

BITCOIN'S NATURE AND ITS FUTURE

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When I became a member of the small band that the Federalist Society was thirty-seven years ago, it would have been impossible to imagine discussing the subject of cryptocurrency as part of its proceedings, let alone before such a substantial crowd.¹ But ultimately, the Society and the Constitution that it celebrates are concerned with the relation of liberty and the state. And there's no issue of modern technology more appropriate for us to consider, with cryptocurrency on the cutting edge of the divide between liberty and the state—between a centralized, coercive order, and a decentralized, voluntary one. And that divide, here, comes in that most important matter of money.

Modern fiat currency, like the dollars in your pocket and bank account, is quintessentially a creature of the state. Early in the twentieth century, Georg Frederick Knapp, the father of modern monetary theory, wrote, "The soul of currency is not in the material of the pieces, but in the legal ordinances which regulate their use."² Knapp argued that currency must be constituted by law, since only government could confer the requisite legitimacy to gain acceptance and public trust.³ Thus, the underlying value of a currency is intrinsically tied to a public's trust in that legal system.

Of course, some citizens have little trust in their legal system, particularly when it comes to currency. Nation states can manipulate their currency, printing more money to fund projects for their favorite supporters. Savings then lose their value, as

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1. This is a lightly edited version of Professor McGinnis's remarks. It draws heavily on John O. McGinnis & Kyle Roche, *Bitcoin: Order Without Law in the Digital Age*, 94 IND. L.J. 1497 (2019).

2. GEORG FRIEDRICH KNAPP, *THE STATE THEORY OF MONEY* 2 (Macmillan & Co. English ed. 1924) (1905).

3. *See id.* at 1–3.

prices are driven up by inflation.⁴ Citizens become less certain of money as a store of value and economic growth suffers.⁵ Government control over money thus can be a form of oppression no less than the denial of civil liberties. Because, for instance, of its hyperinflation today, Venezuela is about the most extreme example of what I would call a monetarily oppressive regime.⁶

The recent advent of cryptocurrencies, Bitcoin chief among them, poses both a practical challenge to such monetarily oppressive regimes, and a theoretical challenge to the view that the public law of currency is the necessary foundation of money. Thus, while the creation of Bitcoin and other cryptocurrencies is impressive as a technological innovation, their central innovation is in trust, the essential characteristic of any currency that will have long-term success.⁷ Bitcoin does not require faith in any public institution, such as the Federal Reserve, a monarch, or any other central authority, but rather, trust in the computer logic and the effectiveness of a decentralized order that maintains it.⁸

4. See N. GREGORY MANKIW, *MACROECONOMICS* 130 (9th ed. 2016).

5. K. Peren Arin & Tolga Omay, *Inflation and Growth: An Empirical Study for the Comparison of the Level and Variability Effects*, in *TRENDS IN INFLATION RESEARCH* 207, 212 (Barbara T. Credan ed., 2006).

6. See, e.g., Emma Graham-Harrison, Patricia Torres & Joe Parkin Daniels, *Barter and dollars the new reality as Venezuela battles hyperinflation*, *GUARDIAN* (Mar., 14, 2019, 2:00 AM), <https://www.theguardian.com/world/2019/mar/13/venezuela-hyperinflation-bolivar-banknotes-dollars> [<https://perma.cc/PGH5-4VAQ>] (describing the extreme economic hardships in Venezuela, as a result of hyperinflation, such as power outages disrupting electronic transactions and a lack of plastic to make debit and credit cards).

7. See, e.g., *The promise of the blockchain: The trust machine*, *ECONOMIST* (Oct. 31, 2015), <https://www.economist.com/leaders/2015/10/31/the-trust-machine> [<https://perma.cc/WY58-7UHR>] [hereinafter *The trust machine*] (describing how the blockchain, the core technology underlying the Bitcoin innovation, enables transactions between individuals who do not have an established trust relationship, in the absence of a third party).

8. In traditional bank-to-bank transactions, trust is created by a third party. In the United States, the automated clearinghouse (ACH) system is a network through which banks send each other “batches of electronic credit and debit transfers.” *Automated Clearinghouse Services*, BOARD GOVERNORS FED. RES. SYS., https://www.federalreserve.gov/paymentsystems/fedach_about.htm [<https://perma.cc/2BWx-WZT8>] (last visited Sept. 11, 2019). The ACH was responsible for moving \$51.2 trillion worth in financial transactions in 2018. *What is ACH*, NACHA, <https://www.nacha.org/content/what-is-ach> [<https://perma.cc/7UUY-VRPK>] (last visited Sept. 11, 2019). However, centralized trust comes at a cost: transaction fees processed by the ACH range between \$0.15 and \$0.95, costing financial institutions

Thus, Bitcoin is nothing less than a fundamental assault on the idea that a public law of currency is a necessary prerequisite of the modern monetary order. In fact, Bitcoin has the *potential* to outperform the currencies produced by legal regimes as a store of value, precisely because it requires no trust in political process, but rather trust in a transparent set of rules and transactions that follow those rules. The basic problem for public or fiat currencies is that a legal system cannot generally make the precommitments necessary to completely isolate the governance of its money supply from all political pressure.⁹ Bluntly, no one can insulate the stability claimed by public law from the hurly burly of politics.

To be sure, the U.S. dollar is the world's most trusted currency.¹⁰ Despite its many critics, the dollar has formed the basis for 90 percent of international trade over the last thirty years.¹¹ Companies, consumers, and central banks around the world trust in the relative stability of the Federal Reserve and the U.S. government.¹² Yet, the dollar has been subject to periods of severe and unexpected inflation. In fact, since the creation of the Federal Reserve, the purchasing power of the dollar

roughly \$20 billion a year. *ACH Processing Fees*, FIRST ACH, <https://www.firstach.com/front/ACH-Processing-Fees.html> [<https://perma.cc/TFA9-LAJA>] (last visited Sept. 11, 2019). Conversely, the Bitcoin blockchain is essentially a transaction database that contains every transaction ever executed in the currency, which is publicly available on the internet where one can find out how much value belonged to each Bitcoin address at any point in history. See AJ, *Blockchain 101: Beginners Guide to Understanding the Technology*, COINMONKS (Apr. 11, 2018), <https://medium.com/coinmonks/blockchain-101-beginners-guide-to-understanding-the-technology-75a75f863ec2> [<https://perma.cc/D8EN-SNH8>]; see also *The trust machine*, *supra* note 7.

9. This impossibility in the United States stems from the inability of legislatures to bind future legislatures. See John O. McGinnis & Michael B. Rappaport, *Symmetric Entrenchment: A Constitutional and Normative Theory*, 89 VA. L. REV. 385, 388–89 (2003). Thus, legislation can change the structure of the Federal Reserve or its objectives.

10. John Waggoner, *U.S. dollar is still the world's most trusted currency*, USA TODAY (Mar. 12, 2010, 8:41 PM), http://usatoday30.usatoday.com/money/economy/2010-03-12-dollar12_CV_N.htm [<https://perma.cc/TH79-8MKS>].

11. See Yalman Onaran, *Dollar Dominance Intact as U.S. Fines on Banks Raise Ire*, BLOOMBERG (July 16, 2014, 3:54 AM), <http://www.bloomberg.com/news/articles/2014-07-15/dollar-dominance-intact-as-u-s-fines-on-banks-raise-ire> [<https://perma.cc/2C48-J23M>].

12. *Id.*

has fallen by 97 percent.¹³ And that's not a surprise. Since the Progressive Era, the Federal Reserve has had, by law, other political objectives than maintaining the value of the currency, such as getting to full employment.¹⁴ But individuals only have one desire for a currency: that it maintain its value.¹⁵ The basic divergence between the social objectives of fiat money and the individual's objectives of maintaining value is what necessarily limits the trust that any fiat currency can enjoy.¹⁶

I emphasize that I have only spoken of Bitcoin's potential, not its current reality. If Bitcoin succeeds as a currency, it will do so only by climbing the rungs left open by the frailties of the public law of money. It has already gained strength and stability by competing successfully against monetarily oppressive regimes, and performing payment functions for the poor that the bank regulations have made difficult. Looking at its past history, Bitcoin has been an enormous success. It has had substantial volatility of late, but if one had been an investor early on, one could be a millionaire, indeed even a billionaire today.¹⁷

Bitcoin could become even more competitive, and climb other open rungs, because even the best currencies are subject to the political risks built into any public law of currency. But while Bitcoin is used as a currency in monetarily oppressive regimes (the people of Venezuela are using it right now),¹⁸ it does not

13. *Consumer Price Index for All Urban Consumers: Purchasing Power of the Consumer Dollar in U.S. City Average*, FED. RES. BANK ST. LOUIS, <https://fred.stlouisfed.org/series/CUUR0000SA0R> [<https://perma.cc/J586-S35T>] (last visited Aug. 23, 2019).

14. 12 U.S.C. § 225a (2012).

15. See George Melloan, *Only a Crisis Will Bring Money Reform*, 32 CATO J. 279, 279 (2012); Lewis D. Solomon, *Local Currency: A Legal and Policy Analysis*, 5 KAN. J.L. & PUB. POL'Y 59, 74 (1996).

16. See Melloan, *supra* note 15, at 279–81.

17. See, e.g., David Enrich, *Spend Some Time with the Winklevii*, N.Y. TIMES (Mar. 21, 2019) (reviewing BEN MEZRICH, *BITCOIN BILLIONAIRES: A TRUE STORY OF GENIUS, BETRAYAL, AND REDEMPTION* (2019)), <https://www.nytimes.com/2019/05/21/books/review/ben-mezrich-bitcoin-billionaires.html> [<https://perma.cc/C5S8-EGV7>] (describing an example of Bitcoin's volatility and the fortune made by two early investors); Gene Marks, *\$100 of bitcoin in 2010 is worth \$75 million today*, WASH. POST (Mar. 23, 2017, 2:51 PM), <https://www.washingtonpost.com/news/on-small-business/wp/2017/05/23/100-of-bitcoin-in-2010-is-worth-75-million-today/> [<https://perma.cc/7623-M3B6>].

18. See, e.g., Kamilia Lahrichi, *Growing number of Venezuelans trade bolivars for bitcoins to buy necessities*, GUARDIAN (Dec. 16, 2016, 6:15 AM), <https://www.theguardian.com/technology/2016/dec/16/venezuela-bitcoin-economy-digital-currency-bolivars> [<https://perma.cc/C8FE-Y6XR>].

function as a currency in more established regimes.¹⁹ That does not mean that people don't hold it in the United States. Some do, but even most of those hold it only for small investments, and use it to pay for a few items—often as a kind of hobby.²⁰ The vast majority of us hold most of our investments in dollar denominated assets, and use cash to pay day-to-day expenses.²¹ For most people, Bitcoin is not yet a good enough store of value. It's simply too volatile compared to the dollar, and risk-averse people don't want to hold their cash or assets in a unit account so volatile.²²

I conclude by outlining what needs to happen for Bitcoin, or possibly some other cryptocurrency, to gain greater market share against more mature currencies—and ultimately against the dollar itself. It needs to continue to gain in price to attract investors, but also to lessen in volatility to attract people who would like to hold it for general purposes of payment. For a cryptocurrency with a fixed supply, like Bitcoin, these two forces may sometimes be in tension. For instance, although rampant speculation may drive up a currency's value, the inherent volatility that comes along with such upward swings can be destabilizing for a currency. But that might not be a fatal

19. See, e.g., Olga Kharif, *Bitcoin is rallying again, but it's still not used to buy much of anything*, L.A. TIMES (May 31, 2019, 1:48 PM), <https://www.latimes.com/business/la-fi-bitcoin-rally-blockchain-speculation-20190531-story.html> [<https://perma.cc/V9U4-NKKE>].

20. See, e.g., Spencer Bogart, *Bitcoin is a Demographic Mega-Trend: Data Analysis*, BLOCKCHAIN CAP. BLOG (Apr. 30, 2019), <https://medium.com/blockchain-capital-blog/bitcoin-is-a-demographic-mega-trend-data-analysis-160d2f7731e5> [<https://perma.cc/2CP4-H6XM>] (showing that 9 percent of Americans own Bitcoin); Alex Lielacher, *How Many People Use Bitcoin in 2019?*, BITCOIN MKT. J. (Feb. 11, 2019, 8:00 AM), <https://www.bitcoinmarketjournal.com/how-many-people-use-bitcoin/> [<https://perma.cc/55N5-XBLG>] (showing that there are 32 million bitcoin wallets, but only 11 percent of total bitcoin owners use wallets for payment); *Why haven't we all bought cryptocurrency yet?*, FINDER (June 13, 2018), <https://www.finder.com/why-people-arent-buying-cryptocurrency> [<https://perma.cc/X97F-RVUF>] (showing that the average amount of bitcoin owned is \$3,453.89).

21. See, e.g., Kharif, *supra* note 19; James Royal, *Survey: Real estate is back as American's favorite long-term investment*, BANKRATE (July 17, 2019), <https://www.bankrate.com/investing/financial-security-july-2019/> [<https://perma.cc/78S2-FZLE>] (showing only 4 percent of Americans said Bitcoin, or cryptocurrencies, were their favored long-term investments).

22. See, e.g., Michelle Singletary, *I don't care how high the price for bitcoin gets, it's still too risky for the average investor.*, WASH. POST (June 27, 2019, 7:30 AM), <https://www.washingtonpost.com/business/2019/06/27/i-dont-care-how-high-price-bitcoin-gets-its-still-too-risky-average-investor/> [<https://perma.cc/AX8U-YKZK>].

flaw.²³ If Bitcoin comes to enjoy steady growth and demand, it will be able to attain an acceptable level of volatility, while at the same time reaching a broader market.

To become more successful and widely used, Bitcoin does not need to become less volatile and more accepted than the dollar. There are many less successful currencies against which it could compete, and it would gain much value simply by replacing, or even complementing, gold as the basic hedge against currency devaluation.²⁴ There are two important conditions to facilitate such developments. First, there have to be monetarily oppressive currencies so as to give substantial impetus to the use of Bitcoin as an alternate currency. Given the renewed enthusiasm about socialism throughout the world,²⁵ this condition is already being satisfied. When socialists run out of other people's money, they print more of it for themselves.

The second condition is more open ended. There has to be continued strength in the "Bitcoin ecosystem." Most people don't have the skills to use Bitcoin directly. There are amusing stories about people somehow losing their Bitcoin key, and looking around for it in some of their papers, having lost a million dollars.²⁶ Bitcoin owners need to keep an open key wallet. They need mechanisms to ensure the security of dealing with Bitcoin. Thus, they need cryptocurrency wallets and exchanges. Fortunately, these institutions have gotten a lot more profes-

23. Vildana Hajric, *With its volatility on the decline, is Bitcoin fading away or just maturing?*, L.A. TIMES (Oct. 5, 2018, 3:55 PM), <https://www.latimes.com/business/la-fi-bitcoin-volatility-20181005-story.html> [<https://perma.cc/M33J-W6MG>].

24. See, e.g., Mathew Di Salvo, *Why are Venezuelans seeking refuge in cryptocurrencies?*, BBC (Mar. 19, 2019), <https://www.bbc.com/news/business-47553048> [<https://perma.cc/JD6Y-KDNX>] (demonstrating that Bitcoin is already competing against the Venezuelan Bolivar); Alex Lielacher, *Is Bitcoin a Better 'Safe Haven' than Gold?*, BTCMANAGER (Dec. 5, 2016), <https://btcmanager.com/is-bitcoin-a-better-safe-haven-than-gold> [<https://perma.cc/D99L-BR3E>] (suggesting investors flocked to Bitcoin after currency-destabilizing geopolitical events).

25. See, e.g., Frank Newport, *Democrats More Positive About Socialism than Capitalism*, GALLUP (Aug. 13, 2018), <https://news.gallup.com/poll/240725/democrats-positive-socialism-capitalism.aspx> [<https://perma.cc/7RNT-K93F>] (acknowledging that both Americans under twenty-nine and Democrats statistically have a more positive view of socialism than capitalism).

26. Alison Sider & Stephanie Yang, *Good News! You are a Bitcoin Millionaire. Bad News! You Forgot Your Password*, WALL ST. J. (Dec. 19, 2017, 11:34 AM), <https://www.wsj.com/articles/good-news-you-are-a-bitcoin-millionaire-bad-news-you-forgot-your-password-1513701480> [<https://perma.cc/4R98-7L2Y>].

sional since the day Mt. Gox lost hundreds of millions of dollars' worth of Bitcoin.²⁷

Even more importantly, there needs to be continued growth in the markets around Bitcoin. Futures and forward markets make the price discovery process for Bitcoin, and other cryptocurrencies, more efficient and help dampen volatility.²⁸ Permitting funds that invest in Bitcoin, and other cryptocurrencies, will allow more people to hold Bitcoin or cryptocurrencies as part of their portfolio. That will also thicken the market, and have a stabilizing effect.²⁹

Now, note that these wallets, futures markets, and investment funds are not order without law. They are institutions regulated by our law, and by our administrators.³⁰ And indeed, the SEC recently rejected—in my view wrongly—the Winklevoss twins' application for an ETF investment fund that would have been devoted to Bitcoin.³¹

Thus, paradoxically, the success of Bitcoin may depend on the state's willingness to apply the neutral principles of its laws to an innovation that may itself turn out to be a competitor to one of the greatest powers of the state: its ability to print fiat money. That

27. Robin Sidel, Eleanor Warnock & Takashi Mochizuki, *Almost Half a Billion Worth of Bitcoins Vanish*, WALL ST. J. (Feb. 28, 2014, 7:16 PM), <https://www.wsj.com/articles/mt-gox-to-hold-news-conference-1393579356> [<https://perma.cc/D3XY-8U2V>] (describing Mt. Gox losing 750,000 Bitcoins worth \$470 million).

28. Hajric, *supra* note 23.

29. Luke Graham, *How bitcoin could overcome its wild reputation*, CNBC (Sept. 21, 2017, 11:37 AM), <https://www.cnbc.com/2017/09/21/bitcoin-volatility-how-digital-currency-can-overcome-wild-reputation.html> [<https://perma.cc/FYL8-Q7YB>].

30. See, e.g., Jacek Czarnecki, *No, the EBA's Bitcoin Regulation Proposals Aren't All Bad*, COINDESK (Aug. 19, 2016, 5:51 PM), <https://www.coindesk.com/defense-ebas-proposed-bitcoin-regulation> [<https://perma.cc/UF23-KXFC>] (describing the executive branch of the European Union advising that wallet providers be brought under the scope of its anti-money laundering and countering terrorist financing regulations); Garrett Keirns, *From First Filing to Final Decision: The Journey of the Winklevoss Bitcoin ETF*, COINDESK (May 17, 2017, 7:10 PM), <https://www.coindesk.com/the-journey-of-the-winklevoss-bitcoin-etf> [<https://perma.cc/GU3C-QGMS>] (explaining that ETFs are regulated and evaluated by the SEC); IRS reminds taxpayers to report virtual currency transactions, IRS (Mar. 23, 2018), <https://www.irs.gov/newsroom/irs-reminds-taxpayers-to-report-virtual-currency-transactions> [<https://perma.cc/5UVA-VD6G>] (explaining that taxes must be paid on any trading profits from virtual cryptocurrency transactions); Phillip Stafford, *US regulator gives green light for bitcoin futures trading*, FIN. TIMES (Dec. 1, 2017), <https://www.ft.com/content/43d69af8-d6b0-11e7-8c9a-d9c0a5c8d5c9> [<https://perma.cc/C9D7-QLW5>].

31. Bats BZX Exch., Inc., Exchange Act Release No. 34-83723, 2018 WL 3596768 (July 26, 2018).

shows why cryptocurrency is directly in the Federalist Society's wheelhouse. Its success depends, ultimately, on the rule of law and the constitutional respect for a new form of property.