

1. Bitcoin, Digital Culture, and Right-Wing Politics

IN THE EARLY 2010S, and then especially throughout 2013, observers of digital culture began to read more and more about a new form of digital payment called Bitcoin. Although any number of digital payment systems had already emerged—from relatively straightforward tools for money transfer such as new Western Union services, online bill paying, and PayPal, to more exotic systems such as Liberty Reserve (Langlois 2013), “beenz” (Richardson 2001), and forms of “digital gold” like E-Gold (Zetter 2009)—Bitcoin was said to be different. Its difference stemmed from at least two sources: first, that it was based on a relatively new form of cryptographic software technology called a “blockchain,” and second, that throughout 2013 Bitcoin had skyrocketed in its value relative to official world currencies like the U.S. dollar. At the end of 2012 one could buy a single Bitcoin for around US\$13. By May 2013, that one Bitcoin was worth upward of US\$100, nearly an 800 percent gain for those fortunate enough to have held it for five months. In November and December of 2013 Bitcoin’s value briefly exceeded US\$1,200 (“History of Bitcoin”). In just under a year investors who timed their buying and selling correctly could have made around 8,000 percent in profits, far exceeding the performance of most, perhaps even all, traditional investments. Those who had bought or “mined” Bitcoin earlier in its existence (the first coins were created in 2009 and started out as essentially worthless) could and well may have realized gains that dwarf even these. This remarkable performance thrust Bitcoin into the public eye, eventually attracting numerous start-up projects, venture capitalists, and investors.

By far the majority of interest in Bitcoin came from technologists and those who follow and admire the work of technologists. To those of us who were watching Bitcoin with an eye toward politics and economics, though, something far more striking than Bitcoin’s explosive rise in value became apparent: in the name of this new technology, extremist ideas were gaining far more traction than they previously had outside of the extremist literature to which they had largely been confined. Dogma propagated almost exclusively by far-right groups like the Liberty League, the John Birch Society, the militia movement, and the Tea Party, conspiracy theorists like Alex Jones and David Icke, and to a lesser extent rightist outlets like the Fox media group and some right-wing politicians, was now being repeated by many who seemed not to know the origin of the ideas, or the functions of those ideas in contemporary politics.

These ideas are not simply heterodox or contrarian: they are pieces of a holistic worldview that has been deliberately developed and promulgated by right-wing ideologues. To anyone aware of the history of right-wing thought in the United States and Europe, they are shockingly familiar: that central banking such as that practiced by the U.S. Federal Reserve is a deliberate plot to “steal value” from the people to whom it actually belongs; that the world monetary system is on the verge of imminent collapse due to central banking policies, especially fractional reserve banking; that “hard” currencies such as gold provide meaningful protection against that purported collapse; that inflation is a plot to steal money from the masses and hand it over to a shadowy cabal of “elites” who operate behind the scenes; and more generally that the governmental and corporate leaders and wealthy individuals we all know are “controlled” by those same “elites.”

Understanding how Bitcoin comes to embody these extremist ideas requires situating it within two

broader analytical frameworks. The first of these is the phenomenon that scholars call *cyberlibertarianism*. The central texts describing cyberlibertarianism are Barbrook and Cameron (1996) and Winner (1997); for more recent accounts see Turner (2008) as well as Golumbia (2013b, 2013c, in preparation). In its most basic and limited form, cyberlibertarianism is sometimes summarized as the principle that “governments should not regulate the internet” (Malcolm 2013). This belief was articulated with particular force in the 1996 “Declaration of the Independence of Cyberspace” written by the libertarian activist, Grateful Dead lyricist, and Electronic Frontier Foundation founder (EFF is a leading “digital rights” and technology industry advocacy organization) John Perry Barlow, which declared that “governments of the industrial world” are “not welcome” in and “have no sovereignty” over the digital realm.

In practice, opposition to “government regulation of the internet” is best understood as a core (and in important ways vague) tenet, around which circulate greater and greater claims for the “freedom” created by digital technology. At its most expansive, cyberlibertarianism can be thought of as something like a belief according to which *freedom will emerge inherently from the increasing development of digital technology*, and therefore entails that efforts to interfere with or regulate that development must be antithetical to freedom—although what “freedom” means in this context is much less clear than it may seem. As Winner (1997, 14–15) puts it, to be a cyberlibertarian is to believe that “the dynamism of digital technology is our true destiny. There is no time to pause, reflect or ask for more influence in shaping these developments. . . . In the writings of cyberlibertarians those able to rise to the challenge are the champions of the coming millennium. The rest are fated to languish in the dust.”

Cyberlibertarianism is thus not to be understood as the belief system of someone who overtly describes themselves as a *political* libertarian—a member of a libertarian party or someone who votes for libertarian candidates—and who supports or promotes the development of digital technology. Someone who fits this description would likely have cyberlibertarian beliefs, of course, and a few pundits associated with the Koch brothers–funded Mercatus Center do explicitly embrace the label; see Thierer and Szoka 2009). But the analysis of cyberlibertarianism is getting at something subtler: the way that a set of slogans and beliefs associated with the spread of digital technology incorporate critical parts of a right-wing worldview even as they manifest a surface rhetorical commitment to values that do not immediately appear to come from the right.

Certainly, many leaders in the digital technology industries, and quite a few leaders who do not work for corporations, openly declare their adherence to libertarian or other right-wing ideologies. Just a brief list of these includes figures like Elon Musk, Peter Thiel, Eric Raymond, Jimmy Wales, Eric Schmidt, and Travis Kalanick. Furthermore, the number of leaders who demur from such political points of view is small, and their demurrals are often shallow. But the group of people whose beliefs deserve to be labeled “cyberlibertarian” is much larger than this. The core tenet of cyberlibertarianism—the insistence that “governments should not regulate the internet”—appears to be compatible with a wide range of political viewpoints. As EFF’s senior global policy analyst Jeremy Malcolm (2013) has written, “Even politically progressive activists are inclined to be more distrustful of governmental intervention online than offline, in an expression of Internet exceptionalism.”

As Winner makes clear in his 1997 paper, the critical point about cyberlibertarianism as a belief system is that it “links ecstatic enthusiasm for electronically mediated forms of living with radical right-wing libertarian ideas about the proper definition of freedom, social life, economics, and politics” (14). His emphasis on “proper” definition is the key to Winner’s analysis: people who

subscribe to cyberlibertarianism for the most part do not describe themselves as cyberlibertarians and may not call themselves “libertarians” or even identify with right-wing political parties. Instead and at least sometimes without explicitly knowing it, they accept definitions of certain fundamental terms that come from the political right, especially when digital technologies are at issue.

The most important of these redefined terms that occur repeatedly in discussions of Bitcoin are “freedom” and “government,” both of which are central to all cyberlibertarian and political libertarian rhetoric. Referring to the 1994 manifesto “Cyberspace and the American Dream: A Magna Carta for the Knowledge Age” by Esther Dyson, George Gilder, George Keyworth, and Alvin Toffler Winner (1997, 16) writes:

Characteristic of this way of thinking is a tendency to conflate the activities of freedom-seeking individuals with the operations of enormous, profit-seeking business firms. In the “Magna Carta for the Knowledge Age,” concepts of rights, freedoms, access, and ownership justified as appropriate to individuals are marshaled to support the machinations of enormous transnational firms. We must recognize, the manifesto argues, that “Government does not own cyberspace, the people do.” One might read this as a suggestion that cyberspace is a commons in which people have shared rights and responsibilities. But that is definitely not where the writers carry their reasoning.

The “freedom” these writers advocate turns out, in a way they themselves do not always acknowledge, to be identical with the use of “free” in the phrase “free market”: that is, free from government regulation. Building on the foundational, often unspoken rightist beliefs about the uniquely oppressive nature of governmental power, they “advocate greater concentrations of power over the conduits of information which they are confident will create an abundance of cheap, socially available bandwidth. Today developments of this kind are visible in the corporate mergers that have produced a tremendous concentration of control over not only the conduits of cyberspace but the content it carries” (16). Indeed, in the nearly two decades since Winner wrote, this is exactly what we have seen happen; in the name of vague slogans like “internet freedom” (Powers and Jablonski 2015) wealth and power have concentrated enormously (Hardoon 2015; Piketty 2014) as digital technology has spread all around the globe.

From a cyberlibertarian perspective, governments—*all* governments, not simply whatever current “bad” government we describe as doing wrong—exist *only* to curtail the freedom that is inherently negative (in the classic sense of “negative” vs. “positive” freedoms developed in Berlin 1958): to be “free” simply *is* to be “free” from government. The core cyberlibertarian belief that “governments should not regulate the internet” really makes sense only if it is true that government exists to curtail rather than to promote human freedom. Yet in most non-rightist political theory, government exists in no small part to *promote* human freedom.

Their advocates make it sound like, and may often believe that, cyberlibertarian commitments are about *limiting* power, but this is only true so long as we construe “government” as equivalent with “power,” and “the internet” as being oppositional to power, rather than, at least in significant part, being strongly aligned with it. The most direct way to arrive at this perspective is to accept the definition of government developed by the far right, especially anarcho-capitalist theorists like

Murray Rothbard and David Friedman, and echoed by politicians like Ronald Reagan and Margaret Thatcher. According to this view, “government” is *inherently* totalitarian and tyrannical; indeed “government” and “tyranny” are essentially synonyms.

Cyberlibertarian doctrine did not develop in a vacuum. It fits into, and at best does nothing to resist, the profound rightward drift evident in so much of contemporary politics. This becomes clear when we examine the explicit political and economic doctrine and practice that is usually called *libertarianism* in the United States (here meaning the political movement that is explicitly advocated by right-wing partisan institutions such as the Cato Institute, the Heartland Foundation, the Mises Institute, and others, as well as astroturf movements like the Tea Party and political figures like Ron Paul and Rand Paul) and its connections with the less explicit doctrine analysts call *neoliberalism*. Both of these doctrines or dogmas stem from the writings of core right-wing thinkers such as Friedrich August von Hayek, Ludwig von Mises, Milton Friedman, Rothbard, and others, as well as their more recent followers. The most trenchant critic of this work, on whose research my analysis relies in particular, is the economic historian and theorist Philip Mirowski, whose *Never Let a Serious Crisis Go to Waste* (2014) remains the single most comprehensive account of what he calls the Neoliberal Thought Collective and the nearly identical Mont Pelerin Society (MPS), of which Hayek was the founding president.

Mirowski, along with some of his colleagues, has explained with particular cogency how Hayek and others disseminated neoliberal doctrine. From somewhat different angles, writers like Chip Berlet (2009), Berlet along with Matthew Lyons (2000), Claire Conner (2013), Sara Diamond (1995), Michael Perelman (2007), Jill Lepore (2010), and the writers in Flanders’s edited volume (2010) give us thoroughly documented accounts of how those wider spheres of right-wing political thought and practice operate, distributed among actors whose overt adherence to MPS doctrine can vary widely, though they tend to be found far more on the right than the left.

The journalist Mark Ames explains how apparently disparate political interests, especially in the context of Silicon Valley, can be seen to work together. Reflecting on some surprising alliances between today’s technology giants and the lobbying groups and of the world’s major extractive resource companies, Ames (2015) writes that

even if we still give Google and Facebook the benefit of the doubt, and allow that their investments in the Cato Institute and the Competitive Enterprise Institute weren’t directly motivated by killing Obamacare and throwing millions of struggling Americans back into the ranks of the uninsured and prematurely dying—nevertheless, they are accessories, and very consciously so. Big Tech’s larger political goals are in alignment with the old extraction industry’s: undermining the countervailing power of government and public politics to weaken its ability to impede their growing dominance over their portions of the economy, and to tax their obscene stores of cash.

Google—like Facebook, like Koch Industries—wants a government that’s strong enough to enforce its dominant private power over the economy and citizens and protect its wealth, but too broken and too alienated from the public to adequately represent the public interest against their domineering monopolistic power.

In this way, much right-wing discourse, even when it appears to be focused on issues that are not purely economic, turns out to work extremely well for the most concentrated sources of capital and power in our world.

Power is one of the central subjects for political analysis, and perhaps *the* central subject: who has power, who wants power, what the perspectives those who have and want power are on the creation and maintenance of methods for the management of power. We might say that right-wing politics sides emotionally and practically with power—it identifies with power, and via this identification works to ensure that nobody interferes with the concentration and exercise of power. On this view, left-wing politics is specifically focused on the limitation of power, on mechanisms for distributing power equitably, and on the excesses that almost inevitably emerge when power is allowed to grow unchecked.

Rather than a balance of powers and regular elections to curb the inherent possibility of abuse of power, the cypherpunks and crypto-anarchists accept, often without appearing even to realize it, the far-right, libertarian/anarcho-capitalist definition of government that extends from the German social theorist Max Weber (who famously and tendentiously defined the state as a “monopoly of the legitimate use of physical force within a given territory”; see Weber 1919, 33; see also Giddens 1984 for a thorough critique of Weber’s definition) to Ronald Reagan’s inaugural address of 1981, in which he famously claimed that “government is not the solution to our problem; government is the problem.” In *Why Government Is the Problem* (1993), Milton Friedman, a key player in the creation of neoliberal economic doctrine, makes the same case at greater length.

The clearest articulation of these views is found in the work of arch right-wing thinker and Cato Foundation cofounder Murray Rothbard. In an essay titled “Anatomy of the State,” first published in the 1974 volume *Egalitarianism as a Revolt against Nature*, Rothbard abruptly dismisses with almost the entirety of political theory prior to Hayek, while taking Hayek even farther than he was willing to go, at least in print. Arguably the position Rothbard develops is among the farthest to the political right offered in Western discourse, with the exception of those who explicitly identify with fascism: “We must, therefore, emphasize that ‘we’ are not the government; the government is not ‘us.’ The government does not in any accurate sense ‘represent’ the majority of the people” (Rothbard 1974, 56). With no supporting argument or analysis, Rothbard dismisses nearly all the political theory on which democratic rules are based (even the monarchist Thomas Hobbes thought that the sovereign represented the people over whom he ruled, in an abstract sense) and the entire theory of representative democracy.

At their limit—a limit that is often surpassed in current cypherpunk and crypto-anarchist rhetoric and practice—these views suggest bizarrely that only government is *capable* of violence, and that even when private institutions and enterprises engage in what appears to be physical violence, it is in some sense of a different order than that practiced by governments. Even more bizarrely, these views entail that democratic government lies about the one thing that does in fact distinguish it from other forms of power—that it is directly accountable for its actions to the people from whom it draws its power—while simultaneously entailing that power derived from capital and markets *is* accountable to citizens. Worse still, it suggests that this market-based form of accountability does not merely trump the electoral and legal accountability built into representative government, but also shields corporate forces from the political critique to which the right routinely subjects government. In other words, no matter how much power corporations take, their power can never be “evil” in the way that governmental power inherently is.

There are certain keywords that move with a fair amount of ease between explicit right-wing

discourse and more general political discussion but that serve as rallying cries for right-wing political action. Two of the most prominent and most relevant to Bitcoin are “tyranny” and “liberty.” When the right wing uses them, these words are removed from their more general meanings and grafted onto holistic bodies of political thought, so that it can sound reasonable to oppose Social Security or Medicare on the grounds that they offend “liberty” and constitute “tyranny,” despite the signal lack of substantive political thought that would make such assessments coherent. It is no accident that the right-wing ideologue and talk show host Mark Levin titles one of his best-selling books *Liberty and Tyranny: A Conservative Manifesto* (2009), or that he misleadingly claims that “the Founders understood that the greatest threat to liberty is an all-powerful central government” (4) and that “conservatism is the antidote to tyranny” (11), a “tyranny” that in the United States is best exemplified to Levin by social programs enacted under the New Deal (6–7). Despite our abhorrence of real tyranny, then, the right wing uses the words “liberty” and “tyranny” to solicit and activate populist energy *against* exactly those democratically enacted structures and programs among whose main purposes is to curtail the tyrannical abuse of individual liberty by concentrated economic power. (Puddington 2013 describes this dynamic with regard to uses of the word “tyranny” by the Tea Party) The effect is to make such concentrations of power even more possible and even less subject to oversight, and this is very much the direction in which Bitcoin heads.

There are many things worth saying about Bitcoin. This short book is concerned not with providing a thorough description of the technology, a detailed history of its uses, an account of the scandals and triumphs associated with it, or profiles of the various personalities involved in its creation and subsequent use (for which good introductory resources include Lanchester 2016; Murray 2013; Pagliery 2014; Payne 2013; Popper 2015; Robinson 2014; Scott 2016). Its goal is more limited: to show how much of the economic and political thought on which Bitcoin is based emerges directly from ideas that travel the gamut from the sometimes-extreme Chicago School economics of Milton Friedman to the explicit extremism of Federal Reserve conspiracy theorists. While it is beyond doubt that many who “believe” in Bitcoin think they do not subscribe to these theories, it frequently turns out that they rely on assumptions and concepts that do emerge from the far right. As they are currently configured, Bitcoin and the blockchain technology on which it rests satisfy needs that make sense only in the context of right-wing politics; those of us who do not share those politics must, therefore, view Bitcoin and the blockchain with both skepticism and a clear eye for the political terms and concepts invoked in the discourse surrounding them.

I am sometimes asked to account for Bitcoin enthusiasm among those with explicitly left-wing politics. My response is to ask two questions analytically prior to this one: first, to ask for accounts of where and how it happened that a technology developed specifically to magnify the powers favored by the political right has mutated so as not to serve those powers but the forces they oppose and second, to ask for accounts on economic and political-economic grounds that proceed from left-wing thought (whether Marxian or Keynesian) to the need for and utility of Bitcoin. Almost uniformly responses to these queries repeat some of the rightist tropes about central banking and governmental tyranny I describe here, and those that do not (e.g., Bauwens 2014) emerge very skeptical about Bitcoin. Perhaps Bitcoin and the blockchain can serve politics other than the ones from which they were birthed and which they continue to embody; my goal here is to document those politics and to show what any non-rightist politics of Bitcoin needs to overcome.

5. Software as Political Program

WHILE WE HAVE SO FAR DISCUSSED it as *currency*, its advocates frequently promote Bitcoin as a new form of *money* (see, e.g., Emery and Stewart 2015; Smart 2015). Money and currency are not identical. “Money,” as we use the word today and as economists define it in standard textbooks serves three critical functions: *medium of exchange*, *store of value*, and *unit of account* (see, e.g., Abel, Bernanke, and Croushore 2008, 248–49).^[1] *Medium of exchange* means that a token (which need not be physical; a token might be nothing more than an entry in an accounting ledger) can be used to buy or sell products and services; *store of value* means that the tokens can be saved, and (despite a certain level of inherent volatility) can be relied on to maintain their purchasing power. *Unit of account*, sometimes also called *measure of value*, refers to the fact that the market uses the token in determining the value of products, which is to say, their prices. It is worth noting that, in circular reasoning typical of ideological constructions, these textbook definitions of money are frequently rejected by Bitcoin advocates, even as they insist that Bitcoin is money. That is, though Bitcoin fails to meet the criteria we have long used to identify money, we are told that we must accept that Bitcoin is money (see, e.g., both “Myths”; and Smart 2015 for conspiratorial redefinitions of “money”).

Of these three classical functions, it is arguable that Bitcoin serves only as a *medium of exchange* if it is possible to buy and sell products using Bitcoin. Speaking very roughly, “medium of exchange” might well be thought of as the “currency function” of money. As many economists have pointed out, though, virtually *anything* can serve as a medium of exchange, and nonmonetary media of exchange proliferate in our world: from frequent flyer miles to credit card bonus point programs, from grocery store coupons to high-value goods like fine art, precious metals, and gems.^[2] None of these alternative currencies poses any threat whatsoever to national sovereignty over money, let alone national sovereignty itself. Yet Bitcoin advocates frequently attempt to redefine money as if the term refers only to medium of exchange.

Whether Bitcoin serves the *unit of account* or *measure of value* function is much less clear. It is rare, though not unheard of, for markets to exist that price their goods only in Bitcoin, and rarer still for those prices to exist in relation to nothing other than Bitcoin: that is to say, even the infamous deep web drug marketplaces like Silk Road and its various offshoots clearly set the Bitcoin prices for their goods according to their value in official world currencies, despite having prices nominally listed in Bitcoin (i.e., those prices rise and fall with changes not just in Bitcoin’s valuation, but in the price of drugs in national currencies). Exactly because Bitcoin lacks any relationship to bodies that need the currency to exist in relationship to mechanisms of international exchange, or of state-internal matters like taxes, Bitcoin on its own floats free of any anchor to ordinary valuing processes. If Bitcoin-only economies were to develop, in which labor were priced in raw relation to Bitcoin regardless of Bitcoin’s exchange value with world currencies (i.e., labor is priced at 1 BTC an hour regardless of whether 1 BTC is worth US\$10 or US\$1,000), this situation might change, but this presents the same chicken-and-egg problem we see throughout Bitcoin propaganda: *if* states were to go away and *if* entire economies existed in Bitcoin, *then* it could become money; but it is simultaneously said to be Bitcoin that will *cause* states to wither away and that will produce those economies.

The third function, *store of value*, is Bitcoin’s fundamental and most interesting obstacle, and the place where conspiratorial economic thought becomes most clearly implicated in the structure and

usage of the software itself. Part of why Bitcoin is so well-known is precisely *because of* its volatility: it was Bitcoin's remarkable climb to over US\$1,000 that brought it to general public attention. Despite the fact that this is seen by many Bitcoin promoters as a "positive" change in value, a change is a change regardless of direction. An instrument that grows to 400 percent of its original value (from US\$200 to US\$1,000) in under a year can and will lose 80 percent of its value in a similar time period. A person storing their savings or profits from business in Bitcoin has absolutely no reason to expect that that value will be maintained over even a short time frame, and in fact has every reason to expect that it will not.

Bitcoin's status—or lack of status—as store of value is a crucial site at which to observe the currency's ideological functions. One of the most frequent conspiratorial frames for the promotion of Bitcoin is gold itself, or "the gold standard," itself a critical nexus point for conspiratorial financial theory. Bitcoin is routinely promoted as if it constitutes or could constitute a "real" or "sound" store of value the way gold purportedly does, and is often championed in the same right-wing media that sells precious metals as an alternative to the "debased" nation currencies that are said to have lost all their value via inflation. Bitcoin advocates make repeated reference to the superiority of gold-backed money, despite the fact that governments fixed even the price of gold at many moments in history to tame volatility, and in the face of current stories about gold and silver prices being part of the Libor price-fixing scandal.^[3] This preference for gold versus what they somewhat inaccurately call the "fiat currency" of nation-states only shows the ideological nature of their assertions, since gold exists right now, is widely traded and can be untraceable, largely resistant to counterfeiting, and yet is widely used (though not as a currency peg) *by the very nation-states and central banks* that Bitcoin advocates say they are in the process of dismantling. Just as revealing are statements like those by self-described "currency trader and economics nerd" Brian Kelly, who in *The Bitcoin Big Bang* inaccurately attributes the threefold nature of money to currency, and despite this, after laying out the case that Bitcoin only serves the medium-of-exchange function, suggests that "we are too tethered to the conventional definition of a currency as a medium of exchange, a store of value, and a unit of account" (2015, 13). Bitcoin therefore is at once everything that money is, but to the degree it turns out not to be everything that money is, the definition is what's wrong. The problem is that the definition provided by economists is descriptive, not normative: it says that *the money function* as we understand it is only filled by objects that have those three characteristics, not that this is how things *should* be. This kind of semantic play is typical of ideological constructions, but not of serious analysis.

Indeed, the story told so far has if anything tilted the story too much in Bitcoin's favor. For while the textbook account of money includes the three critical functions we have mentioned, the majority of expert economic theory simply defines money as *currency that is issued by a sovereign government*. This theory is known as "Modern Monetary Theory" (MMT) or "neochartalism" and has its roots in economics going back at least to John Maynard Keynes, whose views have perpetually been a major target for every sort of attack from right-wing thinkers. According to this view, the difference between *money* and *currency* is that *money is currency issued by the state* and indicates the form of currency in which taxes must be paid. It is precisely the pegging of a given national currency to factors like taxation, national industrial production, and international trade that enables the store of value and unit of account functions of money. That is, nation-state sovereignty and the very idea of *money* are inextricably linked in our world, and so the notion of money that is not issued by a nation-state is essentially a contradiction. Like most right-wing discourses, Bitcoin rhetoric thrives on such paradoxical constructions.^[4]

One of the places in which this conundrum is most visible is in the claims of Bitcoin advocates about “fiat money,” also an important trope in right-wing extremism. As a general idea, the notion of “fiat currency” has a long history in economics. For example, decades prior to the development of Bitcoin, liberal economist John Kenneth Galbraith (1975, 63) offered the following typology of money:

Writers on money have regularly distinguished between three types of currency: (1) that which owes its value, as do gold or silver, to an inherent desirability derived from well-established service to pride of possession, prestige of ownership, personal adornment, dinner service or dentistry; (2) that which can readily be exchanged for something of such inherent desirability or which carries the promise, like the early Massachusetts Bay notes, of eventual exchange; and (3) currency which is intrinsically worthless, carries no promise that it will be redeemed in anything useful or desirable and which is sustained, at most, by the fiat of the state that it be accepted.

Note to begin with that Bitcoin does not conform to *any* of these descriptions. At best it is a variation on (3), since what distinguishes (3), “fiat money,” from the other two, is that whatever token is being exchanged has no “intrinsic value”—that is, where the token used as currency for that money has demonstrable value in another context. The most typical example of non-fiat currency is gold, because gold has many uses and is still valuable even when not in circulation as currency; paper money, on the other hand, is taken to be fiat because the paper on which it is printed is nearly valueless as paper.

Frequently in Bitcoin discussions, one reads the circular assessment that “fiat” in “fiat money” refers to the “fiat” of the state—that is, an official decree—that turns a currency into money. While there is an element of truth to this, it does not reflect the history and usage of the term “fiat money” since money is inherently a creation of the state, regardless of whether it is based on a token of intrinsic value, even a gold standard would be “fiat currency” according to this definition. One suspects that “fiat by the state” is used in these definitions because the thought of some non-state actor deliberately suggesting that it could flout national law and declare its own currency to be “money” would have been unthinkable until very recently. But there is no way around the fact that Bitcoin advocates have no mechanism *except* fiat by which to declare their currency to be money. The point of the “fiat” label is to distinguish currencies with “intrinsic value” from those without it because these otherwise nearly worthless tokens have been declared to be of value by (someone’s) fiat. Further, this definition is the one that has wide usage in conspiracy theories, which allege that the failure to peg “worthless” paper money to a commodity with intrinsic value is part of what deprives ordinary citizens of their wealth. According to these standard usages, Bitcoin could *only* be fiat money; Schroeder (2015, 1n2) writes that Bitcoin “can be considered a fiat currency in that it also has no underlying asset.” Yet because of the appeal of currencies with intrinsic value to the right wing, one of the most frequent objects of Bitcoin discourse has been either to redefine “fiat” so as to exclude Bitcoin (see, e.g., both Kelly 2015; and Cox 2013 for this sort of ad-hoc redefinition), or to redefine “intrinsic value” so that some aspect of the Bitcoin software system (e.g., the energy put into mining, or the “trust” put into the system by its users) can qualify.

The supposed problem with fiat currency, which happens to be a favored talking point of conspiratorial libertarians like Ron Paul and Rand Paul (Shoff 2012), is that it interferes with the

store of value function of money. Without the stability of value that they (erroneously) claim proceeds from either the use of valuable commodities as currency (e.g., gold used for coinage) or as a grounding mechanism for money (e.g., a “gold standard”), not just economic instability but actual totalitarian political power is the inevitable result. As Ron Paul put it in 2003 in a speech before the U.S. House of Representatives, “If unchecked, the economic and political chaos that comes from currency destruction inevitably leads to tyranny.”

What people like Paul criticize about “fiat” currencies is that “central bankers” can manipulate the value of the currency, which is purportedly not the case with asset-backed currencies like gold. The whole point of this is to have a stable currency, one whose value does not fluctuate wildly. But because the value of Bitcoin cannot be modulated except by market transactions, it cannot separate its asset from currency functions. This makes it *too volatile* to use as a store of value, despite the fact that advocates recommend it for its superior stability.

These paradoxes are endemic to right-wing rhetoric about money, much of which encourages people to abandon national moneys and to put the proceeds in precious metals like gold (see e.g., Mencimer 2010 on Glenn Beck’s promotion of gold), because they are supposedly stable in value. Yet history shows that gold standards themselves are regulatory in nature, and no more free from manipulation, derivation, and speculation than are any other currencies; gold itself provides clear evidence of this in its recent price volatility (see Allen 2013; also see Andolfatto 2013 on the parallels between Bitcoin and gold price volatility), as do the wildly fluctuating prices of all rare commodities.

As Bitcoin hit an all-time high (albeit briefly) of US\$1,124.76 on November 29, 2013 (“History of Bitcoin”), it wasn’t hard to find—in fact it was difficult to avoid—cyberlibertarian believers celebrating this surge and similar ones in the past as proof of Bitcoin’s importance (see, e.g., Falkvinge 2013b). While the surge certainly did indicate *something*, it was remarkable to read celebrations of the surge as if it demonstrated Bitcoin’s feasibility as what it is advertised to be, a new form of money or currency. Under any conventional economic theory such surges prove not that Bitcoin is a new government-toppling currency, but to the contrary, that it *cannot* perform those functions: it is too volatile to serve as a store of value, and this function is critical to money. Like so many other aspects of cyberlibertarian practice, the case for Bitcoin’s supposed power is so perched on contradictions that it is surprising to find people taking it seriously, and yet if anything exposure of these contradictions seems only to inspire renewed seriousness and missionary zeal on the part of Bitcoin advocates.

The tension between its function as currency and as investment have informed Bitcoin discussions from the beginning, but particularly in the wake of its extreme volatility during and after 2013. In the early stages of one of its surges upward in price, Pirate Party founder and self-described “political evangelist” Rick Falkvinge (2013b) posted a piece on his widely read Falkvinge.net blog titled “The Target Value for Bitcoin Is Not Some \$50 or \$100: It is \$100,000 to \$1,000,000.” Falkvinge appended his Bitcoin pieces with a note saying that he “has a significant investment in Bitcoin. Specifically, he went all-in two years ago after having run these very numbers,” referring to his statement in May 2011 that he was “putting all of [his] savings into Bitcoin” (Falkvinge 2011). In that earlier piece he makes the typically paradoxical claim that Bitcoin “is a currency, but an entirely new kind of currency,” and then explains that he is “investing all of the money [he] had saved and all that [he] can borrow into the currency.” In both pieces and many like them, Falkvinge appears unaware that he is simultaneously

advocating for two diametrically opposed ends: for Bitcoin's wide adoption as money, for which it must be able to maintain a stable valuation, and for its desirability as a get-rich-quick investment which disqualifies it as money. It is no surprise that in the same piece where Falkvinge (2011) claims that Bitcoin "will replace the current financial system" he notes that "in the past fourteen months, the value has more than thousandfolded" and predicts that in "the coming years . . . the value of a Bitcoin will increase another thousandfold" without even a hint of acknowledgment that such increases by definition would rule out Bitcoin as a form of money.

Perhaps even more remarkably, in the same piece Falkvinge claims that Bitcoin can "safeguard fundamental civil liberties for the whole population," while simultaneously noting that the "second wave" of Bitcoin adopters will be "people who don't want or are not allowed to use the legacy banking system for their everyday transactions." Since many of the regulatory measures built into the legacy banking system exist specifically to *protect* what most of us would regard as core civil liberties (e.g., to have our ownership of our property protected by deposit insurance and credit card chargebacks) the idea that Bitcoin protects civil liberties by encouraging those who are "not allowed to use the legacy banking system"—a category that mostly includes people convicted of illegal activities—is one that only a deeply committed ideologue would make.

The comparison with gold opens the door to the right-wing theories that underlie too much writing and thinking about Bitcoin. Many of its most vociferous advocates rely on characterizations of the Federal Reserve as a corrupt idea in and of itself, a device run by conspiratorial bankers who want "the state to control everyone's lives" (Weiner 2013). These claims are grounded in rhetoric propounded in the United States and across the world by far-right politicians like Ron Paul, a vocal advocate of Bitcoin (Borchgrevink 2014), whose bald declarations about the Federal Reserve are far more ideological than substantive in nature. Paul claims to want the abolition of the Fed and a return to the gold standard, as if this would result in the kind of absolute economic freedom libertarians demand, which is itself a line of argument with deep connections to racist conspiracy theories in which Paul has long been implicated (see, e.g., "Ron Paul Sites" 2011).

Such beliefs require one to ignore the direct evidence of one's own eyes. Precisely because it is outside of legal regulatory structures, Bitcoin is particularly prone to the kinds of hoarding, dumping, derivation, and manipulation that characterize all instruments that lack central bank control and regulatory oversight by bodies like the SEC. Contrary to the advocates' claims, unregulated securities instruments are everywhere in contemporary finance; there is convincing evidence that the inability of the Commodities Futures Trade Commission to establish regulatory authority over CDOs and CMOs is the proximate cause for the economic crisis of 2008 (*Frontline* 2009). Now the lack of regulation of Bitcoin means that hoarders (as of December 2013, half of all Bitcoins were owned by approximately 927 people, with such proletarian heroes as the Winklevoss twins of Facebook infamy among them; see Wile 2013) can use all sorts of sophisticated trading methods to manipulate the market. This means that fly-by-night operations can come and go, stealing huge amounts of Bitcoin for themselves, as allegedly did the operators of both the short-lived Silk Road drug supermarket replacement ironically called the Sheep Marketplace (Madore 2015) and the CEO of the most widely used Bitcoin exchange, Mt. Gox (Sarkar 2015).

Bitcoin's incredible volatility and lack of regulation, celebrated by cyberlibertarians, actually prevent the cryptocurrency from being used in just the way its advocates claim. The very reason central banks regulate the value of currencies is to ensure they serve as stable sources of value. The

Bitcoin experiment demonstrates an enduring principle of finance: absolutely free markets produce extreme boom-and-bust cycles. If Bitcoin becomes regulated enough to serve as a stable store of value and to ensure that debacles like Mt. Gox don't happen in the future, it may be useful as a global system of payments (but so are generally non-transformative technologies like PayPal and Dwolla). But that will hardly shake world political structures at their foundations. If it remains outside of all forms of both value and transactional regulation, Bitcoin will continue to be a very dangerous place for any but the most risk-tolerant among us (i.e., the very wealthy, whose interest in Bitcoin should indicate to advocates how and why it cannot be economically transformative) to put their hard-earned money.

It is beyond ironic, indeed it is symptomatic, that Bitcoin has experienced dramatic deflationary and inflationary spirals just as it is being promoted as a corrective to inflation and deflation. Politically, this points to the resistance of ideologies to being disproven by contrary facts. Practically, it shows that the problems with currencies actually aren't formal, or mechanical, or algorithmic, despite what Bitcoin propagandists want us to believe. They are social and political problems that can only be solved by political mechanisms. That is why, despite the rhetoric of Bitcoin advocates, today most national currencies are far more stable than Bitcoin will ever or can ever be.

Many economists recognize something that appears to have been beyond the inventors and advocates of Bitcoin. Without direct supply-based regulatory structures that discourage an instrument from being used as an investment (aka "hoarding"), any financial instrument (even gold) will be subject to derivation, securitization, and ultimately extreme boom-and-bust cycles that it is actually the purpose of central banks to prevent. In fact, there is an underlying general proposition that applies not just to Bitcoin but also to other tradeable commodities: "investment" and "currency" functions oppose each other. Despite this, it becomes increasingly clear that a majority of Bitcoin enthusiasts emerges not from its utility as a currency but as a highly speculative investment (Glaser et al. 2014). Despite the arguments in its favor focusing almost exclusively on Bitcoin's currency-like characteristics.

In fact, because the cycles of rapid deflation and inflation provoke constant exchanges of Bitcoin for other stores of value, usually national currencies, Bitcoin can more readily be understood not merely as a commodity, as just one among many other digital commodities, but also as a kind of derivative itself—an option or futures contract related to the value of other instruments and on which investors of all sorts can speculate and, depending on the volume of transactions, even manipulate the market. Given Bitcoin's foundational anti-legal regulatory stance, it is almost inconceivable that major players are refraining from such manipulation. No less a prominent Bitcoin advocate than Rick Falkvinge himself, who after claiming in March 2013 (Falkvinge 2013b) that the correct price of one Bitcoin could eventually be as high as US\$1 million, wrote in September of the same year (2013a) that its valuation had become "unwarranted by several orders of magnitude" due to "illegal price fixing," even though "for many Bitcoin enthusiasts, the Bitcoin market's unenforceability of governmental rules is a *feature*, not a bug" and that in manipulating the market, some Bitcoin traders were engaging in "cheating of some kind, a breaking of the social contract." Thus the involvement of high-profile players like the Winklevoss twins, too, cannot be a cause for celebration of Bitcoin's potential as a currency, but rather demonstrates its utility as a commodity that established capital can readily manipulate to its own ends. In this sense, it becomes a tool for existing power to concentrate itself, rather than a challenge to the existing order: as some better economically informed

commentators consistently point out, Bitcoin functions much more like a speculative investment than a currency (Worstall 2013; Yermack 2014), although what one is investing in, beyond Bitcoin itself, is not at all clear.