On Bitcoin usage, Techno-optimism and Participation

An anthropological perspective on Rovereto's Bitcoin Valley users

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Abstract

The present research engages with theoretical notions related to anarchy, currency systems and the intersubjectivity of money to develop a critical analysis of the individual attitudes and motivations relevant to the usage of Bitcoin for what concerns users in Rovereto, Italy. Through the use of ethnography, this research explores the reasons behind the spread of use of Bitcoin in the area of Rovereto and how those reasons may be connected to the way the Bitcoin network was designed and the socio-political set of values of its creators. New theoretical paradigms and a re-interpretation of old theoretical notions is proposed, in order to overcome the lack of literature and fieldwork material related to the subject of cryptocurrency users, for what concerns anthropological research. General reflections on the impact of new technologies such as cryptocurrencies on individuals are also produced, in connection with the material collected on the field in Rovereto.

To my family.

To the hospitality and support of Inbitcoin employees and Rovereto inhabitants.

This research would have not been possible without your continuous support.

Thank you.

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Introduction

This research focuses on the behaviour and personal motivations as seen and described by Bitcoin users, as it has been observed in Rovereto, a small village surrounded by mountains in Trentino, Northern Italy between February and May 2018. Moreover a comparison with users from Rome, the Italian capital city, is proposed. The reason for this focus is that Rovereto is known to be a "Bitcoin Valley"[1], a term used to describe a place densely populated by commercial activities accepting Bitcoin for daily purchases. According to the official website of the valley[2], the area of Trentino has a total of 45 activities accepting Bitcoin, 18 of those commercial activities are located within Rovereto's area, the densest city in Trentino when it comes to Bitcoin usage, one of the densest in Europe if we consider the population ratio[3].

The rise of cryptocurrency has been a phenomenon widely observed and reported by mainstream media in the last months of 2017 up until January 2018[4]. The fast price increase that Bitcoin experienced in this period has been covered by newspapers and television programmes extensively, despite the lack of media coverage that it actually experienced since 2009, when it was first created. Nonetheless, the project of the Bitcoin Valley in Rovereto was created in 2015, way before the latest "hype-wave" hit the market and, as we will see, the speculative aspect of Bitcoin we saw the media extensively talk about, is not particularly relevant for this research.

The first part of this research focuses on the theoretical notions drawn from Anthropology on one side and from the set of values that underpinned the creation of the Bitcoin network. Starting from publications focusing on Bitcoin, the cypherpunk movement that started the project and their relationship with anarchy, I will then look for anthropological studies questioning the origins of the notion of value and what it means for our society today.

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[1]To know more about Rovereto's Bitcoin Valley:
https://bitcoinmagazine.com/articles/real-users-italian-mountain-town-everyone-knows-about-bitcoin/
[2]Used as a reference to gather data on number of commercial activities accepting Bitcoin as payment gateway: www.bitcoinvalley.eu
[3]Those considerations were made on the basis of the data gathered on https://www.coinmap.org, therefore the information may be inaccurate or outdated after the publishing date.
[4]Articles on Bitcoin's surge of late 2017, early 2018:
https://www.economist.com/buttonwoods-notebook/2018/01/17/the-rise-and-fall-of-bitcoin;
https://www.theguardian.com/technology/2018/jan/18/bitcoin-speculative-bubble-bursting-long-way-to-fall-economists-warn.

Currencies, economic and financial systems will all be mentioned through the research. Nonetheless, the focus of this essay is on Bitcoin users, and not on Bitcoin as a system of payment alternative to fiat currency. Therefore, no comprehensive explanation of how Bitcoin's network is structured is going to be provided, nor any mainstream economic theory will be compared to cryptocurrency systems. This is an anthropological study, therefore the focus will be on the relation between the theoretical notions proposed in the first chapter and the fieldwork material collected in Rovereto and Rome, for what concerns the personal attitudes of Bitcoin users towards this digital currency and technology in a broader perspective. The first chapter also introduces the notions of inter-subjectivity as developed by Husserl throughout his writings, and links it with the idea of currency as an intersubjective entity, analysing it as a tool fulfilling a purely social purpose, that is the one of easing economic transactions among individuals (as described by D. Graeber in "Debt: The First 5000 Years"). Moreover, the notion of techno-optimism will be explored in relation to Rovereto's Bitcoin users. And in relation to his conception of techno-optimism, a new paradigm of "participative" techno-optimism is elaborated since it may be more accurate to further understand the individual attitudes of Bitcoin users towards the impact of new technologies on society. It is important to mention that this research will not provide comparisons between Bitcoin and other currency systems; rather, it will focus on the perception users have of Bitcoin itself: what drives them to use it and how they developed an interest for cryptocurrencies in the first place.

In the second and third chapters, I will talk about my findings on the field, in Rovereto and Rome, and I will do a brief comparison between the experience I had in this small, alpine town and the one I had in the Italian capital city, while trying to gather material on the local Bitcoin users. It is important to mention that the main focus of the fieldwork activity was on the Bitcoin Valley in Rovereto, therefore a major part will be dedicated to observations relevant to this area only. Finally, the conclusive section of this research will focus on how the aspects relevant to gain a deeper understanding of the individual motivations behind Bitcoin usage in Rovereto may be useful to ethnographic researchers addressing the topic of cryptocurrency users in the future, and how these reflections, arising from the comparison of the material collected on the field with the theoretical notions exposed, may be useful to elaborate new theoretical notions related to individual attitudes towards technology in general and Bitcoin specifically.

I

Crypto-anarchy, monetary systems and techno-optimism

I.I   *The anarchic influence on Bitcoin's development*

"A specter is haunting the modern world, the specter of crypto anarchy."

("The Crypto Anarchist Manifesto", Timothy C. May, 1992. p. 1)

Anarchy has hardly ever been considered more than an ideology marginally participating to the modern political and academic debate. Nonetheless, its presence and influence can still be observed to play a role in our social world: from Somalia to Rojava's Kurdish community we have examples of the fact that anarchic principles can be used to build communities with bottom up approaches even in modern times (Leeson, 2007; Cemgil, 2016). The marginal role played by anarchy in the academic debate, and especially in the anthropological sector, is no secret (Graeber, 2004). Nonetheless, there is one movement which was greatly inspired and shaped by anarchic principles, that played a key role in the creation of Bitcoin: the cypherpunk movement, that sees cryptography as a tool useful to achieve cohabitation among individuals in an ethical setting reinforcing anarchist values rather than denying them. It is important to mention that the notion of anarchy considered by this movement is not the one, often shared by the public opinion, of a system with no rules, but that which comes from the etymological origin of the word. Originated from the Ancient Greek an- (a prefix that means without) arkhós (a chief, a leader), anarchy in its origins was meant as a system with no person or group capable of enforcing the rules on others. Thus, anarchy does not imply the absence of rules themselves, rather it refuses the use of violence, even legitimised violence, as a tool to enforce the rules within a system. The primary value to be defended, for anarchists, by societal models, is individual freedom, even at the expenses of security and opening to the risk of free-riding, because no real freedom can be achieved through authoritarian means (Graeber, 2004).

On the basis of the set of values rising from this school of thought, the cypherpunk movement, being mainly composed by software engineers, developed a new school of thought, which has been defined as crypto-anarchism. Crypto-anarchism is based on the idea

that technology should ensure the maximum degree of privacy to individuals and that any type of control or monitoring activity related to software-based systems should be impossible to implement. Thus, cryptography is seen as a mean to achieve a situation in which software-based systems cannot be monitored because of their very structure.

"Privacy in an open society also requires cryptography. If I say something, I want it heard only by those for whom I intend it. If the content of my speech is available to the world, I have no privacy. To encrypt is to indicate the desire for privacy, and to encrypt with weak cryptography is to indicate not too much desire for privacy."
("A Cypherpunk Manifesto", Eric Hughes, 1993. p. 1)

It should be clear that since the Cypherpunk Movement is so strictly linked to the implementation of cryptography in software technologies, in the development of their political thought they detached itself from the traditional perspective and positions of anarchists as they developed in the previous decades. Therefore, it is important to underline that anarchy was and still is, considered more as a way of doing politics and developing communities, rather than as a model, or a mean, finalised to reach a certain outcome, as Marxism for example is (Graeber, 2004). Anarchism has focused on the ethical dimension of revolution practice, while Marxism on the other hand, focused on which revolutionary strategies are to be considered the most effective for each situation. We have also to take into consideration that technology as a fundamental tool is something new to anarchic ideals. It is considered by Cypherpunks as a way to empower individuals, and put them in the position of deciding what to do with their new possibilities, that the current political aggregates may not consider legit but cannot do anything about because of the high degree of untraceability that those technologies implement. The dark web is a practical experiment of the application of crypto-anarchist principles to the web and software technology and its usage has seen many different outcomes: from the creation of infamous marketplaces, the most known being Silk Road, to the whistleblower-protection platform WikiLeaks created by Julian Assange, the dark web is used everyday by thousands of people, to engage safely in illegal activities or to search protection from the tyrannic policies that governments themselves implement in regards to the access to the digital world.

We could say that crypto-anarchism is in a middle position between the two different visions of politics that anarchy and traditional political ideologies such as Marxism have: it is based on the set of values posed by anarchism (the prioritisation of privacy over any other value could be seen as a way to achieve the protection of individual freedoms) but still, it sees cryptography and anarchic principles as tools useful to reach a certain outcome, while traditional anarchy is more a political methodology, a strategy that anarchists are supposed to follow to reach whatever objective they want. Therefore, anarchists conceive individual freedom as a prerequisite, necessary from a moral standpoint, for the healthy development of a community, it is a precondition necessary to gain a certain result. Differently, Cypherpunks, or Crypto-anarchists want to create to a situation in which individual freedom is not only guaranteed, but it is impossible to be taken from individuals by any kind of group or institution thanks to systematic factors. Or as May (1992) claims in the Crypto-Anarchic Manifesto: "*Just as the technology of printing altered and reduced the power of medieval guilds and the social power structure, so too will cryptologic methods fundamentally alter the nature of corporations and of government interference in economic transactions*". In other words, crypto-anarchy does not focus on the revolutionary practice in itself, on the how, as classic anarchy does, rather, it looks at the anarchic principles as a mean useful to achieve a goal, in a way that is similar to that shown by communists that reinterpreted Marxist principles to develop new revolutionary practices.

Thus, cryptography is not something necessary to be granted because of the moral implications its absence would entail, it is something to pursue in order to achieve something more important: a transition to a society in which governments and corporations cannot interfere in the economic, individual relationship and can not influence top-down the economic system and its structures not because the law prevents them from doing so, but because the tools used to engage in economic relationships simply does not allow them to do so (May, 1992).

> *"(...) in a crypto-anarchy the government is not temporarily destroyed but permanently forbidden and permanently unnecessary. It's a community where the threat of violence is impotent because violence is impossible, and violence is impossible because its participants cannot be linked to their true names or physical locations."*
>
> ("B-Money", Wei Day, 1998. pp. 1-2.)

Bitcoin and its characteristics (the open ledger and the distributed and decentralised network) are therefore the outcome of the efforts of cypherpunks who were trying to create a digital currency that could ensure absolute privacy, or at least as much privacy as cash does in our everyday transactions. Bitcoin is the result of a theoretical and practical series of experiments that have been going on for at least a decade (one of the first essays theorising a digital cash system comparable to that of Bitcoin, B-Money, was published on the cypherpunks mailing list in 1998) and can be seen as one of the first tools developed by the Crypto-Anarchic community to start a change towards a society that ensures full anonymity and makes coercive economic measures impossible.

Another aspect of cypherpunk thinking which should be taken into account, because it affected Bitcoin's creation, is the role that hacking as a revolutionary act plays within the realm of the software developers and crypto-anarchic community as a whole. Hacking is not necessarily a concept which applies exclusively to breaking into software security systems, but can also be a broader concept. In particular, hacking as a revolutionary action could be conceived as the attempt to break the rules of a system (political, social or of any entity) from the inside, without exercising external pressure on the system. Hacking also takes the virtual and makes it material, the hacker is conscious that social constructs and systematic rules are purely virtual and their effects apply only as far as people's perception lets them. Nonetheless, he does not refute the virtual for the purely material, but engages with the processes of materialisation of the virtual, to bring to the material dimension the virtual he believes best helps him to achieve the purpose he aims to reach in the material world. Such a way of thinking has been highly relevant to the development of hacker culture in the last twenty years (McKenzie, 2004) and has played an influence on Bitcoin as well.

Many attempts to challenge basic principles of our society such as intellectual property and property of information emerged from the hacking and programming digital, global community in the safe space of the Deep Web, which ensures them total anonymity on the Internet. Bitcoin can also be seen as an experiment aimed at challenging basic principles underpinning modern society: the idea that macro-systems such as currencies are a State business and cannot be self-regulatory.

I.II   *The social value of money*

The widely accepted notion of money we have today is strictly linked to the institutionalised framework that currently regulates national and international monetary systems. It is based on the different schools of thought that developed starting from the State Theory of Money in the early 20th Century. According to this conception of monetary systems, since money have no intrinsic value, they should be issued by the government, in the form of tokens or that of fiat currency, and anything that the State accepts as "legal tender" and as a form of payment valid for taxation. Despite the fact that this system is highly relevant to Bitcoin, we will not dig deeper in this notion, all that we need to know is that such a system is based on the trust given by the people to State and financial institutions, a trust backed by the legitimacy that the government issuing the currency has established with its citizens (Knapp, 1924).

The cypherpunk community, when they started the Bitcoin project, wanted to establish a digital currency that was as privacy-oriented as State issued cash is, without the centralisation of control over the network and without the trust-based relationship that are required by such a system. That is the reason a system of benefits and costs based on Game-theory was created, to ensure a system that allows people to earn from the maintenance of the Bitcoin network, without granting them special access or powers that could give them the possibility to enforce top-down changes to the network itself, while at the same time ensuring that any agent within the network cannot economically profit from hacking the system or counterfeiting Bitcoins (Satoshi, 2009). As a result of such a system Bitcoin is not issued or controlled by anyone and its value is solely determined by market forces. The collective demand and offer of all users decide Bitcoin price, and no trust-based relationship is needed to make the system functional (Antonopoulos, 2015).

It is important to mention that the field material collected in Rovereto was not focused on cryptocurrency conceived as an alternative system, opposed to the classic banking system. Therefore, the mainstream theories on currency will not be useful to approach the notion of Bitcoin among its users. For this reason, for developing theoretical reflections, we will refer to approaches more grounded in the social and anthropological fields. In particular considerations on money and debt as exposed in "Debt: The First 5000 Years" by Graeber (2011) will be useful.

Those are theoretical approaches that look at currency with a more social perspective, focused on what uses of currency individuals engage in, and how those uses are influencing and being influenced by the shared notion of money we have now, and compare such notion with that present in previous economic systems The fact that they are less focused on the principles underpinning modern economic systems than modern economists, allows those approaches to look even further in the past in their analysis at how we regulate economic transactions, considering pre-monetary systems and alternative notions of currency which existed in pre-monetary and pre-capitalist times. This will be useful to understand even further the reflections exposed by the Bitcoin users in Rovereto that will be analysed in the following chapters. The fact that they started using Bitcoin as an alternative currency requires this theoretical introduction to look beyond classical economics to notions of value that refuse the idea of value as something created by State backed institutions and move beyond the mainstream debate of Bitcoin as opposed to fiat currency.

The history of debt in particular is something of high relevance to Bitcoin's development and to its spread of use. Debt and credit are often considered as something that came after the creation of currency: first came barter, then money and only after credit. This is the history of economic transactions according to the classic and contemporary economic tradition. Although, if we look at how economic relations were regulated in previous communities, it is hard to find any that used barter as main tool to handle their economic relations. On the other hand, it seems that an informal systems of credit and debit were often used within human communities before as well as after the creation of the first physical currencies. Actually such a system can arguably be considered as a currency system itself, one way more similar to Bitcoin than to the current monetary system, because the unit of account was purely virtual. Looking to currencies with an historical perspective therefore shows how barter hardly ever became a widely used solution to regulate economic exchanges. Even when a monetary system fell apart people relied on a system based on credit and debit as, for example, happened in Central Europe after the fall of the Carolingian Empire, when credit accounts based on the old Imperial currencies were established, despite the fact that the coins themselves were not in use anymore. Moreover, the idea of currency as a tool created to ease economic transactions hardly conciliates with the fact that often barter has been found to be used within communities that were familiar with the concept and even use of currency (Graeber, 2011). Then, if moving away from barter was not the reason the use of currencies

spread and if currency was used even before the invention of its physical representation as token, what was it then, that pushed human societies to adopt the current monetary system, backed by State institutions?

According to Graeber (2011), money were first created as IOU, coins represented promises to pay someone in the future. They were valuable only because they were supposed to be widely accepted within a community and because there was a shared agreement that once an IOU was established, the person owing the debt was going to repay it, sooner or later. It could be argued then, that trust in other people is the characteristic that was crucial to the spread of use of money: the shared belief that the coin used as a currency was going to be valuable in the future and that the debtor was going to fulfill his economic responsibilities. Nonetheless, this kind of situation could only be established within small communities, where everyone know and can keep track of everyone else. It is once we started living within bigger communities such as States or Empires that a centralised, physical currency was needed. Since an economic exchange could at that point be among strangers, with no potential future repetition of the interaction being present to push people to act fairly with each other, trust could be misplaced way more easily than in the setting of a small community where people are strictly interconnected to each other. State-backed currency solves this problem by moving the trust from being placed in the individual I am exchanging value with, to being placed in an institutional system that will ensure that the value and acceptance of the unit of value transacted will be maintained through time and that attempts to fraud will face penalties.

Here is where Bitcoin is substantially different from previously established currencies: because of its decentralised structure, and due to the limited amount of tokens produced and distributed in the network, it does not require trust among its users to be used. It only requires people to trust the network, which is not possessed nor it can be controlled by anyone arbitrarily. Bitcoin's value is solely determined by market rules: demand and offer among users decide the price. This is part of the reason Bitcoin is defined as a trustless currency: you do not need to trust the person you are transacting with and you don't need to trust third parties to enforce the system rules; all transaction are encrypted, and therefore irreversible, all attempts to fraud will be met by a punishment enforced by the network itself autonomously (Nakamoto, 2009). Therefore it requires people to switch the place they put their trust in from institutional actors to software and hardware infrastructure, that has no human being influencing its behaviour.

Stepping back into the analysis of the development of currency usage, the further step of the creation of widely accepted tokens among big communities is one that brings Graeber (2011) to argue that to look for a history of currency is to look for a history made of so many different shaping factors that no actual reason for the origins of money can be found.

"What we call 'money' isn't a 'thing' at all, it's a way of comparing things mathematically, as proportions: of saying one of X is equivalent to six of Y. As such it is probably as old as human thought".
("Debt: The First 5000 Years", David Graeber, 2011. P. 52)

Therefore, considering that the history of currency is so fragmented and that depending on where and when we look, different reasons and factors seem to contribute to its creation and establishment among different social groups, it should be clear by now that money are not just one thing, that they are not definable through one single notion of money and that they should be considered as a tool rather than an entity, with its own dimensions and characteristics, contextual to the place and time the currency was established.

Such a perspective is important in order to understand how users in Rovereto's Valley can be very different among each other for behaviours they engage in, the sector they work in and even in the way they conceive and use Bitcoin, and still share the willingness to use Bitcoin as an alternative to the Euro. Being a tool used for economic transactions, Bitcoin does not require its users to engage with its anarchic framework or to share the idea of its existence as an alternative to classic currencies.

Finally, considering all the previously exposed argumentations, it is important to mention that this research focuses on the notion of currency as an inter-subjective entity, and we will therefore consider Bitcoin as such. An inter-subjective entity is one that finds its reason of existence on the basis of the interactions it enables among individuals.

The scope of this research on this matter therefore, is on how Bitcoin use may be the result of or may have influenced the interactions among its users, for what concerns the Bitcoin Valley in Rovereto. In addition, we will look at the role of trust in a currency that does not necessarily require people to trust each other to transact with such mean of exchange and if that has played a role in the spread of use of Bitcoin in Rovereto. In other words, the focus of this research is on the intersubjective dimension of currency, and in particular of the digital

currency that is Bitcoin. The notion of intersubjectivity has been widely used in social sciences and is an especially important concept in anthropology. For what concerns the following sections, it is sufficient to consider that intersubjectivity *"ranges from acts in which one is minimally aware of the presence of an Other to acts in which one actively works at making sure that the Other and the Self are perceptually, conceptually, and practically coordinated around a particular task"* (Duranti, 2010). Reflections on how Bitcoin is intersubjective and what kind of awareness of the Other it pushes its users to engage with will be provided in the next chapter.

I.III *Between digital currencies and flying cars: techno-optimism*

If we look at the depictions of the future described by science-fiction writers, we can see that the Globalization era is still missing many technologies that those authors took for granted would have been present and widely used. From flying cars to self-tying shoes, from colonies on Mars to commercial moon flights, some kind of 'techno-optimism' seems to have been contagious among writers focused on the future of human society.

We could even say that the generation that was raised in the sixties and seventies especially have been promised a future that never came to be, and may as a result have developed some kind of techno-disappointment (Graeber, 2015). Nonetheless, we have the wonders of the World Wide Web to prove that human civilization has indeed moved forward, and we must say it is true that the Internet allowed interactions that would otherwise be impossible to become intuitive and instantaneous. Still, even the Internet cannot compensate for all the technological advancements that were supposed to take place up until the early 2000s and never came to be.

As a result, techno-optimist and techno-pessimists have monopolised the debate on the role of technological advancement in the current era, and how it may help or obstacolate further the development of sustainable development models for future generations.

Those two opposing feelings on the role of technological advancement are greatly synthesized in the agricultural sector by the positions of Norman Borlaug and his supporters on one side and those of the Neo-Malthusians and William Vogt in particular. Despite the fact that those two schools of thoughts are strictly linked to debates on world food production and resource scarcity in relation to the agricultural field, their ideological positions on the

role of technology can be seen as representative of the techno-optimism vs techno-pessimist debate as a whole. Borlaug was an agronomist, who supported the spread of genetically modified crops to improve cultivation processes further and to overcome the problem of the scarcity of food in an increasingly overpopulated world. Vogt was in strong opposition to the idea of technology as a way to improve the sustainability of agriculture and as a tool to improve the state of living in general, as he saw technology as the source of the current sustainability issues and a tool that widened the wealth gap. In other words: Vogt saw technology as the cause of all the problems in relation to overpopulation and therefore he could not see how technology may be the solution to the problems it is the root cause of. Borlaug on the other side, with his work on genetically modified crops aimed at making agricultural cultivation more accessible to populations in developing countries, conceived technological progress as the only way to solve some of the key issues linked with food production on an overpopulated planet (Mann, 2018).

Similarly, the different opinions on Bitcoin's impact on future economic relationships within our societies could be grouped in techno optimists and pessimists. On the optimist side are those who consider Bitcoin as the currency of the future and see it as a tool to overcome the issues that can arise from a centralised, State-based currency system (Ammous, 2018; Antonopoulos, 2016). On the pessimist side there are those who consider Bitcoin as a merely speculative asset. The proposition of Bitcoin as an alternative currency, according to this opinion, has deepened the idea of the value of money as something completely virtual and that of money as a wealth on its one, rather than being a representation of real-asset based wealth (Russo, 2018; Navin, 2018; de Galhau, 2017).

The techno-optimist position was, as we will see further in second chapter, widely spread among Bitcoin users in Rovereto. Nonetheless their declination of techno-optimism distinguishes itself from the passive feeling described by Graeber (2015). As we will see requires a new paradigm of techno-optimism to be addressed without falling into the prejudice that individual techno-optimist attitudes have not experienced changes with the arrival of the digital revolution.

I.IV *Methodology*

The collection of fieldwork material and its analysis has been performed based on the concept of ethnography. Ethnography is defined by O'Reilly (2012) as: "*a practice that evolves in design as the study progresses; involves direct and sustained contact with human beings, in the context of their daily lives, over a prolonged period of time; draws on a family of methods, usually including participant observation and conversation; respects the complexity of the social world; and therefore tells rich, sensitive, and credible stories*".

Ethnography is concept central that has been central for the development of this research, and in particular participant observation has been the key method used to try to achieve the insights that ethnography can give. In practical terms, I engaged in Bitcoin spending activities with Bitcoin users in Rovereto and I tried to build social connections with the local community and the companies working in the area, active in the sector of cryptocurrencies, all with the objective of gathering observational material just as much as of engaging in first person with the personal attitudes that users said to have developed in connection to Bitcoin use.

As argued by O'Reilly (2012) the activity of participatory observation is an oxymoron by definition because it includes the participation to the activity of a subject of study and at the same time requires the participant to be an observer, who is able to detach himself from his active role and engage in observational insights as an actor external to the activity. I recognised and embraced this oxymoron as a characteristic and not a deficit of qualitative, ethnographic research. This has helped me to understand when I was at risk of falling into subjectivism while exposing my observations and prevent it. I tried to find a balance among those two roles: the participant and the observer. In doing so, I was able to develop a personal point of view on these activities, while at the same time being able to look at the way those activities are differently performed and considered by other actors. A diary collecting my everyday activities and thoughts has been kept in the final period of the fieldwork, in order to have an alternative source of data which could also give me a deeper understanding of how I was affected in the long term by my participatory activity. This helped me to keep track of my progresses as well as to understand how my views on the research topic changed through time. Together with participant observational activities, interviews were organised to be able to look from a close-up, direct source the personal attitudes of Bitcoin users in the area. The

format of the open interview was the only one used. Open interviews are characterised by general questions addressing topics only from a broad perspective, leaving little interpretation to the personal opinion on the subject of the interviewer.

Nonetheless, in order to engage with the topic of cryptocurrency users in Rovereto, it was not sufficient to elaborate an interpretation of the material gathered on the field. This because the topic analysed in this research, that of Bitcoin users, is one that has not sufficiently been addressed yet by ethnographic researchers to be able to elaborate a comprehensive perspective on the subject remaining within the context of a purely ethnographic work. In order to give a more coherent understanding of the concepts relevant to this research, I had to rely on theoretical frameworks previously developed to tackle dimensions relevant to Bitcoin users such as economic structures and political ideologies. Moreover, because of the fact that this topic has not been sufficiently addressed by ethnographic researchers yet, I looked at anthropological researchers who not necessarily engaged with ethnographic research as their main methodology, but often use sociological perspectives and theoretical frameworks to elaborate their analyses on qualitative data (Fletcher, 2013; Maddox et al., 2016).

In order to achieve these results and be able to perform the fieldwork as intended, I also relied on the Participatory Action Research (PAR) methodological framework as described by MacDonald (2012). PAR is a methodology used by those anthropologists who try to understand the world by actively trying to change it. Following this way of thinking I engaged in activities advocating for Bitcoin use in first person. However, together with those methodological tools the critique to militant anthropology has also been considered as a tool useful to tackle the obstacles characterising ethnographic research (Scheper-Hughes, 1995). Despite not pursuing a coherent political purpose and lacking a predetermined set of values to characterize it, participatory action has a political dimension and is strictly related to a vision of the community which is radically different from that of the current liberal nation-state framework. Participatory action, by relying on individual's sense of responsibility, proposes an alternative model of conceiving social interactions.

I cannot prevent myself from having personal observations and opinions, as my subjects cannot. Thus, I will pursue the idea that an environment where everyone is free to express his personal views, even in research activities, will help me further in distinguishing subjective and personal views from the reality of the facts. Moreover, those insights on subjective views of participatory action and related activities, can give further material for analysis. The

understanding of participatory citizens of their own actions and the values underpinning them as well as its outcomes are as relevant as the participatory action itself. Actually, somebody could even argue that the subjective perceptions are what constitutes the participatory action itself, because they are the reason people engage with such activities. Thus, personal, subjective views, belonging to me as well as to the subjects of my research, will be integrated with my data collection on the field.

It is important to mention that my fieldwork activity took place in Italy, allowing me to practice ethnographic research at "home", in my native Country, where I am familiar with the national language and the traditional customs that social interaction and integration is built upon. To make the reader able to engage with my perspective I integrated the fieldwork with an historical background of the area. Therefore, to provide a view of the potentially relevant historical factors influencing Bitcoin users in Rovereto, I relied on source in the Italian language. I will not rely on English language sources on the Italian history because in my experience they are very distant from the Italian research on the subject, which has been taught within the public education system of the Country and is the one to have potentially influenced the individuals interested by my research in their own understanding of Italian history. To summarise, different methodological approaches have been integrated in the tasks on the field of information gathering, depending on the contextual and external factors found on the field. Despite being all those methods developed within the anthropological field, this cannot be considered a research that has only been conducted through ethnographic methodologies, but the fact that sociological and historical factors, as well as theoretical framework not strictly linked to ethnographic research, have been used, is something to be taken in high consideration when critically engaging with the following chapters.

II

Rovereto and The Bitcoin Valley

I was lucky enough to visit Trentino, the Alpine region where the fieldwork for this research took place, many times before I went to the Bitcoin Valley, but I never had the chance to see Rovereto or the mountainous valley surrounding it before. The view of the small city that I witnessed from the nearby mountains left me breathless, as on my first day in the city I walked through the woods that encircle the urban area. Entrenched within the Alps, Rovereto looks like an orange stain, due to the traditional color of the roof tiles that most buildings in Italy have, sitting in the middle of a green cloth formed by trees and bushes. To close this almost perfect natural landscape, there is the Adige, a large river that starting from the Reschen Pass that divides Austria and Italy, flows through the city to end up in the Adriatic Sea. Nature though, is only one of the many interests that Rovereto has to offer to its connoisseurs and visitors. In addition, this small urban center is a key hub for the economic activity of the whole region and its geographical position was of crucial, strategic importance for the conflict between the Italian Kingdom and the Austro-Hungarian Empire that took place during the First World War, a conflict whose consequences have been dramatic for the "identitarian quest" of its citizens (Blanco, 2006). Since the territory of Trentino was under the Austrian rule for a long time, but the population's heritage is a mixture of Italian and Austrian cultural elements, the local population struggled to identify as citizens of one Nation or the other. People from this area are often bilingual and their German is just as good as their Italian. When I first arrived, I was confused by the fact that strangers were wishing me a good morning, the sense of community seems to be strongly present in this town. The majority of the commercial activities in the town are owned by locals and managed directly by their owner, something that is as well typical of the country. The "small business" is a model Italy was built upon after the Second World War, to push the middle class to engage in private entrepreneurship and to favour the creation of family managed commercial activities, which has been highly adopted in Rovereto. It should be no surprise then, that inter-subjectivity, the "we-relationship" as Schutz called it, is a notion that would have helped me to reach a deeper understanding of my experience in Rovereto.

In this second section we will dwell in Rovereto, where the consolidated reality of a Bitcoin Valley has been present for several years by now. Paying and receiving payments in Bitcoin is not only possible, but it has even become part of the everyday life for some of the cryptocurrency users of the area. From table games to beer and pizza, almost anything can be bought here using this digital currency.

II.I   *Standing on the shoulders of giants*

The first time I met Marco I had only recently arrived in Rovereto. In the few days that I was there, I had been lucky enough to make the acquaintance of many Bitcoin users, thanks to the friendliness and open-mindset of the owner of the bar Mani al Cielo, located in the historical center of the city.

Admittedly, I was nervous the hours before the meeting: I heard so many talking about the impact that Marco had on the creation of the Bitcoin Valley. He was the first to push commercial activities in the area to accept Bitcoin, even before the company was constituted. Nonetheless, this tension dispersed as soon as I greeted him as he came in the Mani al Cielo. With a big smile, I was welcomed with a: "So, you must be the anthropologist everyone is talking about in the office"[5]. I had heard all kinds of rumors about Marco being a person ahead of his time, with a knowledge and culture out of reach for most people, from his friends and colleagues. Nonetheless, as soon as we started chatting about virtual currencies I understood that despite the rumors being grounded on good basis, when he talked about something or grasped notions from a philosopher or a researcher that I knew nothing about, he was willing to enlighten me with patience and clarity.

The scope of the conversation, which lasted several hours and required the consumption of several beers, got so wide that once I came back to my notes, it was hard to distinguish when we were talking about cryptocurrencies and when the topic shifted to politics, philosophy or technology.

"I have to admit that I was lucky, when it comes to Bitcoin" he said to me once I started asking about his personal experience "my educational background is in computer engineering and I´ve been a machine learning researcher for quite a few years before I developed interest

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[5] It is important to mention that all the conversations relevant to this research took place in Italian and that the translation of the aforementioned conversations has been done by the author.

in Bitcoin. I was already active in the open-source environment, having worked with Debian before, and for me the fact that Bitcoin is developed through open-source code is fundamental, and one of the main reasons made me start getting interested in it back in 2011-2012."

The importance Marco confers to the open-source movement in the creation of Bitcoin should be of no surprise: the roots of the cypherpunk movement can be found to be among online communities of coders, that often put their skills into practice for free to create software that is freely accessible to everyone for its consumption but also for its improvement.

"The open-source is not only important on a principle level, because it denies the right of a company or a single coder to claim intellectual property rights on the technology itself, but also because open-source programming enables the creation of a global, constantly developing coding environment. It should not be a surprise, if you ask me, that Bitcoin is one of the mostly advanced software technologies available to the public today. If you look at the Debian project for example, or even the videogame 0 A.D., do you know this one?"

As often happened during this conversation, I had to stop my interlocutor here, to ask for further explanations, because his enthusiasm when we started to talk about the open-source movement was overwhelming and I was not able to keep my writing up with his fast talk.

"0 A.D. is an open-source videogame developed on the basis of another similar game, which was very famous in the early 2000s. If you look at the original, traditionally developed video-game and compare it to the open source alternative, 0 A.D. is way more detailed under every possible point of view: the fact that it was not created by professionals being paid for their job, but it was the result of the contribution given by people sharing a passion and putting their coding skills at use during their free time, allowed them to develop 0 A. D. in ways that a commercially driven product would not be possible to do, simply because they would not bring extra profit. This same concept you can apply to Bitcoin" he concluded "the fact that its value is solely dependant on the individuals participating to the network, the token scarcity, the fact that no one can actually control or own the Bitcoin network, these are all things that if there was a Bitcoin company controlling the network, they would have never done. Those are all characteristics that according to the public narrative were implemented in Bitcoin because of its cypherpunk, or crypto-anarchic, roots, but I am not the first to suggest that they are strictly linked with its open-source development (Truscello, 2003). Linux is an

even more emblematic case of the success of open-source programming: it is an operative system that is currently used all over the world from the most different devices, even Microsoft's Windows uses Linux now."

Here is when I started reflecting on the intersubjective character of open source development, which seems to give Bitcoin itself an even more intersubjective dimension than fiat currencies such as the Euro or the Dollar.

Considering the definition of intersubjectivity proposed in the first chapter, the fact that an open-source infrastructure is intrinsically intersubjective should be clear: an open-source development model requires software engineers to be aware of each other's work and coordinate their efforts to develop a functioning product without wasting time and resources because of miscommunication issues. If one of the developers supporting an open-source project is not constantly aware of the work done by other developers and is not coordinating his actions with the activity performed by other developers, he may end up working on something that is already being developed by someone else, and waste time, or he could implement faulty code in an otherwise working technology putting at risk his work and that of others.

Even Antonio, an Inbitcoin developer, told me that the main reason he became increasingly interested in Bitcoin because of its open-source development model. I met him in the same place as Marco, the Mani al Cielo. Antonio is in his early thirties and it does not take much for us to establish a relationship: we both have a passion for software technology, videogames and cryptocurrencies. It does not take much time before he opens up to tell me his personal story and how he ended up working for Inbitcoin. "My first contact with Bitcoin did not come through Marco, I started getting interested in it on my own on a technical level, since I am a software developer. I even started mining it in 2012, but I did not buy any up until 2015. Then I got increasingly fascinated by Bitcoin because many of the developers that I knew as they were active in the open-source environment, started programming for the Bitcoin network as well, so I started asking myself: why do these people switch from working on the freest and most open operating system in the world to start developing for this digital money thing?"

"Then I got re-connected with Marco because of this shared interest, we had already worked together in Pordenone and after that we kept in touch" and here is where Antonio's story links with the intersubjective dimension of this digital currency, that we mentioned earlier

"He was already trying to spread Bitcoin use here in the area. After a few years he started the Inbitcoin project and I joined him when the company was started already. After I started working here I understood this was the ideal situation for a software developer, and it may be one of the reasons that pushed Bitcoin use and the creation of companies such as Inbitcoin in Rovereto. In this small village everyone knows everyone: I don't need to trust and understand Bitcoin, if you, a dear friend of mine, can explain it to me during a bar conversation, and can introduce me to it actively. Moreover, this situation of the 'everyone knows everyone' helps me in particular: take for example the Bitcoin wallet app I developed for Android phones: it is an application that is not particularly better than many others, yet I was able to understand the issues related to the user-friendliness of this technology, probably in a deeper way than many other developers in this sector, because I receive feedback directly here, in the Valley, where most users of my wallet are. Many of the software developers I know do not even use the very same apps they build, and if they do they often end up not understanding the issues their apps have, because they are technicians and have no way to approach their work from an average user perspective".

Antonio's experience is even more helpful to understand the intersubjectivity that Bitcoin's development model, being based on free, openly accessible contributions, helps to achieve. Not only Antonio connected with the global community of Bitcoin developers, but he even managed to make new acquaintances within this digital community that brought him to work for a Bitcoin centered company outside the digital realm. This shows how Bitcoin's intersubjectivity can also materialise in different forms than those made possible by fiat currency: the fact that you have to choose to participate to its network, and the fact that you can freely decide to contribute to its development are two dimensions that as we will see further in the ending part of this section push the intersubjectivity of Bitcoin as a mean of exchange even further than fiat currencies.

What struck my attention was that from this model Marco has extrapolated a mentality, a mindset that makes him approach things from a different perspective. Marco told me that he has a hard time to feel the same excitement he feels for open source projects for proprietary projects with closed sources because this particular model is for him the materialisation of the constant improvement of previously built knowledge; or as Marco himself described it this is: "dwarves standing on the shoulders of giants, thousands of small professionals working together for the achievement of a common goal, a goal that is not property of anyone, because

it is freely accessible to everyone." There is no space for copyright or intellectual property of software coded in the open-source world, a mentality that originated not only from the open-source world, but grasps from the hacking community as well. As Marco described it: "I don't see why the author of a book should be the only one who can modify it, improve it. Imagine if, instead, Dante's Inferno could be taken by a great contemporary author and rewritten in a more modern language, without him having to pay for publishing rights and without having him to ask for permission from those who have the publishing rights for Dante's Inferno."

This mindset belongs to software engineers and developers, who aspire to the elimination of any virtual construct[6] that can prevent people from gathering and expanding collective human knowledge, to enjoy the benefits of an acceleration in technological progress and democratisation of knowledge by eliminating the possibility of exclusive access to information. This way of thinking was the outcome of the idea that new knowledge is now produced by hacking the previously existing one, and not by simply building on top of it. Hacking is not to be intended here only in its informatic dimension, but rather it should be conceived as a way of operating in the creation of new knowledge and technology. A concept applicable to software coding just as much as it is applicable to philosophy, mathematics and any other field of knowledge, hacking here is meant to be the idea that new knowledge is now produced by breaking the rules and standards imposed by the previously existing one, by refuting them to find its inherent inefficiencies, its "bugs" and build a new paradigm that is more useful for the further expansion of human knowledge and progress (McKenzie, 2004).

Therefore the mission of the open-source movement and that of the hacker movement is one that draws from the particularities of their job, from the fact that they spend most of their time to create products and services that are completely virtual, despite their potential impacts on the material world. Nonetheless, this mission they advocate for is a social and political one, not to be relegated as a merely professional dilemma. They ask for every other professional field to grasp the mentality of the software coder to implement it in other sectors of human society, for the improvement of society as a whole.

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[6] This term is to be conceived as the informatic alternative to the notion of social construct. It is used to underline the connection between the virtuality of social constructs and the preponderant virtual character of the profession of a software coder.

II.II *The intersubjectivity of Rovereto's Bitcoin users*

It is also true that the very existence of the network itself requires coordination among different people, who fulfill different tasks. From the miner[7] confirming the validity of a transaction to the users transacting tokens, everyone is engaging with many more other people than the subjects interested by a transaction, when they use Bitcoin. Even the fact that the price in fiat currency of Bitcoin is determined by a globally interconnected, constantly active and non-regulated market, puts Bitcoin even more in the position of an intersubjective entity. Nonetheless, it is important to underline that all those interactions do not require its users to be "aware of the Other" in the way Husserl meant it initially: all those interactions are automatically regulated by software and the fact that the user is consciously enacting all those processes or not does not affect the final outcome of the interactions.

How can Bitcoin be considered an intersubjective entity then, if its users may not even be conscious of those interconnections? As it has been suggested, Bitcoin's open-source model of development may be intersubjective, but this does not imply that its usage has an intersubjective dimension different from that of fiat currencies. In the end they both enable people to perform economic exchanges more efficiently than they would be able to do with bartering. Simply, the "awareness of the Other", which is how intersubjectivity was defined by Husserl, is more than the mere presence of mutual recognition and understanding. It requires the actors to engage with a deeper understanding of their relation with other beings, it requires them to be conscious of the possibilities that emerge from the interactive environment that puts the participants in connection with each other. Intersubjectivity therefore emerges from the creation of trading places, that open up to new possibilities of interaction that the mere mutual recognition between individuals itself would not enable (Duranti, 2010). The presence of those trading places once we start considering currencies as intersubjective entities should be self-evident. Markets are the first trading place that comes to the mind because it is literally the place where economic trades are performed. Nonetheless, there are many other spaces whose creation is enabled by currency use: currency is a tool for the exchange of value, and its usage should not be considered ignoring the goods and services that are exchanged with it. Places such as modern universities or

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[7] The process of mining consists in adding Bitcoin transactions to the open, publicly accessible ledger that is commonly known as Blockchain. The word miner can be used to indicate the computing device performing this function, or the owner of the computing device as well (Antonopoulos, 2015).

hospitals are infrastructures whose functions could not be performed without a unit of value being involved, and hardly any interaction including the exchange of goods, services or skills can take place in modern society without requiring currency use.

And it is here, once we start looking at those trading places, that Bitcoin can be seen as an intersubjective entity that distinguishes itself from fiat currency. Actually, it might be said that the intersubjective dimension is even more intrinsic in Bitcoin than in Euros or Dollars.

Nonetheless, it is arguable that the intersubjectivity that underpins Bitcoin resides more in the creation of trading places described by Duranti (2010) than in the active awareness of the others that users may or may not possess, and here also lies the key difference (that arguably makes of Bitcoin a more "pure" intersubjective entity) with fiat currencies.

The trading places generated by fiat currencies are a combination of individual actors and institutions that establish and enforce the rules according to which those trading places enable individuals to engage with each other; therefore fiat currency is intersubjective in the fact that it finds its use case in the interaction among people, but its structure and model are not intersubjective, since they are determined by top-down approaches that do not require institutions to be "aware of the Other". A Central Bank President can enforce quantitative easing measures or regulatory measures on the flow of new currency without having to consult the whole network of users. On the other hand, Bitcoin is an intersubjective entity both in its use case and in its structure, that of a network whose characteristics rise from interactions among individuals solely. The individual users with their single interactions generate an aggregated outcome which forms the consensus: the set of rules that is established to work for every single user, in order to ensure the certainty that economic transactions are taking place in the same way for everyone (Antonopoulos, 2015).

Alessandro's experience is a good representation of the potential new trading places that Bitcoin's use brought to Rovereto. "After I got back to Italy, I had to find a way to fill my time productively, since Bitcoin was still not a viable business opportunity back then. So I got back to University but as I said I was losing interest for university studies. I started doing some speculative trading, unsuccessfully I must admit, and then I started thinking that if people like me did not push their social network to use Bitcoin as well, its success might never come, so I started going from shop to shop, trying to convince the owners to accept Bitcoin as a payment and proposing myself as the first customer. While doing this activity, I heard more and more frequently from the shop owners that another person, a certain Marco,

already visited them with the same intent, so I contacted him. As soon as I found out that he was starting the Inbitcoin company, I decided to jump in, and that is were it all started. I did not know Marco or Nicola (one of the others that participated to the creation of Inbitcoin) before I started advocating for Bitcoin use."

This story of Alessandro's personal and professional growth that took place in connection with his growing personal investment in advocating for Bitcoin is highly relevant to have a deeper understanding of the stories that Marco and Antonio shared: their increasing interest in Bitcoin helped them to connect to virtual communities, but also helped them to connect with people in their material world. In this last case it is particularly evident: he connected with people he had shared the living space with for a big part of their life, since they all live in Rovereto's area; still, if it was not for Bitcoin, they would have never created such strong bonds, and started a business project together. The usage of Bitcoin created new social spaces for him, where he could exchange economic value as much as knowledge and skills with new people.

It may be argued that it is the fact that the network is structured as a decentralised project that shapes Bitcoin as an entity whose intersubjective dimension is different from that of fiat currencies, and therefore such intersubjectivity influences Bitcoin users differently from how fiat currency usage influences its users. The consequences of building up a network such as the one underpinning Bitcoin inevitably leave up to the users' responsibility their management of their own economic resources present on the network. There is no bank that can recover the money you sent to the wrong person, or that funds you got stolen. But even more important than that: there is no company, no agenda, no roadmap that can give this technology a precise direction and make its users understand how its usability will change in the future, because its future is determined by what the absolutely autonomous developers will decide to work on during the spare time they have from their everyday activities and from their professional lives. This is probably what pushes Bitcoin users and developers to consider the intersubjectivity of this digital currency as different from that shaping fiat currencies.

In fact, all the characteristics previously described as expressions of this intersubjectivity were implemented by the first Bitcoin developers to create a digital monetary system that could actively deny any chance of free riding and counterfeiting while not having to renounce to the freedom and resistance to censorship granted by a system with no centralised authority

(Dai, 1998). Nonetheless, whatever may be the historical determinants of this particular condition, it is here that lies the key difference with the state-backed currencies that dominate the markets today, for what concerns intersubjectivity. While fiat currency makes interactions among individuals possible and it finds its purpose in the fact that they allow individuals to easily exchange economic value with each other, its legitimacy to be used an an exchange of value relies upon its institutional, centralised system: the political system is legitimised in the eyes of the population to print and regulate monetary assets, to ensure stability of the prices and regulate the State economic growth, but with the creation of such economic structures, the users choices and role in the governance of the currency and of its usage are far more limited than those possible with Bitcoin.

Moreover, it is also important to consider the current monetary systems for what they are when we adopt an user perspective: pre-determined institutional systems individuals are born in, over which they have no direct governance powers. All that a citizen of a country can decide to do with the national currency is decide whether or not to use it, with big issues rising if he decides not to participate to the monetary system of his country. Thus, it can happen that a user of fiat currency lives without ever questioning the legitimacy of the currency he is using. A user may never question the very purpose that his relationship with currency is supposed to fulfill, he may never ask himself why he uses this or that currency in the first place, or if he adheres to the principles underpinning the system itself. On the other side, since Bitcoin is a system that leaves total freedom of choice on participating or not participating to the network, it is arguable that even if cryptocurrency users may not question the fundamental principles underpinning this digital currency and even if they can ignore its working mechanisms, they must at least make an active choice to choose to use it as alternative to the fiat currency backed by the State they live in. While, for example, an European citizen has little to no necessity to question his use of Euros as a a mean of exchange, the very same individual will need to think about the very purpose of his currency usage and what is pushing him to use Bitcoin instead of the universally accepted unit of account that the rest of the community he lives in uses. He will have to find places that accept Bitcoin while on the other side Euros are accepted throughout the Continent, for example.

As a result of such thought processes, while Bitcoin users are not only free to question their economic relationship with others and how their currency usage influences their role in the community, but are even pushed to do so by the obstacles posed by their choice of using a

currency that is not State-backed, fiat currency users are never necessarily demanded to question their use of money or how it influences the ways they relate with others: they were born within the currency system they use for all their life, and often there is little to no alternative to their national currency if they want to be able to transact within their community efficiently.

III

Techno optimism and crypto-enthusiasm

III.I *Techno-optimism as a push factor for participation*

Flying cars and self-tying shoes may not be a reality yet, and the sci-fi novels and movies, as well as the latest technological advancements of the 20th and 21st century have surely played a role in shaping individual attitudes towards technology. Those phenomena pushed individuals to be on one side disappointed by the current status of technological progression (especially for what concerns the baby-boomer generation) and on the other optimistic about the future perspective of tech progress (Graeber, 2015).

There is also little to no doubt that those mechanism have a role to play in the ongoing rise of cryptocurrency as well. From A. Antonopoulos to N. Taleb, many have compared the invention of the Bitcoin network to that of the Internet in literature, and their thoughts, even if not directly, I observed to be impacting hugely on the attitudes towards technology that users in Rovereto developed towards new technologies. Through my fieldwork period I had the chance to observe many different perspectives on technology, but I struggled to find anyone who did not share, at least up to a certain degree, the optimism on the future impact of Bitcoin on current ways of living. "As the Internet changed the way we inform ourselves and relate to each other, cryptocurrency is going to change economic systems and the way we exchange value with each other" I heard many times not only from the professionals working with Bitcoin, but from simple users as well, such as the owner of the Mani al Cielo bar.

"Bitcoin is beautiful, it brings people together, but not all the people: the right kind of people, those with optimism for the future, those who want to build something. People of all ages and with different interests and lives, that get together under the Bitcoin flag. A common cause" I remember Giuseppe told me the first time I met him in the ComproEuro, a shop located in Rovereto's city center where people can go to gain information on Bitcoin and can even use an ATM to exchanged their euros for the digital currency. He was escorted by two thin men in their early twenties. "They're miners you see" said Giuseppe as an introduction "they came here to see the Bitcoin Valley everyone is talking about". I have to admit that it was quite hard to deny that Giuseppe's words on Bitcoin bringing people together was hard to criticise in that moment. I was actually sitting with a third age man from Rovereto and two young

adults who I found out were from Sud Tirol, while being a young adult myself whose only reason to be there was Bitcoin. Nonetheless, the optimism is lampant in this situation as well: what are the "right" kind of people? Why should developing a passion for a technological tool such as Bitcoin inherently imply that you are a certain type of person? Maybe because he was taking for accounted that having an interest in Bitcoin is only possible for a person if in the first place that person adheres to the cypherpunk set of values?

I only was lucky enough to meet two people that surprised me with a more pragmatic and less optimistic perspective on the future outcome of human technological process: Antonio, the developer mentioned in the previous section, and Alessandro, one of the associates of the Inbitcoin company, who does not have a coder background.

Antonio: "Take Android for example: it was started from Google as a "nerd" project, that only interested developers and people from the high-tech sector. Today Android is the most used mobile operating system, and the more popular it gets the less "open" and customisable it becomes, but it is still an open-source operating system. What I am trying to say is that open source projects are fragmented, hard to implement and not as user friendly as commercialised products, but they manage to find their own way to be successful. Nonetheless the variables are so many that it is hard if not impossible to predict what the future of Bitcoin is, it will depend on the public understanding of the technology and how willing will people be to give up user friendliness for true decentralisation (...) we are already up to a point where all genres of intermediaries are providing Bitcoin related services. The more Bitcoin grows the more they pop-up." In that moment, I saw that Antonio's perspective on the potential of Bitcoin was opening up to the possibility of failure, or more in general to a less optimistic outcome, than his colleagues did, and I tried to stress on the possible negative impacts of Bitcoin up until he admitted: "I don't have blind faith in Bitcoin, it is not a religion, it is a technology and as such can be used for the good just as much as it can be used for the bad."

Alessandro's perspective was even stronger. The first time I met him, it was in the Inbitcoin office. Located near Rovereto's city center, the office is a 3 room space with a big hall and a couple of small rooms filled with computers. It is characterised by a minimalistic furniture, consisting of just a few framed pictures of the team members, a flat screen tv, a printer, a white glass table and a few of the bitcoin all-included boxes, that are sold by their partner company franchise ComproEuro. A giant sign with an Inbitcoin's symbol on it is positioned

just below the shelves the pictures are put on. Alessandro is waiting for me sitting at the table in the middle of the room and welcomes my arrival with a big smile and an energetic handshake. I would soon find out that he is only one year older than me, yet he looks way more mature because of his way of talking, which is very calm and reflective, something rare to find in my generation. As soon as we start talking, I am impressed by how easy it is for him to understand what I am looking for in my interviewing. While generally people I interview start answering being skeptic about my work and the replies they should give, he is very open from the very beginning to talk about his personal story.

"I got interested in Bitcoin in a moment during which I was affected by a general lack of interest for any field of study I was getting into. As soon as I got too deeply into a subject, like economics, I started losing interest for it and finding something completely new that was absorbing my attention. For this reason I found it hard to just focus on one field of study to then find a job in that sector." Then he tells me how he got into Bitcoin after failing to keep up with various university courses, in a moment of break from studying, while he was living in Berlin. "It was simply what I was looking for: a subject combining many different fields from economics to software engineering, that also had a political frame I shared. For me Bitcoin is really about the poorest, a tool to ensure that poor people can benefit from economic growth and be ensured to have acceptable living standards without having to necessarily reduce the wealth gap."

Starting from this perspective, we got to talk about politics, spanning from Marx to anarcho-utopism and then anarcho-capitalism and the views of the cypherpunk movement that sparkled the idea of a digital, decentralized currency. "I am not a libertarian" he told me laughing, since many people in the Bitcoin environment are radical libertarians, this precisation is necessary, "but I do believe a high degree of individual freedom is necessary to enable people to live a fulfilled life, and Bitcoin helps to bring freedom of choice for what concerns their financial future back in the hands of the individuals, what they will do with it is another matter." From politics we move the focus to globalization, and from there we end up talking about sustainability and climate change. "I am a huge advocate for sustainability, at least on a local level here in Rovereto, where I participate to a youth association activities aimed at sensibilizing the population about environmental issues. For me Bitcoin is a solution only if we overcome climate change issues and do not get extinct before, which still seems the most likely scenario if you ask me."

Here you can see why I thought that Alessandro's perspective on the future of human society was the one grasping the most from the actual situation and relying less on Bitcoin's potential and technological advancement in general as a way to find new solutions to old problems. A vision that collided with the one provided by one of the few people I met who came from outside the Valley: Vincenzo. Vincenzo is a man with a distinguishable clothing taste, the only time I saw him, his sky-blue suit and eye-catching, light colored tie instantly got my curiosity, but as soon as I started to talk with him, he got my attention as well.

He asked me what I was studying, since Marco introduced me to him as the "anthropologist", and as soon as he heard the word sustainability, his eyes sparkled and he started to ask me what I thought about climate change and intergenerational issues. Nonetheless, the time to reply that I was given was very short, because as soon as he understood that I was sharing a pessimistic perspective on the future role of humankind in protecting nature, he interrupted me with a: "You are a smart boy, you should not worry about these issues with such a pessimistic point of view. All these environmental issues are being discussed without considering the time bias: that when these problems will hit us significantly, we will have far better technology and will have evolved and improved in our capabilities. Those who worry about the problems and do not work on the solutions are those who cannot overcome this temporal bias, while on the other side there are successful entrepreneurs, people like us today, who think about how to use this time bias to their own advantage and for the betterment of human living."

His view on sustainability issues and especially the subject of time-bias found me off guard: never before I had a conversation on the topic with someone that had such a strong and original opinion. Yes I am aware of the importance of time-bias when one addresses the topics of technological advancement or sustainable models of development, but I had rather looked upon it with a reversed point of view: up until that moment I considered time-bias as one of the root causes of techno-optimism, not as a factor shaping techno-pessimism.

Nonetheless, even Alessandro was deeply convinced that Bitcoin's impact will be huge and that usage of cryptocurrencies will change the way we organise our economic relationships forever. "I am a Marxist, but I do not believe that the revolution will come from the people, it will come from the sublimation of capitalism not from its destruction, and Bitcoin can speed up the processes that will anyway bring to the sublimation of capitalism. The fact that it is scarce makes it a deflationary asset and that will help wealth to spread over to the poorer

classes, without demanding those who already have more than enough to give up their own assets."

Eleonora as well described to me her hopes for Bitcoin's future impact. She graduated in psychology but decided to give up working in the sector when her boyfriend, who was an Inbitcoin developer already, asked her to join the project. "It started as a simple interest but then I got increasingly engaged in conversations on the topic with my boyfriend or other friends who were into Bitcoin; my interest at the time was that of having a job that makes a positive impact on the world, I did not care if it was strictly linked to psychology or not and I started thinking that working with Bitcoin could be a way to achieve that. Many psychiatric and mental issues are connected to economic struggles that people experience throughout their life, with the deflationary asset that Bitcoin is, but also thanks to the fact that it is a bottom-up movement I believe we could give people more financial stability and as a result improve their mental health."

The same passion and optimism for the future that I saw in Valeria's eyes while she was talking about the Vespa scooter she bought to expose in the ComproEuro, the selling point previously mentioned she works for. Valeria is a very energetic girl, whose young age has not impeded her to enter the world of Bitcoin-centered businesses as soon as she got out of high school. She is only 19 years old but she already works in the administrative section of the ComproEuro. As I was saying, the first time I met her she was talking about this scooter she wanted to put in the shop, because she said: "The Vespa, for me, is a symbol of freedom, as Bitcoin is and I want to communicate this concept to our customers. Bitcoin can be a way for them to free themselves, to empower themselves. I come from an anarchic family, I participated to anarchic community centers activities and therefore I know that anarchy is not the absence of rules as many think, but rather it is the idea that people should be free to participate to whatever rules system they prefer. Bitcoin for me is the synthesis of this principle in economic terms, and that is why I developed such a passion for it. I have to admit that I am not sure I would have known about it if it was not for this working experience, that is why I want to spread the word about Bitcoin as much as I can."

As it is noticeable from these conversations, it seems that Bitcoin users here in the Valley are not simply adhering to Bitcoin because of the personal fulfillment or gains they can get from it, for them this digital currency is a way to work on something they believe could have a positive impact on society. The type of impact they look for seems to depend a lot from their

educational background and personal attitudes. Alessandro's vision is that of Bitcoin as a disruptive force that breaks the fragile economic relations underpinning the liberal, capitalist system we live in, while Eleonora's hopes are for a currency that helps remove the anti-social outcomes deriving from financial instability. Antonio sees Bitcoin, and Rovereto's Bitcoin Valley in particular, as a way to improve his software development skills in an area where he can receive direct feedback on the products he codes, while for Marco it is the chance to bring his skills and knowledge in machine learning to what he considers the best open-source project active today, as he considers open-source development as the frontier where new paradigms of technology based systems are being created.

It is on the declination of those ambitions and long-term objectives that the techno-optimism I observed in Rovereto distinguished itself from the techno-optimism observed by Graeber in "Debt: The First 5000 Years" (2004). While his description of techno-optimism is based on the perception of technology that his generation developed through sci-fi novels and movies. This perception was developed way before the Internet was created and participative, freely accessible and anti-censorship networks such as the TOR network or WikiLeaks were created. Graeber's generation was one still conceiving technological advancement as something tangible, with a pragmatic impact on the physical world, while the new technologies that started being developed from the 80s is more simulative technology. The technology of computers and the expansion of their computational power is not one that as the same tangible impact on individuals that inventions such as mobile phones, or walkmans had, opening up to new ways for humans to approach the material space they live in directly. Thus, the latest technological breakthroughs of the 21st century deluded the expectations of those coming from the analog age, the generation that experienced the boom of technologies strictly linked to the material world.

On the other hand, it is also true that the people I engaged with in Rovereto were very well aware of how technological tools now have more to do with the digital than with the physical world. Marco and Antonio provided me many insights on the mechanisms open-source development relies upon, they have shown that they possess a deep knowledge of the principles underpinning the open-source movement. Thus, their interest in the digital realm does not reside only in the impact it could have on the material world, it is an interest strictly linked to the digital network itself, and that was developed in virtue of the fact that since it is a digital network, it required different principles, structures and rules to work than the

networks present in the physical world. I talked with Marco for half an hour on the single matter of how the Linux community, being based upon agreements among equal parties, addresses issues related to the election of representatives of open-source projects and foundations. Despite the fact that this conversation started from real life politics, its scope soon verted towards the uniqueness of the elective systems they have within the Linux community because of the fact that they are solely virtual. The interest shown by some of Rovereto's Bitcoin users towards new technologies is also linked to their digital nature then, which is something they do not see as a delusive aspect of it, but rather as a reason of even major interest. In other words, the interest that people in Rovereto have developed for cryptocurrency technologies does not rely on the potential impact that it may have in the real world alone, it recognises and may even be fueled further by the fact that it is creating new forms of collectivisation and getting people together within the digital realm. The digital-only side is as important as the physical impact part, because they are interconnected and one cannot exist without the other in current times.

Most importantly, those new simulative technologies opened up to the possibility of the creation of decentralised, censorship resistant networks, that put the individual at the center of the system mechanisms: the individual is at the same time the creator of the content and the person the content is created for. WikiLeaks does not distinguish readers from whistleblowers, its objective is to ensure absolute freedom to both by guaranteeing them total anonymity. Even centralised networks such as Facebook, or digital companies such as Microsoft that are supposed to be self-enclosed environments, rely on the idea that the user is also a content creator and that his direct participation is not only encouraged, but it is the factor the network existence itself relies upon.

Is it that the fact that those systems rely on free, individual participation, use consensus mechanisms to approach governance matters and are built from bottom-up movements, which may have pushed Bitcoin users (at least for what I observed in Rovereto) to switch the flip of techno-optimism? This may be a factor that played a role in pushing Rovereto's users to approach Bitcoin with a mindset different from that techno optimism described by Graeber (2004) as a feeling that all of humanity problems would eventually be solved by future technological advancements, that we just need to wait long enough and the constant, human, technological progress will provide us new tools to overcome climate change, overpopulation or resource scarcity. The type of techno-optimism expressed by the people previously

mentioned does not seem to entirely be represented by this passive way of thinking, it looks like a more creative feeling and that implies the active participation of the techno-optimist himself to the development of new tools and solutions that can improve Bitcoin and spread its usage.

It is like if the motto of techno-optimism changed from: "what can technology do for me to improve my life?" to: "what can I do with technology, that can improve my life and that of those around me?" These people do not want to grasp personal profit from Bitcoin volatile value, they want to create new services, provide better ways to implement cryptocurrency in our everyday life, and their aspirations for the future they see are not relying on their passive benefitting from a new technological tool, but rather, they seem quite fueled by the contribution they provide to the Bitcoin network.

This situation is particularly interesting and its importance can be betterly understood with a comparison with one of the oldest stories related to the relationship between humans and technology: the Greek myth of Prometheus. Prometheus was a Titan, who stole fire from the Gods and gave it to humanity, disobeying Zeus' orders. Prometheus is the representation of the divine origin of technological tools that many civilizations had before the advent of Humanism. This myth represents the vision of Humans as passive entities, whose capabilities are not determined by their own talents and knowledge, but they are the result of the plotting and the actions of more than human entities. In other words: men did not discover fire, it was stolen from the gods and donated to us, if it was not for Prometheus, we on our own would not be able to use fire. Well, the passive techno-optimist attitude described before can be seen as the post-humanist version of this vision: stripped of its divinity, but still connected to the vision of individual himself as something subject to technological progress.

On the other hand, it looks like if the personal attitudes towards Bitcoin of the users from Rovereto mentioned so far do not share this vision of the future of technology. Antonio's hopes for Bitcoin's future are strictly linked to his work aimed at improving the user friendliness of the technology. Eleonora's hope for the future positive health effects that economic stability can ensure are not something she is just waiting to happen through a spread of Bitcoin usage, she is actively working in a company that is trying to provide services that ease this spread of usage. In other words, those people consider themselves to be their own Prometheus. They see a potentially beneficial use of fire (or Bitcoin) and want others to see it too, but they will not just passively wait for someone else to advocate for

cryptocurrency use, or to provide the tools necessary for the people to engage increasingly more with cryptocurrency, they will actively work to make their hopes and aspirations come true.

Considering how Rovereto's techno-optimists seem to differ from those coming from the technological expansion of the Fifties and Sixties, there is an important observation to be made before closing this section. The techno-optimism described by Graeber (2004) is one of constant delusion, generated by a dichotomy between the expectations of human technological progress that people have and the actual improvements that those technologies provide impossible to overcome, because it is the result of years and years of education of the generations that came before the digital revolution, that flying cars and self-tying shoes were not just a sci-fi movies thing. The techno-optimism I observed in Rovereto in relation to Bitcoin instead is differently characterised, but it cannot be defined as something completely different from the one analysed by Graeber, because the fact that it is a feeling of optimism towards the future impact of a technology is undeniable. On the other hand, the fact that this is an active techno-optimism, one that pushes the individual to work to make his expectations meet reality in the future, hardly can be seen as a source of delusion and illusion as the baby-boomers' techno-optimism. Rather this feeling towards the potential impact of new technologies on our ways of living, being in the case of Rovereto's users strictly interconnected with a willingness to work and actively participate in the creation and spread of use of those technologies, should be distinguished from the techno-optimism Graeber described. It could be described as a participative techno-optimism, to describe the fact that the very same optimistic hopes about future humanly driven technological advances push these people to cooperate with each other and get together to put their skills and time at the service of technological advancement.

What kind of impact it will have on future human societies is something no one can predict, but surely the particular connotation of this participative techno-optimism and its analysis as a proactive force rather than one that creates alienation and disillusion is something to be considered by future researchers focusing on this topic. It might be arguable that such a notion may not only be relevant for decentralised, distributed technologic networks such as Bitcoin, but for the software technologies that are being developed since the start of the 21st Century. Social medias, Open Access academic journals or hubs of blogging and writing platforms are examples of the fact that digital networks are now relying increasingly more on

the aggregate impact of individual content creation. Such a dynamic has surely an impact on individual attitudes towards technology, an impact that may push them to be pro-active as they are the main resource the technologic tool itself is relying on right now.

On the other side, the technological breakthroughs for previous generations were big revolutions that had an impressive impact on the material world and were seen as causative forces. In the case of participative techno-optimism, the causative force remains within the human dimension. The participative techno-optimist can be considered as optimist because he believes that the empowerment of the individual is made possible by these technological tools, but does not consider the technology itself as a causative force.

III.II *Between Rome and Rovereto*

Following a first period in Rovereto, I decided to go in Rome after finding out that the Italian capital city has many places for Bitcoin-accepting commercial activities in the Country, with more than fifty activities open to cryptocurrency payments[8]. I was surprised, because I personally developed an interest for Bitcoin a few years before when I was living precisely in Rome, but I never heard anyone talking about it in the three years I spent in the city. The idea of being able to compare Rovereto's Bitcoin Valley with the situation in Rome was stimulating, but I soon found out that the experience I had in Trentino was very different from what i would have seen in Rome. In the few weeks I spent in the city, I was only able to gather a few interviews I was only able to gather a few phone interviews, despite the fact that the interviewed subjects were all in the city when I contacted them, lacked time to engage in a face to face conversation and I was not able to find a cohesive community that was gathered around Bitcoin use as I found instead in Rovereto.

I was excited at the idea of being able to meet Italians that shared an interest for Bitcoin, but lived in a densely populated area. The impact of urban environments on social mechanism, and as a consequence on individual attitudes and behaviours has been studied widely and it has been observed that social interactions and the creation of networks is affected by factors that are not present within small villages and sparsely populated areas where the community is smaller, less dispersed and deeply interconnected. In particular, the impact on the creation

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[8] The following website was used as a reference for the number of of activities accepting Bitcoin payments in Rovereto and Rome: http://www.coinmap.org.

of networks and of participating political infrastructures in currently expanding metropolitan spaces has been observed to be deeply impacted by the processes of creation of urban and suburban neighbourhoods. On one side it seems that the living spaces produced by modern urbanisation make it difficult to recreate the same participative community organizations that have worked as governance supportive associations up until the 20th century urbanisation process. Still, there are new possibilities in the fields of participative governance and community management that the concentration and subsequent interconnection of people in urban neighbourhoods open up to: new infrastructures and modalities of cooperation involving the creation of common goods and public infrastructures such as shared gardens for food production or local political institutions based on occasional voluntary participation (Kirman, 2010; Jamieson & Di Paola, 2016). Therefore, I was keen to see how urbanisation processes affected Bitcoin's usage in Rome, but I did not expect it to be so much harder to find users open to share their experiences as compared to Rovereto, were it only took me a few days to connect with both professionals and simple users that were willing to talk about their life in the Bitcoin Valley.

While the bar Mani al Cielo and the ComproEuro where two gathering places for Bitcoin users in the small village in Trentino, there was no similar thing that I could find in Rome. Browsing through MeetUp[9], the website used all over the world to gather people together on the basis of common interests and widely used by Bitcoin users to reunite, I was only able to find what I thought would have been an informative meeting about Bitcoin, but ended up being an event targeting potential investors. The meeting took place in a Startup Hub, ran by one of the local universities. As I walked through the modern building I was struck by how it shared the same characteristics as the Inbitcoin office and the ComproEuro shop I visited in Rovereto: all of them are recently renovated buildings, with white as dominant colour and a minimalistic furniture to give an overall sense of practicality and efficiency. Yet, this event turned out to be my first direct contact with the speculative side of cryptocurrencies, radically different from what I had observed in Rovereto. "Bitcoin's rising days are over, it is overpriced already" or "Bitcoin's technology is old, the real revolution is in new blockchain technologies" were two of the phrases that hit me the most. Bitcoin was spoken of as a technology or as a financial asset, but not as a currency. Surrounded by an audience of middle-aged entrepreneurs, the more the meeting developed, the more I thought that the

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[9] http://www.meetup.com

social and technological revolution that people from Rovereto described to me was absent in that meeting in Rome. The speakers seemed to be financial advisors, rather than cryptocurrency experts, and spent more time talking about trading investments in cryptocurrencies than explaining the technology, or talk about its potential use cases.

My experience in Rome may be considered irrelevant at a first glance, to develop a better understanding of the main focus that Rovereto users are, still it may not necessarily be so. I do not think that if I spent more time in the city I could have found active members of the Bitcoin community, what is arguably understandable from this experience is that the complexity related to social interactions that densely populated, urban areas like Rome is not present in Rovereto. Others may have faced the same difficulty that I encountered in creating a network of people interested in Bitcoin in Rome. Obstacles to the creation of network of people based on a common interest that clash with the easiness I experienced in finding cryptocurrency users in Rovereto, where the population is smaller and social interactions more frequent, but also where a small group of people was able to build a tangible community around Bitcoin's usage as a currency. Such a community project may not have been as successful in the Roman urban environment both in its starting phase and in its consolidation. It is also important to consider that the Bitcoin Valley was created by people who did not work together, or even know each other, before Bitcoin arrived in their lives, but they had already invested a lot of time and energy in understanding Bitcoin and trying to spread knowledge about it in Rovereto before starting to get in connection with each other to build Inbitcoin, the first piece of the Bitcoin Valley puzzle. Even Valeria, when asked if she thinks that this project is transferable and applicable to other areas said: "I don't believe the Bitcoin Valley we have here could be reproducible in big cities, but smaller towns sure. The sociality is crucial, the fact that here in Rovereto everyone knows everyone else and that people are constantly in contact with each other is something that I believe has helped a lot to bring this project to success."

Marco and Alessandro got interested in Bitcoin on their own, and used information available online to develop their knowledge, without having any friends or acquaintances they could confront on the subject with, let alone have the widespread social network of Bitcoin users that they can enjoy in Rovereto. Their contribution to the establishment of the Bitcoin Valley was important, yet the dynamics that brought them to become Bitcoin users are way different from those that pushed who was not interested in Bitcoin before it arrived in their hometown.

Out of the thirty people I briefly interviewed in the ComproEuro, only four told me that their first contact with Bitcoin was thanks to a newspaper or a blog article, while the rest of them was initiated to the topic by a friend, an acquaintance or a relative. If it was pure interest in the subject that pushed Alessandro and Marco towards Bitcoin, it seems that a large part of the average users is pushed by their social connections to inform themselves at least about what is going on in their very own city.

Additionally, it is interesting to reflect on the fact that if Rovereto has pushed this research towards the elaboration of a new paradigm of techno-optimism, a participative techno-optimism, the meeting that took place in Rome, which was mainly focused on attracting the investment of entrepreneurs in the cryptocurrency market and in startups related to cryptocurrency, seems to be a representation of the fact that the passive version of techn-optimism is still alive. And this is not hard to believe once one looks at the bigger picture of the financial market there is around not only Bitcoin, but many other cryptocurrencies: it is undeniable that cryptocurrencies have attracted a vast amount of people just for the potential economic returns they can bring in fiat currency, people who do not necessarily participate actively to the construction of a better future perspective for Bitcoin usage but simply want to take economic advantage if this perspective actually materialises (Russo, 2018). Nonetheless, it is also true that one reality has not prevented the other from expanding so far. They may even reinforce each other, as the rise in value of Bitcoin can attract new professionals and the improvement in the technological fundamentals may attract new investors. Bitcoin has expressed so far the incredible ability of conjugating interests which may seem intrinsically in conflict. The interests of people with radically different political views for example, but this dichotomy between speculators and users (or in a broader perspective we could say participants to the network) is very representative of the cohabitation of not only different but potentially conflicting interest groups.

Concluding remarks

To write the conclusions included in this final section and as a general methodological framework I referenced to "The Mushroom at the End of the World" by Anna Tsing (2015). Tsing's work is particularly important to understand the overall perspective adopted throughout the data collection and its interpretation in relation with the theoretical section. Her ethnographic work on the matsutake mushroom and its pickers was the result of the analysis of many different factors differently interconnected with each other, and no single factor or perspective among the many she used to approach her research was in the end considered by Tsing to be the key to tackle her research question, because she considered the interconnection among the different factors, points of views and experiences that shaped the final outcome of her research.

In the previous sections I analysed the following topics:

- the anarchic elements present within Bitcoin's infrastructure and how they are related to individual attitudes towards Bitcoin for what concerns Rovereto's users;
- the intersubjective character of currency and how it applies to Bitcoin in particular, which is a *sui generis* currency, being the first monetary system to be completely digital;
- how this intersubjectivity may have influenced Rovereto's Bitcoin users personal attitudes related to currency usage;
- the impact of techno-optimism on individual attitudes towards technological innovation for what concerns the subjects interviewed in Rovereto;
- to more accurately represent the different feeling that Bitcoin users seem to possess in comparison to the techno-optimists described by Graeber (2004), the notion of participative techno-optimism

All these notions have been analysed firstly on a theoretical level and later for their relevance in connection to Bitcoin users in Trentino, using the interview material collected in Rovereto's Bitcoin Valley. It is arguable that from what observed in the previous chapter about the anarchic elements of Bitcoin, the particular intersubjectivity of this cryptocurrency and the active techno-optimism it pushed its users to feel, all those elements, have played a

huge role in shaping the Bitcoin Valley and its users for what they are today. Nonetheless, among those elements, there is no single variable that can be considered playing a role on its own, without considering how it is intrinsically related to the others. Anthropology is supposed to represent the hypercomplexity and non-exclusivity of the various aspects and factors that shape the world we live in, not to oversimplify it with rigid categorisations and standardisations of those variables, representing them as self-contained theoretical notions. Therefore no final answer on which among the crypto-anarchic ideology, the intersubjectivity pushed by the open-source development model of Bitcoin and its decentralisation and distribution or the techno-optimist feeling can be considered to be the main push factor that brought to the spread of Bitcoin use in Rovereto. All those elements contributed to the success of this project and may have pushed different people to become Bitcoin users for different reasons. The anarchic character underpinning Bitcoin's infrastructure and its very creation have undoubtedly influenced the intersubjective character of Bitcoin, but it is not to be ignored that similar conclusion could be taken with a diametrically opposite perspective: the particular intersubjectivity of Bitcoin and that of all currencies may have influenced the declination of anarchy as intended by crypto-anarchists and cypherpunks. In other words, Bitcoin is the material example of the fact that the implementation of crypto-anarchic principles within economic structures is possible, and such an example may have pushed some Bitcoin users that do not consider themselves as anarchist to reconsider their positions on certain principles underpinning this political methodology. For example, Valeria's support for anarchic principles comes from her familiar tradition and are strictly related to the political tradition of anarchism, which precedes the crypto-anarchist movement, while on the other side Alessandro's political views cannot be defined as anarchic, but still the anarchic principles implemented by the cypherpunks in the Bitcoin network are something he has demonstrated to agree with, an agreement that he does not see as alternative to his political beliefs. The same perspective can be applied to the impact of the open source development on Marco and Antonio: Marco has a long experience in open source development and his passion for Bitcoin first came from this adherence to the principles that drive the open source movement, while for Antonio, who has had less experience in the open source sector, the motivations might be less ideological and more related to his professional improvement: having a global, constantly interconnected platform where to put your skills at work together

with colleagues from all over the world may be a great way to boost your abilities in software development.

All those different influences should not be ignored, the fact that such strong ideological premises as those dictated by the cypherpunk movement and implemented in the Bitcoin network are not only freely adopted by Bitcoin users that do not consider themselves anarchists, but appear to be considered by users exactly the reason people from different political and ideological backgrounds get together to use Bitcoin, is a dynamic new to the creation of macrosystems such as currencies or political institutional models since the establishment of modern democracy. This is the reflection that should arise from the description of the individual attitudes of Bitcoin users in Rovereto: it is not the adherence to a particular characteristic underpinning Bitcoin's network or its community that pushes people to become users of this digital currency, rather it seems that it is the fact that this set of principles and characteristics are perceived by its users as non-exclusive. Despite the fact that Bitcoin was created by the radical movement of cypherpunks, Bitcoin users do not see those values prioritised by cypherpunks and implemented within the technology as something that creates an out-group composed by those who do not adhere to the overall crypto-anarchic mindset. Rather, they recognise the presence of those rules as what makes the creation of a community composed by people with different political and social values possible.

There is no doubt that crypto-anarchy is different from traditional anarchy: as we mentioned in the first section of the first chapter, the latter is a strategy more than an ideology, while cypherpunks see anarchic principles as a tool, not as a morally necessary precondition, useful to achieve their desired outcome. Still, because of the fact that Bitcoin implemented principles that come from traditional anarchy, its structure maintained one of its essential characteristics inherent in values: they are not values supposed to gather people on the basis of their adherence to a specific set of values but quite the opposite: those characteristics are the necessary pillars on which interaction among people having different attitudes and motivations can take place. Therefore, new theoretical paradigms and notions should be explored by ethnographers and anthropologists in general, when it comes to the study of cryptocurrency users. The development of the notion of participative techno-optimism is just an example of the fact that anthropologists need to engage with this new sector of society without falling into the easy prejudice of reading the complex social reality related to cryptocurrency use with theoretical paradigms that were developed for previously existing

economic structures. To analyse the impact on personal attitudes that cryptocurrency usage may have on individual users, a new anthropological perspective on the relation between individuals and economic systems may be necessary to be developed. In addition, it is important to address that for what concerned this research, the previous experiments of the open source movement have been of great help to understand the different, interconnected dimensions underpinning Bitcoin's network and how they can affect users that are in touch with the open source environment that has been built around Bitcoin's development. Looking further at research on open source developers and their personal attitudes may help provide a more comprehensive theoretical paradigm for understanding Bitcoin users. Ethnographic works that put in connection those two worlds may be very effective to overcome the lack of knowledge and material produced within the field of anthropology, for what concerns cryptocurrency users.

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