⁴¹ It is of no coincidence that GameStop was chosen as the stock to meme. GameStop has been historically the butt of many a jokes and ridicule on 4chan; it was part of the digital folklore of 4chan.

Hodlers are not however simply telling stories to reduce the uncertainty of the space as a mainstream economist, or a financial analyst might do. In many ways hodling invites extreme uncertainty and volatility, it is only under this condition that the price of your crypto goes up. Through calls to subvert economic reason, or to resist the naysayers of institutional thought that constantly prophesize the failure of crypto, hodlers create a market that is favourable for them. A place where placing a small amount of money could see over a 1000% percent increase (or a loss of 100%). Holding a government bond with a return of 7% per annum might be of interest to the wealthy but is of little interest to those with limited resources. For the latter group it may be more profitable to hodl rather hold.

To gain a nuanced understanding and appreciation of how hodling engages with uncertainty, and an equitable volatile market is created, we must look at the important role humour plays in memetic storytelling. The idea of hodling is shot through with a particular type of humour undergirded by the 'logic of lulz'. A humour that decouples reason from action leaving a fertile ground of uncertainty; a ground that sprouts possibility. Next, I explore the ambiguity of this humour, its subversive quality, the quality of parody, play and critique inherent within the memetic stories told within this space through exploring Dogecoin.

Dogecoin – humour and ambiguity

27th November 2013, Jackson Palmer tweets jokingly that he was going to invest in Dogecoin – a coin that did not yet exist. It was merely a fictional coin drawing on the Doge meme. The popular Doge meme, a misspelling of 'dog', is a picture of a Shiba Inus dog with its internal monologue captioned in Comic Sans. The dialogue is often in either a kind of broken English, or with the word(s): 'so scare', 'wow', 'how insight', or 'so mystery'. The intention is to create a comical mocking tone. The incoherent grammar and the rough-hewn collage of a talking dog are part and parcel of what makes up folklore; an informal speech not fit for formal settings (Greenhill & Matrix, 2010).

Dogecoin memes began circulating on 4chan, Reddit and other online boards. Dogecoin soon started to build a loyal following who bought in to the idea of a meme

currency. The Dogecoin members who called themselves Shibes, had a reputation for being less serious, less aggressive, and more fun. A long-time member notes, 'in the beginning everything was awesome and hilarious...the people who got into it were goofballs, whereas the previous cryptocurrencies had attracted people who just wanted to get rich' (Kayleigh Rogers, 2015). The Shibes wanted to use Dogecoin as a more traditional currency; to tip contributors of the community, to buy, sell and fund things, rather than speculating on prices. The Shibes were well known for charitable contributions, raising \$50,000 for the Jamaican Bobsled Team, a further \$30,000 dollars was collected to build a well in the Tana river basin in Kenya (Kayleigh Rogers, 2015). Especially for those at the start of the Dogecoin project, everything had become too serious - there was simply too much speculation.



Figure 12: Doge meme (Hern, 2014).

The emergence of Dogecoin can be read as a critique of cryptocurrencies veering away from the project of a creating a decentralised new money, a parody of the overly serious world of cryptocurrency speculation. Reasons for buying Dogecoin changed with time, especially as its price rose spectacularly in January 2021. However, I wish to focus on a particular reason that investors in 2018, continually and consistently referred me to: the 'lulz' – 'a pluralisation and bastardisation of laugh out loud (lol)', doing things for the sake of comedy.

The 'logic of lulz' strongly informs conversations on 4chan, Reddit, and other forums and crypto communities, and is often enacted through and associated with memes (Coleman, 2006). Lulz is associated with ideas of trolling, 'amusing jokes, images and pranks', doing things for a sense of irony, and/or just because it would make for a funny story (ibid p. 2). Doing things for the lulz was also cited as a reason for hodling GameStop stocks by many on Reddit. Significantly, doing things for the lulz requires no further justification: it subverts the conventional relationship between means and ends and is, potentially, truly anarchic. When reasons are asked for why a particular cryptocurrency or stock was purchased, one may simply respond for the lulz, or they may give a comic reason of how they make their decisions by drawing on UNO cards, or reading reports drawn by crayons. This was a constant source of frustration and confusion for those from more institutional backgrounds who bracketed off the significance of these events under mania or childish exuberance, or as one university Business and Finance research department concluded, the activities of 'uninformed equity-market participants' (Eaton, Green, Roseman, & Wu, 2021). It was also source of frustration for mainstream media who seemed ill-equipped to understand what was happening. As Neil Irwin, senior economics correspondent for the New York Times notes, 'trying to make sense of the Gamestop thing as a 42-year-old who has covered econ and markets for years, I feel like Don Draper sitting back and trying to listen to the Beatles, then giving up after a short while, confused and discomfited' (Dixon, 2021).

Humour informs most memetic stories. Reasons for doing things, intentions, are often refracted through humour making it difficult for those outside to understand why certain events took place, why certain choices were made. Outsiders often ask why is a sarcastically mocking dog the face of a \$20 billion currency? Why is the ranting of a drunken man a 'go to' tale within this world? Are Dogecoin and GameStop a tale of resistance or one of capitalist greed?

To these kinds of questions that dig at the surface to get to intentions, Milner and Philipps (2017, p. 10), offer the 'shruggie' emoticon (¯_(\ツ)_/_), part of online vernacular, as one possible reply, to indicate 'I don't know', 'I don't care' or a 'a Zen-

like tool to accept the chaos of the universe'. Such an approach, a refusal to articulate either through the logic of lulz, through the shruggie emoticon or comical reasons, is not flippant as much as it highlights and affirms the ambivalent nature of these stories. This is ambivalence not in the blasé sense (lacking interest), but one that derives from its Latin roots of ambivalent (*ambi-*), meaning 'both, on both sides, implying tension, and often fraught tension, between opposites' (Phillips & Milner, 2017, p. 10). Offering a shruggie emoticon or saying you are doing it for the lulz upholds this tension and in doing so perhaps resists the idea that people and their worlds are always subject to explanation.

As we will see in chapter three, located within this ambiguity, refusal to give reasons is, as Žižek (2021) notes, something potentially revolutionary that questions financial and economic expertise and power. Refusal to articulate reasons and doing it for the lulz could be read as what Brunton and Nissenbaum (2015) may term an 'obfuscation strategy', part of an everyday digital resistance and protest strategy to maintain uncertainty; to avoid surveillance, to prove slippery for those hoping to understand this space. In upholding this ambiguity and tension, memetic stories share much in common with folk and fairy tales that do not neatly resolve uncertainties as they must in traditional financial or economic storytelling (Greenhill & Matrix, 2010). Different possibilities, contradictory viewpoints, a spectrum of reasons for doing things co-exist. Consider those who came together on WallStreetBets to hodl GameStop stocks, they claimed to hodl to disrupt the corrupt financial services; for the lulz; to disrupt the control of shadowy elite group of people; as a pay-back for the financial crisis of 2007-8; to make money.

Solnit (2020) reaches the same viewpoint in comparing stories told by those in the financial world with fairy tales. In financial and economic reports, the driving force of the story is the journey from uncertainty to certainty, the resolving of tension. Once the tension is resolved the story can lose its magic (trailers can reveal too much). In fairy tales this tension and uncertainty need not be resolved and moreover everyone knows the format, but it is in telling and sharing stories that they come alive. It is this complex engagement with uncertainty without necessarily reducing it, without attempting to create certainty, that makes fairy tales an important way of telling stories that, Solnit

argues, we can learn from in thinking about what kind of stories we might want to tell during the COVID pandemic (ibid).

Stories narrated around sarcastic mocking dogs, magic coins, and drunken bravery thematically share much in common with fairy tales. Whereas in economic and superhero stories agency is cast a narrow net with select individuals who use their superior individual reasoning capability or extreme strength to 'win', in fairy tales it is often marginalised or overlooked characters who form alliances with talking animals, rivers, and mountains to overcome seemingly impossible obstacles. Asked to sort a heap of mixed grain before dawn, it is the ants that come to the rescue, seeking shelter from a storm it is the forest animals and rivers that come to the aid. In these stories, an unlikely group of characters band together to engage with an overwhelming force that confounds them (Liber, 2021). Strange magical characters are always churned out on 4chan; Pepe the frog, Pedobear, certain humans that come to possess powers to engage with the crypto market: the Bogdanoff twins – who can manipulate the market, Sminem – a character that opposes the Bogdanoffs. Uncertainties about cryptocurrency, market, and life are dealt with in this alternate world. New meanings are found in the sharing of familiar stories with a twist (Liber, 2021; Phillips & Milner, 2017). Turning to fairy tales has often been pointed out as a strategic form of storytelling employed by those who live through historical periods of political rupture and uncertainty (Liber, 2021). The articulation of these storytelling strategies to deal with the uncertainty of the financial markets less so.

Cryptocurrencies in an unequal World

Walter Benjamin and Jean-François Lyotard observed that with the advancement of communication technologies, storytelling as a way of understanding the world is diminishing (Benjamin, 1986; Jackson, 2002, p. 20). Not so within the cryptocurrency world. To listen to these stories, in a world that is anonymous, fast paced, and overflowing with information, the anthropologist must attune their ears, and transgress classical methods. The three themes of despair, courage, and comedy have been separated here for analytical purposes, but online they intermix. There can be elements of courage and comedy with Pink Wojak stories, and hodling stories are often intermixed with pain and comedy. Humour informs and constitutes most memetic stories.

Through foregrounding storytelling, the folk and fairy tale dimension of this space, I have highlighted how actors who take to the digital infrastructure of this space come to know the cryptocurrency market they engage with, and the ways in which they make this space inhabitable. As one interlocuter in London remarked, echoing a popular meme: “came for the crypto, stayed for the memes”. Through storytelling using Pink Wojak, Doge and hodling memes, a sense of belonging is created as netizens engage with a highly uncertain space.

Implicit within the ethnographic material presented here is a thread that was identified in chapter one – emotions are not separate to coming to know the lay of the landscape (i.e., abstracting the economics of this space) but play a crucial role in coming to know the cryptocurrency market. Through engaging with stories of despair, courage, and comedy – highly affective stories – actors within this space come to know a part of this space.

However, as Arendt and Jackson remind us, storytelling is neither purely about the private or the public, it is about the fluid and intersubjective movement between these realms. Actors within this space come to understand the world from where they stand (online forums), but in telling these stories they come to shape the public discourse, the way the market is experienced collectively, and come to have an impact on the price movement of the markets (explored in greater detail in the following chapter). Affirming the folk and fairy tale dimension of these stories allow us to see how these stories travel into the public realm, and how they do not simply reduce the uncertainty of the space. Instead, they help to re-create it by providing a certain way to collectively experience and feel the market, through highlighting stories of pain and despair that emerge in engaging with uncertainty, through creating images of Pink Wojak screaming with a noose around his head, or whilst wearing a McDonald’s cap and bloody tears cascading down his face. Through telling comedic stories that allow people to laugh with others in ‘a visceral community of laughter, [to] throws the tragic back in its own face’ (Jackson, 2002, p. 186), through hodling and refusing to listen to economic reason, actors not only come to personally experience the market in a particular way, they collectively create a market that is favourable for them – one that is highly volatile and uncertain. Where the relationship between £1, £1000, and a

million, are destabilised and made more uncertain than the relationship implied by working for limited wages.

'The precariat'



Figure 13: Wojak 'wageslavin' meme (KYM, 2015).

How might we conceptualise and understand the actors that inhabit 4chan and other similar online spaces? What conceptual resources are available to help us to understand their actions and proclivities? The anonymity of these actors creates some analytical difficulty. However, there may be some resonance with a recently invented figure: 'the precariat'. The figure of the precariat was coined by British economist Guy Standing (2014, p. 4) to describe a group of people that are 'floating, rudderless and potentially angry, capable of veering to the extreme right or extreme left politically backing populist demagoguery that plays on their fears or phobias' (the politics of 4chan are discussed in the final coda section). Shifts on the global political stage in the 1970s, Standing argues, has produced a 'dangerous class': a complex mixing of various other, more traditional classes. The label of the 'proletariat' seems outmoded as 'there is no common situation among workers' (Standing, 2014, p. 10). Though composed of various classes, Standing offers some descriptions of the anonymous precariat figure: a 'lack of occupational identity', working on flexible contracts, they 'find their minds and bodies spent [and] have little energy or inclination to do anything

other to indulge in passive play...often by watching a screen' (Standing, 2014, p. 128). These are descriptions that resonate strongly with the kind of stories told through Pink Wojak. A figure often employed to tell stories of working long hours, feeling unsatisfied, lacking motivation, feeling like the only energy left is to go on 4chan. Pink Wojak is often closely associated with another class of memetic stories called 'wagie memes', where Wojak is used to describe the soul crushing labour one has to do.

Standing (2014, p. 20) argues that a significant part of the precariat life is 'spending a vast amount of time online' and feeling disconnected from the world, which further aids in 'producing the *precaritised* mind' – one 'fed by fear and is motivated by fear'. Standing describes an ideal type, not based on ethnographic evidence and I would argue against any depiction of the precariat figure as a mindless actor who goes online simply to escape the drudgery of daily life. As this chapter has demonstrated, there are far more nuanced, world building, and creative practices on display in the kinds of online spaces the precariat might inhabit.⁴²

Coda: contextualising cryptocurrencies

Memetic storytelling makes the cryptocurrency space inhabitable, but for whom? This question has been bracketed off until now, in order to allow me to describe how certain stories come to resonate within this community and to highlight their resistive and subversive qualities. In this final section I would like to pay more attention to the wider cultural and political landscape through which these stories travel. Drawing from folk and fairy tales, I would like to complicate the story told so far, not in order to draw an alternative and conflicting conclusion, but to disturb and agitate the one I have told. My aim is to make the lesson more uncertain, in a way that I hope will be productive, and serve as an invitation to other storytellers.

Alan Dundes (1987, p. 12) notes that folklore is 'always a reflection of the age in which it flourishes'. It unveils complex anxieties about the major issues of the day, concerns

⁴² Standing's conceptualisation of a 'new class' (the precariat) has caused some provocation. For example, Scully argues that highlighting 'precarity around the world as a single phenomenon' obscures far more than it reveals (Scully, 2016, p. 160). For example, it blurs together the 'much longer history of precarious work in the Global south' and those on 4chan (those reside in the global North)

about the economy (Dundes & Pagter, 1975), threats to everyday life of a particular group expressed as racism, homophobia, or xenophobia (Dundes, 1987; Oring, 2008), or, as he puts it, 'paternalistic handwringing over women's sexual, economic and emotional autonomy' (Phillips & Milner, 2017, p. 28). In other words, societal and cultural issues are the essential context to folklore.

Stories told on 4chan and /biz/ similarly are a reflection of the times: constantly refracted through racial, homophobic, and misogynistic slurs. Those new to the space are referred to as 'newfags', brown men from South Asia as 'Pajeets', women as 'femoids'. Women, Jewish, black, and brown people, are nominated as the causes of white male oppression. Terms denoting inequality are similarly refracted through slurs, 'wagecucked' (someone working in a job with limited prospects) is derived from racial cuckold pornography, where white men invite black men to have sex with their wives while they watch (Marwick & Lewis, 2017, p. 37). The term 'cuck' is intrinsically linked to white power ideology acting as a 'dog whistle' to those on the far right (ibid).⁴³ It was mentioned at the start that those who occupy this space are young, white, men. Laura Bates (2020) points out it might be more accurate to describe those who occupy 4chan as 'Men Who Hate Women'. She is speaking largely of the popular /pol/ and /b/ sub-boards where such discourse is rife and the language, thematic content, deeply racist and misogynistic sentiments, overlaps significantly with the /biz/ board. As Bear (2020, p. 1) argues, and as is evident in the ethnography provided here, 'racial, gendered, national and other imaginings of the social permeate acts of speculation'. These imaginings are built into new worlds and re-enforce structures of inequality.

Those on 4chan eschew ethics and consideration for others through terms such as 'moralfag' (someone who expresses moral opinion and political thought) and through the 'shruggie' emoticon, or simply by claiming to do things simply for the lulz, whilst attacking a particular group of people. Far-right and alt-right movements increasingly employ the narrative of excavating 'the political' rotten of left-wing liberalism and cultural Marxism, to see the world for what it is: a place where the white man is

⁴³ Indeed, 4chan has provided a powerful model and inspiration for those attempting to re-create far-right and alt-right platforms (Marwick & Lewis, 2017).

oppressed and kept out of the sexual and financial economy (Marwick & Lewis, 2017). This is the politics of gesturing to evacuate 'the political' from speech and action, while simultaneously commanding the arena by continuing to produce, replicate, and circulate far right propaganda and structures of violence (Donovan & Friedberg, 2019). The politics of 'evacuating the political' are evident within early technocratic pioneers of cryptocurrencies, and still prevalent within Silicon cities (Golumbia, 2016).

To construct a sense of belonging in this uncertain world, participants look to folklore, as did the Nazis and other right-wing authorities before them (Lixfeld & Dow, 1994; Simeone, 1978). Several authors highlight the political labour that has been performed more recently through folklore: memetic storytelling and digital folklore emerging from 4chan, and other boards played an important role in electing Trump to power, including by undermining the left (Duffy, Page, & Young, 2012).

Several authors have highlighted that some of the first groups to use cryptocurrencies were groups with right-wing sensibilities (Brunton, 2019). Golumbia (2016), for example, has argued that undergirding cryptocurrencies is a right-wing ideology. Analysing material gathered online, he argues that when Bitcoin initially emerged it resonated particularly with online right-wing message boards and groups conspiratorially suspicious of a deep state composed of Jews, 'commies', and other groups an argument that can find support in many of the memetic stories told on 4chan (Golumbia, 2016). Euro-American online message boards are an important part of the cryptocurrency space, and the stories told on them come to influence both the cryptocurrency and traditional markets, as I will describe. However, it is also worth noting that these are not the only users and traders of cryptocurrencies. As the reach of cryptocurrencies grows, and the 'Cambrian explosion' continues, alternative imaginaries of what cryptocurrencies are, will emerge (Maurer et al., 2018). Filipino university students play games on their phones to earn cryptocurrencies; shop owners of El Salvador watch as their government asks them to accept Bitcoin as legal tender; and Yahoo boys from Nigeria see opportunities to gain an income from their cafes. Under such conditions it might be hasty to say cryptocurrencies are 'right' or 'left' wing. In the next chapter, I capture the movement of these stories into the public realm, where I highlight much more explicitly how these stories travel and have an impact, not only on the cryptocurrency market, but also the traditional stock market.

Chapter Three:

Anonymous Tricksters and Meme Stocks – A Revolution?

“How can we have any inside knowledge, when we have no knowledge at all?” –
quote from a member of WallStreetBets, an online forum.

A postcard from the field

Keith Gill, a 34-year-old white man from Massachusetts, U.S., is seated on a red leather gaming chair at his home, speaking into a red microphone projecting from the left side of his computer screen. Today he is not communicating with members of WallStreetBets (WSB) – a Reddit forum he frequents, but is instead attending a virtual hearing before the US House Banking Committee. He is attending the hearing because of his involvement in a coordinated purchasing of GameStop (a stock) that resulted in its value increasing exponentially. He is wearing a formal suit and tie, rather than the t-shirt emblazoned with cat pictures and the slogan ‘Game Over’ and other games-related attire that his YouTube audience are accustomed to.⁴⁴ The hearing is being broadcast by CNBC to millions. A significant number of hedge fund managers are tuning in with utter contempt for this man, whilst those on WSB are listening gleefully. Gill begins by laying out the facts:

“A few things I’m not...I’m not a cat.”

⁴⁴ I only knew Keith Gill through his activities on WSB, I came to know of his YouTube channel only through the Senate hearing.

The message sends those listening into a social media frenzy. I imagine that congresswoman Maxine Waters, who is presiding over the hearing, is not best pleased. Gill goes on to point out: “I’m not an institutional investor, nor am I a hedge fund” – as he has said countless times before, he is a retail trader. As he addresses some of the leading regulators in the US, in a formal tone, showing little emotion, in the background a picture of a cute kitten caught in mid-air holding onto something, with the caption ‘Hang in there!’ is visible. The picture seems intentionally placed: the red bandana Gill normally wears on his live stream when preparing for battle against hedge fund managers and Wall Street is draped conspicuously over the corner of the frame.

*

This is a strange and important moment that occurred on 18th February 2021 as the world of Reddit, online message boards, and the kind of stories highlighted in chapter two, encountered institutional actors. The figure of the retail trader, who had until this moment been considered as background noise, was coming to have a significant impact on not only the cryptocurrency market, but the traditional marketplace as well. It was strange to put a face to a nameless and uncertain figure whose posts I had been following as part of an online forum called WallStreetBets. Until this moment I had only known Gill by his online moniker ‘DeepFuckingValue’. It was a moment that was recognised by many within my cryptocurrency network as significant, evidencing the power of the retail traders and the online worlds they inhabited. Before proceeding with my analysis, I will provide some background on what was often referred to as the ‘GameStop Saga’ (Lucchini et al., 2022).

GameStop (GME) is a US store where people go to buy and rent video games. For some hedge fund managers, and indeed to many, GameStop seemed obsolete. The shop relied on people coming in to buy games, an idea that seemed bad for two reasons – firstly the COVID pandemic prevented people from visiting the shop, and secondly the realisation that people would increasingly either download their games or purchase them via Amazon in the future. For many hedge fund managers, ‘the fundamentals’ that make for a good company were absent. The decision seemed simple: short the stock. Shorting involves borrowing, say, 100 shares for \$10 a share (\$1000 total), waiting until the price goes down to \$4, buying 100 shares at the new

lower price and netting \$600 profit when you give back the shares you borrowed initially. This strategy requires confidence that the stock will be lower in value when you must buy back. It can be profitable, but if the stock goes up in value, the losses can be huge. It was the latter that was pointed out by a group of retail traders on a forum (WallStreetBets) that discussed high-risk trading strategies. They highlighted that several hedge funds, most notably Melvin Capital, were shorting GameStop, and this was an opportune moment to cause significant losses for them, and earn a small fortune in return. The call to arms against short sellers was presented as a moral intervention at times. Short sellers were identified as having aggravated the financial crisis of 2007-8, causing companies which might otherwise have been viable to fail.

Members of WSB coordinated through rallying calls to 'hodl' or hold the line, via sharing of badly drawn memes, lulzy jokes, misspelt and made-up words and phrases, for example, hodl, meme currency, stonks, diamond hands etc. They did so despite the warnings of many from the institutional financial world that this would all end in disaster for them (FCA, 2021b; Jakab, 2022a). Through coming together on WSB, those who institutional financial authorities refer to as 'retail traders' or 'noise traders' were able to move the stock price of GameStop from around \$19 in December 2020, to trading at around \$600 near the end of January 2021, less than a month later – creating an increase of over 3000% (Lucchini et al., 2022). Such volatile movement in the crypto market was a relatively common occurrence: however, within the traditional market this was unprecedented. Coordinated actions to move the stock market have taken place before, but often not by retail traders, and never to this extent. As a result of the activities spurred on by WSB, Melvin Capital was estimated to have taken a loss of 53% (over 4 billion dollars) due to the price of GameStop increasing (Chung, 2021; Lucchini et al., 2022).

As chapter two highlights, 'meme coins or currencies' were common terms within the crypto world used to denote cryptocurrencies moved via social media and message boards. In 2021 a new idea circulated, namely a 'meme stock' – a stock moved not by 'fundamental value' but by the stories told on online forums, and social media. The idea of 'meme stock' and 'hodl' took flight and entered the headlines and pages of *The Economist* ('Sweet memes are made of this')(The Economist, 2021), Financial Times (Wigglesworth, 2021), and also became mainstream vernacular. A special report

compiled by financial research company S&P Global analysed the real impact the 'meme stock moment' will have in years to come (S&P, 2021). CNN highlighted that Wall Street investment firm VanEck was to launch an ETF⁴⁵ to track 'meme stocks' (Monica, 2021).

During January 2021, trading on GameStop was stopped numerous times by Robinhood (the app offering retail traders access to the market) at the height of the frenzy, just as it looked as if the 'little guy' was winning against big institutional actors. Restricting of this access caused outrage among many on WSB who complained that this was a rigged game. The restriction both split and joined spectators, often across unexpected lines – for example, bringing about a rare unification of Congresswoman Alexandria Ocasio-Cortez with Sen. Ted Cruz in shared ire against Robinhood. This incident catalysed a hearing by the Senate Banking Housing Committee, a meeting with the heads of the US Treasury Department, the Securities and Exchange Commission (SEC), the Federal Reserve Board of Governors, numerous investigations by the SEC, Financial Industry Regulatory Authority (FINRA), three hearings by the House Financial Services committee, and countless reports compiled on retail traders by economists trying to make sense of the neologisms and finance-speak of WSB that seemed familiar yet alien: 'stonks, hodl, diamond hands, paper hands, apes stay strong'.

The happenings also brought about a senate hearing with Keith Gill, a well-known member within the WallStreetBets forum. Senate members wanted to point a camera at this single figure to inquire into what was going on. They asked, "What was the reasoning for purchasing the stock?", "What was the motivation behind it all?", "Why was he buying GameStop?" To these questions the forum members watching on, pointed out what they always do under such lines of questioning – "Hey, I just like the stock!".

The 'GameStop Saga' drew contrasting reactions both within the cryptocurrency space I inhabited and amongst the public more generally (Lucchini et al., 2022; Martin,

⁴⁵ An Exchange Traded Fund that tracks an index, a commodity or bonds and is traded on stock exchanges.

2021). For some, this was the evidence of an increasingly financialised world, of misinformed actors, and ‘trolls’ online perpetuating structures of inequality (Jakab, 2022a; Silverman, 2021). “You can’t stop capitalism with capitalism”, as the father of a friend put it. From others, it drew comparisons with Occupy Wall Street, the activities of Anonymous, and other protests and revolts. For them, this was potentially a ‘protest or rebellion’ of the ‘Precariat’ or an evidencing of the effect the ‘little guy’ can have.⁴⁶ For some, such as Zizek (2021), what was lurking behind the chaos was a potentially ‘revolutionary moment’. This possibility is worth interrogating.

Outline

This chapter does not take a position on whether this was a potentially revolutionary moment or not. Rather it uses the happenings of GameStop to disturb conventional ideas of revolutions that were apparent in both those who thought this was a ‘revolutionary moment’ and those who thought it was not. Doing so, as I suggest in this thesis, might be of interest to those who wish to challenge and question neoliberal power structures. This chapter disturbs normative understandings of revolution at play within the happenings of GameStop by foregrounding the ethnographically informed categories of the ‘retail trader’ and the ‘trickster’.

My description of the category of the retail trader emphasises the historical arc of this figure and highlights the perception that these are ‘noisy’ actors within the market, believed by some to possess little information and understanding of the market, and regarded as irrational, and often prone to bouts of mania. The figure of the trickster is used in two ways – as a descriptor, and as an outcome of normative expectations.

Firstly, the figure of the trickster describes, and coincides with, the lulzy activities and strategies by which members of WSB were able to play on the expectation that they were ‘noisy’ and unknowledgeable. In doing so they were able to fold critiques of themselves by mainstream media, economists, and outside spectators into their own narratives so as to call into question the knowledge of financial and economic experts. My attention to the trickster is an attempt to place an analytical handle on a group of

⁴⁶ The ‘little guy’ was a term many (media, politicians, academics) used to highlight the mismatch between Traditional finance and those on WSB.

people, mainly men, who are resistant to being categorised as a singular or uniform group. Through considering the natural habitat of the trickster as well as rituals (and their overlap with revolution), I disturb the idea that behind revolutions are violent ruptures from the past occurring in a linear unrolling of time and making way for a self-evident 'new' land. Rather, I propose that what is often at stake in a revolution is the 'hailing' of stories and memories from other times that are normally silenced yet can potentially become the grounds for action (Lazar, 2014). The hailing of these stories from other times can disturb economic and institutional reasoning. In an increasingly digitalised world, where social media and online message boards come to play a significant role in revolts, rebellions, and revolutions, it is such stories of resistance and strategies developed elsewhere that can travel and become actionable in strange and unexpected places.

Secondly, the figure of the trickster is an outcome of normative expectations of two kinds. The trickster is an outcome of expectations that there is some monolithic reason to be extracted from behind the actions of the members of WallStreetBets. Related to this, there is also the outcome, perhaps, of looking for a figure or class of people united by some shared and recognisable ties.

By foregrounding the figure of the trickster, I highlight that 'revolutions' and the happenings of GameStop might be better understood not as a singular event that reverberates through a linear space-time, but as part of 'a non-linear series of event/s' (Cherstich et al., 2020). The activities of Occupy Wall Street, of Anonymous, and protests in Hong Kong, amongst other things, may be considered as part of a non-linear series of event/s. Framing revolution in this way disturbs neoliberal conceptions of time and allows us to engage diachronically and comparatively. Moreover, such an understanding forces us to reflect on ourselves as commentators on the happenings of potentially significant moments. Indeed, as Lazar (2014) highlights, journalists, academics, and other commentators are not separate to 'the event' but come to play in its constitution. If what is at stake in a revolution is the hailing of stories and memories from other times, how might we abet this process? How might we think about the 'GameStop Saga'?

History of the retail trader

'In the beginning, there were Gods and there were Mortals. Gods knew everything; they could not trade with other Gods, because all the Gods would always be on the same side of a trade. Mortals did not know much, or they only thought they knew. Hence, Gods could trade only with Mortals, and Mortals traded among themselves too. And so, markets were born' (Preda, 2017, p. 2).

The above is the cosmogenic tale, exaggerated and interspliced with some humour by Alex Preda, that financiers and mainstream economists tell of the relationship between the financial elite and others who trade on the market. The latter, the mere Mortals, supposedly trade on 'noise', which Fischer Black – famed American economist and co-creator of the famous Black-Scholes equation conceptualises in the following way:

'Noise trading provides the essential missing ingredient [to the whole market] ... People who trade on noise are willing to trade even though from an objective point of view they would be better off not trading. Perhaps they think the noise they are trading on is information. Or perhaps they just like to trade' (Black, 1986, p. 532).

The information the Gods trade on is of a higher quality, involving more accurate descriptions of reality, whereas the information the Mortals trade on is of lesser quality, utilising less accurate descriptions of reality. In finance the distinction between informed and noise traders has often been equated with the 'professional' versus the 'amateur' trader. The professional traders need the noise brought on by the amateur traders, because without them there would be an ideal state where everyone would be certain of what they know, but there would be no trading taking place (Preda, 2017, p. 2). 'Without noise traders, prices would not be estimates of value, but value itself' (Black, 1986, p. 534). As Preda (2017, p. 2) points out, and as may be obvious to anthropologists, noise is not an inherent quality of the market: 'it is not a state of the physical world (like say, auditory noise) but a property of the social worlds of the market, as embodied by traders'. The market is structurally constructed in such a way

as to 'produce and maintain such a critical ingredient as noise traders' (Preda, 2017, p. 2).

Prior to the 1960s, the financial market was far more exclusive, populated by wealthy individuals and companies. To trade as an individual, you would have to know a trader – someone in New York or Chicago. You would then have to devote a significant amount of time to peruse specialised financial magazines (*Barron's*, *The Investor's Chronicle*, *Wall Street Journal* etc.), and be on the phone regularly with your broker, or send telegrams through the post office. These activities required significant capital, the necessary contacts, time, and attracted high commission fees. From the 1960s to the 1980s, mutual funds and discount brokers came into the picture, the latter offering a technical set up, attracting greater numbers of individuals and their money into the system. The number of trades committed increased, though commissions were still high, and you still had to make an appointment with an advisor if you wanted to put money into a mutual fund.

From the mid-1980s to the present day, 'institutions came to specialize in absorbing and recycling individual money into markets at great speed' (Preda, 2017, p. 54). Products that were more tailored to individuals were offered. Technical advancement, the development of the internet and a shifting regulatory landscape gave more people access, and more money flowed into the market. With the advent of internet trading, obstacles to the market did not magically disappear as there were still high costs associated with gaining access to the market, for example, Currency Management Corporation still required a minimum deposit of \$20,000 to make trades (Tomasula, 1997, p. 38). Currency trading was still for the wealthy individual investor and small firms. From the mid-1990s, products tailored towards the non-professional trader increased further: together greater leveraging opportunities, attractive tax incentives, tax reliefs offered on losses, and perks such as air miles on trading accounts drew more people in (Preda, 2017, p. 51). In the UK, innovation and softer regulation in the gambling industry paved the way for popular contracts such as spread betting, which essentially allowed for betting on future outcomes – more of a prominent factor in the UK than the US (Cassidy, 2020; Preda, 2017). By 2011 these shifting elements resulted in retail traders making up 8% of a \$4 trillion market for the exchange of currencies (King, Osler, & Rime, 2011).

The rise of online non-professional traders and investors aligned with the ‘dot-com bubble’ in the 1990s, where many non-professional investors invested in tech start-up companies. The increasing scope of the internet, the Taxpayer Relief Act of 1997, and other developments to lower the bar of entry, led to the description of the non-professional trader as the ‘day trader’. People quit their day jobs to start investing in the stock market full time. Prices of stocks such as Qualcomm rose over 2000% (Norris, 2000). For many considering the dot-com bubble, the similarities to WSB and cryptocurrencies are striking: they describe both as a ‘bubble’, a product of ‘mania’ in the market, that is, a period of excessive irrationality. Post-2000, the category of the day trader was associated with ‘mania’ and the ‘irrational exuberance’ of the dot-com bubble (Preda, 2017). With the shifting legal and regulatory landscape that wished to incorporate these actors further into the financial marketplace, the day trader was rebranded into a new category: ‘the retail trader’ (Preda, 2017).

It is this history – of far more complexity than summarised here – that came to mould and constitute the retail trader. This actor was initially thought, by the financial elite, to be simply adding liquidity to the market. Retail traders were not considered to be market makers. The vast majority, some estimate 90%, lose out on trades – proof for the financial elite that the non-professional traders were trading on noise; on poor quality information (Preda, 2017). To return to the metaphor employed at the start of this section, the Gods were the market makers and movers, and the Mortals were those that traded on noise, provided liquidity, and had little influence over the market. Enter the trickster.

WallStreetBets (WSB) bringing the noise

WSB has a subscription of 12,000,000⁴⁷ members and has grown exponentially since its inception in 2012. The group tagline gives an apt portrayal of the group: ‘like 4chan found a Bloomberg terminal’.⁴⁸ On the message board people come together to discuss aggressive trading strategies. A Wikipedia entry provides a description of the

⁴⁷ At the time of writing, 3/05/2022.

⁴⁸ Bloomberg terminals being software that allows professionals to access, monitor and analyse real-time financial market data.

group as young retail traders and investors ‘who ignore fundamental investment practices and risk management techniques, so their activity is considered gambling’ (Wikipedia, 2022). The magazine *Money*, prior to the GameStop incident, described the forum as a ‘fusion of memes, bragging, bullying, hoodwinking, and the exuberant overconfidence of (mostly) young men’ (Davidson 2018).

Clear demographics on WallStreetBets do not exist. However, from polling taken by members of WSB groups themselves, and from some sampling studies, one can roughly say that over 75% of those on WSB are men, and 70% identify as white (Barthel, Stocking, Holcomb, & Mitchell, 2016; Hadly, 2021; WSB, 2018). Those who take to Reddit are typically between the ages of 18 and 29. The language here is not as overtly racist and misogynistic as it is on 4chan, however, there is considerable overlap. This is apparent in the phrases, memes, method of storytelling, and most notably the lulzy sense of humour employed. Many I knew in the offline world, who attended the ‘community meetups’ described in chapter one, may not openly admit that they were part of 4chan, but were much more willing to admit that they were part of WSB. Phrases such as ‘diamond hands’, ‘stonks’, ‘meme stocks’ or ‘meme coins’, became part of discussions had both online and offline.

Within this forum, the practices of hodling, or holding the line, during the GameStop event were narrated by WSB via a ‘lulzy’ sense of humour. This humour implied an awareness that they, the retail traders, were perceived as uninformed market participants, as actors that brought the noise. This was evident in their descriptions of each other and of themselves as ‘apes’, ‘retards’, ‘autists’, and ‘degenerates’ and in the popular slogan employed: ‘apes together strong’ – a quote from the movie *Planet of The Apes* that has gone down in internet folklore. Grammar is made to repeatedly riff on the perception they are without knowledge. The lulzy sense of humour was also apparent in the answers they gave to those who asked why they were buying Gamestop – a question that circulated in both the mainstream media and senate committees at the time. Many stated they wrote their financial analysis reports with crayons to reflect on their financial choices, or rolled a dice to make decisions, or as Keith Gill (2020) put it in a video:

“It’s really difficult to explain why I did or did not buy a certain stock...let’s say I’m looking at a stock...let’s say PENN stock...I’m going to refer to my UNO deck...I maintain two piles at all times...for times like this where I might be unsure what I should do...in the first pile just even numbers...the odd numbers are for the suits...I draw out a card...6...I ‘m going to buy 6000 shares of PENN right?...hold on...there’s a second deck I have to draw on...”

The scene ends with Roaring Kitty shaking a magic 8-ball to figure out what stock to buy next. The comments on the video are telling: ‘Hedge funds are gonna be doing research on the guy that beat them, and they’re gonna find this video of a dude pulling Uno cards. This is absolutely beautiful’. Another commentor posts: ‘The SEC will end their investigation after watching this video’ (Roaring Kitty, 2020).

In short, by using their lulzy sense of humour, participants of WSB were highlighting an awareness of the perception that they were uninformed market participants, that they were ‘dumb money’, and institutional actors were ‘smart money’. However, they were well aware that they were actors that brought the noise. Rather than directly challenge this viewpoint rhetorically or in discourse, they further played on these critiques and stereotypes.

The trickster – the political figure of online anonymous message boards

It is the lulzy sense of humour on display, the refusal to articulate reasons for actions, that invites the labelling of actors on WSB as ‘trolls’ and ‘tricksters’ by academics, journalists, and general spectators (Jakab, 2022a; Martin, 2021; Silverman, 2021). A similar form of humour is also on display within 4chan. As Milner points out, ‘taken together 4chan and Reddit are each vibrant sites of mediated public discourse...they each prominently feature a logic of lulz’ (Milner, 2013). For many scholars that have explored this space, contained within this trickster form of humour that circulates on 4chan, and Reddit, is something that is political, a ‘highly transgressive humour’ (Coleman, 2006; Milner, 2013; Phillips, 2015, p. 53).

Gabriella Coleman highlights this political potential through her ethnography on 4chan and Anonymous which explores the activities of these actors through the ‘trickster’ figure who embodies and enacts the ‘logic of lulz’. Anonymous is a network of actors

'birthed in the pits of 4chan' and their name for many, especially in the early years of their inception, was 'synonymous with trolling' with a lulzy sense of humour. Coleman argues that 4chan is historically significant as it was here that the trickster-like behaviour now evidenced in other online message boards (like WSB) first emerged. It was a key place where humour first seemed clearly political and actionable.

Coleman's opening paragraph in her ethnography, *Hacker, Hoaxer, Whistleblower, Spy: The Story of Anonymous*, opens with Anonymous uploading a YouTube video on 29th July 2007, responding to reporting by Fox News describing the group as 'the internet Hate Machine' – a title the 'collective would subsequently adopt as a badge of honour' (Coleman, 2015, p. 1). The video uploaded is of a person wearing a Guy Fawkes mask, speaking in a low deep tone. It begins, seemingly earnestly:

"It has come to our unfortunate attention that both the name and nature of Anonymous has been ravaged as if it were a whore in the back alley, and placed on public display for all to behold" (Anonymous, 2007).

Instead of upending Fox's and other mainstream news media portrayal of them, the video seemingly confirmed their suspicion – 'though only, of course, to those not in on the joke' (Coleman, 2015, p. 2). Anonymous' aesthetics, their mode of coordinating and functioning, has gone on to have a significant impact on the blurred line between online and offline politics. Traces of the Anonymous network could be 'found at the heart of hundreds of political ops – becoming integral to some of the most compelling political struggles of our time' (ibid.). Anonymous were involved in hacking the Tunisian government's website in 2011, and part of Spain's *indignados* (a series of protests, demonstrations, and occupations against austerity policies in Spain) when the illuminated Guy Fawkes mask of Anonymous was projected onto a building in the Puerta del Sol. In 2011, they rose to prominence through 'Operation Avenge Assange', a campaign that involved committing a DDOS (distributed denial of service) attack, flooding financial institutions that refused to process donations to WikiLeaks, including PayPal and Mastercard (Coleman, 2015, p. 3). Such an attack essentially works by a large group of people occupying a digital space – for example, going onto a website and overwhelming the structures in place. This historical event paved the way for Bitcoin to demonstrate its worth clearly and became a tool that members of

Anonymous and others used to fund WikiLeaks. For Anonymous, cryptocurrencies became a vital tool to get around attempts by the US government, acting through financial institutions, to choke WikiLeaks.

There are many points of overlap amongst the strategies employed, and in the contexts and milieux within which the tricksters of Anonymous and WSB emerge. As with Anonymous, WSB actors once again employed the logic of lulz in refusing to ground their actions in 'reason' – understood as the accepted connecting of cause and effect, of connecting events, moments, and thoughts, through a particular flow of time. As Roy Wagner (2012, p. 166) puts it, what we come to understand as 'reason itself corresponds to nothing so much as the plotting of creditable cause-and effect sequences in a particular subject matter...creating a time-sensitive relation' between the two. The trickster's logic of lulz politicises humour, and 'performs the work of [a] cultural critic' – though of course as highlighted in chapter two, these are not their only works. The logic of lulz and memetic storytelling, apparent in WSB and 4chan, 'has escaped the confines of internet forums' (Metahaven, 2013, p. 32). It is not simply part of a realm of discourse detached from materiality but comes to have a part in a contemporary form of politics, and in stories of resistance and struggle thus becoming actionable in strange, unexpected, and trickster-like ways.

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Coleman's work on the figure of the trickster as a cultural critique, one who employs humour, guile, and trickery, is of course not particular to 4chan and WSB. Her comparison draws on early anthropological works that have highlighted trickster myths and the role of the trickster within certain groups. Levi-Strauss' (1964) analysis of American mythology identifies the 'trickster' as a problematic figure for those that have examined myths, and as a figure that problematises and deconstructs commonly held assumptions within a particular group. Levi-Strauss identifies ravens and coyotes as tricksters outside of society, who mediate between opposite poles: life and death, right and wrong, reasonable and unreasonable, male and female, linear and non-linear flows of time. Tricksters' intentions are never clear, and they work under, and create conditions of uncertainty and unpredictability. Paul Radin (1972) similarly describes the trickster's intention in the Winnebago Trickster myth as uncertain and difficult to understand and make sense of: why does the chief in the village burn his own anus

and eat his own intestines? The reasons are not given. Moreover, the village peoples' attempts to understand their chief's actions are constantly thwarted.

The figure of the trickster is recognisable across a wide variety of places and times: ancient Greece, China, Japan, medieval jesters, Punch-and-Judy plays, in Indigenous Communities all over the world. Though there are various types of tricksters, there is a remarkable similarity in tricksters as those who embody and exist in relation to spaces of liminality and uncertainty. Tricksters work within and create condition of uncertainty, and they call into question representations of reality through various categories and question normative moral claims.

Despite similarities in the tricksters in diverse places across the globe, we might, as Boellstorff (2015a) argues in relation to Coleman's work, be more specific about the type of trickster at work here. Tricksters of Anonymous and WSB, unlike many other tricksters, are anonymous or pseudonymous figures. Like many tricksters they lurk (as WSB and 4chan actors understand themselves) on the fringes, as opposed to being part of the 'normies' (Nagle, 2017). Like many other tricksters, both WSB and 4chan provide social commentary and critique of the world around, and respond to others' reaction to them, in the case of members of WSB through a particular form of humour – the lulz. Importantly, rather than there being one trickster figure, as often seen in rituals and myths, there are many, often claiming to act as one. Indeed, the expectation seems to be from media and legal institutions that these are monolithic figures; 'noisy actors', perhaps.

Rituals or revolution?

The activities of WSB, and the significant movement of GameStop prices drew substantial media and academic attention. The questions these actors seemed to be asking of the Gamestop spectacle bear remarkable similarity to events when Anonymous coordinated activities via 4chan and other online boards to either order large numbers of pizzas to a single house, or to attack state infrastructure – 'are [they] principled dissidents? Or are they simply kids screwing around on the internet as lulzy drunk trolls', [as tricksters]? (Coleman, 2015, p. 200). Was this a potentially revolutionary event or was it a way of making 'rituals of rebellions' (Gluckman, 1963a)? Was this more of the same or something new? These questions seemed pressing to

those who wished to comment, write, and understand the unfolding of the Gamestop event. Inspired by the tricksters of WSB, this chapter does not provide a direct answer as to whether this is a revolution or not, or whether there is something 'new' at play or not. Instead, I want to think through and subvert assumptions implicit in this line of questioning. In doing so, I wish to put forward the idea that such acts might create the conditions of possibility for recognising fractures and contradictions within neoliberal practices. Primarily, I want to draw attention to two assumptions. 1) Revolutionary moments can only be brought about by singular coherent reasonings, and 2) revolutions bring about something that is radically and self-evidently 'new'. I start with the latter.

To interrogate these assumptions, I turn to a body of anthropological literature that explores the overlap between rituals and revolutions. Rituals are of course the natural grounding of the trickster. As Jacob Campbell argues in an anthropological work exploring the presence of the trickster across diverse areas such as the Amazon basin of South America, Polynesia, the Caribbean, and West Africa, the 'ritual performance is the most tangible means by which a community may interact with a trickster' (J. Campbell, 1999, p. 6). The anthropological literature on rituals is of course vast, but I wish to focus on a significant strand which is relevant to my discussion on tricksters, revolutions, and the activities of those on WSB who partook in the GameStop saga. That is, I wish to focus on temporality.

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Gluckman, coming from the British structural-functionalist school of anthropology, might have understood the playing out of GameStop as allowing for rituals of rebellion as distinguished from and opposed to revolutions proper (Gluckman, 1963b). In his famous essay *Rituals of Rebellion in South-East Africa* Gluckman describes various rituals; the first-fruit rites of the Goddess *Nomkubulwana*, where women transgress their conventional social roles to temporarily affront the males; the Swazi *incwala* ceremony where the king is for a short period subjugated to disdain from his subjects, only to emerge from the ceremony as the rightful ruler (Cherstich et al., 2020; Gluckman, 1963b). Order is always re-established in these rituals, as Gluckman argues:

‘These ritual rebellions proceed within an established and sacred traditional system, in which there is dispute about particular distributions of power, and not about the structure of the system itself. This allows for instituted protest, and in complex ways renew[s] the unity of the system’ (Gluckman, 1963b, p. 112).

In a similar way to how Gluckman argues that kings may be ridiculed, but ultimately the structure of kingship is supported, the high priests of finance maybe ridiculed, their knowledge called into question, but ultimately, the structure of the market is affirmed. By mobilising on the markets with neoliberal actors as the gatekeepers, any potential revolts and rebellions by the retail trader will eventually be absorbed.

For example, as the idea of hodling comes to have financial value, already it, and the structures that allow for people to hodl – message boards mainly – eventually become part of the financial gaze. Traders from the traditional financial world showed remarkable agility and speed in not simply dismissing the actions of WSB as a one-off event, but mobilised platforms and companies that allowed for the tracking of social media conversation through indexes and metrics. Wall Street investment firm VanEck launched an ETF⁴⁹ (BUZZ) to track meme stocks. Similarly, within the crypto world, ‘Sentiment’, a ‘behaviour analytics platform’, offers the savvy trader insight into the daily happenings on message boards and social media. Although initially attacking the hedge funds was a major rallying call, and Melvin Capital lost significant amounts of money, eventually other traders and hedge funds mimicked the movement of WSB traders to cash in. New York hedge fund Senvest Management made a profit of \$700 million during this period, Mutual-fund giant Fidelity sold its 13% stake in GameStop reaping a large profit (Jakab, 2022b).

Numerous publications, articles and books have claimed that this event was not a meaningful show of resistance, nor a break from the past, nor a story of David vs. Goliath. As Jakab (2022a, p. 1) (an ex-stock analyst at a major bank) points out in *The Revolution That Wasn’t*, GameStop only made those on the Wall Street even richer – the ‘house’ eventually wins. Moreover, paternalistic policies aimed at ‘protecting’ the retail traders from their own lack of knowledge are being discussed at great length by

⁴⁹ Exchange Traded Fund – a pool or basket of securities that track an underlying index.

senate and banking committees in the aftermath of GameStop. On 26th September 2021, the SEC (Securities and Exchange Commission) amended rule 15c2-11 in order to, as Stephanie Avakian (director of the SEC division of enforcement) put it: 'protect retail investors from being victimised' by pump-and-dump and other fraudulent schemes (SEC, 2021). The amendment to the rule limits the number of stocks available directly to the retail trader.

There are numerous good reasons to think that this is not any meaningful show of resistance. Many, rightly so, highlighted the ability of capitalism to fold critiques of itself – through counter speculative methods or otherwise – into enhancing its function (Bear, 2020). However, to close the book here, on this moment, might be to foreclose the moment without realising its potential for those actors interested in questioning neoliberal structures, or for future actors for that matter. As Žižek (2012, p. 3) considers, the difficult question in critiquing capitalism is 'how to fight the system without contributing to its enhanced functioning', how to highlight revolutionary potential that lurks below the surface without naivety.

The question Žižek proposes is too big perhaps to think through here fully, but perhaps it offers a place to start thinking through the temporal assumptions at play in ideas of 'newness' and 'revolutions' that are so often invoked in discourses assessing significant change. Anthropologists concerned with paying attention to the playing out of neoliberal powers might wish to, trickster-ing such an understanding of revolutions and informed by literature on rituals, complicate this understanding of revolution and time (Bear, 2014).

Early anthropological work, including that of Gluckman, makes a distinction between rituals and revolutions that are centred around arguments about time and its structure (Cherstich et al., 2020, p. 22; Gluckman, 1963b). For Gluckman, rituals are characterised by a 'repetitive' and cyclical nature, whereas revolutions are 'one-off historical events that take place in societies oriented toward change and development, revolutions can only happen if the constraints of ritual cyclicity are broken' (ibid., p.22-23). Such an understanding of revolution seems to be at the heart of

contemporary and recent politics, and strongly undergirds Marxist ideas of revolution as well.⁵⁰

Regardless of political views, the consideration of what is revolutionary or ‘new’ is framed within a conception of time that has at its heart a Judeo-Christian notion of Providential time. Here, time marches from Creation to Judgement Day, with significant moments or what comes to be termed an ‘event’, marked by rupture and violence, that breaks free from the past into something *new*. European historians of revolutions have traced back to the 18th and 19th centuries the proliferation of such a Judeo-Christian approach (a paradoxical intertwining of secular and religious time). Such an idea contrasts with ‘earlier conceptions that identified revolution with the cyclical motion of heavenly bodies, to which the cycles of political change were also associated’ (Cherstich et al., 2020, p. 19).

Such an understanding of the rolling out of linear time, involving rupture and bringing to light new uncertain frontiers and worlds, is also at the heart of capitalist and neoliberal practices – from the venturing of Columbus into the Americas to the revolutions being manufactured in Silicon cities. This view strongly informs the technocratic revolution put forward by cypherpunks and cryptoanarchists, who imagine code and algorithms as allowing for a violent rupture from the past, catapulting civilisation into a ‘new era’. As O’Malley (2004), Esposito (2011), and others point out, neoliberalism has at its heart an affirmation and valorisation of uncertainty that comes from disjuncture and breakages in the linear unrolling of time (Tellmann, 2020). An uncertainty that can be potentialised and put to work for the creation of profit is also in play. For Anthony Scaramucci – Donald Trump’s former communications director and founder of Skybridge Capital (a global investment firm) – the activities of WSB were not something that undermined his profession. He articulates: ‘we are witnessing the French Revolution of Finance’ (Scaramucci, 2021). The uncertainty and potential

⁵⁰ In the Eighteenth Brumaire of Louis Bonaparte, Marx draws the following parallel between language and revolution: ‘the beginner who has learned a new language always translates it back into this mother tongue but he assimilates the spirit of the new language and expresses himself freely in it only when he moves in it without recalling the old and when he forgets his native tongue’ (Marx, [1852] 2009)

disjuncture, the 'new frontiers' that 'revolutions' offer are potentially another way to seek profit, albeit in a radical way that strikes some as 'new' (O'Malley, 2004).

However, as more recent works on a ritualistic approach to revolutions have shown, (complicating Gluckman's understanding of rituals) what is often at stake in a ritual, revolution, or revolutionary moment is not necessarily the breaking into an evidently new and uncertain territory. In a recent book titled: *Anthropologies of Revolution – Forging Time, People, and Worlds*, the authors explore more 'sophisticated' and intricate understandings of temporality at play within rituals and revolutions across divergent places and times (Cherstich et al., 2020). They argue that rituals and revolutions are quite often about the folding in of multiple temporal planes upon a moment. Ancestors come to speak from the distant past in the enactment of rituals, anticipations and anxieties about the near future are folded into the present, and sometimes the immediacy of the present is dislocated from flows of time (ibid.). They argue that rituals and revolutions force us to consider a diverse range of temporalities, 'lead[ing] us to contemplate nonlinear ways of conceiving time itself' (Cherstich et al., 2020). Tricksters often emerge as actors in rituals and myths that embody this nonlinear time, that root their actions in another temporal plane, and in doing so they disturb conventional connections and the drawing of relations, casting a wider net on temporality and highlighting the grounding of actions in a heterogeneous temporal plane (Cherstich et al., 2020; Nikolajeva, 2003; Radin et al., 1972).

Quite often in the literature on rituals, 'possessed' and trickster-like behaviour comes to signify acting according to the reasons of another world, another time, and can be subversive and potentially revolutionary. For example in 1863, in Madagascar, Merina commoners who were frustrated by the acts of their king who was submissive to French and British colonial powers, refused to do their agricultural duties and spontaneously became possessed by the spirit of their ancestors on a mass scale (Bloch, 1986). Similarly, the Zimbabwe African National Liberation Army aligned with local spirit mediums to override the power of the presiding chiefs to act on the authority of chiefs of the past, the *mhondoro*, so as to resist British colonial rule in the 1970s (Lan, 1999). They performed rituals to engage with their ancestors, and to act under their guidance and reasoning, having found their current chief compromised by

colonial authority. It is this dislocation of reasoning from normalised time flow that is potentially revolutionary.

Within the financialised space, economist reports, yield curves, mathematical models, quarterly reports and price charts create a particular rhythm of time (Bear, 2014; C. Zaloom, 2009). For example, the summary of a company's financial statements published every three months impacts the connecting of cause and effect along a certain temporal plane. Many crypto traders I encountered on social media conducted technical analysis using candlestick charts (a style of financial chart) to read patterns into data sets that were structured along hours and seconds. What surprised me about the actions of WSB actors was that many dislocated reasoning from any such normalised time flow, and drew on memories of past recession, particular family difficulties, and crises – all events that became actionable on the marketplace.

For example, amongst the lulzy humour, many shared stories of how hedge funds and short sellers profited and contributed to the financial crisis of the past. Short sellers and hedge funds bore much of the hatred from the group and came to be a symbol of the corrupt aspect of Wall Street and mainstream finance. Many shared personal stories of the financial crash: grandparents that lost their homes, fathers that lost their job, mothers that were asked to pick up extra shifts. These stories were again connected with hedge fund managers, short sellers, and a corrupt financial system. Stories of past financial crisis and living through austerity folded into the present and became grounding for action on the marketplace.

In an 'Open Letter to Melvin Capital, CNBC, Boomers, and WSB'⁵¹ one poster wrote:

'I was in my early teens during the '08 crisis. I vividly remember the enormous repercussions that the reckless actions by those on Wall Street had in my personal life, and the lives of those close to me... My aunt moved in with us and paid what little rent she could to my family while she tried to find any sort of work. Do you know what tomato soup made out of school cafeteria ketchup

⁵¹ Published with permission from ssauronn and Queenjaninejaheen (Reddit poster). : https://www.reddit.com/r/wallstreetbets/comments/l6omry/an_open_letter_to_melvin_capital_cnbc_boomers_and/

packets taste like? My friends got to find out...to Melvin Capital: you stand for everything that I hated during that time. You're a firm who makes money off of exploiting a company and manipulating markets and media to your advantage. Your continued existence is a sharp reminder that the ones in charge of so much hardship during the '08 crisis were not punished... I bought shares a few days ago. I dumped my savings into GME, paid my rent for this month with my credit card, and dumped my rent money into more GME (which for the people here at WSB, I would not recommend). And I'm holding. This is personal for me.

To WSB: you all are amazing. I imagine that I'm not the only one that this is personal for. I've read myself so many posts on what you guys went through during the '08 crash. Whether you're here for the gains, to stick it to the man as I am, or just to be part of a potentially market changing movement - thank you. Each and every one of you are the reason that we have this chance. I've never felt this optimistic about the future before. This is life changing amounts of money for so many of you, and to be part of a rare instance of a wealth distribution from the rich to the poor is just incredible. I love you all.'

The post received 143,000 upvotes (likes) – an unusually high amount. Queenjaninejaheen posted in response:

'i hate to earnest post, but this hit home hard. a lack of food in my house during 2008 started me down a path toward the tortures of anorexia at such a stupid young age (5th grade).
fuck all of them.
hold. the. line.'

Countless others shared their stories of austerity as well on WSB. As journalist Christina Hadly points out, beyond the lulzy sense of humour, fanciful tales, 'there are real stories' here on this forum – something that is often forgotten (Hadly, 2021). There were also other stories that I came to hear from a diverse range of actors outside of WSB and the online world. For a retired teacher in North Wales, who identifies as a socialist, and his son who told him about GameStop and WSB, GameStop seemed

like an opportunity to cause damage to the current financial system. For the retired teacher, the activities were reminiscent of the activities he participated in during the 1970s. Certain friends who had memories of tuition fees being amped up, and the saving of a select privileged few by the government during the time of the financial crisis similarly considered the purchasing of GameStop to be partaking in some form of resistance. Many wondered whether this was some digital event akin to *Occupy Wall Street*. For the small numbers of protestors who gathered outside Manhattan's Zuccotti Park, to 're-occupy Wall Street', and for many other small protests in the offline space, including the scribe of the graffiti 'BUY GME – KILL HEDGE FUNDS' near my home in London outside another building project clearly not intended for the local community, GameStop evidenced the corruption of the market and economic systems by a select few.



Figure 14: Gamestop graffiti⁵²

⁵² Photo taken by a friend: Eda Seyhan.

Hodling and calls to partake in the activities set in motion by WSB 'hailed' actions from diverse temporal planes in much the same way as rituals and revolution do (Lazar, 2014). As many have highlighted, both rituals and revolutions are 'event-based mediation between different temporalities' that come to impinge upon a moment, where 'different social experiences of time meet in a politics of time, in some cases to co-construct revolution' (Bear, 2014; Cherstich et al., 2020; Lazar, 2014, p. 92). As highlighted in chapter two, digital memetic storytelling has a folk quality in that it allows for divergent reasons for doing things to co-exist, thus making space for a sense of communality yet without sharing explicitly the same views. Coming together in this way allowed for the breaking free from normalised flows of time structured by the financial and economic reasoning of so-called experts. In response to those that critiqued and belittled the actors who bought GameStop, when questioned as to why they bought the stock, many, including Keith Gill in response to the House Committee on Financial services, replied in a typically lulzy and trickster-like manner – "I like the stock!". Gill's response became a popular slogan among protestors and others who communicated that no other reason need be given.⁵³ For them, the uncertainty surrounding reasons for doing things need not be resolved to a term labelled 'economic reason'.

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Finally, through the figure of the trickster, I wish to briefly highlight the second assumption that was present in understandings of revolution employed by many that came to comment on GameStop: revolutionary moments can only be brought about by disciplined moral actors with a singular voice. Much of the reporting looked for a singular reason. The figure of the trickster could also be understood as the product of a system or machine that looked for monolithic reasonings, rather than a label that describes the activities of a certain group of people.

⁵³ In doing so they highlighted that the value of the stock was not susceptible to some 'fundamental analysis' to be conducted by economic and financial analysts, but by their actions. Žižek (2021) argues that what the WSB members seemed to be saying was: 'we don't really care what really goes on, we just want to shock the market...what brings us success is not the reality of production, [but] the enigmatic character of our act'.

As the WSB post above highlights, there was no single reason why people joined in purchasing GameStop shares – there were many reasons. Many did it to make a quick buck, some did it as a show of resistance, some did it due to personal experiences they had had with the market, some did it for the lulz – and this is not an exhaustive list of reasons. For those who expected a singular coherent, rational, reason from the figure of the sole ‘retail trader’ to report back, the multiple and shifting voices that came out of the mouth of this figure also acted to create the effect of a kaleidoscopic and shapeshifting figure – a trickster, a troll – whose reasons for doing things seemed constantly in flux and uncertain. The trickster figure emerges precisely from the expectations for reasons, mainly of the singular kind that order a series of activities along a linear timescale, arranging cause to effect, and not just as a description for the actions of WSB actors.

Non-linear revolutions and event/s

Countless other examples can be given highlighting the play of a temporal plurality that complicates any assumption of revolution as a rolling out of linear time with violent ruptures that come to be labelled as an ‘event’. Consider one final example, Victor Turner’s historiographic study of the Hidalgo insurrection of 1810-11 which initiated the Mexican revolution against Spanish colonial rule (Turner, 1975). Under the leadership of Hidalgo, a local priest initially called out the cry of revolution during festivities honouring the Virgin of Guadalupe. Turner argues this was a catalytic moment where the figure of the ‘Brown Virgin’ as a Catholic figure with indigenous characteristics was a potent symbol in unifying and forming a *communitas* among the *mestizos* and indigenous people against the white ‘*criollos*’. The ritual dynamics of the festivities provided favourable conditions for sparking an uprising, but Hidalgo’s undisciplined campaign was eventually dealt with by the much more organised Spanish Crown army, with Hidalgo being executed several months later. However, the story does not of course end there. As Turner points out, ‘in taking up the banner of the Brown Virgin of the oppressed many-centuries-dominated Indians, [Hidalgo] was seizing a sign of wholeness and prophetic pan-Mexicanness that his opponents could not really counter’ (Turner, 1975, p. 152). Though Hidalgo’s insurrection failed, the uprising through the Virgin of Guadalupe left a ‘symbolic deposit in actual historical time [with] potent effects on subsequent dramas and revolutionary processes’ (Turner, 1975, p. 102). To this day the figure of the Virgin of Guadalupe ‘lives in scenes of

action...as a multivocal symbol of popular powers in times of major social crisis' (Cherstich et al., 2020; Turner, 1975, pp. 153–154).

If what is at stake in a revolution is not necessarily a rupture from the past but flowing in of marginalised stories and histories, and imaginaries of future into the present – as ritualistic approaches to revolutions have shown - might we wish to re-consider the classification of GameStop, Occupy, activities of Anonymous, not as an 'event' but as part of a series of non-linear event/s? What might this understanding of trickster-ing, and of revolutions, do to engage with GameStop? Thinking with an activist cap on for the briefest of moments, might this acknowledgement aid in what Lazar might call, hailing practices? That is, by paying attention to how marginalised histories, stories, come to press on a moment, might we aid in dislodging them and making them more mobile and actionable in the present? Framed another way, in a contemporary world where, as Lazar (2014) highlights, academics, journalists, economists are increasingly involved in constituting events, where the narrative is up for grabs,⁵⁴ how might we as anthropologists engaged in questioning neoliberal powers engage with this moment?

As highlighted previously in the chapter, the trickster activities of Anonymous – initially deemed the lulzy actions of undisciplined actors with no moral cause – came to bear on revolts, rebellions, and revolutions across the globe in unpredictable ways. Traces of their actions can be found in the Tunisian Revolution, the Egyptian Revolution, in attacks against the Russian government in 2022 in response to Russia's invasion of Ukraine, in various other 'operations' conducted in the Philippines, India, Quebec, Cyprus, Japan, Anaheim, Nigeria, to name a few (Chow, 2021). In a recent documentary movie titled: *Revolution of Our Times*, with the tagline '*the times didn't choose us we chose to change the times*', it is evident that the activities of Anonymous, the strategies they employed, came to influence the Hong Kong protest of 2019-2020 (Chow, 2021). And, indeed, the lulzy activities of Anonymous were certainly influential in the strategies employed by WSB actors. Might the stories and strategies employed by WSB actors come to travel to other moments and times? Might it be, like the Virgin of Guadalupe, hailed by other future actors? As anthropologists engaged in

⁵⁴ It is of course not an even plane, certain actors come to have a greater role in signifying and scribing 'an event'.

questioning power and neoliberal structures, we might wish to abet these hailing practices whilst remaining mindful of the ability of capitalism to fold critique of itself into the self-serving project of enhancing its own functioning.

Chapter Four:

The Work of Chance; Antinomies of Wage and Chance Work

“Like all the men of Babylon, I have been proconsul; like all, I have been a slave. I have known omnipotence, ignominy, imprisonment... I have known that thing the Greeks knew not – uncertainty.”

The Lottery in Babylon, Jorge Louis Borges (2017)

This chapter provides an alternative historical arc to the one given by early cypherpunks in which cryptocurrencies are embedded. It takes a longer historical perspective to show how retail traders highlighted in chapters two and three are part of a longer tradition of ‘chance work’ and turning to uncertainty to re-negotiate conditions of inequality. I show that cryptocurrencies are a modern extension of the lottery, the stock market, Victorian bucketshops, horseracing – they are places where the relationship between £1 and a £1000 can be re-negotiated. In unearthing this historical arc that is not discussed in popular and contemporary discussion surrounding cryptocurrencies, or by start-up projects, I contribute to a thread that is implicit throughout this thesis and one that is made explicit in chapter six. That is, in understanding crypto we should be mindful that the networks we draw on to understand and know crypto, comes to constitute ‘crypto’ as well.

In part II of this chapter, I discuss and analyse the chance work that people are involved in. This section draws on the ethnographic material in chapters two and three that highlights the kind of work that retail traders are involved in: the labour of storytelling, scouring through online message boards, and staring at screens whilst sat in in their bedrooms.

Part I

In *The Lottery in Babylon* Jorge Louis Borges considers age-old questions: do we have control over our destinies? What happens to us in the future? Are we all simply subject to an ungovernable uncertainty, to the roll of a die? In this classic short story, Borges describes the fictional city of Babylon where citizens turn to engage with chance — framed as radical, unbridled uncertainty — to rework their position in society. They engage via a lottery organised by a secret organisation known simply as ‘the company’. Initially open to only those who wished to partake, eventually the company became complex, and it became necessary for all of the residents to partake in the lottery. As time goes on, what remains is speculation on whether the company has become so powerful that it has managed to erase its footprints completely, or whether it ever existed at all.

There are many interpretational tangents along which our thoughts may travel in this deeply symbolic and ambiguous story, however, what is of interest to me here is why a group of people might turn to chance to rework their position in society. Indeed, as I became immersed within my fieldsite in London, attending ‘community’ meetup events, and traversing diverse online worlds through monitors and screens, I felt I came to know this Babylonian world where chance played a critical role in my own and others’ thinking, in reworking conventional relationships between what was possible and what was not; between the kinds of money one was able to acquire and wealth that was out of reach, between £1 and £1 million. Signs of this world were all around.

A postcard from the field

On the morning tube from Euston to Old Street it is a characteristically busy day. Those standing up undulate to the rhythm of the tracks as they commute to work. Some hold on to the rail attached to the ceiling, with headphones in, and stare out into empty spaces in the crowded carriage. Those lucky enough to get a seat enter another world through their phones: playing games, watching TV shows, simply scrolling to escape the minor hell that is the morning commute. Tunnels carved sixty or so meters underground echo the screeches as tonnes of metal fight eternally with the rails on the ground. Complex physics at play between carriages funnels in much needed, albeit

polluted, air providing respite for those nearest the ends of the carriage. Commutes have been happening here since 1890, since the late Victorian era.

Standing in the carriage my gaze dances across the map of the tube line, as it so often does, reading the names of stations, looking at the various lines that intersect. In this almost meditative process of scanning, one particular advert halts my gaze: 'Missed Doge? Get Floki'. I feel slightly taken aback, seeing the emergence of cryptocurrency names that I encountered initially on online forums, through memes, escaping beyond the confines of my screen into the offline cityscape. A few stops later, I see a big spread poster on the side of the tunnel: '*Bitcoin is Dead*⁵⁵ Easy with Coinfloor, The UK Bitcoin Exchange'.



Figure 15: Cryptocurrency advert on the underground (Akalin, 2021).

These are not the first adverts for crypto I have seen on the tubes and transport networks in London. The number of adverts in the city around me have increased significantly in recent years. In 2018, the number of adverts proliferated after the drastic rise in crypto that year, with 15,000 adverts shown across the Transport for

⁵⁵ A play on the familiar cries from the institutional financial world (especially pre-2018) that 'Bitcoin is Dead'

London (TfL) network. Despite Covid and lockdown, in the first six months of 2021, 39,560 crypto adverts were shown. Many of these were for 'relatively obscure firms such as Hex, Kraxen, BOTS, and Puglife' (Davies, 2022). One advert, in a clumsy attempt to stay within regulatory limits, simply stated the facts, '*HEX'S PRICE WENT UP 11,500% in 129 days*', leaving commuters to fill in the gaps. These adverts were largely placed by exchanges such as eToro, Luno Money, and Coinfloor. Since 2018, crypto companies have spent £825,245 advertising on tube and train services (ibid). It is not only crypto companies that have increased their spending on adverts on TfL recently. '[The] crypto advertising push was mirrored by a significant increase in gambling ads' with casinos and book makers spending £1.16 million in 2020-21 (ibid).

Adverts like these signposting the world of Babylon are nothing new. They have existed in this city at least since the 17th century in the form of posters and pamphlets, inviting passers-by to open themselves up to chance and participate in lotteries or investment opportunities.

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Signposts to this world appear in other forms around the city. On the return leg, getting out of the station and walking home, I walk past large Edwardian houses with compact gardens, purple buddleias in bloom, red geraniums hung in metal buckets, and the smell of lavender re-igniting nasal passages dulled by commuting below the surface of the earth. These are houses I cannot hope to afford with my current wages or wages based on the most optimistic of career trajectories. I have walked on this road many a times with a close friend. We would often peer into the estate agents' windows, look at the prices of the houses in the area, and contort our faces in various ways, as we let out short gasps of air.

The limits of what was possible through wage work were evident on streets like this. In various conversations with retail cryptocurrency traders, housing came to signify the limits of wage work. These limits were also signposts to the Babylonian world. One participant's father offered his daughter £1,000, strictly earmarked to spend on cryptocurrencies, explicitly as compensation for being unable to support her with a deposit for a house. Several retail traders I knew who had made their money by purchasing Dogecoin, Shiba Inu, Ethereum, and Bitcoin – meme and non-meme coins - had cashed out most, if not all, of their profits to buy their first homes.

In one world the relationship between £8.18 (my hourly wage) and £500 (my rent), was one mediated by wages and the temporality inherent in those wages. In this world, the following kind of calculations were made: it would take me 61 hours of labour to pay my rent; it would take a few months to save up for a holiday; I would need to save up for 8 years to put down a £30,000 deposit on a single bed flat in London, and so on.⁵⁶ In the Babylonian world, the relationship between £8.18, £500, and £30,000 was much more unstable. A world where, as I found out from personal experiences of trading and opening up to chance, £200 could turn into £30,000.

The limits of wage work were expressed in specific terms. Many within the start-up space, retail traders on TikTok, 4chan and Reddit, participants online and offline, spoke of these limits through the popular metaphor of '9 to 5' or by using the term 'wage slavery'. These hours were an expression of the monotonous, repetitive way of life that wage work demanded - the daily commute, trudging through traffic or being shuttled along in underground tunnels. It was not simply that the 9 to 5 or wage slavery had a limit on what was economically possible that was evident in these stories, it was also 'the soul-destroying work' of the 9 to 5, as one interlocuter within the start-up space put it (a common sentiment, and a quote that could have come from any of my field sites). Those on 4chan most vividly depicted the painful existence that comes from wage labour through memes of Pink Wojak working behind the counter in McDonalds, for Amazon, or other exploitative structures – known as 'Wagie memes'. These memes flooded across other message boards and were familiar digital artifacts of the Euro-American crypto netizen. These memes resonate with Graeber's (2018, pp. 106–107) argument in *Bullshit Jobs* that 'it's impossible to understand the spiritual violence of modern work...no matter how much workers may have been conditioned in time discipline by schooling, they will see the demand to work continually at a steady pace for eight hours a day regardless of what there is to do as defying all common sense'.⁵⁷

⁵⁶ In the area I rent.

⁵⁷ As Highlighted by Mollona (2022) and Sanchez (2022), Graeber's argument is perhaps too sweeping, and often gives short shrift to the enjoyment people gain from their jobs, and the creative and political potential within them.

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The experiencing of these limits of wage work played a significant part in many opening up strategically to take a chance on the crypto market. However, for many within the institutional sphere, including the ‘Oracle of Omaha’ Warren Buffet, taking a chance on cryptocurrencies came by another name: gambling (Li, 2019). For many, cryptocurrencies seemed like an encounter with uncertainty without the ‘fundamentals’ of investing and trading; without the handrail of economic and financial rationality guiding us into the unknown.

Categories and terms such as ‘meme finance’, ‘meme coins’, and ‘meme stocks’, have become entangled with the assertion, accusation, or suspicion that retail traders purchasing cryptocurrencies and related financial products are in fact gambling. Matt Levine (2021) writing in his popular newsletter *Money Stuff* for Bloomberg writes, ‘Robinhood is the brokerage for fun gambling on meme stocks and meme cryptocurrencies...the main theme of financial markets for the last year or so has been fun gambling on meme stocks and meme cryptocurrencies’.⁵⁸ Many other news outlets and market commentators similarly point out the element of gambling within the cryptocurrency space. As Hamilton Nolan (2021) writes, ‘the collective ‘frenzy’ surrounding ‘meme stocks and currencies’ are simply the latest manifestation of the sickening desperation of people to break free from wage slavery...it is the modern lottery ticket...and, like all such dreams that are rooted in luck rather than politics, it will ultimately amount to nothing’.

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Gambling is, of course, a politically and morally loaded term: one of the poles in the historical battle surrounding what counts as proper and improper work, rational and irrational behaviour. It comes with pre-conceived ideas about individuals who are prone or susceptible to some base instinct. It is partly to escape from this baggage that I introduce the term ‘chance’. Chance also seems to better capture what most of

⁵⁸ Quinn DuPont reflecting on his venture into cryptocurrency ‘investing’ through the purchasing of ICOs, as part of his research, notes, ‘truthfully, the experience usually felt a lot like gambling, or, at best the seedy cousin of online stock trading platforms (DuPont, 2019a, p. 133).

my participants were up to: they were strategically opening up to the unknown, in the face of limits on what was known.

A conference held in June 2008 titled *Economies of Fortune and Luck: Perspectives from Inner Asia and Beyond*, and the consequent special issue that emerged, looked to explore the ways in which ‘luck’, ‘fortune’, ‘chance’, and other related terms, come to ‘constitute alternate economies’ (da Col, 2012, p. 2). Much of the focus (besides Graeber’s article) was on the role chance and luck plays in constituting economies ‘out there’ in seemingly isolated informal economies. These contributions addressed a crucial lacuna that highlighted the quotidian strategies people employed to turn strategically to the unknown to negotiate their economic conditions. They do this by focusing on the ‘interface between cosmology, economics, and human relatedness – that is, cosmoeconomics’ (da Col, 2012, p. 1). However, as Graeber (2012) highlights, ideas of risk, a metric and statistical approach to uncertainty, are no less part of ‘cosmoeconomics’.

Taking a historical approach to examining the role of chance in England highlights its central role in constituting the economic landscape of Britain. Chance has been strategically deployed by the state to fund various projects, it has been used by its citizens to rework conditions of inequality inherent within wage work, and it has been used by the rich to further increase their wealth.

The use of chance, gambling, and Susan Strange’s (1986) casino capitalism metaphors have of course been employed by many to critique the functioning of finance and capitalism. Strange (1986, p. 3) writes that international finance has become ‘so much like a gambling hall... [that it] has made inveterate, and largely involuntary gamblers of us all’. However, as many have pointed out, this is potentially problematic (Cassidy, 2009). One problem seems to be that as the metaphor treats the appearance of gambling and chance as inevitable and natural, we come with preconceived ideas about it. This analysis disguises the fact that ‘the appearance of chance in capitalism follows a trajectory of necessity that is bound to the workings of capitalist production based on the commodification of labor power and the process of exchange between owners of money and labor power’ (Kawashima, 2009, p. 5). Put simply, the metaphor does little work to highlight the functioning of a system, despite i

it making some intuitive sense that those in big buildings in the city are merely rolling the dice.

In the section that follows, I highlight an important history that illuminates the work chance does within a capitalist economy both for the citizen and the state. In drawing this historical arc, I situate the stories that many of my participants told me, both online and offline. By historicising, I show that the strategies many of my participants employ to negotiate the limits of wage work are nothing new, but part of a longer tradition of traversing back and forth from the wage and the Babylonian world since the 16th century. The traversing to and from this world has occurred through lotteries, Victorian bucket shops, betting on horses, and increasingly the markets (both traditional and crypto). This history illuminates the market as a place where chance is taken strategically to deal with inequality, and to short-circuit the road to wealth.

The depositing of chance in the markets⁵⁹

The lottery

In Borges' Babylonian world, uncertainty and ambiguity are cultivated to allow for chance to play a part in everyday affairs. 'Instead of lowering the level of ambiguity in the resolution of a problem, as we might in making predictions or determining the causes of events, [the Babylonians] went in the other direction and institutionalised the role of chance in human affairs by raising the level of ambiguity' (Wagner, 2012, p. 165). Chance is given form in a lottery: the drawing of numbers. Initially, 'the lottery in Babylon was a game played by commoners' (ibid). By taking chances, the citizens of Babylon can access a great range of possibilities.

However, one need not only turn to fictional tales in order to find chance playing a significant role in social life. Chance has been employed in political, religious, and economic decision making for a long time. The Bible describes the part played by the drawing of lots in numerous decisions including: choosing a king (1 Sam. 10:21-1), selecting of the scapegoat (Lev. 16:8-10), and division of wealth and land among claimants (Numbers 26:52-6) (Biblehub, 2022). Practices of drawing political leaders

⁵⁹ By markets, I mean the traditional financial markets

by chance mechanisms can be found among the Munda and Oraon people that live in the forested area of eastern India (Shah, 2021, p. 691). In England, in 1583 the chaplain of Wells Cathedral divided power among borough officers in this manner (Brenner & Brenner, 1990, p. 6). Legal decisions and division of property were sometimes taken by the drawing of a lot. In 1653, a London congregation proposed that members of Parliament should be chosen by lot after a solemn prayer (ibid). Chance in much of these cases implies giving up of human control and surrendering to cosmic realms to determine the outcome of a decision.⁶⁰

Significantly, chance entered economic life in England in the combined form of a lottery and government bonds (Hacking, 1975, p. 111). In 1569, Queen Elizabeth I issued a lottery to fund public works, including the improvement of harbours (Goede, 2005, p. 50). The early 17th century saw James I authorise numerous lotteries to finance settlements in colonial Virginia (Brenner & Brenner, 1990; Goede, 2005). In 1694, the English State Lottery was managed by the newly created Bank of England ‘to almost no one’s distress’ (Itzkowitz, 2002, p. 121). Historians, and historically-minded anthropologists, often point to the creation of the Bank of England to finance King William III’s war against France (Graeber, 2012). However, what is sometimes forgotten is the role chance *qua* lottery played in funding the war, creating and managing the national debt in the absence of large-scale taxation, helping to expand Britain’s colonies (Goede, 2005, p. 51; Itzkowitz, 2002, p. 121). It is perhaps no great surprise, as Graeber argues, that ‘concepts of luck, chance, probability, and risk also emerged at the end of the seventeenth century’ (Graeber, 2012, p. 32).

Between 1694 and 1826 around 170 state lotteries were launched in London, the earlier of which gave out periodic payments to all ticket holders, and special money prizes to small numbers of lucky winners (Hochfelder, 2006). This eventually changed to paying out to only the holders of winning tickets. Secondary markets emerged that allowed those who could not afford to buy a whole lottery ticket to buy shares of a

⁶⁰ A point emerges that authoritative cosmic forces come to play a part in the making of decision, and this perhaps is not chance at all (Sahlins, 2017). However, as Shah (2021, p. 691) points out, and what is of interest to me here similarly, is the ‘practical impacts of what the spirits sanction’ – that anyone, thing, or outcome can be chosen.

ticket. If they could not afford to buy a whole ticket, people pooled their money together to 'invest'. These lotteries and the secondary markets they created provided opportunities for the poor (and the well-off) to earn more than was possible through their wages. Wages from the 1700 to the 1860 changed very little: a footman and a housemaid could expect £8 per year, and a coachman anywhere between £12-26. £20 a year was considered a low wage. Though London became the centre of global trade⁶¹ and expanded its empire, during this period many living in the city experienced low and stagnating wages (Emsley, Hitchcock, & Shoemaker, 2021; Mayhew, O'Day, & England, 2008). At a time when advancement by wages and 'conventional means were restricted, schemes that offered a great deal of money for such limited outlay had undoubted attractions' (Murphy, [1861] 2005, p. 20). The lottery provided 'a rational if desperate strategy for the ambitious' to amass some wealth (Gigerenzer, 1989, p. 20; Murphy, 2005, p. 19).

The wealth, just as now, did not trickle down. Poverty was rife, both in London and elsewhere in England. It was such escalating conditions of poverty that struck Engels as he ventured from Manchester to London (Engels, [1845] 2009). Initially awed by the scale of London, its 'giant docks', 'thousands [of] vessels [that] continually cover the Thames', 'masses of buildings [and] wharfs', after two days of being a participant observer and conducting ethnographic practices by walking the streets of London, Engels was struck by the depravity of London life (Engels, [1845] 2009, p. 22). He noted, 'Londoners have been forced to sacrifice the best qualities of their human nature' for the sake of expanding empire (ibid).

Throughout *The Conditions of the Working Class in England*, Engels makes numerous comparisons of waged work in England to chattel slavery. Engels, as Persky (1998) points out, was greatly influenced by the comparison that the Tory Radicals and the British Socialists made to the conditions of work in industrial factories to chattel slavery through the term 'wage slavery'. The comparison was made by both those who were

⁶¹ Indeed, the global trade, the voyages of slave and cargo ships that this consisted of, were made possible by insurance schemes that similarly employed mechanisms of chance. The latter part of the 18th century saw suspicion begin to emerge that these insurance schemes were part of gambling (Clark, 2004).

pro- and anti-slavery. The comparison of course has many serious failings, none more so than completely overlooking the pillaging of continents, draining of resources, the collective trauma that comes from violently uprooting a group of people to a foreign land, to be forced to toil for generations, the trauma that comes from being commodified, dehumanised, and owned. Overlooking these stark dissimilarities, the term became popular at the time and has been reappropriated in online forums in the present day to highlight that both the slave and wage worker are dependent agents subject to direct and coercive discipline. As highlighted in chapter two, terms such 'wage slavery', 'wageslavin', 'wage cage', and 'wagie meme' – a category of memes depicting the often soul-crushing conditions of modern work – are popular on 4chan, Reddit, and other online forums.

As de Goede (2005) argues, the lottery was part of the financial revolution rather than a continuation of archaic practices from the 17th to 18th century (Murphy, 2005, p. 2). A 'financial revolution...that is at odds with representations of the financial revolution as being dominated by...bankers, merchants, and landowners' using their models, intelligence and analytical capabilities to structure a system (Goede, 2005, p. 51). State lotteries were not the only institutionalised engagement with chance. Early insurance practices emerged in this era, that 'we would now consider to be gambling' (Goede, 2005, p. 52). Lloyds of London, an insurance firm, started out as a coffee house where various actors came to wager against the outcome of certain events, including the lottery, fire, flood, and the sinking of ships. Other coffee shops offered the opportunity to work with chance by taking guesses as to how long celebrities might live, or on the outcomes of battles and trials (Daston, 1988, pp. 163–182).

For much of the 16th, 17th, and early 18th century, the crossing to the Babylonian world of chance proceeded without much fuss. The poor crossed into this world to attempt to rework conditions of inequality in a way that was not possible through their waged work. The middle and upper classes also crossed this world in order to increase their fortunes. The state benefited from the poor and rich crossing back and forth via both lottery and wage work, as it allowed for the waging of war, pillaging of countries, and the building of infrastructures that further drained resources from those abroad and at home through wage work. The need to draw the line between gambling and finance, between who was allowed to take a chance and who was not, became much more

pertinent in the latter part of the 18th century, and especially to the Victorians in the 19th century. The policing of this boundary and the rise of moral discourse surrounding gambling, coincided with the expansion of the British empire, and a dramatic shift towards speculation, dividends, and interest from shares, as a way the rich sought and expanded their profits (Itzkowitz, 2002). Due to the shift in the moral landscape during this period, the state lottery (to the disappointment of some government officials) was eventually outlawed in 1826.⁶²

Colonisation and gender

Chance was a threat to the established order, both within the metropole and in colonies where gambling was strictly policed, for two key reasons. Firstly, the redistribution of wealth via chance short-circuited centralised forms of power. And secondly, the idea that wealth and fortune could be established without hard work, skill and merit, seemed particularly troubling to the Victorian sensibility as they amassed their wealth by plundering the world. Lotteries and other ‘gambling’ practices were ‘severing the link between merit, skill...hard work and temporal rewards’ (Daston, 1988, p. 148). Notions of chance and luck can be problematic for, as da Col (2012, p. 3) argues, ‘they intervene in the (dis)connection between will, action, efficacy and can confine the magnitude of human authority; in economic exchange, they single out the tensions between personal skills, choice, and notions of value’. Policing games of chance in the colonies became part of the British civilising and racial discourse. As Jonathan Saha (2013, p. 660) points out in his exploration of the policing of gambling in Burma in the 19th century, ‘the British argued that the Burmese could not be trusted to act with moderation when indulging in games of chance’. British officials put forward the narrative that the Burmese have succumbed to gambling habits as a result of state-sponsored lotteries, and that it was their role to ‘deliver Burmese society from the corruption and degradation of the pre-colonial state’ (Saha, 2013, p. 661). However, as Pickles (2019) and Mosko (2014, p. 239) point out, gambling emerged in certain colonies only after European colonisation.

⁶² Gradually, a new angle appeared in the condemnation of beliefs in chance, namely, that the rich are rich not because of chance, but because they did something good (Brenner & Brenner, 1990).

The ability to take chance was also policed along gendered lines. Women who took chances on the lottery, races, or markets, were said to be ‘gambling with the household money’ and ‘forsaking the running of the house and the care of their children’ (Goede, 2005, p. 56). ‘Gambling women’ were blamed for the proliferation of gaming in society by failing to set a good example. Moore (1790, pp. 369–370) writes, ‘the man that plays beyond his income pawns his estate; the woman must find something to mortgage...her person’. As de Goede (2005) argues, this gendering of chance is part of a broader history of capitalism and financialisation where the site of capitalist extraction is often described as feminine, and the traits required to extract capital as masculine. For example, Francis Bacon construed Nature as wild and feminine that must be tamed by the male scientific mind (Landau, 1998). Similarly, uncertainty *qua* chance is to be tamed through a statistical and numerical male mind. Sexually explicit metaphors of men taming the ‘wild’ and ‘hysterical’ nature of the market are apparent in both the professional traders of Wall Street and in the language employed by retail traders who take to 4chan and WallStreetBets (WSB) (Ho, 2009; Luyendijk, 2013b; Caitlin Zaloom, 2006).

The words of Victorian ‘anti-gambling’ activist J. Malet Lambert (1890, p. 8) are worth quoting as it chimes with the ‘respectable’ opinion of the Victorian era.

‘The wealth and possession of man are made by labour and by industry, money does not grow of itself, wealth is not for men if they are lucky enough to get it, but comes from the labour of men. The gambler looks upon the world as a place where wealth is open to him without patient labour, by luck or by chance. But his theory is demonstrably false. The mass of men must labour for wealth itself to exist...If all men were to turn gamblers for a living, they would become like wolves searching the wastes of the earth without a living being to prey on, and forced to turn cannibals, or be honest, or die’.

The markets

Despite the abolition of the state lottery in 1826, and the evocative writings of Lambert and his allies, the portal to the Babylonian world did not close. Instead, alternatives proliferated during a time of great inequality. The most important of these access

points was to be found at the Stock Exchange, where chance was again put to work to build infrastructure, to manage national debt, and develop colonial projects overseas. Like the lottery, many chose to use this as an opportune moment to amass a fortune (if they were already rich) and to negotiate their wages if they were poor. Chance *qua* the markets mediated people's relationship to the wider world. However, unlike at the coffee shops (where the likes of Lloyds were founded) now there was a differentiation between licit encounters with chance – valid and necessary speculative work or 'investment' — and illicit encounters with chance – 'gambling'.

Some argued that the stock market was like a game of whist or chess – there was an element of skill involved, whereas playing a lottery, or betting on horses were more akin to roulette or baccarat – pure chance (Lannon, 2009, p. 28). For others, the difference between valid speculative work and gambling centered around the validity of the Stock Exchange as a whole as opposed to the actions of a few misguided individuals. In this way, the system would eventually be the downfall of isolated individuals that took to chance in the stock exchange, for the system was 'inimical to the objectives of the gambler while fully supporting those of legitimate investors' (Lannon, 2009, pp. 29–30). And while many others saw that there was an element of chance involved in the market, the taking of these chances was made productive by providing liquidity and capital for the raising of necessary projects.

The validity of speculating on the stock market was also found through the 'taming of chance' through mathematical and statistical patterns (Hacking, 1990). As Hacking argues, societal rules, norms, including suicide rates, heights and criminality were shown to follow statistical patterns, inferring that the uncertainty of the future could be peeked at through numbers. This new version of chance was shot through with numbers, statistical patterns, indexes and models. 'In a climate favourable to the scientific calculation of probability, chance came to indicate not the favour the gods, but an absence of knowledge' (Reith, 1999, p. 13). As Graeber (2012, p. 33) points out, such a probabilistic and numerical understanding of chance is peculiar to others such as the Malagasy, as concepts of mana, baraka, or śakti – concepts anthropologists often employ to 'put a name on the play of chance' – appears perhaps peculiar to the anthropologist educated in the West.

However, despite attempts to tame chance, or wrestle human control of the unknown and the future, the suspicion that those at the heart of the financial world were also rolling the dice, did not disappear entirely. In opposition to the rhetoric of Lambert and the anti-gambling movement, the categorical distinction between valid speculation and 'gambling' elsewhere was, as it is now, hardly self-evident. The ideas of chance and luck that de-centered human authority, that emerged in capitalist speculative practices, were locked in tension with Victorian sensibilities that required wealth to be amassed through hard work and merit.

This tension was most visible in the discourse surrounding Victorian bucket shops — small betting shops that were intentionally designed to resemble the stock market. Here people bet on the movements of stock prices without necessarily always purchasing the stock. These shops were made possible with the advent of the stock ticker and telegram wires that, similar to cryptocurrencies, came with a rhetoric of decentralising finance. Priced out of the stock market,⁶³ the bucket shop, as Charles H. Taylor (1917, p. 565), official historian of the Chicago Board of Trade noted in 1917, provided a place, similar again to cryptocurrencies, 'where the common people could speculate'.

Bucket shops seemed particularly irksome to the wealthy as they seemed to illuminate and reflect the chanceful nature of the stock market. Punters could bet on the movement of various stocks and shares just like those at the exchange. Similar to the adverts to take a chance on the cryptocurrency market that I encountered on the London transport network, adverts for Victorian bucket shops were all around London in pamphlets and posters (Itzkowitz, 2002; Loussouarn, 2013). Both invited Londoners to take a chance, to rework the limits of their wage work. Some bucket shops mimicked

⁶³ At the time, the advent of the stock market provided an opportunity only for a few to engage with chance and amass some wealth. For the poor and those on middling incomes, the markets were 'scarce and difficult to access'; moreover, the markets were perceived to be a hotbed for artifice and trickery (Murphy, 2005, p. 21). To take a chance on the stock market required much more capital than most people had. At the New York Stock Exchange, a minimum margin of 10% was required to trade, and transactions were in hundreds and thousands, whilst bucket shop trades ranged from \$10 - \$50. It was much the same in London. It was mainly the wealthy that could initially take a chance on the stock market.

the décor and interiors of the Stock Exchange, with fancy furniture and seductive technologies such as stock tickers and telephones. The reflection threatened the legitimacy of stock speculation, and 'created a dangerous slippage between the sanctified activities of stock speculators and the shadowy activities of card sharps and confidence men' (R. Moore, 2021). The speculative activities of those on 4chan and WSB similarly drew attention to the arbitrary line between gambling and supposedly legitimate activities of those at Wall Street. The activities of those who took to bucket shops, and indeed gambled on horse races, were similar to the traders at the exchange: gathering information through reading pamphlets; discussing ideas and strategies with acquaintances; and following price movements obsessively. The taking of chance at the bucket shops, and elsewhere, demonstrated a 'rational autonomy that was difficult to come by in other circumstances' in their waged work (Itzkowitz, 1988, p. 27). The proliferation of activity at bucket shops and the increased activity in sports betting were, as Itzkowitz (1988, p. 8) argues, a mirror of the commercial ethic that characterised other sectors of capitalist enterprise.

The differentiation between gambling and valid speculative activities was blurred at bucket shops. Those at the bucket shops and the London Stock Exchange were engaging with *untamed* chance and uncertainty through similar, if not the same, activities. The smudging of the line between prudential work and gambling was evident in legal battles that ensued between bucket shops and institutional financial authorities (de Goede, 2005, pp. 68–72; Harvard Law Review, 1932). Many court cases brought forward by the institutional authorities against bucket shops failed to hold up in court as they could not clearly differentiate between the activities taking place in the shops and the Stock Exchange: 'It was impossible to make a consistent and fundamental distinction between the practices of bucket shops and the financial instruments traded on the exchanges' (Goede, 2005, p. 69).

The drawing of these lines seemed particularly unconvincing during the time of the Victorian railway speculation which began in the 1840s. Members of the London Stock Exchange and punters in bucket shops speculated on the price of railway company stocks, as the new technology captured the public imagination with the promise of connecting people across vast distances. Henry Wilson (1845) wrote in his 1845 pamphlet *Hints to Railroad Speculators*: 'Railway speculations [...] like all other

gambling, is a fascinating, but delusive passion'. The anonymous author of the *Railway Investment Guide*, a one-shilling pamphlet aimed at the new wave of speculators openly advises people to speculate on certain railways advising 'that they could profit even if the railway was never built at all' (Itzkowitz, 2002, p. 130). The author goes on to write: 'Railway investment has in fact become a lottery (for it very closely resembles one in the uncertainty of the amount of profit) in which the chances are reversed' (ibid).

As highlighted in the works of Tsing (2000), and discussed further in chapter five, spectacles are a necessary part of capitalism, and help to draw capital towards particular projects. It is not the case that an irrational, unproductive mania took hold in the early 1840s, and that fundamentally different prudential investors came in 1850s to help build the railways as is often claimed (G. Campbell & Tuner, 2012). These events are interconnected and part of the same process of drawing capital (G. Campbell & Tuner, 2012; Tsing, 2000). Curation of such a spectacle was made possible by developments in technology, the press, and the ability to disperse pamphlets and communicate to a wider audience at a much quicker tempo than was possible before. Chance *qua* the markets was involved in the building of the railway system that I used to traverse to and fro during my fieldwork, as it had been in the building of harbours in 1569 through the lottery.

For many at the time, the speculative 'railway bubble' provided ordinary men, and less so women, the opportunity to take a chance to increase their fortune in a way that was not possible through their wages – the poor at Victorian bucket shops, the rich at the Stock Exchange. Like the lottery and cryptocurrencies, investment in railway shares was promoted as a once in a lifetime opportunity. Like the lottery and cryptocurrencies, the railway 'speculative bubble' provided an opportunity for people to 'short-circuit one's temporal subjectivity and to produce a gap in time where events deemed to be fatal and inevitable may become positively possible' (da Col & Humphrey, 2012, p. 11). The limit on how much you can 'rationally' expect to earn through your wages, the fatal and the inevitable, can be surpassed through an encounter with chance and uncertainty: an alternate world where the conventional relationship between time, work and \$10, \$1000, \$1,000,000, is destabilised.

The battle to draw the line between prudent financial speculative work and gambling continued with increased fervour despite the role of chance at the heart of financial work and the drawing of capital, and a system that required many to take chances to attempt to rework the radical conservatism of wage work. It is precisely for these reasons that the popular critique of finance and capitalism as a vast casino and bankers as gamblers, as ‘chancers’, makes intuitive sense. However, to make these intuitive criticisms productive, we must use them to shine a torch on the workings of the system and highlight their relationship to inequality. It is this that I have attempted to do in this section. The taking of chance coincided with the limits of wage work, whether through the lottery from the 16th to 19th century, bucket shops, betting on sports, and most recently in the traditional and crypto markets.

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Since the 16th century, those living in London have travelled back and forth to the Babylonian world using various entry points, trying to even up the odds as best they can. This is the historical background to the stories of many of my research participants. They, like many before them in this city, were taking a chance. They had calculated that wage work was limited and an unlikely source to attain the life they wanted, and instead opted to take a different path.

Stephanie, a recently divorced mother with a young child, who was working three jobs to support herself and her child, described the cryptocurrency market as providing a chance at a better life, one where she did not have to work out of necessity, but as a result of desire or choice. Cryptomarkets promised the kind of rewiring of her income that was simply not possible with her wage work. She would arrive home from work at 6pm, tired and exhausted, and sit in her bedroom, in front of her computer, scrolling through online forums and reading news articles to figure out what coins to buy. She would then go to bed and wake up early the next day to head to work. Unlike professional traders, she was much more forthcoming about stepping into the unknown without any handrails. Sam, recently kicked out of his home by his father whilst at university, looked to engage with the cryptocurrency market to earn his fortune. He described his strategy of scrolling through online forums, going to meetings in London, and trying to compile a portfolio of coins that had a chance to ‘100x’ (multiply its value by a factor of more than 100). Chris pointed out that working for

wages was not going to give him “the good life” he wanted.⁶⁴ For him this meant, “big houses, Mercedes Benz, large businesses, a wife, friends and family”. Wages for Chris were restrictive and small; they could not help him actualise his dreams.

Many conferences and meetups I attended identified migrant workers as those who would benefit the most from the low-cost payment infrastructure of cryptocurrencies. However, in a report titled *The new wave of crypto users: migrant workers*, Andalusia Knoll Soloff (2021) points out that for the people she interviewed, cryptocurrencies were not simply about remittances but also about ‘building wealth’. Salgado, one of Soloff’s interviewees points out that before investing in Bitcoin she felt “like a chicken stuck in a coop” working at her factory job. Salgado goes on to note: “I came to realise that I would never get anywhere earning minimum wage” (ibid). Samir, a Syrian refugee, with whom I played football on a regular basis over the last four years, who I understood to be stoic, quiet, reserved, was positively beaming when telling me about his engagement with the crypto market. One day after football, he grabbed his phone, and showed me his portfolio of currencies. The most he had on any one currency was around £130. He knew he did not know much about it but told me that it would only require one of these coins to go big to make his small fortune. He, like many others, was very much aware that his account could go to zero.

Hoping that one investment multiplies its worth many times to redeem the purchasing of all other coins is of course not only the strategy of the retail trader. Venture capitalists, wealth fund managers, angel investors, and others much wealthier than those I describe above also take chance on companies – though their encounters with chance are filled with financial analysis, reports, and other social artifacts of economic reason.

Much of this chimes with a consumer research report or ‘fieldwork’ conducted by the Financial Conduct Authority (FCA) in January 2021. The report found that the most popular reason (47%) for ‘consumers buying cryptocurrencies’ was ‘as a gamble that

⁶⁴ I met Chris, a 26-year-old IT technician through attending a Coinface picnic in London.

could make or lose money'⁶⁵ (FCA, 2021). The list of potential reasons to choose from seems particularly leading, a not-so-subtle creation of a category 'into which people could conveniently fall in order to be counted' (Hacking, 1990, p. 3). Nevertheless, the report does perhaps highlight that people are willing to open up to something they know little about (in terms of the motives of the project they were investing in). The report found that many crypto users were 'open about not fully understanding cryptocurrencies': only 58% agreed with the statement 'I believe I have a good understanding of how cryptocurrencies and the underlying technology works'(ibid).

Conclusion

Sociologist Gerda Reith (1999) might frame our enthusiasm for cryptocurrencies as a sign of the times; a sign of the times where chance, as something we have no control over, seems to play an increasing role in our lives. As Reith (1999, p. 1) points out, 'chance has [now] become an irreducible aspect of daily life: risk, speculation, indeterminism and flux are our constant companions in social, economic and personal affairs: we have entered the Age of Chance'. To this I would add, chance and uncertainty have been a continual part of life in London and UK since the 17th century and the turn to mercantile and commercial capitalism. It has been part of state tools, and the tool of those on the ground, whatever their situation.

If indeed this relatively short historical period from 17th century to the present is a sign of the times, it seems to be a sign of the times that resonates with that enchanted ancient land between the Euphrates and the Tigris — Babylon (Borges, 2017; Wagner, 2012, p. 167). This is a land where chance is given a central role in determining various outcomes in everyday life; where people opened themselves to, as Borges (2017) puts it, what 'the Greeks knew not – uncertainty'. Whilst situated in London and conducting my fieldwork, both online and offline, I felt I came to know intimately the Babylonian world of cryptocurrency. As I will highlight in the following section, nowhere else did I feel the presence of this world more than when immersed in front of my screen in my

⁶⁵ Online respondents were recruited by YouGov to fill out a questionnaire. It is unclear, if the use of the term 'gamble' was one of the options given to the participants, or the participants own choice of words. It seems likely it was the former. 1140 crypto users were surveyed.

bedroom, checking the latest news of crypto, checking prices and chatter, and constantly evaluating and re-evaluating my trades and those of my fellow investors.

Part II: Bedroom traders

“Working 9 to 5 what a way to make a livin” – Dolly Parton

The term ‘bedroom trader’⁶⁶, as opposed to ‘day trader’ that was characteristic of the dot-com bubble, has increased in popularity in recent years to capture those trading cryptocurrencies and volatile stocks. I foreground this term in part II of this chapter to highlight the site where many that I knew engaged with cryptocurrencies and chance – their bedrooms. The term also seems to highlight the economic and living situation of many I knew who were renting with others in shared houses, going out to work a wage job, and coming back in the evening to their bedroom – a place of digital sociality and physical a-sociality. Symbolically, the bedroom also vividly highlights the encroachment of financialisation, uncertainty, and their entanglement with people’s hopes and dreams. The bedroom – a place where we should fall asleep on soft fresh pillows; read long novels; unwind; practice headstands; seek intimacy with lovers; follow rambling strings of thoughts; and rejuvenate – becomes instead a site of work and financialisation.

Those who take to online forums – from the well know figures of Keith Gill, GameKyuubi, to the Anons of 4chan, and members of WSB – engage with the online world of cryptocurrencies largely from their bedrooms. The term also conjures an image of someone trying to get rich quick through risky strategies. These are actors often described by those from more traditional financial background as gambling or (in terminology based on the British tradition of betting in cash on horses and dogs) ‘taking a punt’. What the discourse of ‘gambling’ conceals is the labour these ‘bedroom traders’ are involved in.

⁶⁶ The term ‘bedroom trader’ has risen in popularity alongside the retail trader. The bedroom trader can be seen a particular class of retail trader.

In this part of the chapter, I draw on ethnographic experience of engaging with retail traders I came to know from both online and offline activities, and draw on auto-ethnographic experience of trading, to pry open the intimate space of the bedroom for ethnographic exploration. In doing so, I highlight the complex entanglement of hope, uncertainty, and the cryptocurrency market, and reveal the kind of labour that metaphors of gambling conceal. By taking a more phenomenological approach, I highlight the inhabiting of a volatile and uncertain marketplace from the bedroom, and the emotional work that must be done to engage with the market. Moreover, through focusing on emotions, I highlight the making elastic of the 9 to 5 (metaphorical) working hours.

A postcard from the field: a day in the life of a bedroom cryptocurrency trader

I wake up. It is a Saturday morning, I stumble to the kitchen, it is slightly messy from the night before when my housemates (I live with five others) had some friends over for dinner. I pour myself a cup of ambition and take it to my work desk and begin to check the crypto markets. I started out my fieldwork as a disinterested follower of the crypto markets, forcing myself to stare at abstract graphs depicting the flow of cryptocurrencies to understand what my participants were talking about and going through. At one point in my fieldwork, once I had bought into the market, all that changed. Now the markets are the first thing I check in the morning, and the last thing I check before bed.

29th January 2021 and 12th May 2021 were significant days for me in my journey to become a bedroom trader. I shall start with the recounting of the former. Prior to the 29th of January, I had made some gains in the market, I was ‘up’ several hundred dollars (the currency used to express gains and losses in cryptocurrencies, reflecting the dominance and origins of popular coins), and was already hooked. But the happenings of this particular day seemed to amplify the emotions involved, and what was at stake. I woke up that day to a message from a friend: ‘Have you seen the price of Dogecoin today?’⁶⁷ Half asleep, I grabbed my phone and checked the price. Dogecoin was up 800% since the last time I checked.

⁶⁷ I had opted to spend less time checking the markets in the run up to the 29th, and as a result I was out of sync with the market slightly.

I had bought some Dogecoin initially in 2019. It was a coin that was often referred to and talked about in a typically 'lulzy' fashion online. A few on the forum used it in strange and fun ways, to fund the building of a well in Nigeria, to fund a Jamaican bobsleigh team to go to the Olympics, amongst other equally erratic and seemingly unconnected activities. A part of me thought that maybe a joke currency that epitomised the humour of online message boards had value.

On the day Dogecoin went up 800%, I had \$2000 worth in Dogecoin. It was both an exhilarating and terrifying moment. I had no clue what to do. We were in lockdown, and I told my friends in the house, and asked for advice, however, they were equally inexperienced. Under these conditions, I found online message boards, where others were similarly debating what to do, a crucial place to think.

Over the next 6 months, I was glued to my screens and the message boards, looking for ideas about what I could do and seeking further coins that might also rise astronomically in value. I went through a rollercoaster of emotions. The crypto market boomed; other coins went through rapid price rises as well. At some point in May 2021, the price of Dogecoin peaked at \$0.68. I had more than \$21,000 in a 'meme joke currency' (Kaleigh Rogers, 2015). Bitcoin went to over \$60,000 for the first time, and the market cap of cryptocurrencies were more than \$2 trillion. I had managed to increase my initial investment by 33,900%.

12th May 2021, brought a significant drop in the value of Dogecoin and other currencies overall. The price change was sharp. It was my first experience of how quickly and drastically the cryptocurrency markets could shift against you. I was utterly lost in the screens that day and failed to draw my curtains. I sat at my desk at 8 am and did not fully clock off till around midnight. I cooked some meals and went for a long walk in the park to dissipate the anxiety through the friction between my feet and the earth, to detach myself from the gut-wrenching feelings. I was checking the prices, the news, reading through online forums, moving coins from one account to another, to sell at a reasonable price. During this period, my portfolio was down several thousand dollars, much more than I had in my actual bank account where my wages were paid.

Sitting here at my desk now, in my bedroom, the graphs no longer seem abstract or impersonal. I no longer have to use so much imagination in order to be invested in what my participants are trying to share with me. Whereas before trading the graphs indexed abstract numbers, now they index and contain memories, stories, a reminder of the journey so far; peaks and troughs teeming with emotions. Highs and lows that retain a vibrational quality to them, feelings that never settled, that were always prepared and anticipating the next price move. I still have to remind myself not to stare at the graphs on the screen for too long.⁶⁸

*

Whereas chance takers before me in London went to Victorian bucket shops, the London Stock exchange, coffee shops or betting shops (Cassidy 2020) to take a chance, my portal to the Babylonian world was firmly located in my bedroom and, to a lesser extent, on the smartphone in my pocket. It opened when I switched on and sat immersed in front of my screens at the desk. It was from here that I engaged with wild swings in price, fortune, and emotion. Most adverts on the transport network in London depicted the cryptocurrency market through the screen, often a mobile phone screen. In *Spread betting and the City of London*, Loussouarn (2013, p. 21) similarly notes an increasing trend of employing mobile phone screens to depict the market, encouraging commuters to ‘trade whatever, wherever, whenever’, to place ‘bets no matter what else [you are] doing at the time’. I, along with many others, certainly checked the crypto markets whilst on the move. If I was waiting for a friend at the pub, I might check the price of Bitcoin; if I was watching a movie with others that did not capture my interest, I might stealthily check the price of Dogecoin.

As Miller (2021) points out, one capacity in which we use mobile phones is as ‘transportive devices’ that connect us to diverse places, whilst simultaneously disconnecting us from dinner table conversations with our family and friends. My mobile phone was certainly a crucial part of being connected to the market. However,

⁶⁸ Attempting to read the signs, considering where and how the price can move next can get you lost in these graphs, see patterns that are not there. As Peter Knight (2016) points out in *Reading the Market*, amateur traders long before me have dissolved, lost themselves, staring at abstract graphs and ticker prices anticipating the next move.

for me, and many others, it was the computer screen I accessed from my bedroom that was the ‘transportive device’. It was where I could be uninterrupted and immersed. It disconnected me from my local surroundings and connected me to the sociality of the online world.

Households have often been the focus of anthropologists to explore the coming together and negotiation of formal and informal; political and moral economies; wage and non-wage work; the ‘big’ and the ‘small’ (Carsten, 1989; Melhuus, 2018; Tsing, 2009). ‘Household analysis’ has provided a means of ethnographic access to a ‘particular temporal dynamic that is revealing of a layered texture of precariousness, capturing at one and the same time the material realities and the intimate relations of living’ (Carsten, 1989; Melhuus, 2018, p. 75). Households highlight the complex entanglement of perceived impersonal and personal forces, between the gift and the commodity, and often highlight the impossibility of the separation between the two (Pine, 2021; Tsing, 2013).⁶⁹

It is in following this trajectory that I foreground the household, and in particular the bedroom, as an important site of work for many of the retail traders I knew and engaged with closely. The bedroom was the site of (dis)connection that allowed for the inhabiting of an online social world composed of forums, social media, YouTube, etc. It was a place where the social relations employed to engage with uncertainty and volatility of the cryptocurrency market, and the ‘folk’ knowledge formed in that process, were folded back into the market. The stories of ‘*hodling*’, for example, were both a reaction to, and production of, the cryptocurrency market. Typically, in household analysis, the household becomes a crucial site for negotiation of the market: where families and friends, close social relations, come together to make fake Gucci goods, jewellery, and bangles, to be later sold on the market (Bossen, 1981); or where crops

⁶⁹ For example, Carsten (1989) uses the Malay household in the fishing village in which she is situated to highlight the coming together of wage work and the moral economy; Richard Wilk (2019) explores the household among the *Kekchi Maya* as a site of creativity – shifting in response to changes in local history, land pressure, ecology and market conditions; Laurel Bossen (1981, p. 287) highlights that households amongst the urban poor she studied in Guatemala City are also sites of ‘petty capitalism’ – sites of production, and accumulation of wealth, isolated from networks.

are produced through complex interweaving of kinship structures (Pine, 2021). Within part of my fieldsite – the overlapping space between my bedroom and online forums – the social relations I employed to engage the market were present, but of a different digital quality.

The bedroom retail traders I engaged with most closely, and whose experience I draw on here, were mostly men, between 18 and 35, living in the UK. Most were not house owners, but renters, living with family or partners. They had hopes and dreams to break free from ‘wage slavery’, or to realise a better life for themselves and their families.

Inhabiting the market

The bedroom can then seem to offer what Aneesh might refer to as ‘virtual migration’ (Aneesh, 2006), a term he employs to highlight the migration of labour, digital stories, and skill, beyond the cubicles in which Indian software programmers work, to other parts of the world, whilst the body remains still (ibid). However, at the same time, the vastness of the cryptocurrency market and its infinite sets of relations is brought into the intimate space of the bedroom through the computer screen. It is whilst sitting at your desk, in front of your terminal, that the cryptocurrency market and its uncertainties are embodied. As Hart (2014) might put it, the self is scaled up, the world is scaled down, and in between ‘the action’ occurs (Goffman, 1969).

Sociologists Karin Knorr Cetina and Urs Bruegger (2002) in *Inhabiting Technology: The Global Lifeform of Financial Markets*, highlight the importance of the screen to do precisely this – to bring the infinite relations of the market into one place via the screen, and allow for the inhabiting of the market. They argue that the metaphor and analysis of networks, so popular within the study of finance, emphasising connectivity of distanced units and actors, ‘give short shrift to the actual realization of the networks’ (Cetina & Bruegger, 2002, p. 390). Those who wished to purchase a share in Victorian bucket shops read pamphlets talked about shares and tips at public gatherings, then had to go to the bucket shop to purchase the share. From the bookmakers’ end, prices had to be gathered before communicating to the purchaser (Itzkowitz, 2002). Prior to the 1970s, those who wanted to trade on the market had to ‘find the market’, through

phone calls to banks to find a quote for a particular product, and through other activities, but now the market was to be found in one place, the screen (ibid).

Speaking in more phenomenological terms, Cetina and Bruegger argue that screen can be seen to ‘appresent’ the market, bringing the ‘distant and [the] invisible near to participants, rendering it interactionally or response-present’, bringing it from distant trading floors to the intimacy of the bedroom (Cetina & Bruegger, 2002, p. 391). The past decade has seen a steady rise in the study of screens as an important material artifact in and of themselves in an increasingly financialised world. The screen as something that not only appresents the market, but shapes sociological practices, trading strategies, and different forms of emotional engagement to that of ‘open cry⁷⁰’ trading (Cetina & Bruegger, 2002; Miller, 2021; Preda, 2017; Caitlin Zaloom, 2006). Most, if not all, of these studies have focused on professional traders working within a financialised institution. However, there has been no serious ethnographic engagement with the trading terminal now readily available to people in their bedrooms.

As described in the postcard at the beginning of this part of the chapter, my engagement with the market was similarly embodied whilst working from my bedroom. After coming back from conducting fieldwork in town, or during prolonged periods of lockdown, I found myself often glued to my laptop, monitor and phone screen. I would stare at price charts, think about what coins to purchase next, whether I should move my coins to a safer storage location, be more involved in yield farming, or think about how the crypto space will react to a particular event, amongst a host of other things. During drastic downturns or upticks, my screen time increased drastically.

When inhabiting the market in this way I felt a sense of unstable frantic energy, that no cup of coffee could give me. There seemed to be a bubble around me or a time dilation between me and the screen — time seemed to move both slowly and quickly. When I was immersed in the markets, the screen and my head were in some sort of gyroscopic alignment, as my head stayed still, whilst my arms grabbed pieces of

⁷⁰ orders made by shouting across loud rooms and waving of hands

paper, pen, cups of tea, and my feet moved around under the desk moving a football or cricket ball around to vent some of the excess energy.

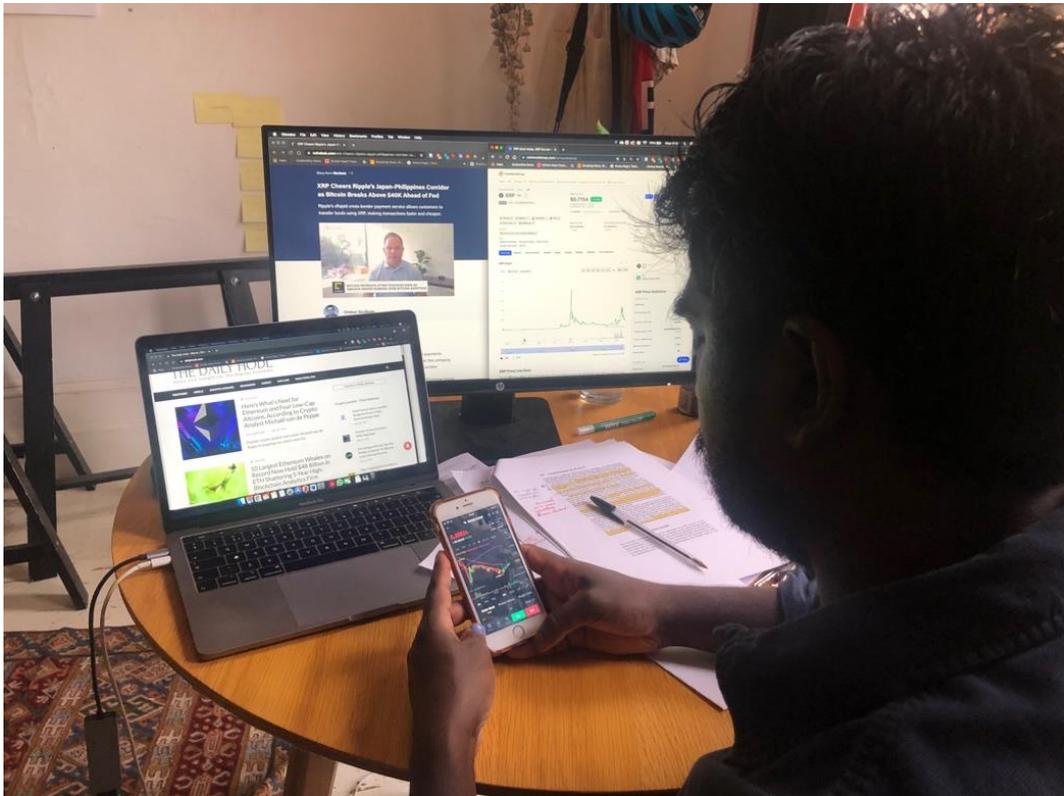


Figure 16: Bedroom trading

Much of the descriptions retail traders gave me of working from their bedroom, engaging with the markets, was strikingly similar to my experiences and the descriptions professional traders often give of their work. Both sets of actors (amateur and professional traders) seem to describe an immersive, uninterrupted state, where time and space warps around them, where the affective aspect of working with uncertainty seemed to give them a sort of frantic energy.

For example, Cetina and Bruegger (2002, p. 396) provide the following description of the experience of their participants:

'When traders arrive in the morning, they strap themselves to their seats, figuratively speaking, they bring up their screen, and from then on, their eyes will be glued to the screens, their visual regard captured by it even when they talk or shout to each other, and their body and the screen world melting together

in what appears to be a total immersion in the action in which they take part. Traders often comment on the intensity of this experience’.

One trader they interviewed providing the following description of his work:

‘I could have gotten three hours of sleep the night before, come on a train, deadbeat tired, I step on the floor...and it’s like. I don’t drink coffee either, just zip, my adrenaline kicks in immediately...I just call it electric’ (Cetina & Bruegger, 2002, p. 392).

The cryptocurrency traders I talked to similarly describe an immersive state that they enter whilst occupied in front of their screen. A university student from London, living in halls of residence, described coming back to his dormitory after finishing his university work in the library. No matter how tiring his university work, when he sat down to engage with the markets, he would feel a ‘jolt of energy’ come back into his veins. Steven, a 25-year-old man, coming back to his bedroom after working a catering job that could last 12 hours, describes coming home tired, but when he sits down in front of his computer to look at the crypto markets, he feels an instant rush. He would spend hours online, going through 4chan, Reddit, and other online forums to look for coins that held the promise of exponential rises in value. He recounted screaming into his pillows, or punching them, as the market took a downturn, or feeling a frantic sense of joy as the market took an upturn. Steven, like many I knew, spent his Covid stimulus package on purchasing more cryptocurrencies. When those resources were depleted, he turned to his credit cards. Mubarak, a 27-year-old working several jobs describes the feeling of trading from his bedroom as “watchful anticipation mingled with anxious excitement and fear”. He would describe the feeling of excitement mixed with dread taking hold of him on his drive back home from work. He would look at his phone navigation system, and at traffic lights would swipe through on his phone to check the cryptocurrency market, and the value of his portfolio. He would give a firm thump to his steering wheel if it had gone down, before accelerating away from the traffic lights.

For many, including myself, the emotional aspect of working constantly with the uncertainty of the markets provided the energy to making the 9 to 5 working hours elastic. That is, despite the possible rebuttal from some of my participants that they

were not ‘working’, I would argue that they were indeed working, more specifically, within a capitalist system: that is, they were expending creative human energy to sustain the possibility of a good life to be had employing capitalist relations of production (Narotzky, 2018). Hope and excitement, emotional outcomes and the energy that came with anxiously anticipating price movements, made working after tiring wage work possible for many. The cryptocurrency space is full of memes that attempt to capture this feeling of being immersed in the ‘screen world’; energised as if you have had a few cups of coffee; negotiating wild swings in emotion that capture a world being formed between the person and the screen, where time seems to slip on the surface of chance – where seconds slip into minutes, and minutes into hours (ibid, p. 397).⁷¹



Figure 17: Memetic storytelling of trading crypto (Steemit, 2017)

⁷¹ 'How often do you check the price of Bitcoin?' asked David Nage (2020), contributor to CoinDesk (a crypto news outlet) on Twitter. A few replies came forward. 'Not very much, every other minute at the most'; 'all day and all night'; 39,688,562 times per hour. Sometimes more'; 'It's always nice to check it when you're at work. When everything totally sucks. Then you smile yourself and say yeah the only reason I'm here is to continue stacking more sats [Bitcoins]' (Wilsner, 2020).

Like professional traders, a significant part of the work that bedroom traders do involves engaging with the affective aspect of working with significant levels of uncertainty. Zaloom's (2006, p. 127) financial traders work to keep emotions at bay through 'techniques of discipline' to form a self that is profitable at engaging with the uncertainty of the market. Most retail traders I spoke to similarly highlighted the importance of keeping emotions at bay, though they were much more forthcoming about the bleeding of emotions into their engagement with the cryptocurrency market. As highlighted in chapters two and three, many took to online forums such as 4chan and Reddit to tell stories of their pain through Pink Wojak and other memes, or as GameKyuubi did, took to drinking whiskey and posting drunken messages on online forums.⁷² For me, dealing with emotions meant similarly engaging with online forums, but also going for regular walks to snap out of the space-time distortion that can arise when immersed in front of the screen staring at price charts. There was no single archetypal strategy that retail traders used to deal with the affective aspect of uncertainty – some went for walks, others switched off their monitors after a certain time, drank less coffee, or turned to their friends.

Both the work of the bedroom trader and the professional trader can be described as 'economies of affect' (Richard & Rudnyckyj, 2009). Affect rather than emotion, Richard and Rudnyckyj argue, better captures the structural processes through which subjects become produced to experience and produce action along certain lines. Basing analysis on 'emotions' as an analytical concept runs the risk of resurfacing 'the spectre of psychological individualism' (Richard & Rudnyckyj, 2009, p. 61). This is a risk that I certainly do not wish to take here. Though I make clear in chapters one and two that I do not take emotions to be separate to action or structure, or to the formation of actors, I wish to emphasize further that the experience of these emotions is a necessary part of the formation of neoliberal subjects that are immersed and reading every whim of the market. These emotions are a critical part of forming an imagined community of market watchers.

Though Zaloom's financial traders speak of keeping emotions at bay whilst decisions are made, it is worth pointing out what is perhaps implicit rather than explicit in

⁷² This is not to say that others took to drinking whilst at their bedroom terminal!

Zaloom's text: these strategies of keeping emotions away are rarely successful. In one telling encounter, a trader tells a group of trainees that if money is lost in a trade, they should seek emotional closure and move on. However, in a one-on-one interview with Zaloom (2006, p. 132) he described the difficulties of actually achieving emotional closure. Emotions that come with dealing with an uncertain market, the loss and gain of money, have to be constantly negotiated; that is, emotions are not separate to a pre-existing market, but actively constitutive of it. Trading floors – electronic or open-cry – are emotionally charged spaces, that reproduce spaces of uncertainty, rather than reducing them, and the emotions they induce.

Similarly, in the bedroom the experience of highs and lows, and the affective labour required to engage with a market that is open 24/7, reproduces the bedroom as a site of uncertainty, as a highly charged space for many of the retail traders I spoke to. A space of rest becomes something that must be actively managed.

For example, one night I woke up around 2 am to use the toilet, and on the way back to my bedroom I realised that it was the night of the Superbowl: the annual playoff championship game of the National Football League in the USA with an average audience of 112.3 million viewers. As I got back in bed, my mind refused to shut down as thoughts of the market intruded. "What would this mean for the price Dogecoin?" I remembered thinking. Superbowl is a time when many gamble and take chances: what could this mean for crypto? What would those on 4chan, WSB, and social media make of crypto and the Superbowl? Realising I would not get to sleep, I got up, opened my laptop, the bright light from the screen shot through the darkness and constricted my pupils, as I was transported to the Babylonian world. I briefly checked the forums, social media, and WhatsApp messages, bought various meme coins, and went back to bed. I woke up the next day eager to check what had happened overnight – the coins I had bought were at the same price. Nothing happened. Other retail traders I knew described setting price alerts on their phone keeping it under the pillow; sleeping next to their monitor screen rather than their bed that was only couple of feet away; and like me, waking up in the middle of the night, to attend to the markets when they could not sleep. Whereas classical ethnographies on households in anthropology have highlighted the use of social relations to negotiate economic uncertainty, the household I emphasise here becomes a site where uncertainty is often amplified.

Hopes and dreams

For the bedroom trader, the screen is not simply the site of abstract graphs and prices. The screen is also where the hopes and dreams of retail traders become entangled in the volatility and uncertainty of the cryptocurrency market. For example, the aforementioned Steven, listening to stories about people making returns of over 10,000%, felt that he too could be one of the lucky ones. He knew it was unlikely, but possible; a possibility that could not be quantified. Should he make some significant amount of money, he said he could pay off his substantial credit card debts, maybe buy a car so that he could visit family that lived outside London. For Mubarak making significant returns meant not having to work out of necessity, buying a house so his child from an ex-partner could have somewhere more comfortable to visit than an awkward shared household – hopes and plans that were simply not possible through wage work.

These hopes and dreams were not causes for action necessarily in some direct way (at least with the retail traders I spoke to regularly) but seemed to exist softly in the background. To give a personal example, my encounter with cryptocurrencies, chance, and the possibility of making a significant amount of money, sometimes existed in relation to the financial difficulties my parents were experiencing at the time. My parents were at risk of losing their home due to an inability to pay off a significant sum that remained after their interest-only mortgage period ended. During much of the time I spent in fieldwork, and a significant amount of time after, I was trying to negotiate extra time with the bank so that they could resolve this issue. As self-appointed financial lead on this matter, I spent significant amount of my spare time writing letters to banks, solicitors, staying on the phone to talk to mortgage advisors, retelling the same story repeatedly. It was exhausting, tiring, and most of all deeply frustrating that my salary would not allow me to purchase the house from them or help them out financially in any significant way. It seemed so wrong that they as migrant parents had spent so much money, effort, and time on educating me, and that now, I could not repay them in any meaningful way. This was not something they expected or placed on my shoulders in any way at all, and frequently told me that there was really no need

for me to do anything here. But it is a feeling that many migrants feel; to want to help those that had invested so many resources in you, to lead the life you want.

Experience of these issues, which admittedly ate away at me slightly, animated my propensity to take a chance. I tell this story with this level of particularity and forthrightness as it seemed many had such *particular* situations and stories hidden away that animated their chance taking activities. I did not seriously think cryptocurrencies were going to be the solution to our problems. However, the making of a five-figure profit that would have taken me over eight years to earn conventionally sprouted a thought: perhaps it was not totally ridiculous that I might make six-figures here! My actions were not directly related to this thought. I did not chase this dream to excess, but these thoughts existed softly in the background. This was also not a thought I shared with others, for it sounded ridiculous, and perhaps my friends would have expressed some concerns that I was gambling my money away and frame my behaviour as pathological or irrational (Cassidy, 2020). I share this here to give just some indication of the complex relationship between the taking of chance, uncertainty, hopes and dreams, that can engage with capitalist modes of production that promise awesome fecundity: capitalist relations that perpetuate and drive precisely the kind of difficult situation my parents found themselves in.

Working 5 to 9

Scholarly debates in the arena of work in the 1980s focused on ideas of 'flexible accumulation', 'end of work', or 'end of capitalism (as we know it)', to capture the altered social, economic, and political landscape of post-Fordism (Goddard, 2018, p. 2). In an era where what 'work' is and might mean within the neoliberal arena were being rethought, concepts such as 'affective', 'gendered' and 'cognitive' labour aimed 'to capture a historical shift in the mechanisms and strategic sites of capitalist production and accumulation', and considered what work means in the post-Fordist era (ibid). It is in a similar vein that I offer the figure of the 'bedroom trader' to foreground the work, and the site of work, where extractive capitalist processes are at work, where hopes and dreams become entangled in volatile and uncertain cryptocurrencies.

The complication of what counts and does not count as work was highlighted no better than through Dolly Parton's famous song '9 to 5' released in November 1980. The song was made initially to act as the soundtrack to a movie inspired by the 9 to 5 activist movement of the 1970s – an organisation committed to improving working conditions for women. The song and the movie foregrounds many of the obstacles that women encountered at their workplace – sexual harassment, being undermined by male bosses, and being demeaned. Both the movie and the song helped highlight the limits of wage work, helping re-think what women's work really is, 'not just the tasks they complete, but how they go about them, how they look while there're doing it, the emotion-steering efforts behind it all', and the care work they have to do after their 9 to 5 (Hussey, 2021).

Forty years after writing her era-defining song, Parton re-wrote some of the lyrics for a Superbowl commercial – an advert for Squarespace, a website hosting company – flipping the '9 to 5' to a '5 to 9'. The commercial opens with a familiar workspace background with people around the office doing mind numbing tasks, with a clock in the background nearing 5 o'clock, the clashing of keyboards comes in followed by the distinct abrupt opening playing of piano chords that builds tension, till the second hand hits 5 o'clock, the bass slides down and there is the slightest pause before the other instruments come in. The tension in the song is alleviated, as Parton sings the re-written lyrics.

'Working 5 to 9, you've got passion and a vision, 'cause it's hustling time, a whole new way to make a living, gonna change your life, do somethin' that gives it meaning'.

Besides ruining of a childhood favourite song, the song seemed to capture the neoliberal entrepreneurial figure who is expected to overcome any and all obstacles to pursue their dreams and go in search of the good life, after the metaphorical 5pm.⁷³

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⁷³ Indeed, it is often metaphorical as work in the contemporary rarely seems to end at 5.

In this chapter, I described the historical encounters with chance that have taken place in the city of London, where most of my fieldwork took place, and the new forms of labour involved in engaging with uncertainty in cryptocurrency markets. Although cryptocurrencies are often described as constituting a rupture in the financial world, in practice, in London at least, they are arguably part of a longer tradition which involves the deliberate cultivation of chance in order to undermine predictable relationships between work and its outcomes. By reflecting on the experiences of and motivations for trading, both my own and those of my participants, I have shown that escaping capitalism takes place in the imagination and in the interface between the screen and everyday life. The volatility of cryptocurrencies provides a sanctuary from the predictable outcomes of work in an unequal world.

Chapter Five:

Stages of a Revolution, or a Scam?

“If everything is a scam, then nothing is a scam” – Lauren, 42-year-old OneCoin investor.

Within my fieldsite in the Silicon city, when news of people losing significant sums of money on Multi-Level Marketing (MLM) cryptocurrency projects trickled through, the reaction might well have been of an eye roll, followed by a paternalistic nod of the head, and comments highlighting that what they, those who had lost money, needed to do was to imitate those within the start-up space and engage in practices of ‘due diligence’. This practice was put forward as necessary to distinguish between legitimate and illegitimate projects or ‘scams’. MLM is also called ‘network marketing’ or ‘pyramid selling’ and has been used with great success, and no little controversy, in the cryptocurrency space.⁷⁴ I show that while cryptocurrency professionals

⁷⁴ MLM companies normally work by using people instead of other methods to sell products. Incentives are provided to recruit more and more people. For example, if person A recruited person B, and then person C recruited person D, Person C would get a commission of person D’s sale, and persons B and A would get a commission as well. The commission would travel up stream. I chose to use ‘MLM’ rather than the related term ‘Ponzi’ scheme, as OneCoin is now being described in court proceedings and media. The difference between the two terms lies in whether they have a ‘real working product’. Since it is the ‘realness’ and how it is brought about that is being explored here, I use the former. Moreover, Ponzi schemes (such as the Bernie Madoff Ponzi scheme) have a public perception of being ‘clearly fraudulent’ projects, whereas MLM projects have been endorsed by the likes of Bill Clinton, Donald

disparage MLM projects, and consider themselves to be working towards the realisation of a 'revolution', in practice, a preoccupation common to both worlds is, 'Is this real? Is this legit(imate)?'

Employing the idea of 'stages' as an ethnographically informed heuristic device and as a pun – as both a temporally bounded region, and a space on which one stands – I highlight unexpected similarities between Silicon city and MLM 'cryptocurrency revolutions'. I describe 'Primalbase' as an example of a project within the start-up world in London, and 'OneCoin' as an example of an MLM cryptocurrency project that originated in Bulgaria. Stages in both start-up and MLM spaces, I argue, allow for the curation of a spectacle. They allow for the living out of possible worlds that blur the boundary between the present and the future. This blurring enables the capture of capital for both Silicon and MLM cryptocurrency projects. I highlight that under such conditions 'due diligence', framed as a self-evident auditing process that enables potential investors to distinguish objectively between 'scams' and the 'real revolution', proves tricky. Instead, I argue, the conditions for participating in the neoliberal version of a revolution or a scam are actually very similar. In this chapter, I do not perturb the idea of 'revolution' as I did in chapter three, but use it in an intuitive sense just as it was used among my participants. That is, revolution was understood as something that brought about a radically new future, with profitable possibilities.

I conclude by highlighting one difference between the Silicon city and MLM 'cryptocurrency revolution'. Whereas the former defers revolutionary potential to code, the latter puts the people back into their version of the 'cryptocurrency revolution'.

Two worlds, one question

In this chapter I draw on two sets of data: participant observation at numerous events I attended in London celebrating all things 'crypto', and interviews and online conversations with participants in MLMs that I engaged in while working as a 'scam hunter'. Much of my fieldwork involved attending events of various kinds in London. Some of these were large, with hundreds of attendees. Some were smaller, in the

Trump, and other politicians. It is also to remove these obfuscating associations that I use MLMs to describe OneCoin.

basements of tech start-up buildings, coffee shops, and bars with crowds ranging anywhere from ten to a hundred people. A typical event during fieldwork might go something like this: I arrive, I check my WhatsApp and Telegram groups to see who is at the event. I grab a slice of pizza and a beer, and wander around the room talking to people before finding a suitable place to sit and watch the talk, the pitch, or a panel discussion between industry leaders.

It was a repetitive format that I became familiar with: arrive, eat, sit down, pay attention to someone standing on a stage. Often this person would be giving a technical and passionate speech about how their blockchain and cryptocurrency project was going to 'revolutionise' one thing or another, whether that be a project that was going to solve the issue of privacy with a new algorithm called 'Mimblewimble'; a project that was going to design a blockchain that was 'Quantum proof'; or perhaps a project that allowed one to put properties on the blockchain, allowing for the leasing out of spaces on the property through a token that one could purchase on the cryptocurrency market. I sometimes, nay often, found myself lost in the intricate technical details but knew enough to find the ideas exciting. I would passionately and furiously scribble down notes in my book, take photos of presentation slides, and then do further research when I went back home. Sometimes, I even invested a small amount of my own money into these projects. After the event, I might go to a pub around the corner with some people from the event and discuss the happenings in the cryptocurrency space. The words of Bob Dylan come to mind, 'in a basement down the stairs, there was music in the cafés at night, and revolution in the air'.

Thousands of miles away, interlocutors I had come to form close relationships with through Telegram and WhatsApp groups were also attending events centred around cryptocurrencies. Like me, they watched someone on stage who was putting forward their 'revolutionary' cryptocurrency project. I can imagine Lauren,⁷⁵ a softly spoken woman, sitting upright, staring at what she described as a "lavish spectacle" unfolding at a Multi-Level Marketing cryptocurrency project in Dubai. I can imagine George from

⁷⁵ Lauren had recently quit her job as a secretary and was looking for a new investment opportunity. She attended a MLM event in Dubai to do her 'due diligence' and became convinced of the legitimacy of the project.

the UK who had travelled all the way to Barcelona to attend another extravagant event hosted by another Multi-Level Marketing cryptocurrency project. I can imagine Valentin in Brussels, sitting in his bedroom, not being able to attend the events, but watching the speeches on YouTube. Sometimes, when people sent me photographs, I did not have to use my imagination at all.

In this chapter I also draw on my experiences of working as what some of my participants might call a 'scam hunter', an activity that takes place in the world of MLMs. Scam hunters publicly expose projects they believe to be fraudulent; provide support to those who have lost money; listen to stories and empathise; and actively partake in activities intended to limit the occurrence of events surrounding fraudulent projects. I befriended scam hunters in both the offline and online spaces of London. Offline, many were frustrated that what they described as 'scams' were ruining the 'cryptocurrency revolution'. These scam hunters, like myself, continued their activities online. They took to Telegram and WhatsApp groups designed to tackle cryptocurrency scams. I came to act as an administrator in one such group with over 500 people. Frequently, my role as a scam hunter involved Zoom calls, talking on the phone, and having lengthy conversations about scams with both other scam hunters and those who had their money taken primarily in the MLM cryptocurrency space. The ethnography presented in this chapter draws on these experiences. Taking an approach similar to Beek (2019), I do not label any particular project I describe in this chapter as a 'scam' because, as I will argue, the term (while important to my participants) can obfuscate and shut down important questions about creativity and power.

Working as a scam hunter, I came to hear many heart-breaking stories of life savings invested in MLM cryptocurrency projects that were never returned. I witnessed painful moments when people slowly realised that they were not getting their money back and, even worse, that family, relatives and friends who had been brought into the project were not going to be getting their money back either. To conduct fieldwork in such a way was often quite intense. I would often go through a range of emotions: anger at those that I thought of as swindling money from vulnerable people; frustration that I could not convince people that they were involved in a project that I thought was fraudulent; and often feeling despondent and sad at the thought that many not only

lost their life savings, but as one scam hunter pointed out to me, also their lives. Many of the scam hunters I came to know and worked with seemed attuned to these facts.

When I described the kind of MLM cryptocurrency projects where people lost significant sums of money to my participants within the start-up space in London, I was often met with hand waving comments, or with eager acknowledgement of the problem accompanied by claims that knowledge was the key to 'stamping out' these schemes. Some suggested that people should be not so greedy. Some emphasised that scams appeared alongside most technical innovations, as people try to make them lucrative. Others pointed out that *technically*, MLM projects like OneCoin were not a cryptocurrency scam because they did not have a blockchain. And many pointed out that in the cryptocurrency world, where you are put in charge of your money, doing 'due diligence' was crucial.

'Doing due diligence' is traditionally associated with corporate mergers and acquisitions, where it refers to 'practices through which the parties to a merger spend time checking the balance sheets and legal histories of their potential partners' (Maurer, 2005a, p. 476). However, within my fieldsite and in more colloquial language, it refers to the process of doing background checks, investigating, auditing, assessing the claims of the company you are investing in or engaging with in some way (including as an employee). It struck me how those within the start-up space in London seemed to employ this phrase as somehow self-evident. It was as if there was an auditing process one could use to determine whether a company was in fact legitimate or not. However, as I highlight in this chapter, the process of due diligence, whatever it may be, did not seem to help those in the start-up world either. In fact, it seemed to be in tension with the vision that was required to participate in the 'revolution'; to see beyond the materiality of the present to invest in the future at a stage when it was still imminent. The chances were that if it existed in a form that could be subjected to due diligence, then the opportunity to earn money had passed.

The responses of professionals working on cryptocurrency projects in London to those who had lost significant sums of money through MLM cryptocurrency projects, as Krige points out in his exploration of MLM schemes in South Africa, are in line with the public discourse that explains and dismisses investment in such schemes as evidence of

'irrationality, lack of education and greed' (Krige, 2012, p. 70). They also serve to distinguish between the lay people and the professionals and the two worlds in which they operate. However, at the same time as dismissing the stories of Valentin, Lauren, and George, for example, as failures belonging to another world, those within the Silicon city of London also described scams as prevalent within their own networks and the world that they belonged to, though these were much less obvious, and more sophisticated than the ones Nathan, Lauren or George encountered as well as being more difficult to detect. For example, in the start-up cryptocurrency world in London, it was common for workers to complain that they were not paid for the work they did. Exchange hacks were common, people embellished the working of their product or pretended to have a certain product when they did not. Some exchanges and cryptocurrencies were more centralised than they admitted to publicly. Engaging in a due diligence process, whatever it may be, did not seem to be helping those in the start-up world in London either. As one of my interlocutors noted: "It's such a big revolution, and the scammers kind of dampen that. These people create negative FOMO.⁷⁶ It's such a big problem".

See the world in a new way

Regardless of whichever world they claimed to belong to, for those involved in MLM and non-MLM projects the global cryptocurrency market was a site of possibility. For some the cryptocurrency market allowed for the bringing about of a new decentralised financial monetary world, and for others it was a place where investing a small amount at an early stage could reap large financial rewards. Often there was a significant overlap. The decentralised future was to come through investment. Building a new decentralised future and making money went hand in hand.

Many involved in building the infrastructure of the cryptocurrency space in London in the start-up space, and the advocates for cryptocurrency more generally, present cryptocurrencies as a great way to overcome inequality and power imbalances of all kinds since they promise the opportunity to be able to transfer money freely, or overcome inflation, or elude surveillance put in place by centralised authorities. What cryptocurrencies were going to do was put the individual back in power – or so those

⁷⁶ FOMO – Fear of Missing Out.

building the infrastructure claim. This was to be done by putting people into contact with one another more directly through the cryptocurrency market and blockchain technology, envisaged as unbiased, depersonalised, and mechanical. For many that I encountered in the start-up cryptocurrency world, the reward for building this system was potentially great. Getting in at the early stages of cryptocurrency projects potentially stood to make you large sums of money. Similarly, those in MLM cryptocurrency projects were also keen on investing in the cryptocurrency revolution – hoping to invest a small amount to gain large rewards.

All this might seem perhaps slightly too familiar for the historically minded. Consider the transition from planned to market economies that came after the revolutions which brought about the end of the Soviet Union. Such revolutions and transitions were marked by an idea of ‘money [that] was no longer the medium of exchange that it had been during Soviet times, but...an object of concern as much as great fascination’ (Lemon, 2000, p. 121). Money became a way to envision a better future, something to hope with in times of destitute economic environments (Burawoy & Verdery, 2000). This hope was to emerge in a process of decentralisation or decentering away from nation states towards global markets. If people were given more control of their money and put into contact with the market more directly, they would be able to realise their hopes and dreams – so the argument went. Neoliberal economics was ‘insistent that markets [could] spontaneously create a new world if the old [could] first be destroyed’ through price liberalisation, stabilisation, privatisation based policies; that is shock therapy intended ‘to dissolve the past by the fastest means possible’ (Burawoy & Verdery, 2000, p. 5).

More recently, many technocrats within the start-up world have taken up the mantle of decentralising the entrenched power relations that gave rise to inequality and scams. They promise to transgress boundaries, to allow capital to flow more freely, including to those in Africa and Asia – places they present as marginal to established markets. They are ‘one world financiers’, and these are the areas they highlight as being the prospective beneficiaries of this new technology. If the neoliberal dream in the 1990s in post-socialist settings put forward the market as the solution, the technocrats and start-ups are now offering a way to get rid of the obstacles that resulted in the failure of this dream. Their aim is the removal of the class of people who are in control of

markets, whether that be through states, or financial actors, in a process of 'double disintermediation' (Dodd, 2017).

The discussion of how this transition to a decentralised way of doing things is to happen is being thought through algorithmically and mathematically, with incentive mechanisms, and via the removal of trust and politics. The fictitious cryptocurrency couple Alice and Bob are often used to explain how people will come to use cryptocurrencies. The possibility of frictionless transactions is presented as containing an implicit concern with social justice. Implicit, because to stress this concern would be to undermine the idea that is a *natural* part of cryptocurrency: 'Alice has 5 Bitcoins, she needs to send 2 to Bob in a refugee camp in Syria (or in a difficult to reach place) but there are high transaction fees in place, through the Bitcoin network you could send with minimal fees' (DuPont & Cattapan, 2017). The right technology and incentive mechanisms are sought to dissolve the past by the fastest means possible and to create the new, more equitable future.

The transition being proposed is imagined through codes and algorithms that are conceived as transcending the personal, floating outside the accumulation of the protected interests that have gummed up the traditional banking system. However, similarly to the transition to market-based economies that happened in Central and Eastern Europe and Central Asia after the fall of the Soviet Union, the shift is proving to be anything but smooth or straightforward. Katherine Verdery and Michael Burawoy (2000) point out in *Uncertain Transition: Ethnographies of Change in the Post-socialist World* that the process of marketisation brought with it a profound period of uncertainty. 'Missionaries – of the traditional, religious variety as well as those preaching the glories of marketization took to the stage in the midst of the revolution, asking people to see themselves and the world in a profoundly new way' (Mandel, 2012). It was a fertile period for many MLM projects and Ponzi schemes that were identified as fraudulent versions of the neoliberal ideology. The old ways of seeing the world needed to be left behind so as to interact with the possibilities the new world offered. As we will see in this chapter, something similar is being asked of those who wish to participate in the cryptocurrency revolution.

Stages

The importance of the physical space of the many stages which, to me, seemed to blend into the background when I attended conferences and events, was foregrounded to me by the scam hunters that worked both within the MLM and start-up cryptocurrency space. On Cohen, a self-identified scam hunter who works primarily to identify scams within the London Silicon city, was acutely aware of the importance of stages. In the build-up to a cryptocurrency conference, the organisers of the conference and the cryptocurrency community in London were discussing the conference on a WhatsApp group for those in the Silicon city. Often On assertively pointed out that the conference organisers were actually going to put a scammer on stage, and he argued that the organisers would be complicit in the scam if they did this. Others objected, pointing out that the project was not verified as being a scam. How could they *truly* know the intentions of those behind the project? A heated discussion ensued about the politics of the stage and what a scam was.

The stages that leaders of MLM cryptocurrency projects would take to were located in extravagant places: ballrooms, large halls, and theatres. Jon, a scam hunter working in London, fully recognised the important implications of holding these events in lavish hotels and would phone up the hotels to tell them that they were offering their stage to scam artists and that by doing so they were complicit in the scam. This was an extreme strategy but one he deemed necessary. Lynndel, another passionate scam hunter I came to know, who has devoted over 15 years of his life tracking MLM scams, identified the disruption of these lavish events as crucial to saving people from losing their money. He argued that these events were about curating “excitement” and “sizzle” as he put it. For On, Jon and Lynndel, and other scam hunters I came to know, it mattered deeply who was given access the stage during what they perceived to be the revolution. It is with this in mind that I foreground stages as an ethnographically informed heuristic device in this chapter.

These stages, both in the start-up and MLM world, were spaces where, as Tsing might put it, a ‘spectacle’ was curated. In *Inside the Economy of Appearances*, Tsing (2000) argues that within spectacles curated by start-ups, the future is brought into the present and acted out as if it were already here. Tsing employs the idea of a ‘spectacle’ to highlight the process by which profit must be imagined and dramatised before being

extracted. Through the 'self-conscious making of a spectacle' equitable futures are drawn closer, and people are asked to interact with such spectacles as a means to draw capital (Tsing, 2000, p. 118). As Tsing puts it, 'start-up companies must dramatize their dreams in order to attract the capital they need' (ibid.). Such a spectacle is also curated through online magazines, newspapers, and other digital platforms. These are, I would argue, 'stages' of the symbolic and metaphorical kind, that are similarly involved in a process by which equitable futures are drawn nearer and people are asked to interact with them. As Briziarelli and Armano (2017) highlight, and as evidenced (implicitly) in earlier chapters, spectacles are similarly curated in online spaces, and on platforms such as WhatsApp, Telegram, 4chan, Reddit. As a result, we need not restrict our understanding of stages to the offline world.

To highlight the process by which spectacles are curated, I wish to employ another meaning of stages, namely stages seen as temporally bound regions, or phases, in which different logics and an alternative ecosystem of reasoning and ways of thinking take hold. For example, we might overhear the following sayings: 'that was a tricky stage of my life' or 'puberty is an important stage in one's life'. American historian Crane Brinton (1965) in *The Anatomy of Revolution*, staged revolutions as one might progressionally stage a fever: incubation stage, moderate stage, crisis stage, and recovery stage. Each stage corresponds to time periods during which different forces are at work. Similarly, in anthropology we demarcate stages to think through processes, for example, Van Gennep's (1961) theorisation of rites of passage describes three stages: separation, transition, and reincorporation. These are examples of temporally bounded stages where different forms of reasoning take hold.

Similarly, as I highlight within this chapter, those curating the spectacle within both the MLM and start-up cryptocurrency revolution, are staging (temporally) the revolution particularly regarding the early phase, and the latter phase. It is during the early stage especially that the kind of astronomical profits that are sought can occur. In this early stage of the revolution, what is required is a radically new way of thinking, and a scaling up of the self in order to interact with the revolution – or so it is claimed by both MLM and start-up cryptocurrency projects.

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The political significance of the stage, as being a space for people to imagine otherwise, has of course been mobilised in revolutions and politics that happened well before those in the start-up and MLM world took to it. From the stage of Dionysos, in ancient Greece, where political theory intersected with the arts, to early Sanskrit plays of Kālidāsa that similarly brought cosmic politics to the masses, to the street theatre of Kerala that looked to bring a communist revolution, the stage was an important place that mediated the world beyond, alternative futures, and the unknown.

In *Scale down the world, scale up the self, bridge the gap*, Hart (2014) points out that one important way we ‘attempt to reconfigure self and world [is through the] consumption of fiction: novels, plays, movies’. He goes on to note that:

‘Here the world is reduced in scale to a stage, paperback, or screen, allowing individual members of the audience to enter it on any subjective terms they wish. Who do you identify with – Pierre or Andre? Does Natasha deserve their love...or yours? Sophocles and Shakespeare stand out as social thinkers because their medium effectively bridges the gap between human personality and an impersonal world’ (Hart, 2014).

Those who claim to be bringing about the cryptocurrency revolution similarly employ the stage so as to reconfigure relations between the private and the public realms, to engage people’s imaginations, to bring equitable futures into the present, and to interact with an unknown world out there. In their exploration of revolutions Cherstich, Holbraad, and Tassi (2020, p. 67) employ the ‘link between revolution and religion as a heuristic device for exploring the ways in which revolutionary transformations operate on, and at, the scale of the person’. That is, they employ this link to make connections between the private and the public transformations that are at stake in a revolution. Similarly in this chapter I employ the stage as a heuristic device, though not only think to of the stage as a connection between these two scales, but also to show the stage as a site where these two scales overlap. It is this crossing of scales that makes the stage of the theatre magical, a place where the unknown world at large is grappled with from the confines of your seat. It is as Caroline Gatt (2015) argues, what similarly makes the anthropological stage theatrical – a place where structural forces play out against agency in the action of everyday actors.

Initial Coin Offerings (ICOs)

Normally, when capital is sought at the early stages of a project, especially prior to the advent of cryptocurrency and the internet, you would go to venture capitalists and seed funds. You would highlight your idea to a certain group of wealthy people with your pitch decks and PowerPoint presentations, asking them to invest in your bright new idea. Cryptocurrencies and blockchain technology offer an alternative means for seeking capital to fund projects – ‘Initial Coin Offerings’ (ICOs). Let us say you have an idea for a project: you want to build a casino that allows people to pay in a digital and encrypted manner. First you would write up the idea into what is known as the whitepaper: a detailed breakdown of how the project works. You would then upload the whitepaper on to your website and ask public investors to pay you in some form of recognised cryptocurrency. This would normally be Bitcoin or Ethereum, and in return you would receive a coin, for example, GamblingCoin. This is known as the ICO process. Investors are invited to get in at the early stage of the ‘revolutionary’ new idea for a cheap price, with the promise that the value of the token they have purchased will rise in value exponentially when the project eventually becomes successful – and that promised moment could be just around the corner.⁷⁷

“We are going to revolutionise how we work”, said two lead spokesmen for the Primalbase ICO project. “We are going to be the first cryptocurrency company to put property on the blockchain.” I was at my desk in my bedroom, having lunch and watching the presentation on YouTube. The two young men, perhaps in their early 30s, were holding a mic addressing an audience at the ‘Waves Community Meetup’ in Amsterdam. Though I was watching the presentation through YouTube, what was unfolding on stage and the surrounding area was very familiar. It was similar to countless other meet ups and pitches that I have attended in London. There were transparent glass walls, young people in smart-casual clothes drinking beer and eating

⁷⁷ ICOs are acronymically speaking similar to IPOs (initial public offerings). An IPO is where a well-developed company that wants to seek further capital goes to investment bankers to list their company on the stock market. It is an expensive process, so unavailable to companies that are just starting out. An important difference between an IPO and an ICO is in the latter as ownership of the token – GamblingCoin – does not give you any ownership of the project, whereas with IPOs you have a stake in the company through the purchasing of shares. Effectively, ICOs can be thought as a form of crowd funding.

pizza, neurons firing in conversations as people discussed the happenings of the cryptocurrency world and the merits of different cryptocurrency projects. Many that I spoke to (both in MLM and non-MLM projects) highlighted YouTube as a platform through which they got to know a project well. They, like me, would listen to speeches by the leaders of the projects they were involved in.⁷⁸

The idea put forward was that through purchasing the Primalbase token, you could gain access to a work desk space in Berlin, London, New York, Singapore or Amsterdam enabling you to work side by side with a vibrant cryptocurrency community. This idea was a cryptocurrency version of WeWork – a company that provides co-working spaces for those in start-ups. In the presentation, a lengthy explanation of the technical working of the Primalbase token was given. There were conversations about smart contracts, gas prices, and the rate at which the tokens would be released. The future was bought into the present and worked on as a technical issue. It was as if the only thing preventing the unfolding of this obstructed future was the writing of the relevant code and deployment of the relevant technical infrastructure. As Swartz (2017, p. 89) puts it, ‘this is technological fetishism with the implementation of that technology as almost an afterthought’.

For me, as an anthropologist, Primalbase offered a potentially exciting way to do fieldwork – my field site would be on the blockchain! I read the whitepaper and the idea seemed to make sense. I did further background checks on Primalbase and came across a *Forbes* article that argued: ‘for an industry as emergent as the fintech sector, such a space [Primalbase] in London is likely to revolutionize the industry allowing for an unprecedented sharing of ideas and joint innovation’ (Wallen, 2018). I talked about the idea with others I knew in London and they too thought it was a promising project. I joined the Telegram group for Primalbase, and it seemed active and functional as the people there appeared to be equally excited about the project. I did some back of the envelope calculations to see how I could make the finances work and the idea seemed viable on paper. I was not only excited about the possibility of an interesting

⁷⁸ Many I spoke to highlighted YouTube, alongside Telegram, as an important place from where they learned of a cryptocurrency project.

field site but was also motivated and interested by the token as an investment opportunity – I was not averse to making money.

Through Telegram I contacted the Primalbase ‘community manager’⁷⁹ to book an appointment to view the desks at the London offices I could be gaining access to. I was excited by seeing the promotional video and photos of the office spaces as they showed people working side by side, talking about cryptocurrency, socialising. I could imagine coming into the office, working, talking over coffee with others. Would it be okay to talk to people whilst they worked? Should I wait until the end of the day to talk to people? Could I get a mailbox in this building? Would basic things like tea and coffee be provided? These were the kind of questions that floated through my mind at the time. I was getting slightly ahead of myself.

When I arrived at the top floor of the building, I was amazed by the stunning cityscape view. But there was one crucial thing lacking. People. The office was eerily quiet. I could hear the distant sound of hoovering, though I am not sure of whose mess. The woman showing me around the office told me people would soon be coming. I was just there slightly early. I had to just wait a bit longer, I was told.

⁷⁹ Almost all cryptocurrency projects had a ‘community manager’ who acted on Telegram addressing the queries and needs of the public interested in the project.



Figure 18: View from the top of Primalbase office overlooking the Silicon city.



Figure 19: Inside the Primalbase office space.

I was disappointed at first. From the technical discussions in the presentation and on the Telegram group, as well as in the promotional videos on YouTube, I had gained the impression that there was already a thriving community here that I could slot into. I did more background checks into the platform when I returned home that night and found some mentions on a forum saying that this was a scam, that the idea was not a valid one: forum contributors asked, why would anyone want to be a lifetime token holder? How could you get liquidity in this market? These were questions I did not have answers to or chose not to think about. By then I had heard the word 'scam' in relation to most cryptocurrency projects – the word seemed to have lost all meaning. Indeed, as some of my participants pointed out 'the real scam' is 'fiat currencies'.

At the time, I remember thinking perhaps the quiet and emptiness of the office was a good sign, simply suggesting that I was in at the early stage of this project that was to 'revolutionise' workspaces, and if I was right, I could potentially earn a lot of money. I also wondered whether I was perhaps too rigid in my thinking. I had not invested prior to my fieldwork so perhaps I needed a different way of thinking about this? The proceedings at numerous conferences events asked members to do precisely this: think in a radically new way to participate in the cryptocurrency revolution. Many founders I interviewed in the cryptocurrency start-up space in London advised me that to be part of the cryptocurrency space required one had to think beyond institutional thought in a radically new way. Indeed, this is what many stressed when they spoke on stage. Gavin, the founder of a cryptocurrency project, pointed out on stage at a conference that he was turning away many applications for jobs from those who worked in prestigious big banks (JP Morgan, Goldman Sachs, and others). To work in the revolutionary cryptocurrency space, he argued, one needed to think in a less institutional way. Other interlocutors similarly pointed out what was really needed is a different form of thinking to enable successful interaction with the coming future.

Whilst I was mulling over whether to purchase the token, a financial analyst I knew, now a CEO of a cryptocurrency project, told me that he had bought the Primalbase token. I knew him to be capable, well informed and diligent. He had previously emphasised to me the importance of doing due diligence within the cryptocurrency space. His involvement convinced me of the project's legitimacy, so I made the decision to purchase the token with my own money. However, while I was organising my finances, the project suddenly took a sour turn, and then it was no more. The end came so suddenly. I remember taking to Telegram, scouring through message boards to find out what had happened. Some were quick to assert that it was all just a scam. Others pointed out that it was simply a failed economic enterprise, nothing more. Others were less sure, and were contemplating the following question: Had this project been legit, or a scam?

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The personal experience of Primalbase that I recount above has occurred countless times to many others within the cryptocurrency space. As one of my interlocutors put it, echoing the sentiment of numerous others: "to be scammed is like an initiation ritual

in the cryptocurrency space” (they were referring to the start-up space in London). Both investors, and those who worked for start-ups, had raised suspicions of scams. One participant recounted beginning work at a start-up cryptocurrency project, excited by the algorithm the company advertised publicly on stage at conferences, but he soon realised that the product was nowhere near completion – worse, it might never be ready. He recounted feeling uneasy after being told this was simply the way start-ups worked. Another participant recalled unease at being asked to create the illusion that there was more activity and progress being made than there actually was: a positive impression was to be created by breaking down larger update files on Github (a publicly accessible online platform that allows developers to work with one another on a project). Many related their experiences of not receiving the money and remunerations for their work, and when they asked for what was promised to them they were told that the money would soon be coming. Apparently, ‘it was just around the corner’.

The diaphanous veil between the future and the present that Tsing (2000) describes in her exploration of a mining start-up project in Canada, is similarly apparent within the cryptocurrency start-up space in London. The thinnest this veil became during my fieldwork was in 2018 – a period some of my London participants refer to as ‘the ICO craze’ or ‘the gold rush’. Entrepreneurs, like those that came up with the idea of Primalbase, were excited and realised that this was a moment where what was possible was only hindered through their own imaginations. They took to the stages offered by conferences, meetups, and the digital world to pitch their revolutionary idea. Dreams and ideas were enacted as if they were already present in the world – ‘as soon as a proposal is offered – whether a white paper, a slide deck, or a blog post – it [was] treated as though it already exists, ready to go’ (Swartz, 2017, p. 89). A blockchain start-up founder noted that it was ‘no longer optional’ to ‘passively await’ the coming of the cryptocurrency future (ibid.). For some such an approach that leans into the future, that gets ahead of reality, was a necessary condition for partaking in the revolution. As one journalist put it, ‘letting yourself get giddily far ahead of reality may be a requirement for participation in the blockchain revolution’ (Rosenberg, 2015). Another CEO of a cryptocurrency project pointed out to me: “if you say your product is ready, but not ready, I don’t have too much of a problem with that. You want to load up your pipeline. Otherwise, when you have your product there’s no one there”.

Matt Levine (2021), an ex-investment banker, writes in *Money Stuff*, one of the most popular newsletters to circulate on Wall Street, that what you need in a 'revolutionary founder' of a start-up project is:

'...the ability to make people see the vision *now*. 'We'll tinker with hydrogen for a while and maybe in a decade or so a fuel-cell-powered truck will come out of it': True, yes, but a bad pitch. The pitch is, like, you put your arm around the shoulder of an investor, you gesture sweepingly into the distance, you close your eyes, she closes her eyes, and you say in mellifluous tones: 'Can't you see the trucks rolling off the assembly line right now? Aren't they beautiful? ...the goal is to get the investor to see the future, so she'll give you money today, so that you can build the future tomorrow'.

The enfolding of such imagined futures into the present via staging of both the spatial kind (conferences, meetups, events, YouTube, WhatsApp, Telegram) and the temporal kind (early/late) was crucial. In the following section, I highlight similar staging processes which work to bring about the living out or enactment of possible worlds, and to draw capital.

OneCoin

Nathan's story

Nathan told me that "before cryptocurrencies" he was a student. He was studying at school "not thinking about marriage or taking care of others". His family's main source of income was growing passionfruit on their land, in a small village in Uganda. They also reared a few goats as a sideline and the family were "neither extremely wealthy, nor extremely poor". Once Nathan finished school he turned to thinking about money, wondering how he was to achieve "the good life".

As with many who get involved in MLM projects, Nathan came to know of OneCoin through a family friend, Bella. This friend outlined the working of the OneCoin MLM project, and the riches that could be earned from investing in the project at the early stage. Nathan and his father listened attentively. But Nathan remembers that it was

not the technical working of OneCoin that drew them in – it was Bella. As Nathan put it, “she looked really expensive...whatever she told us, we really believed it, because she was a testimony” She wore “nice clothes, looked less skinny, she looked wealthy”.

There were also other factors that drew him into project. “I was always there at OneCoin events”, Nathan told me. He would send through photos of himself attending various OneCoin events, with speakers ushering in the “financial revolution”. In one particular photo Nathan sent, there was group of people sitting outside on blue plastic chairs, staring at their local preacher on stage as he spoke under a banner that read ‘Join the Financial Revolution’. These events were convincing, they made the project seem real to Nathan. Using most of his family’s money and by selling his goats, he purchased a OneCoin package in 2016.

There were two ways to make money with OneCoin. You could either enrol more people into the OneCoin project and gain a commission, or you could wait till the money grew, but the former was much more profitable. However, after trying their hands at recruitment Nathan and his family concluded that it was not for them. They opted instead to wait patiently till their money grew.

“The only option was to wait. Wait. Wait. As the public launch kept being postponed. Wait. We had one year to wait. We definitely had to wait.”

They had to wait until the platform was launched publicly before they could withdraw the money. During this time, there were nagging doubts. The family asked ‘Why do they keep making us wait? They have so much money and clients already, why don’t they just launch the project?’. The main nagging questions at the back of Nathan’s mind were ‘is this project real? Is this a scam?’

These questions faded into the background – but never disappeared – as Nathan continued to attend OneCoin events where his local church pastors and other charismatic figures proselytised OneCoin. The person who Nathan, and indeed others who were involved in OneCoin spoke of the most, by far, was ‘Dr Ruja’ one of the scheme’s founders. Nathan and many others were convinced by Ruja’s credentials and speeches: she worked for McKinsey – one of the biggest management

consultancies in the world. She had a PhD in European private law; she featured in *Forbes* magazine; she spoke on stages provided by *The Economist*. Nathan, and many others, recounted spending hours in their bedroom watching Ruja's speeches on YouTube and being mesmerised and convinced of OneCoin's validity.

Nathan, like many others I encountered within the cryptocurrency space, would check his accounts regularly. He would see a number that was rising exponentially, but the number was locked behind a digital screen that he could only access in the future when the project went 'live'. Nathan made many calculations based on these numbers, as to the type of business he might set up by using his OneCoin profits. He refused other jobs and business opportunities that came his way because he thought his riches would be coming to him one day soon – the future was just around the corner.⁸⁰

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If those designing the cryptocurrency space in the start-up world realised the power of the stage, so did those who articulated their cryptocurrency vision through MLMs. They similarly brought the future and alternative possibilities on to the stage through curating excitement, but crucially, they differed in the way they did so. The talks were less technically oriented and instead appealed to the everyday lived realities of the audience members.

The OneCoin scheme that Nathan was caught in originated in Bulgaria and reached over 170 countries. It was initiated by the enigmatic Dr Ruja Ignatova who disappeared in 2017 with \$15 billion. Ruja and her partners were well versed in the language of MLM schemes. When they took to the stage, they combined many of the devices that appeared with MLM and Ponzi schemes in the post-socialist context, and are indeed also found elsewhere, for example, in their hosting beauty pageants and lavish spectacles which strengthened the idea of OneCoin as a symbol of established wealth.

⁸⁰ I know Nathan from my role working as a 'scam hunter'. A couple of years after investing in OneCoin, he identified the project he was involved in as fraudulent. He realised that he and his family were not going to get their money back. After this realisation, he turned to helping others who were caught up in projects he identified as being fraudulent. It was through his 'scam hunting' activities that I came to know Nathan.

In 2016, OneCoin held an event in London, at the SSE Arena in Wembley – London’s second largest indoor arena – for around 12,500 people. Those who attended the event described it as being closer to a rock concert or a global church event. There, Ruja took to the stage and asked people to “join the financial revolution, be part of the innovation, we have a vision, we show people part of the future”. Ruja and other OneCoin promoters were asking similar things of their audience – invest in the revolution at an early stage.

When I asked Nathan and others why they did not simply invest in Bitcoin and other major cryptocurrencies, I generally received two answers. Bitcoin, Ethereum, and other major cryptocurrencies were seen as being ‘too technical’ and moreover, they were no longer in the ‘early stage’ when prices can rise exponentially. The ship had already sailed with these coins as Ruja and other OneCoin promoters often pointed out. They played on the story of Bitcoin’s meteoric rise, articulating that Bitcoin was indeed past the early stage, but OneCoin, on the other hand, was just getting started. As Ruja pointed out in one ‘mega-event’, “we are still at the early stages guys, this financial revolution is going to be huge”.

When Ruja, MLM cryptocurrency promoters, and those in the start-up space took to the stage, they were asking the audience to meet their revolutionary vision by developing themselves, to invest in this revolution at the early stage, and to think in a radically new way.

As one MLM cryptocurrency promoter said to me via a voice note on Telegram: “What decisions are you making right now as you look into future...where are you going with your life? It only takes you believing in yourself to get it done”. He and others were asking the members of their networks to think differently about the world. “You shouldn’t look at the past and compare newer companies to old” he claimed, as the new cryptocurrency world required a different mode of engagement. New radical technology requires new ways of thinking, so they seemed to be saying. In doing so, MLM cryptocurrency promoters were offering what many MLM schemes claim to offer: ‘self-development’ to encounter the ‘new radical world’ (Beek, 2019, p. 503).

Ruja, like those in the London start-up world, realised how the stage can be a place where the self is built up, and the future and the ‘bigness’ of the world are brought down, allowing for the gap to be bridged through the performance of a spectacle (Tsing, 2012, p. 502).

I spoke to many who had lost money through MLMs and they told me that it was shortly after attending, or watching online, the lavish events in Dubai, Spain, or in London, that they bought in. One interlocutor notes:

“The first Dubai event was great. Everybody was very excited. And when I returned, I bought another package⁸¹, the most expensive one”.

Such large and lavish displays of wealth on stage were common at other MLM cryptocurrency events as well. They evidenced the riches that could be earned if only you invested during the early stage of the project.

Many of those I interviewed pointed out the particular stages (spatial) which Ruja and other like-minded promoters were taking to. They asked, ‘Would a scammer be allowed to host an event at the London SSE arena to address a large audience?’. Similarly, others recounted seeing, mainly via YouTube, Ruja on a stage provided for her by *The Economist*. “Would *The Economist* not have done their due diligence?”, asked Marsha,⁸² echoing the sentiments of others. Valentin, a young French university student who joined the OneCoin project in 2016 pointed out that he had doubts as he was told to wait more and more. However, these doubts were kept at bay, as he saw that OneCoin promoters were still active. Valentin and others remembered being convinced by the fact that although these promoters were accused of scams, they did not disappear, but continued to take to prestigious stages and address large audiences. Other OneCoin members also pointed out Ruja’s appearance on the cover

⁸¹ Many of the so-called cryptocurrency coins were sold as ‘licenses’ or ‘educational packages’.

⁸² I met Marsha; a 56-year old ex-doctor from the UK via a Telegram group and spoke to her frequently on the phone. She had attended various OneCoin events and followed OneCoin leaders closely on YouTube.

of *Forbes* as another validating factor. Marsha asked rhetorically again, “Would *Forbes* not have done their due diligence?”.

In the early parts of 2016, The Financial Conduct Authority posted a warning about OneCoin, but it was not until months later that the warning was removed from its website. Many selling the MLM OneCoin cryptocurrency dream exploited this fact (Bryan, 2020). To frame this in Marsha’s line of inquiry: Would the UK Financial Conduct Authority not have done their due diligence?

Similar questions were asked when Elizabeth Holmes, founder of Theranos, appeared on the cover of illustrious magazines.⁸³ On the cover of the popular magazine *Fortune*, there was a portrait photograph of Holmes staring piercingly at the reader with the caption ‘Elizabeth Holmes and her secretive company, Theranos, aim to revolutionise health care’ (ICAEW, 2022). Similar photos and captions appeared in *Forbes, Inc.*, and other influential magazines. Appearances in these magazines, as Rebecca Jarvis points out, were influential in expanding Theranos’ reach and giving credibility to the project. It helped curate the ‘buzz’, or as Lynndel would say the ‘sizzle’, and the excitement around the project, so that seasoned investors, such as Henry Kissinger, Bill Frist and George Schultz, could seemingly not do the ‘due diligence’ on Holmes’ start-up project.

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Many within the MLM crypto space, like those in the start-up space, invited people to do their ‘due diligence’. For example, an MLM promoter who I had been in conversation via Telegram for a few months, seeing that I was hesitant to ‘join the financial revolution’, advised me not to just take his word, but to do my own ‘due diligence’. He said,

⁸³ Elizabeth Holmes, once a Silicon Valley star and founder of Theranos, named her Mini-Lab blood testing device ‘the Edison’. Like Edison, she claimed to have an invention when she did not. Unlike Edison, she was unable to bring her Mini-Lab into the world. Theranos was labelled a ‘scam’, and Holmes a fraud.

“People out there who think it’s just another recruiting Ponzi, pyramid scheme...educate yourself...do your own due diligence...that’s why I flew to Madrid...doing my due diligence as much as I can.”

He seemed to be deeply aware that engaging in practices of ‘due diligence’ was anything but straightforward in a space where the future is folded in, and people are asked to think in radically different ways. Due diligence, like other processes of audit, draws on the idea that ‘every component of the organization is in a state of perpetual self-awareness, animation, and explicitness’, and that one needs merely to consult the relevant data to decipher the state of the company (Nowotny et al., 2011, p. 45). However, under conditions where distinctions between the present and the future were blurred, where value was placed on being able to *imagine* what the company could be in the future, any such fixed relations implied by due diligence did not exist. Invitation to conduct due diligence acted to convey ‘transparency’ and ‘openness’ and to propagate the idea that value could be extracted from examining self-evident facts. However, as Strathern (2000) notes in *The Tyranny of Transparency*, ‘audit that so loves transparency conceals one thing: its reduction of complexity’. Through the discourse of due diligence, those within MLM and start-up projects concealed both the blurring of the present and the future that was required to draw capital, and the imaginative exercises that were needed to engage with the ‘cryptocurrency revolution’.

The ‘human’ and the ‘technical’ revolution

The MLM spectacles in Wembley, Dubai, and Spain were ‘mega-events’. But, as Nathan’s story highlights, there were also smaller events being curated in towns and villages that were equally practiced in bringing possible equitable futures that much closer, within touching distance. Trusted local figures took to these smaller local stages to spread the word of the financial revolution. Nathan pointed out that in Nigeria religious pastors, like Fred Ntabazi, took to the stage to conduct the ‘OneLight Sunday Service’, which was transmitted to distant others via digital means. Elsewhere, pastors in Samoa were involved in translating the OneCoin financial revolution to their local congregation. Stages that often mediated between the religious world beyond and that of the here and now helped to fold alternative financial futures into the present. Economics, religion, and great pieces of art, find common ground in the temporal play between the present and the world beyond or a future unknown. It is a relationship

that has interested a long lineage of anthropologically leaning thinkers (Durkheim, Cosman, & Cladis, 2008; Mauss, 1909). It is with this in mind that Hart points out how, 'world religions have long bridged the gap between everyday life and a vast universe' and calls for a more humane economic system that considers the economic project as a religious one rather than a scientific one (Hart, 2021, p. 4). It is a call that MLM projects seem to have heard most clearly.

From country to country there were similarities in the OneCoin presentation, for example, the technology was described in a similar way, with the scheme always posited as a 'financial revolution', the 'Bitcoin killer', and people were asked to get in at the 'early stage'. There was, as with most MLM schemes, a script. But in moving from country to country, place to place, the project was translated into the specific locality, into the localised experiences of the people on the ground. In this regard, as Beek points out, MLM schemes act as 'travelling models', preaching the financial revolution from place to place. Unpacking these models requires local promoters' knowledge of others' specific dreams and anxieties, and being aware of how people think the world works (Beek, 2019, p. 510). Lynndel was of the opinion that such models were much more effective than big lavish events precisely because they drew on local knowledge, figures, and stories. They were also much harder to police, as these events took place in small school halls, local churches, and in unused office spaces.

In moving from place to place it was not the technical descriptions of the workings of cryptocurrencies that propagated the OneCoin revolution, but, rather, the people and the human stories they told. Ruja and other OneCoin promoters would put the financial revolution into the language of 'humane capitalism': OneCoin for the people. They emphasised the revolutionary potential of cryptocurrencies and OneCoin that could come about if vast number of people came together. 'OneCoin, OneLife' was the mantra heard at these events, highlighting the unity of the network.⁸⁴ As with most typical revolutions, they highlighted how inequality of various kinds could be extinguished if people banded together (Cherstich et al., 2020). The major difference

⁸⁴ OneCoin, in common with other 'spectacles' that Ong (2012) and Shin (2012) write of, often draws on the idea of human 'unity' and 'oneness' to bolster nationalist and neoliberal ideas.

between MLM and start-up cryptocurrency projects when they took to the stage was that the former emphasised the people.

OneCoin promoters would take to the stage and point out that Bitcoin was for the select few, it was for the technical people, whereas OneCoin, 'the Bitcoin killer', was for everyday men and women. Valentin explained:

“...there was a lot of technical details [with Bitcoin] ...I was not interested in the technical mechanism of cryptocurrencies...I was interested in the ‘financial [investment] opportunity of the century’ [that came with OneCoin]”.

Valentin described OneCoin as less technical, and part of a more humane structural network that offered an antidote to the rotten political and financial system. OneCoin, like many other MLM schemes, spoke in the language of ‘family’, ‘brothers’ and ‘sisters’, in the language of a kinship network. Within MLM schemes in Kenya, Beek (2019) highlights a similar privileging of knowledge gained through social networks and experience over ‘the scientific’ and ‘the technical’. As he describes in the selling of a healing product called BF Suma, the PR department sends through ‘a script’ consisting of slides and information to convey the scientific validity of these products. But it is through adding testimonials, listening to people’s experiences of the product, that the product gains validity. It was not Bella’s explanation to Nathan concerning the technical workings of cryptocurrencies that convinced him, it was the recounting of her own experiences of OneCoin. In one particular MLM event described by Beek, following a presenter’s speech concerning the technical workings of the product, the floor was opened for people to describe their experiences of the product. After listening to the lively discussion, the presenter concluded: “the best stories are not scientific but what people have been doing. Next to our information is the human experiences, what people can do with our products”, to which the audience responded, “It works, it works” (Beek, 2019, p. 510).

Similarly, there were tales recounted of OneCoin working. These were offered by people on the ground, people in the company, those who could see the symbolic deposits of the future described by Ruja and other OneCoin promoters. For example, many cited the DealShaker website, an online marketplace where you can purchase

goods partly with OneCoin (and partly with state backed currency) as a great example of OneCoin working. One scam hunter was dismissive of this marketplace, saying: “they sell things no one wants, at inflated prices, and you can’t pay for the whole things in OneCoin”. He went on to argue that most of the transactions are performed or mimicked: someone at a computer was simply subtracting a figure from someone’s account and adding it into another person’s account, and no blockchain existed. There were other cases, for example, I heard of someone who bought a car with OneCoin, but the OneCoin token was simply moved from one account to another.⁸⁵ For many, DealShaker was proof of the future put forward by Ruja and the OneCoin promoters.

Conclusion, due diligence, and scam hunters

Often in working as a scam hunter I was frustrated that those I was helping were not listening to me when I said, “This is a scam!”. I tried to compile evidence to highlight why I thought a certain project was a scam. However, these strategies were not particularly effective. Like the ‘gambling’ metaphor, ‘scam’ was an intuitive critique used by many to refer to a wide range of projects that had a fraudulent idea, an unethical CEO, questionable aims, unrealistic goals, and thereby they raised moral issues of all kinds. As such, the term seemed to lose all meaning for many of my participants. As one of them put it when I was trying to convince them that the project that they might be involved in was a scam: “If everything is a scam, nothing is a scam”. It is these frustrating conversations that have largely inspired me to avoid referring to MLMs or the cryptocurrency space as a ‘scam’ as this does not seem the most helpful label when seen from the perspective of those on the ground.

Instead, I have attempted to show an important part of the mechanism by which capital is drawn, one that makes the distinction between the ‘financial revolution’ and ‘scams’ not so self-evident. That is, the staging, both spatially and temporally, of the so called ‘financial revolution’, is a necessary process of drawing capital. Employing staging as a heuristic device has allowed me to build on Tsing’s (2000) idea of spectacle to highlight the spatial and temporal elements involved in the curation of a spectacle.

⁸⁵ Not everyone can move OneCoin tokens from one account to another, only those who have purchased the most expensive licenses.

Moreover, the blurring of the present and the future through the device(s) of staging thwarts any idea of doing a self-evident and technical 'due diligence' process. Many MLM and non-MLM projects invited potential investors in their revolution to do due diligence for themselves. Though I do not have space to explore further, what seemed most effective in convincing people that they were caught in a project where they might lose all their money was due diligence of a different kind, namely one that was relational. It was through talking at length on Zoom and Skype, forming relationships with us as scam hunters, through checking-in often, engaging regularly with the Telegram and/ WhatsApp groups, that we managed to convince people that they were involved in a project where they might not get their money back. It was remarkable to see the lengthy efforts many scam hunters made in order to help vulnerable others who they suspected as being enmeshed in a fraudulent project – some of the scam hunters themselves had previously been scammed. In retrospect, I am still thinking through the possible reasons that motivated scam hunters to help in this way.

In creating a space where value capture occurs beyond the realms where the state and financial authorities function, these self-mobilised 'scam hunters' operated and proved necessary to many. Indeed, the state was deeply ineffective and slow in identifying those fraudsters who were mobile, who deliberately chose to speak in languages that enabled them to evade capture or identification as scammers. As highlighted above, OneCoin promoters were able to make use of both the slowness of the state to act, and to capitalise on the mistaken expectation of many that the state would have intervened if this scheme was clearly a fraudulent project – the state would have done their due diligence.

It is the specific way in which people see and understand the world around them that is overlooked by those who put forward a technocratic understanding of the financial revolution in Silicon cities. They argue that 'knowledge' and 'due diligence' are self-evident technical things and that this knowledge and the practices of due diligence will eventually trickle down to the masses to prevent projects like OneCoin and other MLM projects that they label 'scams'. However, this chapter has highlighted how such knowledge and the due diligence process do not seem to help those in the Silicon city either. Such an idea of due diligence fails when what is at stake is being able to

imagine a future and fold it into the present. Such imaginations are called on to assess a revolution that is self-evidently both new and a rupture from the past.

It is against the backdrop of a technocratic understanding of the financial revolution put forward by those in the Silicon city that the MLM cryptocurrency project resonated for many. Those within the MLM cryptocurrency revolution seemed to better understand that, for many, the cryptocurrency revolution was not about decentralising the state or about centralised financial authorities, but instead explicitly about the exponential levels of profit that could be achieved. The MLM revolution's proponents seemed to better understand the hopes and dreams of the people they spoke to, as well as the relational aspect of knowledge – stories had to be grounded in everyday lived reality and experiences. OneCoin was described by *The Times* as 'one of the biggest scams in history' (Bartlett, 2019). An alternative, and not altogether contradictory viewpoint, is that what MLM cryptocurrency projects do, I would argue, is put the people back into the technocratic 'cryptocurrency revolution'.

Chapter Six:

'Crypto' Networks

I grew up near a small town that was famed for its singing fish. At night-time when the heat had dissipated, and the hot dust that hung around the air had settled you could hear, along with the lapping of the water on to the shore, the faint murmur of the singing fish. They were to be found in the transitory zone where the river met the sea, in a lagoon, where the meeting of the salty sea water and the fresh river water gave rise to a diverse range of ecological life. This body of water was home to water birds that soared above the lagoon, plants and vegetation that were not found elsewhere, crocodiles that emerged to keep the fishermen on their toes, and of course the singing fish. Some thought the music came from a mermaid – half fish, half human. Local fishermen since the 18th century have used their wooden oars to amplify the sound of the music to map out the aquatic activity below the surface of this lagoon. Some local fishermen still swear by this practice foregoing modern equipment like GPS. They pay attention to the darting birds, the shifts in wind, the noise of the traffic over the bridge that connects the nearby villages to the city centre. Similarly, the Caroline Islanders, Matsutake mushroom pickers, and anthropologists on fieldwork map their fields and navigate by paying careful attention to the world around them. As Tsing (2012) might put it, we might learn more from looking around than looking statistically forward.

During my fieldwork, two similarly disproportioned bodies of waters met: the powerful swell of big traditional finance intermixed with a local community of early adopters in London who came from a range of backgrounds and had a number of different ways

of engaging with cryptocurrencies. The financial currents I describe collided at Coinface, a 'networking group' formed in a pub in Paddington in 2012 to engage with the 'new' possibilities offered by cryptocurrencies.⁸⁶ Both the early adopters who attended Coinface and the traditional financiers, and indeed many in the mainstream, referred to 'cryptocurrencies' or the 'cryptocurrency space' colloquially as 'crypto'. Both groups came to Coinface to get to know what 'crypto' was. Near the start of my fieldwork, the two groups, and the financial flows they represented, mixed in relatively balanced proportions with their intermixing giving rise to an interesting and diverse ecosystem. Those from HSBC and Barclays mingled freely with bedroom cryptocurrency traders; traditional money managers who read the *FT* and *Reuters* occupied the same space as university students who took to 4chan and Reddit to manage their money.

The mixing gave rise to what Tett (2020a) describes as 'hoodie-finance': half young people (dis)connected in their bedroom, half traditional finance; half speaking the folk language of memes and message boards, half speaking the technical language of traditional finance. During my time in the field the price of Bitcoin and other cryptocurrencies rose dramatically and this rise was accompanied by what many saw and characterised as the 'flooding' in of 'smart money', that is, 'institutional money and capital' (Wintermeyer, 2021). With the influx of this 'smart money', the ecology of Coinface seemed to shift. The situation was much the same in other meet-up groups I attended suggesting the advent of a more widespread shift away from 'crypto', seen as the product of an open and heterogeneous network, towards one that was more homogeneous .

Those coming to crypto from traditional finance attended Coinface for much the same reason as many others (start-up, the curious, bedroom traders): to get to know the 'lay of the land', and to understand what 'crypto' was *really* about. However, when those entering from a more traditional financial background 'cut into the network' that was

⁸⁶ When cryptocurrencies initially emerged their technology was intended to be radically different from traditional ways of handling money and finance. Technology has been present for a long time, but increasingly since the 1980s it seems to 'strike people anew', offering opportunities to draw the bridge on the past (M. S. Fisher & Downey, 2006b; Strathern, 1996, p. 519).

already present, their presence induced a change in how knowledge flowed: it altered the balance of who had the power to constitute 'on the ground knowledge', and importantly, what actually counted as 'crypto'. The 'openness' of crypto, its diversity and heterogeneity, was reframed as the 'Wild West' by regulators, politicians, and those who entered into crypto alongside 'smart capital'. It was seen as an overgrown jungle that was much in need of being cut down to size, if it was ever to scale and be successful.

In this chapter I describe the effects of 'smart money'⁸⁷ coming into Coinface as an example of what was also happening elsewhere, at other 'community' gatherings. I highlight how the cutting in of smart capital into a heterogeneous Coinface network acted to transform it into a more homogeneous one. As a result of the influx of smart capital, the richly pluralised vision of what cryptocurrency is and could be was transformed into a more totalised and singular one where crypto was simply the latest 'asset' in the evolution of the financial market, rather than something revolutionary that questioned it. In forming this totalising and singular vision of crypto, incomers claimed ownership of the crypto dream and also claimed to do the work that matters. A rhizomatic-like network underwent pruning to form a more arborescent-like network, one where crypto became the fruit of the neoliberal market. Moreover, in articulating this shift in the network, I foreground an epistemologically conservative purview present within ideas of networks that many of my interlocuters, along with 'parachute ethnographers', corporate anthropologists, and anthropologists like Holmes, Marcus, and others, seem to rely on (Cefkin, 2009; Holmes & Marcus, 2006; Jordan, 2013). From this conservative viewpoint, relational networks exist as extractive pipelines that are used to suck out some kind of pre-existing holistic knowledge from the ground concerning entities such as 'crypto', or the 'US Economy', or the 'markets'. I conclude by thinking with rhizomes to highlight the role of ethnography in expanding arborescent networks to highlight the plurality and diversity of crypto that is concealed by conceptualisations that originate with those who control, divert and direct 'smart money'.

⁸⁷ Smart money or capital is a fetishization of investment which suggests that it may come from those 'in the know', which tend to be those from the traditional and institutional places.

Coinface – a heterogeneous network

Despite 'sweeping theorists of millennial change in the global economy and observers of the New Economy' claiming that the significance of place would dissolve, 'more sensitive, ethnographically situated accounts, however, show that deterritorialization is not inevitable' (M. S. Fisher & Downey, 2006b, p. 24). Coinface exemplified one such place that stood in resistance to sweeping theorisation. The formation of a space like Coinface would not surprise those ethnographers who have already worked at the frontier that the 'New Economy' facilitated via advances in information and communications technology in the 1990s.

As contributors to the edited volume, *Frontiers of Capital – Ethnographic Reflection on the New Economy*, make apparent, what is evident at these frontier sites – such as Coinface – is the huge social and cultural labour that is part of building the 'New Economy' which technology is supposed to rupture into being (M. S. Fisher & Downey, 2006b, p. 24). Often, contrary to the understanding of techno-utopians, these ethnographers stress the social relations, the open-networks that emerge, and imaginations of flat-hierarchical structure that act as what Fisher and Downey (2006a, p. 31) term, 'circuits of knowledge'. These circuits or networks allow for 'powerful hermeneutic schemes to sift through the cacophony' of information, misinformation, and numerical data, often placing reliance on 'intuition, feeling, sentiment and aesthetic judgement' to form an understanding of the wider space (M. S. Fisher & Downey, 2006b, p. 28). For example, Holmes and Marcus stress the 'diversity' of the social networks that members of the Federal Open Market Committee (FOMC) turned to when attempting get to grips with the 'US Economy', rather than to the mounting piles of technical reports of the economy compiled by economists (Holmes & Marcus, 2006, p. 61). Riles (2011) identifies something similar at play in her work with Central Bankers and market participants who use relational networks to form a knowledge of the 'markets'. Coinface was similarly described to me as a network that people engaged with in order to form an understanding of 'crypto'.

I came to know Coinface well during my fieldwork. I regularly attended the meet-ups, timed my meals accordingly to consume the free beer and pizza on offer. I listened to the speeches and circulated around rooms meeting and talking to people and then

attended the pub sessions afterwards. Eventually, I worked with Coinface, having created a role for myself as a ‘resident anthropologist’: I helped organise events, wrote material for the website, and conducted filmed interviews with CEOs and lead members of cryptocurrency projects for the Coinface YouTube channel. When the pandemic struck, I conducted these interviews via Zoom for later upload to the website.

During the early part of my fieldwork, many people who I considered well-informed and in-the-know, directed me to Coinface as the place to go to understand what crypto was *really* about. It seemed to have a certain cultural capital within the London cryptocurrency space. Many described it as a space that had a ‘technical lean’. It attracted developers, coders, and those who worked for cryptocurrency and blockchain projects. CEOs and CTOs also frequented the space regularly. However, it also attracted those who were new to the space and wishing to learn more about cryptocurrencies and blockchain. As the first welcome email I received from Coinface put it:

‘Welcome to Coinface London – a very friendly group of people with a passion for Bitcoin and cryptocurrencies in general. Whether a complete newcomer looking to learn the very basics or a seasoned pro looking to keep up on the latest developments or find business partners, we host regular events that will appeal to you all’

*

I remember well my first Coinface meeting during the latter part of 2018. It took place in a building located on the junction of Shoreditch High Street and Great Eastern Street. As I made the ten-minute walk from Old Street tube station to the meeting spot, I took in the cold December air and heard music filtering out onto the streets from the nearby clubs, pubs and bars. Taxi drivers pulled up illegally on the side of the road as people stumbled out of them in search of a drink or two. Outside the meeting venue, a young Asian man in his early 20s was scrunching his shoulders together and blowing smoke into the cold air. A few other casually dressed young men were standing waiting outside too. The meeting took place on the top floor of a dark, somewhat shabby looking room that seemed to be mostly employed for club nights. The floors were

slightly sticky and suspended in the middle of the ceiling was a disco ball. To one side there was a raised space for a DJ, but today this space was being used to hold a PowerPoint presentation on 'quantum proofing blockchain'. The presentation ended up being technical in nature as many had warned me it would. I listened in to the conversations around me: the crowd were keenly discussing and unpacking the technical ideas put forward in the presentation. Some were discussing other technical things altogether: How do we solve the scaling problem? Will sharding work? What are the technical challenges facing a shift to 'Proof-of-Stake'?

Most of the people in the room were men: in the audience of 40-50 people there was one Italian woman in her late thirties. Those from more traditional financial settings, identifiable by their blazer, jumper, or more formal attire, were fewer and although they were perhaps more ambivalent, they were present. These were people who wanted to dip their toes into the water to learn more about cryptocurrencies. They circulated around the room talking to those who made their fortune trading cryptocurrencies from their bedrooms, and with those making best use of their free electricity by building mining rigs from their university halls – a good example of a version of 'hoodie-finance'. There were many there who, like me, were just beginning to learn about cryptocurrencies, who wanted to know more about this exciting new space. There were also journalists who wrote for crypto news outlets, who, like many others I spoke to, confirmed that Coinface was indeed the place to be. This was the kind of place where many came to put their fingers on the pulse of cryptocurrency's scattered space.⁸⁸

This was all a far cry from how it all started as Brian, the founder of Coinface, once told me. Brian had been a derivatives trader in another lifetime, though you would not guess this from his army camouflage jacket, thick rimmed glasses, and matter-of-fact way of speaking. He explained that Coinface first began as "five guys" who arranged to meet at a "boozy, old School London pub" in 2012. "Back in those days", Brian recounted, the London crypto space was "deserted", and "you made do with sitting in

⁸⁸ Coinface was not the only place that people went to put their fingers on the pulse of the crypto space. As discussed in chapter one, there were many other 'community' meet-ups and events: Crypto Curry Club, Crypto Poker, Beer and Blockchain, Ethereum Crypto Community meet-up, to name but a few.

front of a computer on online forums, refreshing the screen...hoping that someone would post". Against this background, a place to meet and discuss the possibilities of Bitcoin in person was a welcome relief. Coinface has come a long way since those early days with five men meeting in a pub. Some of the biggest names within technical world of 'crypto', such as Vitalik Buterin, Arthur Breitman, Richard Brown, Andreas Antonopoulos, passed through Coinface to give talks and presentations whenever they wanted to engage with an active monetary community in London. Coinface was a group of people interested in the technical functioning of the technology, and how it could be utilised to better serve society and the individual. Coinface was perhaps the oldest crypto meet-up that was still running in London, as it says on the website and social media logo: 'Coinface – building communities since 2012'.

Coinface seemed to resonate most with the 'open network' that Lisa, Harrison,⁸⁹ and other research participants often invoked when discussing the crypto space in London, being characterised by them as a place where "everyone knows everyone" and where "anyone can talk to anyone". Indeed, Brian often passionately put forward to me his vision of Coinface as an "agnostic space", where people of different political persuasions could come together to exchange ideas, arguing that it is only under such conditions that crypto would grow. This idea was essentially synonymous with what Harrison told me about the optimal condition for the growth of 'crypto' – namely an "open, random, and supportive" space. Coinface, as a thriving social space, a diverse ecological lagoon where new and unlikely relations were being formed – and its promise of heterogeneity – was of course inviting for an anthropologist who wished to hear those singing fish.

As highlighted in chapter one, the food on offer at meetings like Coinface was deeply symbolic and part of the marking of the boundaries of such an 'open' space. At the end of the presentation segment of a Coinface event, Brian would take the microphone and invite people to grab a pizza and a drink and hang around – he seemed almost religiously devoted to providing free beer and pizza to the group. There was some deep-rooted notion of egalitarianism at play in this circular piece of dough being

⁸⁹ Harrison is the ethnographic-like practitioner in chapter one, and Lisa is the organiser of the Curry Club.

washed down with fermented starches. Free beer and pizza seemed to be essential parts of the constituting of a space where frank discussions took place about technological development, the politics of cryptocurrency and blockchain, often alongside other conversations that seemed strange and tangential.

For example, at one Coinface gathering, John, a 60-year-old man who had been a maths professor and worked for various institutional firms in IT, openly discussed the relationship between Bitcoin and a block of ice. He then diverted the conversation to an extended discussion about the relationship between ribosomes, thermodynamics, and cryptocurrency communities. We listened attentively with smiles on our faces, sipping our beer, and acknowledging the ridiculous yet apt connections. At another meeting, a few young men were grouped near the pizza boxes talking about the infiltration of 'TradFi' (traditional finance) into the cryptocurrency space. In this environment, I did not know who was rich, who was poor, who had a well-paid job with a leading project and who did not. There were no name tags to indicate who we were or the companies we worked for.



Figure 20: Early phase Coinface meet-up.

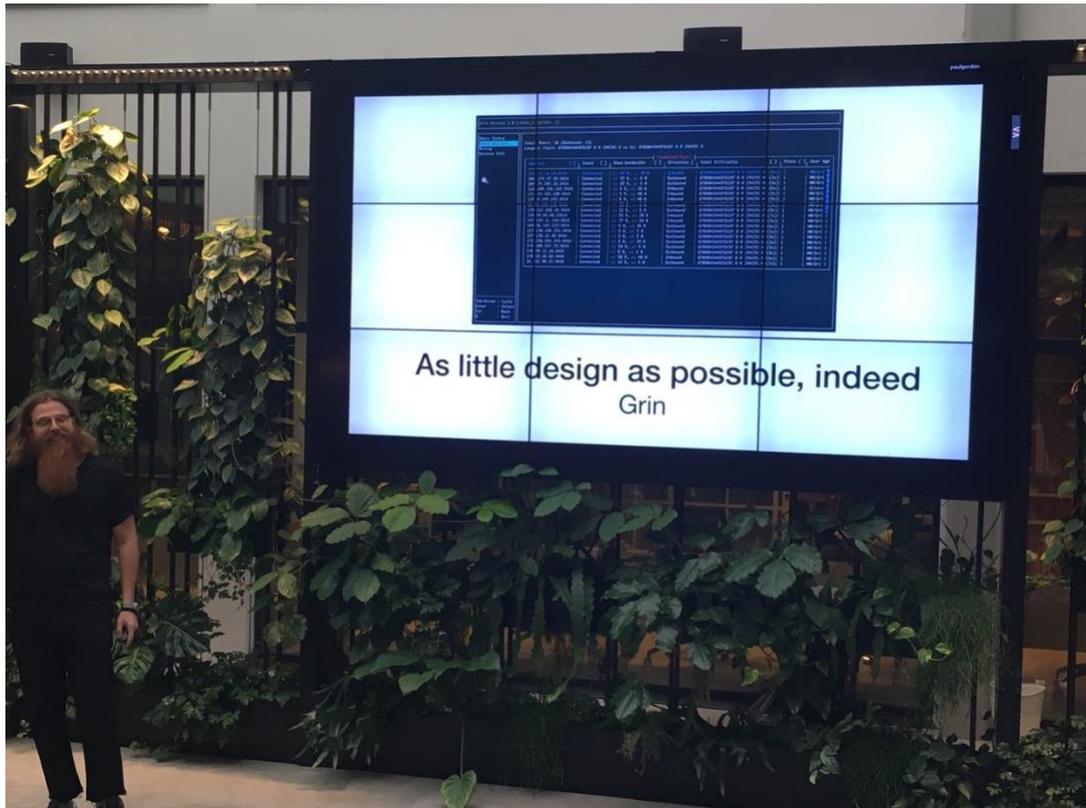


Figure 21: A technical explanation of the workings of the Grin Cryptocurrency project.

The diversity of Coinface attendees became more apparent when I started to conduct interviews as part of my role as ‘resident anthropologist’. These interviews were broadcast on a YouTube channel called ‘People in Crypto’. I interviewed what seemed like a wide range of people in person: scam hunters, blockchain analysts, community manager⁹⁰ of cryptocurrency projects, amongst others. Below, I wish to highlight a particular interview (my most viewed interview) with Denis of the ‘Grin’ project as an index of the kind of projects that appealed to the early Coinface attendees.

One rare sunny evening, early on in my fieldwork, I put on my rucksack, slung my video camera tripod over one shoulder, my video camera over the other, and cycled down to Mare Street Market to meet Denis Smith, one of the leading figures of Grin – a privacy-oriented cryptocurrency. I had agreed with Brian to interview Denis for Coinface’s YouTube channel. Grin was a project trying hard to divert attention away

⁹⁰ These were people that addressed the queries and engaged with those who were part of a particular ‘crypto community’ on Telegram, Discord, or on any other online forum.

from discussions of price: instead they were attempting to alter their mining and distribution of tokens so that they would not become susceptible to market speculative forces. It was not a big project, it was not in the top 100 by market cap⁹¹, but it was one of the few projects that I had come across that seemed to be attempting to stay ideologically close to the cypherpunk vision of privacy and being censorship resistant. They avoided raising money through Initial Coin Offerings or crowdfunding, and most, if not all, of the money for the project was raised via ‘community donations’. Denis was the kind of person who seemed to excite many of the Coinface faithful. During the interview he spoke eloquently of the importance of privacy, the role of memory in electronic cash, the importance of having (and perhaps keeping) electronic cash away from centralised traditional finance.

There was a certain richness and folklore associated with the Grin story that I personally enjoyed as well. Grin is based on the ‘*Mimblewimble*’ protocol named after the tongue-tying curse in J.K.Rowling’s (2022) Harry Potter story – a curse which made the target of the spell incapable of coherent speech. The Grin project was founded by someone who went by the online moniker of ‘Ignotus Peverell’, a name borrowed from the Harry Potter fairy-tale in which three brothers encounter Death who offers each of them a wish. The eldest chose a wand so powerful no one could defeat him, the middle brother wanted a stone that could bring the dead back to life, and the youngest, Ignotus Peverell, asked for an invisibility cloak that no one, not even death, could see through. Hence, the name of Ignotus Peverell seemed fitting for the founder of a project so devoted to creating private and censorship proof electronic cash that would evade the prying gaze of the state. After a while Ignotus Peverell, founder of Grin, disappeared from the project, leaving it in the safe hands of the community members. This folklore within Grin’s story replicates the prophetic disappearance of Satoshi Nakamoto⁹² after delivering the Bitcoin project.

⁹¹ Value of the cryptocurrency multiplied by the number of coins in circulation (see glossary).

⁹² ‘Satoshi Nakamoto’ is the pseudonym of the person/s that wrote the Bitcoin whitepaper, and played a crucial part in its technical construction. The figure disappeared a short while after Bitcoin went live. Satoshi’s Bitcoin wallet contains 1 million Bitcoins (equivalent to \$50 billion USD at the time of writing), that have not been moved since.



Figure 22: Grin project comes to Coinface.

I tell these stories of Denis, Ignotus Peverell, Grin, John, and the young men huddled around a pizza box, not to simply highlight an interesting and idiosyncratic tale, but to index the inevitably strange and wonderful stories that emerge within a lagoon when people draw influences from a wide range of visions and sources which are not limited to data from *Reuters* or *Bloomberg*.

'Cutting in' of smart money

Discussions surrounding the values of 'openness' that were extolled, as described in chapter one, and the heterogeneous network of Coinface discussed above, were informed by my early fieldwork. During this time, Coinface seemed genuinely committed to creating an 'agnostic' space, as Brian had put it. However, as my fieldwork progressed there seemed to be a shift at Coinface, one that reflected a broader cultural change effected by the cutting in of 'smart' or institutional money. New actors came in who similarly wanted to get to know what the cryptocurrency space

was *really* about, but these people were much more strategic in their approach to what they wanted gain from a space like Coinface.

The arrival of ‘smart money’, and the anticipation of attracting investments in the future, seemed to change the ecology of Coinface. These new actors were lawyers, bankers, consultants, and members of committees that worked closely with UK and EU regulators. There were people attending events at Coinface, and elsewhere, who were advising regulators working on the EU’s regulation policy on cryptocurrencies, namely, *Markets in Crypto-Assets* (MiCA). These shifts heralded a landmark regulatory bill that was to come later in June 2022 with the aim of putting, as Stefan Berger MEP⁹³ put it, ‘an end to the crypto Wild West’ (Le Maire, 2022).

For these new actors ‘cutting in’, Coinface, was now part of *their* ‘circuit of knowledge’ (Strathern, 2017), that they employed to get to know ‘crypto’ (M. S. Fisher & Downey, 2006b). Their quest for empirical, on the ground knowledge seemed much more ‘extractive’ and less open-ended (Tsing, 2012). They seemed to be searching for the kind of knowledge that they could scale up, put into reports, and present to committees. With the arrival of these actors, the narrative seemed to shift from the discussion of ‘crypto’ as ‘open’ and ‘diverse’ to ‘the Wild’, an overgrown jungle, an unruly and dangerous place in need of control and sanitisation. This shift in narrative highlights cryptocurrency as an appropriate site for the Baconian male intent on conquering nature to operate (Goede, 2005). The process I describe below resembles classic capitalist attempts to capture value and extract capital, and it is also tied to issues of enclosure. These processes and issues are reminiscent of others that have played out elsewhere in the ‘European sugarcane plantations of the New World’, and in numerous other places, as capitalists have attempted to scale up a heterogeneous ecological system (Tsing, 2012, p. 510).

*

As Coinface was adopting a more market-based and institutionally inflected approach, the interviews I conducted and viewed through the Coinface website, and my interaction with the more institutional-oriented actors now present in the space

⁹³ Member of European Parliament.

seemed much less colourful. The conversations were less expansive, less tangential, now more focused, directed, and technical in nature. There was a shift from the technical-language of computers, algorithms, and blockchain that had been a trademark of Coinface, to the technical-language of the financial markets. Cryptocurrencies were no longer being referred to as 'electronic' cash, money or currency, as they had been when described by project representatives who had previously given talks at Coinface: now cryptocurrencies had come to be known as 'asset classes'. What seemed to matter now was not discussions surrounding the block size, hash rate, and quantum-proof blockchain, but attention to the re-bound floors of the Bitcoin price graph, finding the relevant metrics or 'alpha' driving the price movement, or discussions of the incoming MiCA regulation, or working with government boards such as the APPG (all-party parliamentary groups), or the tax implications of profit earned through cryptocurrencies. There was no one rapping about crypto, or any more discussion of an 'invisibility cloak'.

Eventually, Coinface rebranded itself as 'Coinface Institutional'. The people coming into the space, and hence the conversation that was to be had, was now regulated. The people coming into the space now tended to be slightly older men, more experienced with traditional financial structures. They wore blazers, buttoned-down formal shirts, and sober black or blue jumpers; there was a shift in equilibrium from 'hoody-finance' to more traditional suit-wearing finance. There were fewer people like Denis in this space, and there was no room for the student siphoning electricity from his dormitory to run a mining rig, or for those that wanted to discuss the relationship between cryptocurrency communities and ribosomes.



Figure 23: Coinface Institutional event.

The free dinner of beer and pizza that I had grown accustomed to was replaced by slightly fancier food: entrées of prawn gyozas, spring rolls with hoisin sauce, mini-pretzels, sushi of various kinds, all aimed at pleasing a new and discerning crowd.⁹⁴ At gatherings elsewhere, (i.e. not Coinface) there was now even a charge for the food. Though perhaps seemingly a minor detail when compared to the prestigious names of the institutions people represented at the meet-ups, or the sheer amount of money in the room, the food was nevertheless both deeply symbolic of the cultural shift that was taking place, and constitutive of a different kind of network – one that seemed foreclosed to certain actors, stories, and ways of communicating.

⁹⁴ What I imagine Roy Keane – ex-captain of Manchester United Football Club - would call the ‘prawn sandwich brigade’.

Other meet-ups and events (not Coinface) had started charging money for events, a move which seemed particularly distasteful to those from the more technical background, to quote a typical response from a research participant:

“I don’t think it’s right that people are charging for events now...it’s very different to how it used to be. I understand people have overhead costs...but this is not what this space is about. Some people are charging a lot for events now.”

For this person, attendance charging was further evidence that many within the space were no longer rooted in the ideology of crypto but were simply in the space to make money. Others countering this argument made the valid point that people should not be expected to conduct free labour to organise these events. Some argued that it was only right to pay the speakers and organisers of events who put in huge amounts of work to create an important place for those in crypto to gather, especially as there was now money coming into the space, and opportunities to find sponsorship for gatherings. When money flooded in, *some* social and cultural work at the frontier was recognised as labour. However, this recognition of labour was double-edged as it acknowledged the contribution of some whilst it denied and obscured that of others.

As my fieldwork progressed, many of the meet-ups and gatherings I attended began curating who was to attend the events. An interlocutor I met through Coinface (CEO of a crypto start-up), and an attendee of several of the meet-ups I frequented, described this as “cleaning up the space”. He argued that by allowing anyone to come into the space, we would be exposing ourselves to unsavoury actors and amplifying the risk of scams. His comments implied that not everyone contributed equally to the building of cryptocurrencies, and diversity was now re-framed as containing potential contagions and deterrents to growth. He argued that by ‘cleaning up the space’ meetings would become more inviting to ‘institutional actors’. Others in the crypto space that I spoke to echoed this sentiment, and seemed preoccupied with looking presentable to these incoming institutional actors, including some who had once valued openness, and the London crypto space as one where, to recall Lisa’s words from chapter one: “anyone can talk to anyone”.



Figure 24: Distributing nametags at Coinface Institutional event.

People coming to Coinface under its new 'Coinface Institutional' appellation wore name-tags which included the name of the company they represented, *contra* early Coinface meetings. What was supposed to be an 'agnostic' space, where conversations and discussions were to flow freely, now had a more directed vector and channels along which the talk flowed. An online invitation to 'Coinface Institutional Web Summit' meet-up promoted the events as a:

'...highly curated online summit [that] brings together the global pioneers in crypto with the innovators in traditional capital markets to explore the latest market and regulatory developments as institutional interest in cryptocurrencies, cryptoassets and DeFi⁹⁵ continues to heat up.'

⁹⁵ Decentralised Finance.

The meetings became filled with people from traditional finance and institutional sectors. Coinface now markets itself as a place that ‘the institutional crypto community calls home’; a place offering ‘community content and insights; trading products such as institutional crypto data, news and analysis dashboard; and publicising industry events’.⁹⁶ This description seems worlds away from what I knew of Coinface during my early field-working days; a world away from that night in Shoreditch watching someone rap about cryptocurrencies.

Lisa’s claim that anyone can talk to anyone came into my mind when I was at a non-Coinface event. I was talking with a group familiar to me when I saw a south-Asian man in his forties come towards us. Cutting his way through a crowd, he introduced himself, his gaze flickering over our faces whilst doing so. As he turned towards me, I saw him divert his gaze towards my chest where my name-tag should have been. He asked who I worked for, and when I explained my position, I saw a light switch off: having processed us he moved on, working his way through the crowd towards another group. I would hazard a guess that he would have made a poor Matsutake mushroom picker, would have struggled to listen to the singing fish or would have been of little help to the Wayfinders of the Caroline Islanders (Guyer, 2009; Tsing, 2017)..

Cutting into an open network: an epistemologically conservative idea

Ideas of ‘cutting’ have been employed by Tsing (2012), Strathern (1996, 2017) and Derrida (1993), in various contexts, to think through the numerous ways heterogeneity is pruned or arrested so as to form a more homogeneous entity. Like these theorists, I am interested here in heterogeneity in its spatially extended form as a network, and the ability of capital to cut in and arrest flows. A heterogeneous network maybe understood as one that is open and a homogeneous one as more closed. Accompanying this idea of thinking through shifts from heterogeneous to homogeneous networks, in Strathernian thought (and indeed elsewhere), is an image of flow: flow of money, knowledge, fertility, kinship, wealth, blood (Strathern, 2017).

⁹⁶ Invite Email, sent August 23rd 2021.

For myself, and many of my interlocuters – both near the start and the end of my fieldwork - Coinface, Crypto Curry Club, Blockchain and Beer Club, and other gatherings all had a similar function. They were places in a network, and networked places in themselves ('networks within networks'), where we could form an understanding of the wider cryptocurrency space (Strathern, 1996, p. 523). They were places where we could engage with the flow of relational knowledge or some energy that seemed to activate this space to confer new possibilities, to think about what was *really* happening within the cryptocurrency world.⁹⁷ Questions, discussions, and uncertainties were raised in these spaces in an attempt to get beyond the official narrative that a Whitepaper may give. Discussions aimed to lift the veil to reveal the realities of what was happening within the crypto space. People asked: What kind of people are coming across your project? What do you *feel* is going to happen next within this space? What do you think the regulators are *really* looking for? Do you think institutional money is really going to come into the space? Are crypto assets really that different to things that have come before? Importantly, these were some of the questions that were both implicitly and explicitly explored in the institutional-oriented cryptocurrency meetings. These were exactly the types of questions that members of the Federal Open Market Committee⁹⁸ (FOMC) asked unionists, retailers, manufacturers, educators, governmental and non-governmental agencies when attempting to understand the complex 'US economic landscape'. Using the example of FOMC, one might argue that relational modes of knowing surface here under the ambiguous guise of 'intuition', 'instinct', and 'feel', as essentially 'a structure of feeling' employed to unveil what was *really* happening within the crypto space (Holmes & Marcus, 2006, p. 57).

However, as highlighted above, the intervention of those from the smart money realm induced a different form of sociality, and a different flow of knowledge. Considering this shift, Lisa's words now ring within a different register: 'everyone knows everyone'

⁹⁷ As one interlocuter from a traditional finance background pointed out to me at a Coinface institutional event, they come to spaces like Coinface to get a "feel for the [crypto] space", something they could not fully gather from financial reports, news, and data. Another attendee articulated that Coinface provides a space to know people more intimately within this newly developing field.

⁹⁸ Based on Holmes and Marcus exploration of the FOMC (discussed in greater detail in chapter one).

or 'anyone can talk to anyone', in this context perhaps indexes an openness, yet it also indexes a totality and a closure. The formation of closed and pruned networks create a situation where it is only everyone *within* the network who can get to know each other. That is, to phrase it metaphorically, as the oceanic waters of traditional finance spilled into the lagoon, the aquatic life within the lagoon changed so that it seemed less diverse. Or, to phrase it more analytically, as the incoming actors of smart money cut into the networked organism on the ground (Coinface) in order to gain an understanding of the wider cryptocurrency space, they shifted the ground itself. Hence, they were not tapping into or feeling the pulse of a pre-existing social body so as to form an understanding of a pre-existing 'crypto world' in some totality: their inquiry was instead actually forming both 'crypto' itself and creating a totalising vision of it.

That left no room for privacy coin projects like Grin, or for John's comparison of crypto to ice blocks and ribosomes, or for the discussion of crypto as an 'alternative currency' or 'digital cash'. Instead, cryptocurrency had come to be thought of as an 'asset class', 'digital property', or 'securities'. The investigations of what crypto is, conducted by those who travel alongside smart money, are epistemologically conservative. These investigators assume that there is something to discover, something that is unchanging, and that the best way to achieve this is empirically – to spend time among the people involved in its production through these networks. Ultimately, the aim of such investigators was to scale up the knowledge gained on the ground in order to present it to committees and in reports to be read by regulators, bankers, and others from the institutional world.

Through observing these processes, we may be sceptical about the claims of Holmes and Marcus that the 'diverse' networks formed by the FOMC allow for 'para-ethnography' (chapter one). These networks that reach out to various 'key' sites of the economy allow for the FOMC to form a knowledge of the 'US Economy' (Holmes & Marcus, 2006). Similar networks are formed by Riles' (2011) Japanese market participants in order to gain an understanding of the 'markets'. Questions should be asked of how networks are formed, and what effects these networks exercise on the flow of knowledge. Similar epistemologically conservative ideas are present in the 'corporate ethnography' and 'parachute ethnography' that are now increasingly

present at technological frontiers (Jordan, 2013). Anthropologists have been recruited by corporations to sift through cultural and social material with the aim of accumulating culturally-informed knowledge of the working environment so as to offer a better fit between technologies and their intended effects, and to 'fix' cultural issues at work to facilitate 'open innovation' (Cefkin, 2009; Hafner, 1999; Jordan, 2013). Holmes and Marcus, Riles, corporate anthropologists, and parachute ethnographers all seem to assume – like those who travelled alongside smart money in my field-site – that there is something pre-existing, some totalised entity, to discover, whether this is 'the US Economy', 'the markets', or, in this case, 'crypto'.

Claiming ownership, and building 'crypto'

Such intervention in open and heterogeneous networks by more powerful 'others' is familiar across contemporary capitalism, but to provide just one example, I consider the patent for the Hepatitis C blood test. As Strathern (1996) points out, the social network of those involved in creating the test was open, long and indefinite, and many actors were involved in this process. However, when it came to patenting and creating 'ownership' only a small proportion of an open network became relevant and visible. The patent counsel for the company that was identified as having built the test was reported as saying 'we don't claim we did all the research, but we did the research that solved the problem' (Strathern, 1996, p. 524). The long, open-ended heterogeneous networks, in the early stages were truncated by patenting and the incoming of smart money, into a more homogeneous one. Forty names on a scientific journal were whittled down to six names on a patent application. It is worth quoting Strathern (1996, p. 524) in full here:

'The divide created for the purposes of the patent, between those who did and who did not belong, was established not by some cessation of the flow of continuity but by a quite extraneous factor: the commercial potential of the work that turned a discovery into a patentable invention. We could say that the prospect of ownership cut into the network. The claim to have done the research that solved 'the problem' justified a deliberate act of hybridization: co-operative or competitive, the scientists' prior work could now be evaluated by criteria from a different world altogether: that of commerce'.

Those incoming with the flow of smart money into crypto – cutting into the network – came with a similar narrative of claiming to do the work that mattered so as to justify the exclusion of a diverse range of actors.

Many of those who I talked to in the start-up and enterprise space in London were welcoming of institutional capital and actors, suggesting to me that this capital was necessary to build the infrastructure of the cryptocurrency space rather than remaining in a state where people simply *hodled* their cryptocurrencies hoping that they might get rich. Smart money was required to ‘*buidl*’ – a deliberate misspelling of build – as some who wished for the participation of more institutional actors and capital put it. As Stan Schroeder (2018), a crypto journalist writing for *Mashable* urged, ‘move over hodl it’s time to buidl’. The incoming of institutions and those from more traditional financial backgrounds was welcome as these were regarded as the ‘serious’ people, who had the ‘know-how’ to build the infrastructure of this digital economy. That said, their involvement came at a price: stories and inquiries employed a different kind of language that made it clear that some belonged, and others did not.

As highlighted earlier, the taming of the creative process and the ‘wild’ to produce commodities that can scale up is of course part of the familiar story of capitalism. Where Strathern offers an example of Hepatitis C, Tsing (2012) and Mintz (1986) offer the example of sugarcane, the perennial grass that early capitalists used to rehearse and refine the art of scalability. All three examples show how diverse ecologies are prone to being wiped out in the process of vertiginous up-scaling. As labourers cut into overgrown fields with their machetes disturbing complex sets of ecological relations ‘diversity [becomes] banished from the plantation’ (Tsing, 2012, p. 514). This is reminiscent of the South Asian man described earlier, cutting his way through the crowd to find name tags of significance. Similar scaling processes seemed to be at work within ‘Coinface Institutional’, Crypto Curry Club, and other events, where diverse ecologies were cut through to get to reach a sanitised and singular vision of ‘crypto’ that incomers from traditional financial sectors were now claiming as their own. By extension, the incomers claimed that through their knowledge of the bigger world, economic reason, and their general ‘know-how’, they were the ones best placed to do the work that mattered most.

What then of those who were othered, ignored, or somehow edited out of this process? The cutting in of smart capital did not fully extinguish those other possibilities that circulated within the space. The story is not that simple. Instead, the cutting in produced new terms and marginal groups. For example, terms such as 'TradFi' (traditional finance) and 'DeFi' (decentralised finance), emerged to differentiate between those projects that were more in line with existing financial structures and other projects that were more radical in nature and less regulated. One of my participants (a developer who had been in the cryptocurrency space since 2014) asked sardonically and rhetorically, "Wasn't crypto always supposed to be decentralised?". To which one might respond, that 'it is only when an individual taro or yam is cut that the new parent emerges' (Strathern, 2017, p. 34). It is at those moments of cutting into networks that 'new' life and social patterns capable of reproducing existing social and hierarchical structures can emerge. The bride's father comes into being at the moment of her separation from him at marriage (Schneider, 2017); when the taro or yam is cut, the tuber yields up its nutrients, feeding new shoots growing above; parent and child 'are equally matters of becoming' (Strathern, 2017, p. 35). Seen in these terms, capitalism *qua* 'TradFi' is effectively reproduced through smart money cutting into the diverse ecological life of finance, thereby creating new sites for extraction. 'DeFi' and othered visions begin life anew, attempting to form 'new' life, 'new' spaces, 'new' commons with which to think through alternatives once again – and to bear fruit for the capitalist wielding his machete. Hierarchies are re-established.

These ecologically inflected arguments of course rehearse debates had elsewhere, with different analytical frameworks surrounding the commons that sustain capitalism. For example, Lezaun and Montgomery (2015) explore much the same arguments as Strathern does in exploring Hepatitis C, in their article, *The Pharmaceutical Commons*. They argue that pharmaceutical research on neglected tropical diseases involves utilising 'spaces of commons' that come with the rhetoric of 'open innovation'. Pharmaceutical companies cut in at opportune moments when the fruits of the common's labour are ripe. Tsing (2009) highlights the 'diversity' of spaces of commons that supply chains rely on to function, to produce cheap labour and goods. Birkinbine (2020) points to the 'digital commons' that similarly exist in a parasitic relationship to big software companies that make use of creative and open practices. Mollona (2021) similarly highlights the commoning strategies that commercial art seems to rely on.

The examples available are many and extensive. To simplify somewhat, this collection of literature exposes the parasitical, paternal, and entangled relationship in which diversity exists in relation to capital.

Coda: Rhizomatic and arborescent networks

I wish to end by drawing on one final ecological metaphor: the rhizome – an organism that resists neat beginnings and endings. The value of serendipitous encounters that many emphasised near the early stages of my fieldwork, as Harrison put it (in chapter one) – a field composed by being ‘Open, Random, and Supportive’ – perhaps invites (a generous) comparison to those networked organisms that grow below the surface: rhizomes. Given that a rhizome may be defined as a networked organism with no beginning or ending, one that travels chaotically and randomly below the surface, it is a model that allows for the possibility of chance encounters between an 18-year-old bedroom cryptocurrency trader, and a 50-year-old seasoned veteran of Barclays Finance. Its ‘mode of travel could not be more alien from the root of a tree’, which spreads by a binary logic, ‘dividing itself over and over again’ – an arborescent network (Strathern, 2017, p. 25). Within this early rhizomatic network, various competing possibilities and visions of what crypto could be existed side by side: in it stories of privacy coins, stable currencies, digital cash, and more centralised coins all occupied the same space.

However, with the cutting in of smart capital, the rhizomatic-like network I initially encountered became pruned, and the network became more arborescent in character. Chance encounters between the 18 and 50-year-old described above became less likely. Cryptocurrency, seen initially as a decentralised entity, ‘digital cash’ or ‘alternative currency’ became enfolded into the familiar pre-existing language of ‘asset classes’, ‘securities’, and ‘property’ (PWC, 2021). The effect of this was the creation of an arborescent network that related ‘crypto’ to the ‘potent seed’ of the neoliberal markets (Strathern, 2017). That is, the arborescent network created ‘crypto’ as the inevitable outcome of the neoliberal market and its logicians who curate its growth through ‘economic reason’. ‘Crypto’ which originally signified ‘revolution’ and something radically other, now seems to signal an ‘evolution’ of the traditional markets rather than something that fundamentally questions centralised institutional powers.

In creating arborescent networks, those who travel alongside smart capital form an epistemologically conservative idea of cryptocurrency, a vision of it that is singular and totalising and that conceals the diverse ecology that lies below the surface. Privacy projects like Grin, that many attending Coinface early on found exciting, were now left out in the cold. Part of forming this singular vision of cryptocurrencies is the assertion that it is the incomers and experts in traditional finance who do the work that matters, and that they are the ones actually building the cryptocurrency space.

Inspired by the participants I met in the early stage of my fieldwork, and by things that grow below the surface, I propose that those anthropologists working within neoliberal frameworks where the flow of money can be felt intimately, might wish to affirm that modality of ethnographic work which is rhizomatic rather than arborescent. Since Deleuze and Guattari's seminal work, the 'philosophers' rhizome' has become the metaphor *par-excellence* for open-endedness and heterogeneity (Deleuze & Guattari, 2013; Strathern, 2017). The philosophers' rhizome has been a 'wedge to prise open the structuring of European thought dominated by [...] the arborescent figure of the branching and root[ed] tree' (Strathern, 2017, p. 25). In this chapter and throughout the thesis I have looked to ethnography to serve some similar rhizomatic function. I have utilised ethnography based on immersive, long-term fieldwork to highlight the diversity of 'crypto', thus offering an alternative view to those works which employ the model of arborescent networks to portray 'crypto' as either the outcome of the actions of early cypherpunks or the product of those who seek to further the interests of capital.

Conclusions: finding 'Crypto'

'For, in your poetic vision, a boat has no belly; a boat does not swallow up, does not devour; a boat is steered by open skies' (Glissant, 1997, p. 6)

This thesis began with a story of migrant mothers. It considered how these women engaged with the uncertainty a new and foreign land provided; how they engaged with obstacles they faced and sought possibilities at this frontier. In the absence of a rule book, it highlighted how they came to know the world around and thought with uncertainty by engaging in diverse sets of social relations and networks. These women I knew did not take anything for granted. They were consistently disruptive in the face of financial obstacles and sought alternate ways of understanding, as conventional ways seemed riddled with bureaucratic forms and obstacles. Memories are ablaze with visits to temples, with women consulting on the best exchange rates in London, the best private chit funds in Sri Lanka, and how these could be combined for profitable ends. Calls to others who migrated to Toronto, New York, India would be made to compare experiences of migration. The Gods would be consulted on financial and other matters. These relations and comparative exercises were always grounded in meticulous attention to the surrounding world, looking for details and signs that highlighted the disjuncture between the world that was represented to them (the world of financial and social obstacles) and the world as it was.

What interests me here is the sheer diversity in relations that were drawn on to think at an uncertain frontier. The Martinican writer and poet Édouard Glissant might

understand this as the 'poetics of relation' (his understanding of ethnography) – a forming of relations with diverse spatial and temporal planes to engage with the unknown, and to dig below the surface into what seems fixed and unmoving. It is an approach that I have had at heart when engaging with my Antilles: 'crypto', to show that the boat is not simply 'steered by the open skies' (Glissant, 1997, p. 6). Taking such an approach, I have attempted to go beyond Silicon cities' technocratic representations of 'cryptocurrencies' as simply moved by code, logic and economic reason, to highlight a diverse range of actors: bedroom traders, online forum storytellers, tricksters, scam hunters, Multi-Level Marketers (MLMs), all those that are 'stored in its belly'. These are actors that make the boat move.

As highlighted in chapter six, when smart capital cut into the network that was present at Coinface, it reduced the diversity and plurality of understandings of crypto. It obscured those in the boat. However, Coinface, even in its early stages, was cutting into a diverse network already present: of MLM projects, non-technocratic understandings of cryptocurrency, and so on. Participants who attended early Coinface meetings generally had a highly technocratic understanding of crypto. It is to work against the arborescent networks and totalising tendencies that produce crypto as either the product of smart capital, or a technocratic vision, that I have employed ethnography to make these networks more rhizomatic and less totalising. MLM projects, tricksters on online forums, (dis)connected bedroom traders, and scam hunters are all part of 'crypto'. Inspired by the poetics of relation, I have put these places in conversation with other times and places: Victorian England, Papua New Guinea, a Malay fishing village.

Crucially, these poetics of relations begin on the ground. Much of the scholarly work on cryptocurrencies has focused on the early technocratic visionaries, on the philosophy of Bitcoin and Ethereum: the world that technocrats represent. The cultural and social material is then analysed and discussed in relation to these visions. The effect is, often unintentionally, to form an arborescent network, one where the happening on the ground becomes related to the 'potent seed': some genius vision, an Archimedean story, the power of technology to rupture 'new' beginnings. It is partly to strive against being part of such a network, that I have strayed away from explicit discussions and theorisations of 'trust', 'Web 3.0', and 'decentralisation': terms of

debate set by the technocratic visionaries.⁹⁹ I have opted, instead, to employ analytical concepts and categories that seemed most relevant to what was happening on the ground. As Riles puts it:

By accepting technocrats' claims that a (conceptual or mechanical) tool is a tool and proceeding to inquire as to what kind of tool is at issue and what its effects might be, anthropologists commit themselves to a critique of technocratic knowledge premised on showing the artificial, determinate, and situated nature of seemingly transparent and universal categories such as 'economy' that, as Timothy Mitchell (2002, p. 4) points out, "leaves the world intact. Intentionally or not, it depends upon maintaining the absolute difference between representations and the world they represent" (Riles, 2004, p. 393).

*

Thinking with uncertainty and starting at ground level, I have been led by the question of how people come to know this space they call 'crypto'. The heightened condition of uncertainty cryptocurrency provides is an invitation for people to constantly theorise and speculate. How do people come to know what 'crypto' is at this uncertain frontier? In chapter one I highlighted how people 'cook money', that is, they divert explicit discussions about the price of currencies and the market, in order to learn about crypto. Assessing projects by metrics, data, and the whitepaper – by technocratic means – can be severely misleading, especially in a context where numbers, models, and statistics, are employed to curate a spectacle, where the lines between the future and the present are blurred. As Holmes and Marcus (2006, p. 43) put it, technocratic forms of knowledge seem to 'lag' under conditions of heightened uncertainty. As I described in chapter two, those who take to online forums engage in storytelling that is neither purely about the private or the public, but about the fluid and intersubjective movement between these realms. It is by being immersed in this online world, through practices of storytelling, reading, dialogue and commentary, that they come to know 'crypto'. As explicitly highlighted in chapter one but evidenced in the stories of despair

⁹⁹ Numerous excellent scholarly works already exist in exploring these issues (Brunton, 2019; Dodd, 2017; DuPont, 2019a; Maurer, Nelms, & Swartz, 2013a; Maurer, Swartz, & Mainwaring, 2018; Swartz, 2017).

told in chapter two; in stories told on WSB; and in the (dis)connected activities of bedroom traders, emotions come to play a crucial role in coming to know crypto. As some of my participants in chapter one seemed to be saying, 'it's not crypto unless there's money on the line'.

Abstracting an understanding of crypto, and the various possibilities it offered, involved doing relational work, including a kind of immersion which was notably and distinctively open-ended. Chapter one highlighted this openness and described non-teleological ways of thinking about it alongside other ways of representing and interacting with an uncertain frontier. Serendipitous encounters and a feeling that 'anyone can talk to anyone' were fostered. As Harrison seemed to be saying in chapter one, you had to be immersed and pay careful attention to the conversations that were taking place around you. The potential for plurality seemed to be actively valorised. In chapter two, a similar openness was fostered via alternate means – through non-reductive storytelling practices. Stories were told that resembled folk tales, rather than financial storytelling practices that required, as Leins and Solnit argue, a tension to be built up, to then be reduced by Archimedean intelligence. There was no such requirement among the storytellers I worked with online. Instead, stories allowed one to live with, and be suspended in, the uncertainty of the space – as folk tales often do (Dundes, 1980; Dundes & Pagter, 1975; Liber, 2021).

Such an immersive, relational, open-ended way of engaging with the unknown and uncertain, invites comparison to ethnography. Indeed, as highlighted in chapter one, such a comparison has struck others who have also worked within institutional and financial settings where similar forces seem to be at work. Some have considered this overlap through the term 'para-ethnography'. However, in chapter one, I argued that such a comparison seems superficial since capital seems to require the holding of certain profitable worldviews. Arguments developed in chapter six that highlighted the shift in language from 'openness' and 'diversity' to 'the Wild West' and 'overgrown' in anticipation of smart money coming in supports this point. The comparison to ethnography could be similarly made in the immersive, relational, and open-ended

ways that people engage with cryptocurrencies in the online space.¹⁰⁰ However, as I argue in chapter one, important contrasts and differences remain.

Such a passionate highlighting of the considerable areas of non-overlap has been made in this thesis for the simple reason that in a world where established ways of life appear to be unravelling, relational ways of understanding the world at large have purchase. As highlighted above, and throughout this thesis, some remnants or versions of anthropological practices already occur in an increasingly uncertain world that invites constant thinking through of the world around us, where people are scaling their local understanding, to gain a purchase on 'the bigness' of the world (Tsing, 2009, p. 150).

In addition, and as highlighted in chapter six, anthropologists are increasingly being hired to sift through social and cultural material at the technocratic and corporate frontier. Under such circumstances we might wish to be careful about the role of smart money cutting into anthropology. That is, ethnography has been important in two ways in this thesis: firstly, as a method to explore the cryptocurrency space, and secondly, as an object of study. I have highlighted the political significance of ethnography, as a set of methodological practices that are relevant in a world where uncertainty and complexity are often presented as qualities to be reduced by the fastest means possible. In a world that seeks to convert rhizomatic networks into arborescent ones. The practice of paying close attention to the world around us, and putting what you find in conversation with other times and places, to better understand what is happening, possible, and at stake, is, within an age of uncertainty, a 'revolutionary praxis' (Shah, 2017).

*

In this thesis, I have traversed a varied landscape. In the following section, I begin by summarising what has been covered in the thesis in relation to the three sites I have explored: Silicon cities, online forums, and Multi-Level Marketing projects. I then move

¹⁰⁰ Digital scholars seem to appreciate this way of engaging with the unknown through the term 'cultural work' (Fuchs, 2014).

on to summarise some ideas that flow throughout the thesis and highlight some areas for future research.

Three Sites

Silicon cities: under construction

This thesis began within the foregrounding of the Silicon Roundabout, and Silicon cities more broadly, as a key site where the infrastructure of cryptocurrencies is being built. In the opening chapter, I highlighted how those who espouse a ‘technocratic’ way of understanding the world, are engaged in social and relational work to come to know a space they often referred to as ‘crypto’. Despite many coming into the cryptocurrency space because of the ‘ICO gold rush’, they form ‘communities’ imbued with specific rules aiming to divert explicit discussions about the price of cryptocurrencies, i.e., they cook money; extol values of ‘openness’; and celebrate diversity. They see the impersonal qualities of cryptocurrencies as being antithetical to the ‘community’ they wish to build – one that is necessary to engage with heightened conditions of uncertainty that the cryptocurrency market brings. This ‘community’ simultaneously enables them to learn about crypto, whilst allowing them to do the emotional work necessary to inhabit this space. I highlighted that abstracting an understanding of the world around is not separate from emotions but, rather, very much part of it. This point was argued explicitly here but was very much implicit in the other chapters, including two and four.

Chapter six built on the foundation of chapter one and highlighted that when ‘smart money’ started to flood in, ideas of ‘openness’ and ‘diversity’ that were once celebrated and highlighted as being necessary to building crypto, were reframed as ‘the Wild West’, or an overgrown jungle, that was very much in need of people who knew how to ‘build’. Social spaces were still necessary to get ‘the pulse of crypto’, but the smart money cutting in produced drastic shifts in the demographic. Coinface was offered as an ethnographic example of a place where a rhizomatic network (Coinface) was pruned to an arborescent network (Coinface Institutional): one where ‘crypto’ was the natural evolution of the neoliberal market and financial world, rather than a threat or viable alternative to it.

Retail traders and online forums: new stories to live by

This thesis identified online forums as an essential part of the digital infrastructure of crypto. It is a place where young men, often white, go to engage with the volatility and uncertainty of cryptocurrencies. These actors have been generally referred to as ‘retail traders’ but they have also been referred to as ‘noisy traders’, ‘bedroom traders’, ‘tricksters’, ‘chancers’, and ‘the precariat’ in this thesis. These names add ‘thickness’ to the profile of the retail trader. Chapter two began on the digital ground by highlighting 4chan as an important site within the crypto space. In an anonymous online environment where traditional markers of identity are not available, I focused on practices of collective storytelling that are neither purely about the private or the public, but about the fluid and intersubjective movement between these realms. These stories simultaneously make an uncertain space habitable for the individual trader and allow them to understand the cryptocurrency market. The folk knowledge they form of the markets is political. They form political subjectivities that resist conventional understandings and values extolled by those from traditional financial and economic world and can come to have a disruptive influence on the market in unpredictable ways. Chapter three evidenced this clearly and highlighted the political potential of the ‘lulzy’ sense of humour as evinced online. Chapter four attempted to go behind the screen to highlight the labour that those who take to the online world are involved in – the chance work that they do. It aimed to disrupt normative ideas that those who take to online forums are simply ‘trolls’ or are ‘gambling’.

Multi-Level Marketing (MLM) crypto projects: blurring the present and the future

Chapter five highlighted the world of Multi-Level Marketing crypto — put forward to me by those by those within the Silicon city as separate from the world they inhabited. I came to know many of those within the MLM projects as a result of my work as a ‘scam hunter’. Employing the idea of ‘stages’, in a spatial and temporal sense, I worked against powerful narratives in order to highlight the similarity in the work of those within MLM and Silicon cities. Work at both these sites involved folding the future into the present, and the living out of possible worlds. Capital was extracted via the blurring of the present and the future. In the context of this blurring, differentiating between a ‘scam’ and the ‘real revolution’ via a self-evident ‘due diligence process’ proves tricky

for both. Moreover, the label of ‘scam’ seemed to obscure rather than reveal. As one participant put it, “if everything is a scam, nothing is a scam”.

Five Ideas

Revolutions – a series of non-linear event/s?

I have described how those within the Silicon cities present themselves as in the business of manufacturing ‘revolutions’. They claim to be able to revolutionise how we eat, sleep, think, and how we know and use money. They claim to be able to write the relevant code, algorithms, and software that will connect people more directly – circumnavigating a rotten political core. The revolution they imagine involves a complete breakaway from the past to arrive in a self-evident ‘new’ place, free from inequality. This thesis, most notably through chapter three, disrupted normative understandings of revolutions that echo throughout history, as the linear unrolling of time marked by moments of rupture. It highlighted that such an understanding of revolutions plays a part in the process of capital extraction. That is, a ‘new land’ is found, the valuable diversity is reframed as in need of capitalist intervention, and capital is extracted – such a process was demonstrated in chapter six with Coinface. Chapter five also highlighted how such an idea of revolutions blurs the boundary between ‘revolutions’ and ‘scams’.

Under such conditions, where normative understandings of revolution aid in the process of capitalist extraction, we might wish to look closely at the ground to explore what is at stake within a revolution. Thinking with ethnography conducted on WallStreetBets (WSB), I argued that what seems to be at stake within a revolution is not the founding of a radically ‘new’ land, but the folding in of diverse temporalities that become the grounding for action. Hence, I argued that revolutions may be better conceived of as a series of non-linear event/s – especially within the digital age, where, as highlighted in chapters two and three, stories can travel in unpredictable ways and provide grounds for action that disrupts. Chapter three portrayed the ‘GameStop Saga’ as the product of actions informed by memories of crisis, protests from the 1970s, going without food, and imaginations of the future. Normative ideas and temporal

frames upon which financial decisions should be made were disrupted.¹⁰¹ If what is at stake within a revolution is the folding in of diverse temporal planes, I invited the reader to think about the coherence and resonance between Occupy Wall Street, WallStreetBets, the activities of Anonymous (event/s that have a strong similarity), and the anthropologist's role in allowing for this folding. Indeed, through this thesis, I have demonstrated that the revolutionary potential of ethnography lies in its ability to put different places and times in conversation, by looking at what happens on the ground. Victorian bucket shops, lotteries, Papua New Guinean card players, and Sri Lankan migrants have been folded in to better understand cryptocurrencies.

Crypto commons?

In foregrounding uncertainty, and focusing on the human, relational and collective strategies people use to engage with it, I have identified spaces (including Silicon cities and online forums) that demand our attention. Are these spaces part of some sort of commons?¹⁰² This section considers these questions briefly.¹⁰³

The term 'commons' has become increasingly popular through seminal works such as, 'Midnight Notes Collective's' (1990) 'New Enclosures', Elinor Ostrom's (1990) 'Governing the Commons', and Hardt and Negri's (2000) seminal text 'Empire', to conceptualise numerous types of commons that exist in various relations to capital. Ostrom's early conceptualisation of commons as a space that exists over and above capitalist relations highlighted people governing and managing pooled resources in a more harmonious manner than implied by Hardin's (1968) 'tragedy of the commons'. More recently popular terms such as 'digital commons' or 'creative commons' draw influence from Ostrom to highlight the pooling of resources online through Free/Libre/Open-Source Software (FLOSS) communities. Such an idea of a separate

¹⁰¹ I stopped short of highlighting the 'GameStop Saga' as part of a 'revolution'. In this chapter I was more interested in offering an alternative framework to assess the revolutionary potential of the GameStop Saga.

¹⁰² There are other alternative imagining of spaces that can be considered here (third sector, solidarity economy, etc), owing to space, I restrict myself to the consideration of the commons and moral economy.

¹⁰³ A lengthier and substantial discussion worthy of the importance of the issue at hand is not possible here, but I engage nonetheless as an invitation to other storytellers.

digital commoning space however, as highlighted by many, is perhaps overly optimistic (Reijers & Ossewaarde, 2018).

Instead, the kinds of commons I have foregrounded are more entangled and exist in parasitic relation to capital (Hardt & Negri, 2000). In opposition to ideas of 'commons against and beyond capitalism' that many have explored, I am interested in commons that exist at the heart of capitalistic practices (Barbagallo, Beuret, Harvie, Caffentzis, & Federici, 2019, p. 211). This thesis could be read as a story about the ways in which people pool social relations and knowledge to engage with heightened conditions of uncertainty, i.e., they form a sort of commons. Such a form of commons was perhaps most striking in chapter one, where people diverted discussions about money, but it was also apparent in online forums where people engage in practices of collective storytelling.¹⁰⁴ If uncertainty cannot be socialised, it would of course be detrimental to the reproduction of a particular group of people. The type of commons described in this thesis then might be understood as a kind of 'fix' (De Angelis & Harvie, 2014). That is, a commons is needed to fix any possible destruction in the workforce in a highly volatile and uncertain world.

The kind of commons I describe could also be conceptualised as existing in a certain dynamic and calculative rhythm with capital and enclosure. Early Marxist understandings of enclosures presented them as a singular process in time: 'a complete separation between the workers and the ownership of the conditions for the realisation of their labour' (Marx, 1976, pp. 874–875), as a historical process of 'divorcing the producer from the means of production' (ibid). After such a process the effects are echoed through a linear model of development, that is, enclosures happen once, and thereafter we move on from discussions surrounding enclosures to 'capital logic' (Hardt & Negri, 2000; Midnight Notes Collective, 1990). In opposition, De Angelis and Harvie (2014) put forward that enclosures and commons exist in a more dynamic rhythm mediated by capital logic: where, for example, the commons serve up the fruits, cheap goods, for the capitalists to enclose the commons and harvest the goods, then allowing for the commons to sprout new outputs, before returning. Such a process

¹⁰⁴ Though here they did not cook money, the discussions were explicitly about the price of cryptocurrencies.

seemed to be at work in chapter six, and I attempted to highlight this using ideas of rhizomatic and arborescent networks.

However, 'capital is not a totalised system', rather it has a 'totalising drive' that exists in relation 'with other drives that limit it' (De Angelis & Harvie, 2014, p. 283). And as such, resistance and cracks emerge that, when they appear, are in need of anthropological attention (Callon, 2010). These cracks were perhaps most apparent in the online space, where 'noisy traders' pursuing the capitalist dream on the markets, ran up against an institutional backlash (chapter three): a conservative system that supported hedge funds rather than the everyday retail trader.

Digital work – (dis)connections in the bedroom

The kind of work that takes place on online forums that I have described in this thesis, (in chapters two, three, and four), has been largely neglected by many within anthropology and further afield. The online spaces I looked at as representative of other online spaces, such as Reddit and 4chan, are frequently described in the mainstream as a place of and for 'internet trolls', 'tricksters', and where young people go to have 'fun' or 'play', where they engage in a 'lulzy¹⁰⁵' sense of humour (Coleman, 2006). What these descriptions conceal, however, is the creative and sustained energy people are engaged in to renegotiate the limits of their wage work (chapter four), to try and earn a small fortune, and the labour they are involved in to bring some vision of the 'good life' to fruition (Narotzky, 2018; Narotzky & Besnier, 2014).

Much of the theorising of online spaces and their relationships to labour and capital has come from Marxists, communication, media studies, and sociologists who have been much more responsive in appreciating the economic and political significance of these spaces (Dyer-Witheford, 1999; E. Fisher & Fuchs, 2015; Fuchs, 2014; Fuchs & Mosco, 2016; Lund, 2015; Nixon, 2015; Sandoval, 2015). These seminal works call for both the recognition of the expansion of capitalism into new territories created by development in digital communication technologies, and the need to 're-evaluate, re-

¹⁰⁵ As described in chapter two, 'lulz' or 'lulzy' is a bastardisation of the popular online acronym 'lol' – laugh out loud.

formulate, and update Marxist categories' to better capture the 'exploitative social relations that lie behind the process of commodities' (E. Fisher & Fuchs, 2015, p. 3).

Many of these insightful works highlight the coming together of 'work and leisure, work and play, production and reproduction' (E. Fisher & Fuchs, 2015, p. 19). For example, Julian Kücklich (2005) coined the term 'playbour' in their article *Precarious Playbour*, to highlight the gaming industry's reliance on rarely remunerated 'Modders' to provide feedback on gaming communities. The term has resonated with many who wish to highlight how companies blur work and play in the digital realm to exploit workers.¹⁰⁶ Actors who congregate online have also been conceptualised as 'cultural workers'. For some, this means those who are engaged in 'immaterial labour' of 'symbol creation', whilst others argue that the cultural, social, economic, and politic are all entangled in online spaces; furthermore, they point out these online spaces exist in relation to the material (E. Fisher & Fuchs, 2015; Mosco & McKercher, 2008). Fuchs (2014) understands these 'cultural workers' through what Marx termed 'Gesamtarbeiter', the 'collective worker', who works in combination with others to produce the commodity.

In this thesis, I have similarly foregrounded how people congregate online to work together, to negotiate heightened conditions of uncertainty through practices of storytelling. I highlighted how stories told in online forums (chapter two), can become grounding for actions that disrupt the markets, change regulations, and can mobilise protests in the offline world (chapter three). That is, these online stories can come to have material effects. Chapter four further evidenced the materiality of this space, by highlighting the labour that 'bedroom traders' are involved in. Like many others who explore digital sites, I also highlighted throughout the thesis the blurring of the boundary between work and non-work. However, I avoided the term 'cultural worker', as I do not see why the term is more appropriate to these online workers over, say, those who work in finance. Moreover, 'culture' within this literature is often reified and slips into a particular part of Marxist thought where 'culture' becomes totalised and subservient to capital. I have drawn influence from the Marxist desire to highlight

¹⁰⁶ And for those who wish to consider play and labour can combine in non-exploitative ways (Lund, 2015).

exploitative social relations, but by affirming the complexity and creativity of ‘culture’, and the fluid relationship between ‘culture’, ‘economics’, and ‘politics’, I have also highlighted sites of resistance and fractures in capitalist systems (Gudeman, 2001). Thinking with uncertainty, I have aimed to capture the complex entanglement of social relations and capital.

In exploring these online (and offline) spaces, a large part of my interest has been exploring the relational work people are engaged in to make the uncertainty and volatility of the cryptocurrency space profitable. My entry point to examining the kind of work people do is through considering how people come to know ‘crypto’. I do not see this work as being separate to ‘the economy’, as part of a separate ‘knowledge economy’ or part of ‘cultural work’ (E. Fisher & Fuchs, 2015; Hardt & Negri, 2000). Rather, echoing Gudeman (2001), I wish to highlight that forming an understanding of the world around in relation to oneself is an intrinsic part of all work, and what it means to be human, to be part of the ‘human economy’ (Hart et al., 2010). Abstracting an understanding of the world around us is not just the work of economists, or anthropologists. Abstracting is a key part of the work of migrants, participants in the *Kula*, card players, those who take to online forums, and those who inhabit the start-up world. These actors, unlike the models and knowledges put forward by economists, appear less Archimedian, they are worked collectively and relationally, forming ‘folk models’ and ‘folk knowledge’ of the happenings of the world around (Gudeman, 2001, p. 4). Moreover, this thesis has also paid attention to the emotional labour that is a crucial part of working under conditions of uncertainty. It highlighted that this emotional labour as not getting in the way of understanding the world, as so often seems to be implied, but is a part of coming to know crypto.

Uncertainty and finance: fertile ground for anthropology

The past decade has seen a conceptual shift from ‘risk’ to the study of ‘uncertainty’ within those interrogating economic knowledge practices and financial elites (Bear, 2020; Beckert & Bronk, 2018; Boyer, 2018; Esposito, 2011; Samimian-Darash & Rabinow, 2015; Scoones & Stirling, 2020). Many of these works revive Knight’s insight that ‘uncertainty’ and ‘risk’ are fundamentally different, and that profit emerges from engaging with the uncertain rather than with risk. These works have been instrumental in highlighting the contingent nature of knowledge produced by those in power.

Foregrounding uncertainty, Bear (2014, 2020) not only highlights the contingent nature of financial and economic knowledge practices, but highlights the imaginative qualities that reproduce structural inequalities. Beckert (2018), Esposito (2011), Appadurai (2013), Zaloom (2009), and Leins (2018) all explore how powerful economic actors visualise the uncertain future, form expectations, and decide to act under conditions of radical uncertainty. As Tellmann (2020, p. 346) puts it, the ‘uncertainty of the future has become a rallying point for questioning the rationality and efficiency of financial markets’. This thesis has similarly explored how financial actors respond to uncertainty, but it has also looked further afield and highlighted how less powerful actors (found on online forums and investing in MLMs) are forming themselves and ‘folk knowledge’ to engage with uncertainty (chapter two), often in ways that challenge the knowledge of financial elites. The thesis challenged homogeneous descriptions of the effects of financialisation, that is, the idea that all actors are financialised and become ‘*homo economicus*’ or ‘*homo speculans*’ in some uniform way (Komporozos-Athanasίου, 2022).

Pivoting to uncertainty from risk is prudent for numerous reasons. Firstly, and most importantly, it seems what is at stake and motivates work in finance, and economics, is the uncertainty of the future (not risk). Secondly, uncertainty, as even economists acknowledge, is something economics handles poorly (Davidson, 2014; Keynes, 1921). For anthropologists wishing to question power, this is fertile ground. Thirdly, anthropologists have a rich and diverse range of analytical concepts, ideas, and theories to draw on to interrogate how people work under conditions of uncertainty. Anthropologists have explored how, under conditions of radical uncertainty, people turn to rituals, liminal spaces, storytelling practices, revolutions, chance, moral economies and so on. However, in exploring how the powerful and those in Euro-American countries engage with uncertainty, there seems to be some hesitation to draw on these rich resources, some reluctance to fold what has been learnt at the margins into the core¹⁰⁷. Seemingly sanitised terms such as ‘narrative economics’, ‘speculative imaginings’, ‘contingent events’, are employed rather than ‘storytelling’, ‘folk tales’, ‘chance events’, ‘cosmoeconomics’, ‘magical thinking’, and ‘divinatory

¹⁰⁷ Opting for terms such as ‘narrative economics’, ‘speculative imaginings’, ‘contingent events’, rather than storytelling, folk tales, magical thinking, and divinatory practices.

practices'. In this thesis, inspired by the poetics of relations, I have looked to draw on anthropology's rich resources to explore the activities of Silicon city actors, retail traders in London, and a largely Euro-American assemblage on 4chan and WSB.

Finally, in opposition to a particular area of the literature on uncertainty and finance that looks at how uncertainty is 'reduced' via human strategies, this thesis highlights a more entangled relationship (Beckert, 2020; Beckert & Bronk, 2018; Cashdan, 2019; Tucker & Nelson, 2017; Velthuis, 2007; Vignoli, Guetto, Bazzani, Pirani, & Minello, 2020). I have highlighted how a space of radical uncertainty is inhabited (not reduced), and reproduced at different sites (including in the bedroom). I have highlighted the encroachment of uncertainty into the most intimate realms of our lives, on commutes to work, via our phones and computer screens, and the (dis)connection this works on and emulates.

*

This thesis set out by highlighting that theorising uncertainty directly is undesirable as the term is too nebulous – uncertainty can mean many different things (*see page 36*). Instead – influenced by Strathern – this thesis approached uncertainty as something to 'think with' rather than theorise explicitly. Different meanings and inflections the term takes on emerges through paying attention to context. Indeed, this is what I wished to stress most against a background where technocrats, financiers, and economists attempt to reduce the uncertainty rapidly and impatiently. This thesis can then be seen to make a theoretical contribution to the study of uncertainty by relating it to attentive and relational practices. In chapter one, and throughout the thesis, uncertainty is theorised as a methodological tool that animates ethnographic practices – participant observation and immersive practices. Such an approach to engaging with uncertainty widens the scope of contemporary theoretical work on uncertainty, which as Alexander and Sanchez (2020, p. 3) point out falls roughly into four areas: 1) 'the inability to read other people's intentions', 2) 'the unknowability of the future', 3) 'risk management as a response to those unknowns', and 4) 'the collapse or withdrawal of totalizing systems'.

Future works

States of uncertainty, states of crypto

As I write, Sri Lanka is undergoing an economic and political crisis. Former President Gotabaya Rajapaksa has fled the country, the people are storming the presidential palace, and the value of the Sri Lankan rupee is declining rapidly. One British Pound used to exchange for 200 rupees two years ago, now the exchange rate is closer to 450. Against this background, the Central Bank of Sri Lanka has issued a warning to the public highlighting that ‘Virtual Currencies’ (cryptocurrencies) are not legal tender, not ‘backed by any underlying assets’, and their ‘values are determined by speculation of the public on [cryptocurrency] exchanges’. The warning comes as many look for ways to prevent the value of their savings declining further. With credit and debit card transactions blocked, people are taking to online forums to find currency exchange partners.¹⁰⁸

This thesis has largely focused on those who live in countries where the value of the state currency is relatively stable. In countries where this is not the case the meaning of cryptocurrencies for the state and its people changes drastically. In February 2018, Venezuela issued its own cryptocurrency the *petro*, which is supposedly backed by the country’s oil and mineral reserves. It did so as the value of the Venezuelan Bolívar (the national currency) declined rapidly. The minimum wage is now to be pegged to 50% of the value of *petro* (Reynolds, 2022). Venezuelans are increasingly turning to cryptocurrencies to beat inflation. Nearby El Salvador has also recently turned to cryptocurrencies. Rather than issuing its own cryptocurrency, on 9th June 2021 the El Salvador government made Bitcoin a legal tender. It did so, many suspect, to increase efficiency in international remittances, decrease the percentage of unbanked, and to reduce reliance on the US dollar. However, despite the colossal efforts by the government to get people to use cryptocurrencies, adoption is low. The president’s call for those abroad to send back remittance via cryptocurrencies have largely fallen

¹⁰⁸ People either meet up in person and exchange cash whilst cryptocurrencies are transferred via digital means, or people transact purely online with a bank transfer being made in Sri Lankan rupees, and moments later cryptocurrencies are transferred to their digital wallet.

on deaf ears (for the moment), with cryptocurrency remittances accounting for less than 2% of total remittances (Kurmanaev & Avelar, 2022).

The interaction between volatile state-issued currencies and cryptocurrencies is an important site for further anthropological exploration. At these sites the state and its people are experimenting with what possibilities cryptocurrencies can offer. However, it is not only nation states in or on the brink of financial crisis that are being influenced by cryptocurrencies. Cryptocurrencies have prompted the Central Banks of England, Sweden, and other European countries to investigate what a 'Central bank digital currency' (CBDC) might look like (Insights, 2021; Peebles, 2021). Future works might wish to explore this influence.

Taming the 'Wild West'

One of the most striking changes that occurred during my fieldwork was the shift from the idea that crypto existed outside the state and was in some way 'unregulatable', to the idea that meaningful regulation of crypto was possible, and indeed desirable. At the beginning of fieldwork many institutions adopted a 'stand back and observe' or 'sandbox¹⁰⁹' approach. However, near the end of my fieldwork the presence of the state and its regulatory authority could increasingly be felt. As highlighted in chapter six, at Coinface Institutional there was the increasing presence of those who consulted for MiCA (Markets in Cryptoassets) regulators. At the start of July 2022, the EU finally announced the MiCA regulatory protocols. Stefan Bergen, a German MEP who led negotiations on behalf of the parliament, articulated: 'today, we put order in the Wild West of crypto assets and set clear rules for a harmonised market' (Milmo, 2022). At one Crypto Curry Club event in March 2022, Matt Hancock gave a speech to a select crowd on the role the British government will play in making Britain the hub for cryptocurrencies; at another event, he argued that 'no country can stop this revolution'. Future anthropological works might wish to ask what happens to crypto as state and regulatory actors cut into the network. Who is this 'revolution' for now? What does this mean for 'crypto'? In exploring these and other questions, I invite future storytellers to think with uncertainty.

¹⁰⁹ A regulatory sandbox is a framework set up that allows innovators to experiment in close conversation with the regulators.

Thinking with Uncertainty

We live in a world where financiers, economists, Silicon city actors and many others claim to offer neat solutions to life's most complex and entangled issues. Code, models and algorithms claim to rewire politics and economics in a 'radically new' way, excavating the past with all its fickle complexity. The quest appears at times to be for a certain kind of certainty, detached from the complexities of the world, as people get their heads down and try to figure out the complex technical solution to an equation, a puzzle, or a model, on paper or a computer screen to be then placed on the world. As Geiger (2020, p. 2) argues, Silicon Valley is 'advocating [for] the end of uncertainty', a narrative which is laden with 'eschatological character'. The end of uncertainty takes place at a distinctive speed. The solution is always needed immediately. There seems no time to deal with the vagaries of life. As Irani (2015) highlights in relation to her Hackathon participants in India, assessing the problem on the ground, mobilising people, forming solidarity and alliances, is considered painfully slow. The policy seems to be that the technical solution can be built now: the 'footwork' and social and cultural work of embedding the technology can come later – eschatological narratives at work again. On display is a logic that Hayek, Friedman, and those actors who employed statistical modelling of the stars in the night sky to conduct assessment of populations in the 18th century held on to closely (Donnelly, 2015). The world contains far too many uncertainties for us to explore in any human and relational way. One cannot simply go and knock on everyone's door and ask about their household: instead, statistical models are needed to understand the population. The logic seems to have intertwined with capital and is now pervasive in all aspects in our life: our conceptualisation of ethics, morality, justice, and generally what we owe to one another, to the food we order on deliver apps – where we look at the stars for assurances.¹¹⁰ Such an approach has troubled a long line of thinkers before me. In such an approach we 'occupy' rather than 'inhabit' (Ingold, 2008), we draw solid lines that divide rather than tentative sketches that meander. The quest seems to be to think with, and to find, certainty as we progress through life, and encounter life's most complex entanglements.

¹¹⁰ As in we seem to want to order food with the highest ratings.

In this thesis I have foregrounded how the heightened conditions of uncertainty that most people work under invites a certain kind of attentiveness, the formation of collective strategies, and some remnants of the practice I advocate, including thinking with uncertainty. Such an approach seems largely employed to fix the cracks in the capitalist machine and is mostly folded back into serving capital. Yet I am reminded by Tsing and others that the potential of social relations and humanity are always in excess of subjugating powers. Matsutake mushrooms force us to be attentive, Tsing argues. I would argue something similar of uncertainty.

Glossary and Acronyms

Cryptocurrency exchange – A platform that allows people to trade cryptocurrencies to other cryptocurrencies or state issued money.

Cryptocurrency wallet – For the purpose of this thesis, it can be seen to act as a normal wallet that stores your cryptocurrencies.¹¹¹

Miner/mining – Mining allows for the creation of new coins, and for the validation of transactions on the blockchain. Those who validate the transaction get a certain reward. Miners compete to validate the transaction by attempting to solve a complex maths problem computationally in the quickest time.

Custody solutions – Third party providers of storage for cryptocurrencies. There services are mainly for those with large sums of cryptocurrencies.

Whitepaper – A cryptocurrency whitepaper contains technical information as to the workings of the project. It often explains what separates the project from others and highlights the contribution it is making.

Proof of Work (PoW) – A decentralised consensus mechanism that requires members of the network to expend significant amount of energy to solve an arbitrary mathematical puzzle to prevent anyone from gaming the network.

Proof-of-Stake (PoS) – A decentralised consensus mechanism where those that mine stake a certain number of cryptocurrencies rather than expend computational energy. The system exists to prevent anyone from gaming the network.

Market Cap – The price of the cryptocurrency multiplied by the number of coins in circulation.

Hodl – Hold on for dear life. A strategy to deal with a volatile market.

Lulz – A bastardisation of the internet slang/acronym 'lol'- laugh out loud.

FOMO – Fear of Missing out

FUD – Fear, Uncertainty, and Doubt

ICO – Initial Coin offerings are one way to raise funds for a project. It involves giving users an early entry point to purchasing of a coin. If the project does 'well', the value of the coin should go up (that's the idea anyway).

¹¹¹ Technically it is a device, physical medium, program of service which stores the public and/or private keys which give access to your crypto.

Shorting: Shorting involves borrowing, say, 100 shares for \$10 a share (\$1000 total), waiting until the price goes down to \$4, buying 100 shares at the new lower price and netting \$600 profit when you give back the shares you borrowed initially. This strategy requires confidence that the stock will be lower in value when you must buy back.

ETF: Exchange Traded Fund. A fund that tracks an index, a commodity or bonds and is traded on stock exchanges.

FLOSS: Free (/libre) and Open-Source Software.

FCA – Financial Conduct Authority (UK)

SEC – Securities and Exchange commission.

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Timeline

2nd Century BC – Kautilya writes the *Arthaśāstra* - the first written down and recorded use of cryptography explicitly intended as a political tool.

100 BC – Julius Caesar employs a simple letter-substitution cryptographic technique to communicate with his generals.

1596 – Queen Elizabeth I issued a lottery to fund public works, including the improvement of harbours.

1694, the English State Lottery was managed by the newly created Bank of England 'to almost no one's distress'.

1694 – 1826 – 170 state lotteries issued.

19th century – Victorian bucket shops emerge.

1939 – 1945 – Digital cryptographic techniques get developed during the Second World War.

1970s – Shifts on the global political and economic stage. Coming about of the 'age of uncertainty' (Galbraith, 1977).

16th February 1978 - Ward Christensen and Randy Suess launched the first public dialup computerised bulletin board system (BBS)

1990s - The convergence of information and communication technologies (ICT) and neoliberalism, notably in Silicon cities.

1990s – The 'Crypto Wars' continued throughout the 1990s, with cypherpunks playing an important role in protesting both the government's monopolising of use of cryptography, and its use of cryptography to intrude into the lives of citizens.

1990s - The rise of online non-professional traders and investors aligned with the 'dot-com bubble'.

1st October 2003 – 4chan is founded by Christopher Poole.

2005 – The UK 'Gambling Act 2005' emerges, changing the landscape of gambling in the UK.

31st October 2008 – Satoshi Nakamoto releases the Bitcoin whitepaper titled *Bitcoin: A Peer-to-Peer Electronic Cash System*.

3rd January 2009 – First block mined on the Bitcoin network.

2011 – Litecoin - the second cryptocurrency emerges.

2012 – WallStreetBets forum is founded.

2012 – Coinface first meeting.

6th December 2013 – Dogecoin emerges.

18th December 2013 – GameKyuubi takes to Bitcointalk forum, and hodling meme emerges.

2014 – OneCoin project emerges.

2017 – Pink Wojak memes emerge.

30th April 2017 – A total of 789 cryptocurrencies now available on cryptocurrency exchanges.

July 2018 – Around 1,700 cryptocurrencies on the market.

July 2018 – July 2020 – I conduct fieldwork.

Early phase of fieldwork – July 2018 – June 2019.

July 2022 – over 20,000 cryptocurrencies on the market.

Price graphs for Bitcoin, and Dogecoin



Figure 25: Price of Bitcoin in relation to the US Dollar (Coinmarket, 2022)

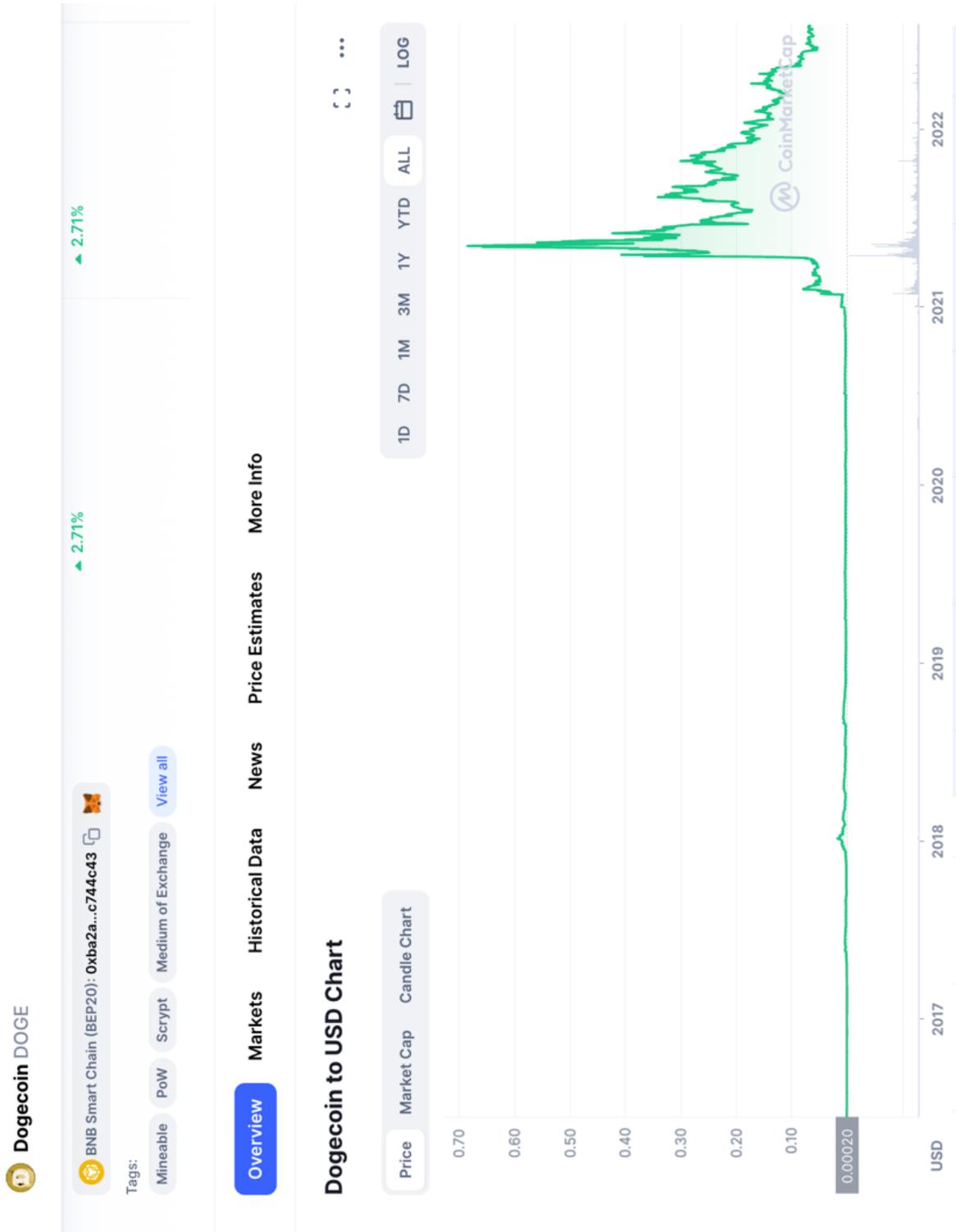


Figure 26: Price of Dogecoin in relation to US Dollar (Coinmarket, 2022)