

Bitcoins Left and Right

A Normative Assessment of a Digital Currency

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1. Introduction

Suddenly, Bitcoin was everywhere. It was a new kind of money increasing in circulation each day. Some heralded it as the currency of the future: an electronic and private money better fit for a digitalized world. But others argued that it was only a fad. Yet again others warned of its dangers, for example its connection to “hactivism” and criminality (for overviews, see Ammous, 2021; Birch, 2020; Vigna & Casey, 2016). It seems fair to say that Bitcoin is a dividing phenomenon in contemporary society. Countries such as Iceland and Bolivia have banned it altogether, mainly due to concerns with money laundering. In the USA, there is no general regulation of Bitcoin but a patchwork of rules on both federal and state levels that seek to address various concerns. The discussion within the EU is yet to be resolved.

We will not try to speculate about the future of Bitcoin here, as this seems almost impossible to determine. However, this chapter is among the first to discuss the justification of digital or virtual currencies from the perspective of political philosophy. Our central concern is whether there is a normative case for Bitcoin—that is, is it a superior (or inferior) form of money from a moral or political–philosophical point of view? It is important to qualify this question further since contemporary debates about Bitcoin concern a range of related yet disparate issues. For example, some are discussing the appropriate response from individual consumers and businesses; whether we as individuals should be supportive of its development (cf. Angel & McCabe, 2015). Others are discussing the appropriate political response; whether Bitcoin should be banned, allowed, or promoted as a (national) currency (cf. Lambrecht & Larue, 2018; Scharding, 2019). Our focus will be on a realistic version of the latter question. That is, we will discuss whether there is a normative case for (politically) allowing or promoting Bitcoin as a major currency in society. By “major” we mean that it is used in a significant portion of economic transactions, either alongside or even instead of other (national) currencies. We take this question to be both practically

and theoretically salient, and thus it provides a fair test of the normative standing of digital money.

Our discussion is focused on Bitcoin, but the intention is to be relevant also for other examples of “cryptocurrency” or digital money.¹ There are several contemporary examples with striking resemblances to Bitcoin, such as Litecoin, Dogecoin, Ethereum, and Cardano. However, given the enormous speed of innovation in the area, we cannot guarantee that all aspects of our discussion will be relevant to all variations. In any case, we have chosen to focus on Bitcoin since (i) it was the first major digital currency, (ii) it is still the most popular such currency, and (iii) it seems that its normative underpinnings have been made most clear by its supporters. Examining Bitcoin thus seems like the natural first step in normatively assessing the phenomenon of digital money.

The chapter proceeds as follows: section 2 gives some further background on the history and basics of Bitcoin. Thereafter we proceed to the normative analysis, which focuses on two central theories of moral and political philosophy: section 3 discusses libertarianism (which is often associated with “right-wing” politics) and whether it can provide a justification for Bitcoin; and section 4 discusses egalitarianism (which is often associated with “left-wing” politics) in the same regard. In the concluding section, we summarize a few findings as they relate to the more general question of what kind of money there ought to be.

2. What Is Bitcoin?

The concept of Bitcoin was first introduced in 2008, in a paper by Satoshi Nakamoto posted to an online cryptography mailing list (Nakamoto, 2008). It is controversial whether this Nakamoto is a real person, a pseudonym, or perhaps the name of a larger group of people (Davis, 2011; McGrath Goodman, 2014). In any case, the paper described the design of an electronic payment system using cryptography and peer-to-peer networking to ensure the security of transactions. This design would displace the need for financial intermediaries such as banks to ensure security. As Nakamoto put it, it was a payment system “based on cryptographic proof instead of trust” (Nakamoto, 2008: 1).

That the system is electronic or digital means that bitcoins (the individual units of Bitcoin) do not exist as physical coins or bills but only as information on a computer network. When a transaction is made, a digital message is sent through

¹ The terminology is somewhat unclear in the area and new currencies can be referred to as cryptocurrencies, digital currencies, virtual currencies, or online currencies. The term “cryptocurrency” highlights the connection to cryptography, while both “digital” and “virtual” highlight the connection to online rather than physical existence and use. We have chosen to use “digital currency” as the general term. We realize that also traditional money often is digital in the sense of existing only on a bank’s servers, but this is not our concern here.

the network to transfer the ownership of coins. The technique here is known as the “blockchain” and may ultimately prove useful in a variety of contexts. It is a crucial element of Bitcoin that the transaction is recorded in a ledger on a wider network, rather than on a central server. This means that transactions are “public” and beyond control by individual users. Furthermore, it means that the transactions are non-revocable; that is, that the bitcoins “change hands” in a final way (Ammous, 2021). In this respect Bitcoin is similar to bank notes, but dissimilar to credit card payments that can be cancelled at a later time. While the transactions are public, the identities of the transactors and owners of bitcoins remain anonymous. Privacy is secured through a strong public-key encryption which restricts access to individual electronic accounts (known as “wallets”). Thus, the introduction of Bitcoin means that we can transact “anonymously and untraceably” on the internet.²

One might ask: Where do bitcoins come from? The somewhat surprising answer is that, just like gold, they are mined. However, the mining process is electronic. In order to get a hold of new bitcoins one must set one’s computer to help maintain and expand the Bitcoin cryptographic ledger, which basically involves solving very difficult mathematical puzzles. Success in this is presently rewarded with 6.25 bitcoins per “block.” In order to have an orderly introduction of coins into circulation, the rewards per block will decrease over time. Moreover, there is only a limited amount of coins that can ever be put into circulation. There can never be more than 21 million bitcoins (Nakamoto, 2008). That might sound like very little money, but each coin is divisible to the eighth decimal which should ensure that there is enough coinage for most transactions.

The limited supply of bitcoins will likely mean that their value will rise over time, especially in our scenario where Bitcoin is allowed or promoted as a major currency in society. In this way, one could say that deflation is built into the design of the currency (ECB, 2012; Franco, 2014). As the value of Bitcoin grows, namely, the prices of goods and services quoted in Bitcoin will decrease (which is the opposite of inflation). Moreover, since the supply of coins is fully determined by the algorithm and the miners, there is no room for governments or central banks to adjust the growth of the money supply. This means that the supply and value of Bitcoin is beyond the reach of governments and public authorities.

The first Bitcoin client was released in January 2009, allowing the first mining of bitcoins and transactions between users. During the first year or so, users were mainly a small group of cryptography fans. However, attention slowly started to grow and the value of bitcoins started to rise. In 2011, sites such as WikiLeaks

² Since partial information on the transactions are public (amounts, dates, and so on), some argue that this is not true anonymity (Brito & Castillo, 2013). Indeed, researchers have shown that sophisticated statistical or network analyses of transaction patterns can reveal the likely identities of many Bitcoin users (Reid & Harrigan, 2013).

started to accept donations in Bitcoin and, by 2012, thousands of internet merchants had started to accept payments in the currency. The value of a bitcoin has famously gone up and down like a roller coaster since then (see Chart 1). It is largely understood that most of these movements are due to financial speculation rather than the use of Bitcoin for purchasing goods and services (cf. Dwyer 2015). With rising attention also came rising concerns. In 2013, the US FBI shut down the “Silk Road” online black market (charged for selling drugs and other illegal goods) and seized bitcoins worth US\$28.5 million (Vigna & Casey, 2016). Another major scandal was when the online exchange “Mt.Gox”—which handled around 70 percent of all transactions at the time—went bankrupt after large amounts of bitcoins were reported missing or stolen.

In order to put the above into context, it is interesting to ask whether Bitcoin really is, or can ever be, money. The standard position in economics is that money is anything that serves three main functions: it is (i) a medium of exchange, (ii) a store of value, and (iii) a unit of account (Mankiw, 2009). It seems clear that Bitcoin can serve as medium of exchange; at least to a limited extent it already does. Due to its clever design and low transaction costs, it could even be a superior medium of exchange for online transactions (Brito & Castillo, 2013). But the prospects seem much bleaker when it comes to being a store of value and a unit of account. As we have seen, the value of bitcoins in relation to other currencies has fluctuated immensely during its history, and repeated heists and scandals have raised concerns about its security. The fact that the supply is capped at 21 million bitcoins is a further problem in the context, which we will discuss below. For these

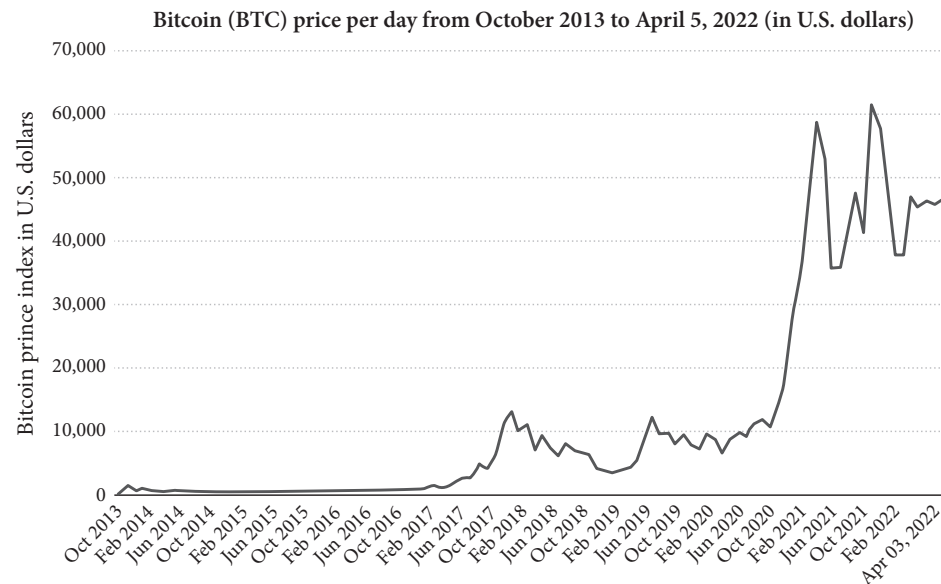


Chart 1 Bitcoin’s price history

Source: CoinGecko (www.coingecko.com) through Statista (www.statista.com)

reasons, even the merchants that accept Bitcoin tend to use other currencies as their principal accounting unit, and they still pay their employees in dollars or euros. This suggests that Bitcoin lacks the public trust needed to be classified as money in the theoretical sense, at least at the present time (cf. Bjerg, 2016; Lo & Wang, 2014). But it seems impossible to predict what the future has in store in this regard.

For the purposes of this chapter, we need not take sides in the debate about whether Bitcoin is money or not, but we note that a central factor determining its success in general is the public's trust in the currency (cf. Dodd, 2018). If people are to be persuaded to use bitcoins rather than dollars and euros, and thus if Bitcoin shall work as a major currency, they need to be confident in its function as a store of value and a unit of account. We think that the centrality of public trust makes a normative assessment of Bitcoin all the more important. Let us now turn to such an assessment.

3. The Libertarian Case for Bitcoin

Libertarianism is a moral and political philosophy which emphasizes the primacy of individual liberty and autonomy (Boaz, 1997; Nozick, 1974). It should be up to each individual how he or she wishes to live his or her life, and this includes choice of religion, sexual partner, and pattern of consumption and trade. Safeguarding these liberties are strong moral rights which put limits on what others can legitimately do to people without their consent. In this way, one could say that libertarianism is designed to protect a moral personal sphere. The central rights are so-called negative rights, i.e. rights *not* to be treated in various ways without one's consent, rather than positive rights, i.e. rights to physical or economic support from others. In line with this, libertarians are typically known for defending the free market as the only economic system consistent with strong individual rights, including strong property rights. The main role of the state should be to protect people's rights and it has no business in steering people's lives beyond this. Only a night-watchman state can, hence, be fully compatible with libertarianism.

It should be obvious from the previous section that that the Bitcoin movement to a large extent has been driven by libertarian ambitions (see also Golumbia, 2015; Lambrecht & Larue, 2018; Tourianski, 2014). The goal has been to create a decentralized and private currency, a means of transaction without government interference or oversight whose value would be determined entirely by its users (i.e. the free market). As further evidence of this, some of the concrete algorithms used by Nakamoto (2008) were drawn from the so-called cypherpunk community, which is a name for anarcho-libertarian programmers supporting the use of cryptography to defend privacy and anonymity on the internet. Interestingly, the ECB seems to have much higher regard of Nakamoto when

suggesting that “[t]he theoretical roots of Bitcoin can be found in the Austrian school of economics and its criticism of the current fiat system” (ECB, 2012: 23). The Austrian school is a tradition of economic thought that shares many tenets with libertarianism, such as emphasis on individual liberty, the free market and a minimal state.³

It is perhaps less obvious how far one should take the libertarian ambition in this context. As previously noted, contemporary debates about Bitcoin are ambiguous and contain a range of viewpoints. Some merely argue against a ban on Bitcoin, implying that there may be a plethora of different currencies for each individual to choose from. Others argue that Bitcoin is so advantageous that it should be the standard currency of any modern society. We will try to avoid the extremes here and therefore focus on a semi-strong version of the argument. Taking queue from a similar line of reasoning that can be found in the Austrian school of economics (cf. Hülsmann, 2008; Schlichter, 2014), we take the libertarian case for Bitcoin to have the following form: (1) individuals have a right to choose whatever currency they want including Bitcoin; (2) many people would (rationally) choose to transact in Bitcoin rather than state money if they had the choice; therefore (3) Bitcoin should be allowed or promoted as a major currency in society.

It is possible to debate both premises of this argument. For example, premise (2) seems empirically dubious at the present stage since Bitcoin is still a fringe currency. Moreover, what we said above about its extreme volatility and security problems seems to cast doubts on whether people have rational grounds to prefer it over state money. However, we will grant this premise for the sake of argument. That is, we will assume that Bitcoin will tend to spread “naturally” if it is not regulated. Our focus will instead be on the plausibility of premise (1). More precisely, we will make a series of attempts at understanding the right that this premise appeals to. What is the moral basis for a right to choose Bitcoin, and how does such a right relate to other libertarian rights?

3.1 Right to Oneself

The strongest moral right there is, according to libertarianism, is people’s right to themselves. This right protects a basic personal sphere in which people can exercise their autonomy, i.e. their ability to be their own masters. The right to oneself is often taken to subsume a number of more specific rights such as right to life, right to one’s body, and right to one’s talents (cf. Cohen, 1995). Right to life in the libertarian sense means that all individuals have supreme moral authority over their own life and may, for example, choose to terminate it in a manner and at a time of their choosing. Right to one’s body means that individuals have sole

³ Strictly speaking, Austrian economists would prefer going back to the gold standard, and have expressly criticized Bitcoin for lacking intrinsic value in this way (Matonis, 2011; Schlichter, 2014).

authority over the use of their body and that others may not touch, use or harm it without their consent. Similarly with the right to one's talents.

The strongest libertarian justification of Bitcoin would arguably be an appeal to this right to self-ownership. If people have a right to do what they wish with themselves, and they wish to use Bitcoin, then perhaps they have a right to do so. Moreover, if the preference for Bitcoin has a "natural" tendency to spread, as we have assumed, then it is only right that it becomes a major currency in society.

But does this argument really work? We think that it does not, and it is important in this context to note the reason. Unlike in the original examples, the choice of currency is not a deeply and primarily personal matter; that is, it is not a choice that concerns the very foundation of people's autonomy and only indirectly affects others. Instead it is an essentially social choice, that is, it concerns forms of interaction with others in a larger society or economy. It is in this sense more similar to, for example, choice of school or business partner; choices whose availability and realization to a large degree depend on the willingness of others. The point is that a right that extends only to the individual, like the right to oneself, does not have sufficient reach to protect choices that essentially concern social relationships. For this reason, the choice of Bitcoin is not protected by the right to oneself *simpliciter*.

3.2 Freedom of Contract

A second kind of right, which does concern social relationships and which many libertarians take to be central to economic interaction, is the freedom of contract. This right allows individuals to expand their personal sphere to include material goods and services by way of voluntary exchanges with others.⁴ The basic rule is that individuals should be free to enter into whatever contracts or exchanges they choose as long as they respect the rights, and thereby the autonomy, of others. By protecting free exchanges on free markets, libertarians argue that they give people the opportunity to exercise their autonomy also in their economic life.

It may seem straightforward that a choice of Bitcoin is protected by the freedom of contract. However, matters are more complicated than that. As just noted, there are limits to the freedom of contract—one is not allowed to enter into contracts that infringe upon the rights or autonomy of others. In order to determine the limits, then, we need an understanding of the consequences of choosing Bitcoin on other members of society. Since the choice of currency is an essentially social choice, as we have argued, our main concern here is with the social consequences of allowing Bitcoin to grow into a major currency in society. Our discussion will first take a broad view of

⁴ Of course, there is also a further way of acquiring things: the just acquisition of previously unowned goods. It is a fascinating question whether freshly mined bitcoins should be considered as traded or previously unowned goods. However, since nothing in our argument seems to turn on this, we will not pursue the question further here.

the types of consequences that seem morally relevant; thereafter we will inquire whether they are also relevant for libertarians.

A central aspect of Bitcoin is that it challenges the power of the state, which typically is the guarantor of individual rights. Most straightforwardly, it challenges the state's ability to use monetary policy; that is, to control the type and amount of money used in the economy. Some proponents see this as positive. For example, Wallace (2011) argues that Bitcoin's predetermined supply cap means that it is "immune to printing-press-happy central bankers and Weimar Republic-style hyperinflation." The thought here seems to be that individuals face a reduced risk of having their fortunes shrink due to deliberate inflation from central banks (cf. Lambrecht & Larue, 2018). This argument expresses a high level of distrust in central bankers which we think is premature, at least without further evidence and debate (which we cannot delve into here).

The starting point should rather be to inquire what monetary policy is used for. According to most economists, monetary policy is an absolutely necessary tool for stabilizing prices, mitigating shocks and promoting economic growth. Let us focus on the dramatic case of economic depressions. When people are hesitant to engage in economic interaction due to a depression, monetary policy can be very helpful through reducing the price of money and thereby increasing its demand (Blanchard, 2009; O'Sullivan et al., 2008). What happens is basically that the central bank lowers its interest rate which makes it cheaper for companies to take out loans and make new investments, which in turn increases their economic activity and helps to move the economy out of its depressed state. But it seems that the possibility of using this mechanism for economic policy decreases in direct proportion to the growth of Bitcoin into a major currency in society, since the supply of Bitcoin is set and the price therefore is wholly determined by the market. Furthermore, the built-in deflationary mechanism of Bitcoin will only serve to drive up the price of money over time. The result is that the use of Bitcoin as a major currency is likely to lead to prolonged economic depressions (Ali et al., 2014; Scharding, 2019). In human terms, this means prolonged periods of unemployment and insecurity for large groups of people.

Perhaps some free-market economists could reply that a privatized currency reduces the risk for depressions to occur. This argument starts from the assumption that it is state interference in the free market that causes the imbalances that overturn the economy (cf. Rothbard, 2007). While we cannot discuss this argument here, we contend that it seems inconsistent with historical evidence.⁵ And in any case, just because bad monetary policy can cause major problems, we cannot conclude that we should abandon one of the best solutions we have to economic disturbances.

⁵ For example, it seems that both the Great Depression and the financial crisis of 2008 were brought about through excessive speculation and the lack of regulation, to name just two problems, rather than the mere existence of fiat money (cf. Stiglitz, 2010).

The potential effects of Bitcoin on economic depressions are concerning, and we will note further negative effects below that speak against its suitability as a major currency in society. However, let us now turn to the question of whether libertarians care about these effects. As noted above, the freedom of contract entails that individuals should be free to enter into whatever exchanges they choose as long as they respect the rights and autonomy of others. From a libertarian point of view, then, the only relevant consequences are those that concern other people's rights and autonomy (cf. Brennan & Tomasi, 2012; Steiner, 1994; Vallentyne & van der Vossen, 2014). So what do the effects above entail in such terms?

We think that an argument can be made for resisting Bitcoin on libertarianism's own grounds, although we admit that this argument is speculative. The central idea is that the effects above are also negative in terms of rights and autonomy. Consider the case of unemployment due to economic depressions. Empirical studies confirm that employment is a central source of individual autonomy through its connection to income, social relationships, and the use of our faculties (Goldsmith et al., 1996). This aspect is sometimes invoked in favor of a right to work. When people lose their jobs, then, their autonomy is seriously diminished. So the widespread adoption of Bitcoin potentially restricts individual autonomy. In contrast, a state monopoly on money does not seem to restrict individual autonomy as such. Whereas the form of economic interaction is predetermined, no individual economic transactions are blocked—that is, you can still buy an apple, a car, or the collected works of James Joyce with state money. This suggests that the amount of autonomy gained by having a right to choose Bitcoin is, at best, miniscule (at least in most countries).

We think that the argument above should be persuasive to most readers. However, there may be some hardcore libertarians that it fails to convince. One complication here is the distinction between negative and positive rights. If the right to work is considered a positive right (which it most often is), then some libertarians may choose to disregard it entirely. Moreover, Nozick (1974: 8–30) argues that libertarianism should not be viewed as a form of “utilitarianism of rights,” i.e. as an appeal to the maximization of autonomy. This point may be used against our argument about the relatively small gain but massive loss of autonomy in a society with Bitcoin. However, we must admit that we find these objections strange. It is hard to see how libertarians can ground their whole philosophy in an appeal to autonomy, yet at the same time give no weight at all to the very negative effects on autonomy noted above.⁶ Moreover, our argument concerns the justification of specific rights. It does not question the notion that rights should be thought of as side-constraints, and it does not say that libertarians should take a

⁶ For similar reasons, Nozick's view has been described as a “libertarianism without foundations” (Nagel, 1981; see also Vallentyne & van der Vossen, 2014).

consequentialist approach to rights-violations. This shows that the argument does not rest on a view of libertarianism as a utilitarianism of rights.

We conclude from the above that the argument for a right to choose Bitcoin based on the freedom of contract is unconvincing. Once again, a central problem is the essentially social nature of choices of currency, which entails that such choices have consequences on broader society.

3.3 Right to Privacy

Let us finally consider whether a choice of Bitcoin can be protected by the libertarian right to privacy. This right is fairly straightforwardly aimed to protect the individual's personal sphere from the curiosity and view of others, including from public authorities. In this way it is obvious how it can be grounded in an appeal to individual liberty and autonomy. The right to privacy is typically taken to cover both an inner sphere—such as thoughts, feelings, and secrets—as well as an outer sphere—such as one's body, home, and property. But perhaps its reach is even greater than that: There has been much debate in recent years about whether the right to privacy covers, for example, one's internet behavior, peer-to-peer filesharing, and other personal activities in public spaces (cf. Nissenbaum, 2009).

It is easy to see how an argument for Bitcoin could appeal to the right to privacy since, as we have seen, it makes it possible to transact anonymously and untraceably on the internet (cf. Lambrecht & Larue, 2018). If the right to privacy includes a right to make one's economic transactions anonymously, then this would be a fairly strong justification of Bitcoin. However, there are good reasons to believe that such a justification is not forthcoming. Economic transactions are essentially social activities, as we have said, and therefore clearly fall outside of people's most basic personal sphere. Furthermore, we may now note the possibly devastating effects of introducing a currency for general use that rules out all public oversight over transactions. This would not only mean that governments lost access to monetary policy, but they may also lose access to fiscal policy. That is, it would be much more difficult for states to collect taxes, such as VAT and income tax, if many transactions were anonymous and untraceable (Stewart & Johnston, 2012).⁷

This would have devastating effects on society insofar as states would have difficulties in, for example, funding public education, infrastructure, and various welfare programs, as well as in safeguarding the security of both markets and social life. It is clear that all of this involves serious negative effects on people's autonomy as well as infringements of their rights. Importantly, note that both

⁷ We say "more difficult" but not impossible. There may of course be alternative ways in which states could collect taxes; for example, through voluntary taxation schemes, property taxes. But none of these measures can get close to the kind of reliability and effectiveness of, for example, the VAT and income tax.

positive and negative rights are in jeopardy. This is since even the night-watchman state, irrespective of how small it is, arguably must be supported by some form of taxation scheme to work. Alternatively, maybe some hardcore libertarians will also bite this bullet and hope for enough voluntary contributions to support the night-watchman state (cf. Rothbard, 1973), but this group now seems exceedingly small. Thus it seems that even most libertarians have reason to conclude that the right to privacy should not be extended to cover the choice of Bitcoin.

We conclude from the considerations above that the libertarian case for Bitcoin does not succeed, since it fails to offer a plausible justification of a moral right to choose whatever currency one wants. This does not mean that we have shown that Bitcoin should be forbidden or that people who make transactions in Bitcoin are guilty of moral wrongdoing. What the argument shows is that libertarianism fails to provide a convincing argument for why Bitcoin should be allowed or promoted as a major currency in society.

4. The Egalitarian Case for Bitcoin

What we have called the libertarian case is a philosophical reconstruction of one group of popular arguments for Bitcoin. In this section, we will look at a different group of arguments and our goal is to develop them into a tentative egalitarian case for Bitcoin. The starting point for these arguments is the thought that Bitcoin not only has the potential to disrupt the power of the state, but it also challenges the political and economic power of banks and the current financial establishment.

While the state is the ultimate guarantor of fiat money, it should be noted that our current system gives much power and leeway over both the value and supply of money to banks and other financial institutions (cf. King, 2014; Ryan-Collins et al., 2011). For example, banks have the power to create new money through extending credit and to determine the value of money through engaging in currency speculation. Many commentators put the Bitcoin movement in the context of the financial crisis of 2008, and the ensuing massive bailouts of Wall Street. As Wallace (2011) notes, “Bitcoin required no faith in the politicians or financiers who had wrecked the economy—just in Nakamoto’s elegant algorithms.” In a similar regard, Bitcoin is sometimes connected to the Occupy Wall Street movement and its more general critique of the financial system (Jeffries, 2013; King, 2014).

We suggest that two more distinct arguments can be distilled from the above connections. One has to do with *power and democracy*. It seems a central concern of both Occupy protesters and Bitcoin proponents that the financial establishment wields an unjustified power over the economy and ultimately over people’s lives. The Occupy movement expresses this in their slogan “we are the 99%”; the idea is that the financial system fails to serve the majority of average-income people. Since Bitcoin removes some of the power over financial matters from states and

banks and gives it to the people, i.e. to internet users, it may be seen to increase a form of financial democracy. (Of course, not all power is given to users since the Bitcoin technology itself also has a central role.) As one proponent expresses it, “Bitcoin is [an] embodiment of the idea that we now have the technology to democratize money” (Jeffries, 2013). We take this point to be similar to the libertarian appeal to autonomy above, but broader in that it emphasizes the positive aspect of empowerment.

The other argument concerns *welfare and distribution*. The “1%” targeted by the Occupy movement are people of extreme wealth whose errands the financial system is said to run. Similarly, Bitcoin proponents have been vocal about unjustified bank fees that are said to serve rich bankers (cf. Ammous, 2021). A prime example here is the fee that commercial banks charge on credit card transactions which, taken together with their support of a “cash free world,” comes close to being a private taxation scheme: for every dollar one spends on goods or services, a few cents go to the financial establishment. But this is not the case with Bitcoin.⁸ In this way, it can be said to counteract the increasingly unequal distribution of resources in society (Brito & Castillo, 2013).

Even though the arguments above often are put forward under the guise of libertarian ideas, we suggest that they should be most attractive to egalitarians. Their main thrust is namely the need for a more equal distribution of both power and resources. Egalitarianism is a moral and political philosophy which emphasizes the primacy of equality. There are different views on exactly what should be distributed equally; for example, resources, power, opportunities, or something else. There are also different views on what kind of policies are best for making society more equal (cf. Kymlicka, 2002). But we may put these discussions to the side here. Our impression is that many people with egalitarian convictions have been wary of Bitcoin. But is there good reason for this skepticism? In what follows, we argue that the answer must ultimately depend on the political and economic context—that is, there are societies where there is good reason to implement Bitcoin, but there are also others where it probably should not be supported.

4.1 A Promising Case

Let us first look at a quite promising case. Recent reports suggest that Bitcoin is making much headway in developing economies throughout Africa and Asia (Mellor, 2021). An especially interesting example is Kenya where several money-like financial technologies are in use. The most popular of these is M-Pesa (roughly

⁸ This should not be taken to mean that Bitcoin is incompatible with contemporary banking services. It seems entirely possible that similar banking behavior would arise in an economy based largely on Bitcoin. Moreover, there might of course be other ways of avoiding high transaction costs besides Bitcoin.

“mobile money”) which was introduced by the mobile operator Safaricom in 2007. It is basically a form of credits stored on mobile phones which allows users to make transfers with each other. In 2019, it was estimated that around 20 million Kenyans, or 79 percent of the adult population, used M-Pesa for their daily economic transactions (Finaccess, 2019). The great success of M-Pesa is likely due to the rural majority’s lack of access to formal banking services, and the more general failure of traditional banks to make positive investments in Kenyan society (Cawrey, 2013; Ndung’u, 2018). Since 2012, Safaricom also offers M-Shwari which is a microfinance service attached to M-Pesa that allows users to open savings accounts and obtain microloans at favorable rates.

Bitcoin may be seen as a competitor to M-Pesa, but initiatives have been launched to integrate them into a common payment system. Bitcoin is probably a safer system in that it uses stronger cryptography and allows for online rather than mobile wallets.⁹ More importantly, Bitcoin facilitates international transactions such as remittances. It has been argued that mainstream remittance companies often are failing the very poorest populations; people that live in remote areas, that are drastically affected by high fees, and whose transfers sometimes are arbitrarily blocked (Ndung’u, 2018). These problems would be less likely with Bitcoin, although there are also other possible remedies.

From the standpoint of our two egalitarian arguments above, there seem to be clear benefits to the use of Bitcoin in societies like Kenya. First, with regards to welfare and distribution, the low presence of mainstream banks in rural areas, and their high entry fees, is a problem that digital currencies can help to alleviate. Such currencies may not only increase people’s access to money as such, but also their access to microfinance services that cater to the needs of poor populations. Second, with regards to power and democracy, Bitcoin moves some of the power over financial matters from states and banks to the general population. This seems especially justified in frail economies where governments are failing to do their job, such as in situations of hyperinflation (Brito & Castillo, 2013), or when corrupt and despotic leaders actually rig the system in order to grab the money for themselves (Scharding, 2019).

Now, these benefits should of course be weighed against the drawbacks of Bitcoin noted above, i.e. the diminished possibility of states to use monetary and fiscal policy. But it seems that, in at least some cases, the benefits are likely to outweigh the drawbacks. This is so since when the states are incompetent or corrupt, of course, such diminished possibilities are actually a further benefit. Thus, given the unavailability of other solutions that may prove to be even better (such as, perhaps, a stronger UN mandate to deal with corrupt regimes), we have seemingly found a case where Bitcoin should indeed be allowed or promoted as a major currency.

⁹ A complication is of course that rural Kenyans may lack access to secure online services.

4.2 A Well-ordered Society

But do these conclusions generalize? Now compare with what we may call, with terminology borrowed from Rawls (1971), a perfectly well-ordered society. It has a strong and benevolent state that uses monetary policy to improve the rate of employment (while controlling for inflation) and fiscal policy to improve the situation of the worst-off citizens. Financial agents such as banks are regulated, inspected, and taxed in an efficient manner. Moreover, the banks accept some degree of social responsibility and work with the authorities to reach previously excluded client groups. We may assume that there is much leeway in this society for citizens to make anonymous transactions as long as they do not interfere with the previously stated functions. It seems quite clear, judging from our egalitarian arguments above, that Bitcoin should not be promoted as a major currency in this type of society. In contrast to our previous example, it would no longer have any benefits in terms of financial democracy or distributive equality; it would only have the effect of undermining the positive activities in both of these areas by both the state and the banks.

Actual societies may of course be more or less well-ordered in this sense, and it is not as easy to determine the best route forward in real-life cases.¹⁰ However, our conjecture is that there is weak justification for Bitcoin to grow into a larger currency in reasonably well-ordered societies such as those in Western Europe and North America. While there are clear problems of equality in these societies, those are probably better addressed by other means such as public policies, corporate social responsibility, or civil society initiatives. At least in societies with well-functioning systems for monetary and fiscal policy, the burden of proof is very heavy on those that think that Bitcoin could be an improvement in terms of equality of power or resources. The situation is quite different in societies that have severe problems in these areas, which is why the case for Bitcoin in developing countries is much stronger (cf. Scharding, 2019).

To sum up, the difference between the libertarian and egalitarian cases for Bitcoin is that one is absolute whereas the other is not. The libertarian argument purports to show that the power of states and banks always should be undermined in favor of individual autonomy, but we have seen that such a stance has drastic effects on the possibilities of both individual and collective aspirations in society. In contrast, our egalitarian arguments imply that the power of states and banks sometimes should be undermined—especially when they are corrupt or only cater to the interests of a small elite. This provides good reason to support the growth of Bitcoin in societies like Kenya. However, it should probably not be supported in well-ordered societies where both states and banks take active responsibility for developing democracy and distributive justice.

¹⁰ Our reasoning here has affinities with the contemporary debate about ideal versus non-ideal theory in political philosophy, cf. Thompson 2020.

5. Concluding Remarks

Our results in this chapter have mostly been negative. We have argued that the libertarian case for Bitcoin is not convincing, but that there is some potential in egalitarian arguments for it. However, we have ultimately judged that Bitcoin should not be promoted as a major currency in reasonably well-ordered societies, since it has more drawbacks than benefits. We understand, of course, that our argumentation here will not mean the end of cryptocurrencies. Although it seems almost impossible to determine the future of Bitcoin as such, it seems likely that new forms of digital money will continue to appear. As concluding remarks, we will therefore offer some more positive notes on what kind of money there should be, based on the considerations uncovered in our analysis. This will not amount to a full normative theory of money, but simply a list of four important desiderata for normatively successful monetary design.

We may start with the most attractive aspect of Bitcoin: It is preferable that money is designed so that it *protects economic freedom and privacy*. Nobody in this discussion has doubted the basic soundness of a market-based system which ultimately rests on the ability of individuals to make free and private choices. The more of our economic lives that are spent on the internet, the greater the challenge becomes to make adequate room for this, especially for economic privacy. But it is also important to recognize that there are other values at stake that may come into conflict with freedom and privacy. We have in particular discussed one such aspect that is problematic for Bitcoin: that money *must be taxable*. If money is designed so that it becomes virtually impossible for outside parties to trace it, tax collection will become very difficult. That in turn will make it much harder to fund social goods such as education, infrastructure and security. It will also make it difficult to redistribute wealth for the sake of social equality.

The trade-off above is a central challenge of money design, but there are also other considerations to take into account. One of those concerns the *possibility to conduct monetary policy* in an appropriate manner. We have warned that the growth of Bitcoin may lead to prolonged economic depressions since it becomes more difficult to decrease the price of money to jumpstart the economy. The reader may think that this consideration is the final nail in the coffin for private currencies, since monetary policy only can be conducted with state-controlled money. However, it is not inconceivable that there could be a private cryptocurrency that makes monetary policy possible. For instance, Freicoin is designed to insure that people do not hoard money by imposing a kind of negative interest rate, or a demurrage fee, on money in users' accounts (Bradbury, 2013). One way of conducting monetary policy could be through varying this demurrage fee.

We end with the most important point, namely that money *requires trust*. If people will not trust something to be money, then it simply cannot work as money. This is especially so for fiat money, but arguably also for money that is

convertible to some commodity, and even more so for digital money. Contrary to what Nakamoto (2008) says, “cryptographic proof” is no substitute for trust. It seems that a background explanation of the rise of Bitcoin is that some people do not trust the state, and therefore they do not trust state money. However, it seems equally clear that many people do not trust private issuers of money which may explain why so few people have put their life savings in Bitcoin. This chapter has rested on the idea that how a currency fares on moral grounds may ultimately be central to its ability to command the public’s trust.

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