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Cryptocurrencies: The New Species

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CRYPTOCURRENCIES: THE NEW SPECIES

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I. INTRODUCTION

The sphere of cryptocurrencies is a new and unique one that represents a potentially huge volume of future trade, investment, and other revolutionary fiscal applications.¹ Currently, the most widely known is

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Bitcoin, but there are other serious players in the game such as Ethereum, NEO, and Ripple, to name just a few.²

Cryptocurrencies extend beyond the pre-established limits, and thus do not fit easily into the existing paradigm.³ In fact, their scope is so vast, it is almost impossible to predict their future impact.⁴ It is a bit like attempting to estimate the possible size and magnitude of an unknown type of fully mature tree from its tiny infant seed.* So, perhaps we should not limit our imaginations too much with rapidly redundant frameworks and limiting definitions.*

The objective of this article is to widen and expose the field of interpretations and understanding of cryptocurrencies while providing some stimulating, inspirational thoughts regarding the unprecedented opportunities and dilemmas cryptocurrencies face.*

This mini-thesis has been written almost like a stream of thought, rather than a concisely researched document.* This is because it does not attempt to meet all the criteria of empirically proven research.* As such, some of its statements are unproven, unquantifiable, and unquoted.*

Currently, complete examination is impossible because cryptocurrency, and the blockchain technology supporting it behind the scenes, is a rapidly evolving organic phenomenon—it is swirling, moving, and adapting.⁵ At this stage, it is impossible to predict accurately what will

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1. See Wilko Bolt & Maarten R.C. van Oordt, *On the Value of Virtual Currencies* 1 (Bank of Can., Staff Working Paper 2016-42, 2016).

2. *Id.*; Laignee Barron, *5 Bitcoin Rivals That Are Rapidly on the Rise*, FORTUNE: TECH: BITCOIN (Dec. 4, 2017), <http://www.fortune.com/2017/12/04/bitcoin-ethereum-cryptocurrency-blockchain/>; Kohwo Ogilo, *Too Late for Bitcoin? Here are Other Cryptocurrencies That You Could Profit Off in 2018*, ORACLE TIMES (Nov. 28, 2017), <http://www.oracletimes.com/too-late-for-bitcoin-here-are-other-cryptocurrencies-that-you-could-profit-off-in-2018/>; see also ETHEREUM, <http://www.ethereum.org/> (last visited Apr. 18, 2018); NEO, <http://www.neo.org/> (last visited Apr. 18, 2018); RIPPLE, <http://www.ripple.com/> (last visited Apr. 18, 2018).

3. See Bolt & van Oordt, *supra* note 1, at 1, 5–6.

4. See *id.* at 1; Ogilo, *supra* note 2.

5. See *Evolution of Blockchain and Cryptocurrency*, BLOCKOGY: BLOCKCHAIN, <http://www.blockogy.com/blockchain/evolution-blockchain-cryptocurrency/> (last visited Apr. 18, 2018).

happen even in the short to medium term future.⁶ But one thing is for sure, this technology is game changing and will have a big impact one way or the other.*

II. BASIC QUESTION

“Lay not up for yourselves treasures upon earth, where moth and rust doth corrupt, and where thieves break through and steal.”⁷

What is cryptocurrency from a legal perspective?* Is it money?* Is it an asset?* Is it capital?* What kind of legal category does cryptocurrency fall under?* Each jurisdiction uses different legal terms to describe and categorize cryptocurrency.⁸ The case law shows a huge variety regarding outcomes, as well.⁹

However, the problem here is that cryptocurrency works globally, not locally.¹⁰ It knows and respects no borders.¹¹ Based on the author’s opinion—plus wording of different legislation, case law, and the jurisprudence of different jurisdictions—the used, relevant, and possible categories are the following: Money, currency, virtual currency, digital currency, digital cash, digital unit, “as if [they were] cash,” cryptocurrency, private money, legal tender, unit of account, medium of exchange, money of account, clearing account, foreign currency, not a currency, payment instrument, e-money, e-money institution, investment firm, payment service, payment service provider, civil association, payment system, information society service, information society service provider, financial instrument, security, financial security, transferable security, share capital, equity, copyright, intellectual property, intellectual product, intellectual right, property right, asset, intangible property right, intangible asset, intangible right, share, movable property, movable asset, right, intellectual work, pecuniary value, goods, property, commodity, virtual commodity, electronic service, electronic money, “alternative private means of payment,” yield, voucher, bill, money order, account files, accounting income, legal claim,

6. *See id.*

7. *Matthew* 6:19 (King James).

8. *See* Francine McKenna, *Here’s How the U.S. and the World Regulate Bitcoin and Other Cryptocurrencies*, MARKETWATCH: ECON. & POL. (Dec. 28, 2017, 11:19 AM), <http://www.marketwatch.com/story/heres-how-the-us-and-the-world-are-regulating-bitcoin-and-cryptocurrency-2017-12-18>.

9. *Id.*; *see also* Timothy Bierer, *Hashing It Out: Problems and Solutions Concerning Cryptocurrency Used as Article 9 Collateral*, 7 CASE WESTERN RESERVE J.L. TECH & INTERNET, no.1, 2016, at 79, 89–91.

10. McKenna, *supra* note 8.

11. *See id.*

and res.¹² One conclusion of the above vast categorization process is that we need to understand the cryptocurrency phenomenon better, instead of just

12. See Directive 2015/1535, of the European Parliament and of the Council of 9 September 2015 Laying Down a Procedure for the Provision of Information in the Field of Technical Regulations and of Rules on Information Society Services, 2015 O.J. (L 241) 1, 1, 3; Directive 2015/849, of the European Parliament and of the Council of 20 May 2015 on the Prevention of the Use of the Financial System for the Purposes of Money Laundering or Terrorist Financing, Amending Regulation 648/2012 of the European Parliament and of the Council, and Repealing Directive 2005/60/EC of the European Parliament and of the Council and Commission Directive 2006/70/EC, 2015 O.J. (L 141) 73, 85, 88; Directive 2013/36/EU, of the European Parliament and of the Council of 26 June 2013 on Access to the Activity of Credit Institutions and the Prudential Supervision of Credit Institutions and Investment Firms, Amending Directive 2002/87/EC and Repealing Directives 2006/48/EC and 2006/49/EC, 2013 O.J. (L 176) 338, 358; Regulation 575/2013, of the European Parliament and of the Council of 26 June 2013 on Prudential Requirements for Credit Institutions and Investment Firms and Amending Regulation 648/2012, 2013 O.J. (L 176) 1, 5, 41, 89; Directive 2011/83/EU, of the European Parliament and of the Council of 25 October 2011 on Consumer Rights, Amending Council Directive 93/13/EEC and Directive 1999/44/EC of the European Parliament and of the Council and Repealing Council Directive 85/577/EEC and Directive 97/7/EC of the European Parliament and of the Council, 2011 O.J. (L 304) 64, 71, 73; Directive 2009/110/EC, of the European Parliament and of the Council of 16 September 2009 on the Taking Up, Pursuit and Prudential Supervision of the Business of Electronic Money Institutions Amending Directives 2005/60/EC and 2006/48/EC and Repealing Directive 2000/46/EC, 2009 O.J. (L 267) 7, 7, 12; Directive 2007/64/EC, of the European Parliament and of the Council of 13 November 2007 on Payment Services in the Internal Market Amending Directives 97/7/EC, 2002/65/EC, 2005/60/EC and 2006/48/EC and Repealing Directive 97/5/EC, 2007 O.J. (L 319) 1,2; Directive 2004/39/EC, of the European Parliament and of the Council of 21 April 2004 on Markets in Financial Instruments Amending Council Directives 85/611/EEC and 93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and Repealing Council Directive 93/22/EEC, 2004 O.J. (L 145) 1, 1, 28; Directive 2002/65/EC, of the European Parliament and of the Council of 23 September 2002 Concerning the Distance Marketing of Consumer Financial Services and Amending Council Directive 90/619/EEC and Directives 97/7/EC and 98/27/EC, 2002 O.J. (L 271) 16, 17, 19, 21; *Commission Proposal for a Directive of the European Parliament and of the Council on Payment Services in the Internal Market and Amending Directives 2002/65/EC, 2013/36/EU and 2009/110/EC and Repealing Directive 2007/64/EC*, at 11, 14–15 COM (2013) 547 final (July 24, 2013) [Commission Proposal]; Directive 2000/31/EC, of the European Parliament and of the Council of 8 June 2000 on Certain Legal Aspects of Information Society Services, in Particular Electronic Commerce, in the Internal Market, 2000 O.J. (L 178) 1, 1; MONETARY BD., OFFICE OF THE GOVERNOR, BANGKO SENTRAL NG PILIPINAS, CIRCULAR NO. 944, GUIDELINES FOR VIRTUAL CURRENCY (VC) EXCHANGES 2 (Feb. 6, 2017) (Phil.); LA JUNTA DE POLÍTICA Y REGULACIÓN MONETARIA Y FINANCIERA, [THE MEETING OF MONETARY AND FINANCIAL POLITICS AND REGULATION], RES. NO. 064-2015-M, BANCO CENTRAL DEL ECUADOR 2 (2015); TANEL KERIKMÄE & ADDI RULL, THE FUTURE OF LAW AND ETECHNOLOGIES 115 (2016), <http://www.springer.com/gp/book/9783319268941>; Wilko Bolt & Maarten R.C. van Oordt, *On the Value of Virtual Currencies* 9, 32 (Bank of Can., Staff Working Paper 2016-42, 2016); Sergii Shcherbak, *How Should Bitcoin Be Regulated?*, EUR. J. LEGAL STUD., Summer 2014, at 41, 48, 51, 68, 83; *Digital Currencies: International Actions and Regulations*, PERKINS COIE LLP, <http://www.perkinscoie.com/en/news-insights/digital-currencies-international-actions-and-regulations.html> (last updated Dec. 2017); *EBA Opinion*

creating justifications and objections for each existing legal category and term.¹³

The category-based approach is extremely interesting in its diversity.¹⁴ However, we do not really get closer to finding the answer to this most very modern of conundrums.¹⁵ The truth is that categorizing something as amorphous might be extremely useful in on-going litigation; however, it does not really help us get the answers we require to our very apparently simple question.¹⁶ We need to understand the phenomenon instead of categorizing it merely in arbitrary legal terms.¹⁷ It means we need to get out of the jurisdiction of the isolated, closed loop of the legal system, and expand the horizons.¹⁸ This kind of approach is absolutely necessary to make sense of the bigger picture.*

of the European Banking Authority on the EU Commission's Proposal to Bring Virtual Currencies into the Scope of Directive (EU) 2015/849 (4AMLD), at 1 (Aug. 11, 2016), <http://www.eba.europa.eu/documents/10180/1547217/EBA+Opinion+on+the+Commission's+proposal+to+bring+virtual+currency+entities+into+the+scope+of+4AMLD>; *EBA Opinion on 'Virtual Currencies'*, at 5–8, 11 (July 4, 2014), <http://www.eba.europa.eu/documents/10180/657547/EBA-Op-2014-08+Opinion+on+Virtual+Currencies.pdf>; Lesetja Kganyago, Governor of S. Afr. Reserve Bank, Address at the Cybersecurity Conference Johannesburg 2 (Aug. 23, 2016); Press Release, Banco de la República, Colom., Comunicado Bitcoin (Apr. 1, 2014) (on file with author); Press Release, Fed. Dep't of Fin., Background Documentation: Reduction of Barriers to Market Entry for Fintech Firms (Feb. 11, 2016) (on file with author) (Switz.); Press Release, Isr. Tax Auth., The Tax Authority Published a Draft Circular That Clarifies the Taxation of Activity in Virtual Currencies (Jan. 12, 2017) (on file with author); Press Release, Monetary Auth. of Sing., MAS, R3 and Financial Institutions Experimenting with Blockchain Technology (Nov. 26, 2016) (on file with author); Press Release, Reserve Bank of India, RBI Cautions Users of Virtual Currencies Against Risks (Dec. 24, 2013) (on file with author); Shri R. Gandhi, Deputy Governor, Address at FIBAC 2015, (Aug. 25, 2015) (transcript available at Bank for International Settlements website). These terms can be considered as possible/impossible categories of cryptocurrencies. ATTORNEY-GENERAL'S DEP'T, REPORT ON THE STATUTORY REVIEW OF THE ANTI-MONEY LAUNDERING AND COUNTER-TERRORISM FINANCING ACT 2006 AND ASSOCIATED RULES AND REGULATIONS 45 (Apr. 2016), <http://www.ag.gov.au/Consultations/Documents/StatutoryReviewAnti-MoneyLaunderingAndCounter-TerrorismFinancingActCth200/report-on-the-statutory-review-of-the-anti-money-laundering.pdf> (Austl.).

13. See Evan Hewitt, *Bringing Continuity to Cryptocurrency: Commercial Law as a Guide to the Asset Categorization of Bitcoin*, 39 SEATTLE U. L. REV. 619, 622–23 (2016).

14. *Id.* at 622.
 15. *See id.* at 621, 624.
 16. *Id.* at 624; *see also* Bierer, *supra* note 9, at 90.
 17. *See* Hewitt, *supra* note 13, at 622–23.
 18. *See* Bierer, *supra* note 9, at 89–90, 94.

III. BASIC DILEMMAS: THE VANISHING CURRENCY OF PENNSYLVANIA—STOCKED IN SPACE AND TIME

It is likely that only a few older Pennsylvanian local citizens would probably know that until 1793 the official currency of Pennsylvania was not the Federal Reserve issued United States Dollar (“USD”), but rather the Pennsylvanian pound.¹⁹ Before the USD, as defined under the 1792 Coinage Act or Mint Act,²⁰ plenty of local currencies were in circulation.²¹ The abovementioned Pennsylvanian pound was certainly not a unique case in the North American territory; there were many different currencies used.²² Currency varied and could vary by states, territories, counties, and even cities.²³ However, with the exception of the occasional *community currencies*, these genuine local alternative currencies are no longer in existence today.²⁴

At their height, nobody thought of these currencies as fragile and temporary—they were just accepted without question.²⁵ What else could better prove their value; just think, at one point in time, people robbed and murdered each other to steal other people’s Pennsylvanian pounds.* Goods and property were purchased, people were paid, and debts were settled all in good old Pennsylvanian pounds.²⁶

This was the money they worked hard to earn.* People hid Pennsylvanian pounds under their floorboards, sewed it into their mattresses, pillows, and sofas.²⁷ When people dreamed of becoming rich, they imagined having large pots brimming with lots of Pennsylvanian pounds.*

19. See THOMAS BORAWSKI, JAMES LOGAN AND THE BAILOUT DEBATE OF 1722 3 (2013), http://www.generaltelegraph.com/papound_html/Bailout1722.pdf; Farley Grubb, *Creating the U.S. Dollar Currency Union, 1748 - 1811: A Quest for Monetary Stability or a Usurpation of State Sovereignty for Personal Gain?*, 93 AM. ECON. REV. 1778, 1783 (2003).

20. Coinage Act of 1792, ch. 16, § 20, 1 Stat. 246, 250 (1792).

21. See *The History of American Currency*, U.S. CURRENCY EDUC. PROGRAM: HIST., <http://www.uscurrency.gov/history> (last visited Apr. 18, 2018); BORAWSKI, *supra* note 19, at 2.

22. See BORAWSKI, *supra* note 19, at 3; *The History of American Currency*, *supra* note 21.

23. See BORAWSKI, *supra* note 19, at 2–3; *The History of American Currency*, *supra* note 21.

24. PETER MOERS, COMMUNITY CURRENCY SYSTEMS: A CO-OPERATIVE OPTION FOR THE DEVELOPING WORLD? 10 (1998), http://www.socioeco.org/bdf_fiche-document-248_en.html; *The History of American Currency*, *supra* note 21.

25. See Grubb, *supra* note 19, at 1779; Moers, *supra* note 24, at 10.

26. See Grubb, *supra* note 19, at 1779–80; Tomasz Tunguz, *The Parallel Between Cryptocurrency and Continentals*, TOMTUNGUZ (Nov. 26, 2017), <http://www.tomtunguz.com/cryo-and-colonial/>.

27. See Grubb, *supra* note 19, at 1779–80; Tunguz, *supra* note 26.

The Pennsylvanian pound had an accepted value and it was a legitimate currency; however, its usage was severely limited in geographical terms—it was not legal tender in other neighboring states or counties.²⁸ Or, if it was accepted, it was done under punitive exchange rates.²⁹

The questions then become: What makes a sustainable currency?* How long can one stay viable?* Why do some currencies fail?* What characteristics are needed for a currency to be accepted in a neighboring state?* What causes one currency to proliferate and another to remain isolated?* Do they spread like trends, fashion, or memes?* Does a currency behave as a cultural-political export product?*

The example of the Pennsylvanian pound and USD shows that some currencies disappear and can be replaced and quickly forgotten about.³⁰ So, it seems that some currencies just die out while others remain and even prosper.³¹ This pattern looks true for government-backed fiat currencies, cryptocurrencies, and other currencies.³² The legal tender is determined by space and time.³³

A. *The Turbo Car Cards Dilemma*

Turbo was a brand of chewing gum popular in the 1990s.³⁴ The gum had collectable inserts, which featured the images of various vehicles along with their top speed, horsepower, and engine size.³⁵ Everyone at school would avidly collect these cards.*

The faster the maximum speed of the vehicle, the more valuable it became.* So, a very fast sports car might easily be exchanged for six medium range cars.* Moreover, many times that exchange alone was insufficient because the buyer was also required to do the seller's homework as part of the transaction arrangement.* The car cards trade was so intense that it occurred at all times, even during lessons.* Cards were exchanged all

28. Grubb, *supra* note 19, at 1779; MOERS, *supra* note 24, at 5.

29. See Grubb, *supra* note 19, at 1779–80; Tunguz, *supra* note 26.

30. See Grubb, *supra* note 19, at 1779–80; BORAWSKI, *supra* note 19, at 24.

31. See Grubb, *supra* note 19, at 1778–80, 1783.

32. See Bolt & van Oordt, *supra* note 1, at 1, 3; MOERS, *supra* note 24, at 11, 15.

33. Don Swenson, *Today's Digital \$ Not Official 'Legal Tender' Money! Why?*, WORDPRESS: KINGDOM ECONOMICS—THE FUTURE IS NOW (June 22, 2017), <http://www.kingdomecon.wordpress.com/2017/06/22/todays-digital-not-official-legal-tender-money-why/>.

34. See Kent, XKS: BUBBLE GUM WRAPPERS, <http://www.b-g-w.blogspot.com/p/kent.html> (last visited Apr. 18, 2018).

35. TURBO, *Short Introduction.*, WORDPRESS: ..MY BUBBLE GUM INSERTS COLLECTION..., <http://guminserts.wordpress.com/01-turbo/> (last visited Apr. 18, 2018).

year round come rain, snow, or shine.* It never stopped.* Yet, no one outside of our school had the slightest clue about this thriving daily market.*

Incidentally, it should also be noted that not everyone was that interested in the Turbo card trade; the younger children were unable to understand the game and the older pupils were already into other things.* However, it was completely inconsequential to us that they did not partake in the bustling trade.*

The Turbo cards were not recognized or regulated by any specific authority or body.³⁶ Acceptability of them can be defined by: The time, for us circa 1993; space, the confines of the school in the city where I lived; and milieu, third grade—mainly male pupils.³⁷

Let me tell you that I would not complete anyone's homework for a Turbo car card today.* While the car cards *there* and *then* were unquestionable currencies, we clearly would not have been able to use them as currency at the local corner shop even at the peak of the craze.³⁸

Of course, it depends on preferences and interpretations of what the Turbo chewing gum cards tells us.* How similar is a car card to a fiat currency, a cryptocurrency, or something else? The above example perfectly illustrates the sensitivity of a given currency in relation to factors of space, time, milieu, acceptability, and trends.³⁹

B. *The Swiss Franc, Zimbabwean Dollar, and Transnistrian Ruble*

The Special Drawing Rights (“SDR”) basket is defined and maintained by the International Monetary Fund (“IMF”).⁴⁰ It currently consists of the following five currencies: The USD, the euro, the Chinese renminbi,⁴¹ the Japanese yen, and the British pound.⁴²

36. *See id.*

37. *See* DAVID WHITEBREAD & SUE BINGHAM, HABIT FORMATION AND LEARNING IN YOUNG CHILDREN 3–5, 11–12, 18–19 (2013).

38. *See id.* at 18–19; *TURBO, Short Introduction.*, *supra* note 35.

39. WHITEBEARD & BINGHAM, *supra* note 37, at 3–5, 11–12, 18–19; Lucinda Shen, *Goldman Sachs: Today's Cryptocurrencies Will Go to Zero, but Stronger Digital Currencies May Still Emerge*, FORTUNE: LEDGER (Feb. 7, 2018), <http://www.fortune.com/2018/02/07/bitcoin-price-usd-prediction-goldman-sachs-cryptocurrency/>; Bob Swarup, *Why Regulation Could Help Bitcoin*, COINDESK (Apr. 7, 2014, 12:59 PM), <http://www.coindesk.com/regulation-help-bitcoin/>; *Turbo, Short Introduction.*, *supra* note 35.

40. *Special Drawing Right (SDR)*, INT'L MONETARY FUND (Oct. 13, 2017), <http://www.imf.org/external/np/exr/facts/sdr.htm>.

41. *Id.* Better known as Chinese yuan, renminbi is the official currency while yuan is the unit of renminbi. *SDR Valuation*, INT'L MONETARY FUND, http://www.imf.org/external/np/fin/data/rms_sdrv.aspx (last visited Apr. 18, 2018).

42. *Special Drawing Right (SDR)*, *supra* note 40.

The above five currencies are commonly referred to as *world currencies*.⁴³ It is rather interesting, however, that the Swiss franc is not included in the SDR basket, as it is a stable and significant currency—well-known, widely accepted, with a lot of things fixed to it.⁴⁴ The franc is investment protected and it goes without saying that the Swiss—and the Swiss banking system—have an extremely strong reputation across the world in this particular field.⁴⁵

Just like the Swiss franc, the Zimbabwean dollar⁴⁶ was also not part of the SDR, but unlike the Swiss Franc, it was never accepted at an exchange office other than in Zimbabwe, such as somewhere in deep rural China, for example.⁴⁷

I went with my friend Istvan to Transnistria⁴⁸ in 2014, which is not internationally recognized as a sovereign country.⁴⁹ It lies in a disputed area somewhere between Moldova and the Ukraine.⁵⁰ Despite the fact that the international community does not recognize it, Transnistria has its own parliament,⁵¹ government,⁵² central bank, and currency.⁵³ People are allowed to pay exclusively with Transnistrian rubles in Transnistria, as we

43. See *Five Major World Currencies*, PERSONAL FIN. DISCUSSION: GEN. FIN. (Jan. 29, 2017), <http://www.personalfinancediscussion.com/five-major-world-currencies/>; Keith Bradsher, *I.M.F. Adds China's Currency to Elite Global Financial Club*, N.Y. TIMES, Dec. 1, 2015, at A1.

44. See *CHF - Swiss Franc*, XE, <http://www.xe.com/currency/chf-swiss-franc> (last visited Apr. 18, 2018); *Special Drawing Right (SDR)*, *supra* note 40.

45. See *CHF - Swiss Franc*, *supra* note 44.

46. See *ZWD - Zimbabwean Dollar*, XE, <http://www.xe.com/currency/zwd-zimbabwean-dollar#additionalinfo> (last visited Apr. 18, 2018). Please read for more information on hyperinflation in Zimbabwe. *Id.*

47. See *id.*; *Special Drawing Right (SDR)*, *supra* note 40.

48. TRANSNIESTER, <http://www.transdniester.ru> (last visited Apr. 18, 2018). Transnistria is called *Pridnestrovie* in Russian. *Id.*

49. Jan Tomes, *Transnitria — Not on the International Community's Map*, DEUTSCHE WELLE: WORLD (Oct. 15, 2017), <http://www.dw.com/en/transnitria-not-on-the-international-communitys-map/a-40937845>.

50. *Id.*

51. See VERKHOVNĪI SOVET PRIDNESTROVSKOĪ MOLDAVSKOĪ RESPUBLIKI [THE SUPREME COUNCIL OF THE PRIDNESTROVSKAIA MOLDAVSKAIA RESPUBLIKA], <http://www.vspmr.org/> (last visited Apr. 18, 2018) (Transnitria); Tomes, *supra* note 49.

52. *Ss ũlki* [References], PRIDNESTROVSKAĪA MOLDAVSKAĪA RESPUBLIKA: OFIŠIAL'NĪI SAĪT PRAVITEL'STVA, <http://www.gov-pmr.org/links> (last visited Apr. 18, 2018) (Mold.).

53. PRIDNESTROVSKIĪ RESPUBLIKANSKIĪ BANK, <http://www.cbpmr.net/> (last visited Apr. 18, 2018); *Transnistrian Ruble*, REVOLVY, <http://www.revolv.com/main/index.php?s=Transnistrian%20ruble> (last visited Apr. 18, 2018). Please read for more information on the exchange rates. *Ofiſial'nŕe Kursŕ Valiut*, PRIDNESTROVSKIĪ RESPUBLIKANSKIĪ BANK, <http://www.cbpmr.net/kursval.php?> (last visited Apr. 18, 2018).

experienced.⁵⁴ However, the Transnistrian ruble is generally not accepted as currency outside of Transnistria, with the possible exception of some bus companies that travel to and from Transnistria.⁵⁵ Other than that, only the Russian Federation accepts the Transnistrian ruble as a legitimate currency—i.e., unit of account.⁵⁶ The Zimbabwean dollar, Swiss franc, and Transnistrian ruble exist in parallel worlds.⁵⁷ All three are excluded from the SDR basket.⁵⁸

What does currency acceptance mean?* The big nations accept their own currency and these are the same currencies that are accepted in international business.⁵⁹ There exists 5 to 8 relevant currencies world-wide; 5 of them are also part of the SDR basket.⁶⁰ The remaining circa 170-plus currencies are not part of the SDR basket and so are essentially considered irrelevant in international business.⁶¹

The Swiss franc provides a unique example of a relevant viable currency not part of the SDR.⁶² In today's extraordinary world, an extraordinary cryptocurrency could provide us with another viable, relevant, yet unaccepted currency excluded from the SDR basket.⁶³

C. *Private Golf Club*

The powers managing the SDR basket do not have any motivation or interest in allowing any additional currencies into the global currency market.⁶⁴ On one hand, one could compare the relevant currencies of the currency market to an extremely exclusive private golf club.⁶⁵ On the other

54. *Transnistrian Ruble*, *supra* note 53.

55. *Id.*

56. *Id.*; *TRANSDNIESTER*, *supra* note 48.

57. *See Special Drawing Right (SDR)*, *supra* note 40; *Transnistrian Ruble*, *supra* note 53; *ZWD – Zimbabwean Dollar*, *supra* note 49.

58. *See Special Drawing Right (SDR)*, *supra* note 40.

59. Quickbooks Canada Team, *Common Types of Currency Your International Business Needs to Accept*, INTUIT: QUICKBOOKS CAN., <http://www.quickbooks.intuit.com/ca/resources/international-business/common-types-of-currency-your-international-business-needs-to-accept/>.

60. Richard Lee, *Top 8 Most Tradable Currencies*, INVESTOPEDIA, <http://www.investopedia.com/articles/forex/08/top-8-currencies-to-know.asp> (last visited Apr. 18, 2018); *see also Special Drawing Right (SDR)*, *supra* note 40.

61. *See* Quickbooks Canada Team, *supra* note 59; *Special Drawing Right (SDR)*, *supra* note 40.

62. *See Special Drawing Right (SDR)*, *supra* note 40; *CHF-Swiss Franc*, *supra* note 44; Lee, *supra* note 60.

63. *See* Bierer, *supra* note 9, at 81–83.

64. *See Special Drawing Right (SDR)*, *supra* note 40.

65. *See id.* Much like a private golf club, “[a] country participating in this system need[s] official reserves—government or central bank holdings of gold and widely

hand, a cryptocurrency is uncontrollable because of its peer-to-peer (“P2P”) structure and sometimes they can be difficult to deal with because of their mainly decentralized structure.⁶⁶

Let us step back for a moment and take a look at a naive scenario, which can show the potential position of cryptocurrencies based on the approach of the major financial powers.* If the major powers—and/or the international banking system—ban cryptocurrencies and only a group of small, financially weak countries accept them, or at least do not prohibit them, then those currencies would stay at the level comparable to the Zimbabwean dollar making it hard to spread.*

If any major economic power—e.g. China, the United States of America, Russia, India, Japan, Turkey, or the United Kingdom—accepts the cryptocurrency, then it will stay alive, and the trading and accounting will be open to the direction of the major power who accepts it.⁶⁷ This will provide the opportunity for the cryptocurrency to exist in a parallel world and give it a chance to become a new global currency.⁶⁸ However, if exclusively only one major power accepts it, then it would most likely be forced to stay at the level of the Transnistrian ruble—unless it could somehow function as a cultural-export.⁶⁹ If cryptocurrencies became recognized and accepted multilaterally, while at the same time banned by other major powers, then it would create a hybrid, financially dualistic, internationally divided, polarised world.⁷⁰

The third option would be if virtually all developed nations happened to ban cryptocurrencies; then, they would just disappear overnight into the dark web and be reduced to the level of the black market where drugs, bloody diamonds, human traffickers, and illegal weapons are traded—and any form of government intervention avoided at all costs.⁷¹ Unless the whole internet platform changes, everything that we now think about the world, the status quo, and money, would radically change as well.*

accepted foreign currencies—that could be used to purchase its domestic currency in foreign exchange markets.” *Id.*

66. Prableen Bajpai, *Countries Where Bitcoin is Legal & Illegal (DISH, OTSK)*, INVESTOPEDIA, <http://www.investopedia.com/articles/forex/041515/countries-where-bitcoin-legal-illegal.asp> (last visited Apr. 18, 2018).

67. See Hewitt, *supra* note 13, at 625, 632–33; Bajpai, *supra* note 69; *Special Drawing Right (SDR)*, *supra* note 40.

68. Hewitt, *supra* note 13, at 620–21, 624–25.

69. See Bajpai, *supra* note 66; *Transnistrian Ruble*, *supra* note 53.

70. See Bajpai, *supra* note 66; *Special Drawing Right (SDR)*, *supra* note 40; *ZWD – Zimbabwean Dollar*, *supra* note 46.

71. See Bierer, *supra* note 9, at 84; Bajpai, *supra* note 66.

D. *Pebble-Stone and the Cyber-Pebble-Stone*

A currency is only what people collectively accept, agree on, and have confidence in its authenticity.⁷² In theory, legal tender can be almost anything: For example, the paper from the turbo chewing gum pack, colored paper as banknotes, bits of metal as coins, precious stones, cooking pots, and salt.⁷³ The thing about money that is most important is that both sides of a transaction accept it, recognize its specific value, and ideally is not too perishable.⁷⁴

The pebble-stone was the legal tender mainly on Waqab—Yap, Island.⁷⁵ Today we call them the Rai stones.⁷⁶ Rai stones were circular limestone disks with holes in their centers.⁷⁷ They varied widely in size from 3.6 meters in diameter to just 7 or 8 centimeters.⁷⁸ Despite their greatly differing dimensions, they still acted as a feasible working currency for their culture.⁷⁹ We can still see the evidence today, so we know it worked.⁸⁰

The whole cryptocurrency mysticism can be personified with this pebble-stone example.* The character of the cryptocurrency can be thought of as a *cyber-pebble-stone*, similar to that used in antiquity on the Waqab Islands.* However, we also see that the legal tender was different on other nearby islands, and different legal tender was used from territory to

72. See Charles A. Conant, *What Determines the Value of Money?*, 18 Q.J. ECON. 551, 551 (1904); Maria Bustillos, *You Don't Understand Bitcoin Because You Think Money Is Real*, MEDIUM (Nov. 30, 2017), <http://www.medium.com/@mariabustillos/you-dont-understand-bitcoin-because-you-think-money-is-real-5aef45b8e952>.

73. See Bustillos, *supra* note 72; Hajara Saleeth, *Characteristics of Money*, TUTEBOX: ECON. (Oct. 18, 2010), <http://www.tutebox.com/2329/business/economics/characteristics-of-money/>.

74. See John Kay, *A Currency Is Anything That Two People Agree Is a Currency*, FIN. TIMES (Aug. 6, 2013), <http://www.ft.com/content/f97fad02-fdd6-11e2-8785-00144feabdc0>; Saleeth, *supra* note 73.

75. Boban Docevski, *The Rai Stones Are Huge Stone Wheels Used as Currency on the Island of Yap*, VINTAGE NEWS (Dec. 28, 2017), <http://www.thevintagenews.com/2017/12/28/rai-stones/>.

76. *Id.*; Atlas Obscura, *Cash, Card, or Car-Sized Stone: Payment Options on the Island of Yap*, SLATE (Oct. 15, 2013, 8:32 AM), http://www.slate.com/blogs/atlas_obscura/2013/10/15/cash_card_or_car_sized_stone_payment_options_on_the_island_of_yap.html.

77. Docevski, *supra* note 75.

78. *Id.*

79. *See id.*

80. *See id.*

territory.⁸¹ Specifically, a different kind of legal tender was used depending on where you went.⁸²

E. *Stone, Iron, Wood*

The pebble-stone example has another aspect that needs to be considered.* Based even on the most conservative estimations, the Waqab-pebble-stone-system, also known as the Rai Stone System, was used for an astounding 500 to 1400 years.⁸³ The USD has been used for just 226 years, and the euro only for about twenty years.⁸⁴

Of course, 225 years has the potential to become 1500 years.⁸⁵ However, there is still a sizable difference between 225 and 1500 years that cannot easily be dismissed—apart from the fact that the dollar, in its relatively short life, has spread so pervasively throughout the whole world.⁸⁶

Imagine aliens who are aware of all of the above mentioned facts, but are independent of all the Earth's socioeconomic structures, political paradigms, and philosophical and cultural frameworks.* They could probably fairly easily imagine that the human race could use stones again instead of the USD, or use cryptocurrencies, or anything else that conforms to the definition of what we, today, call *money*.* Even the USD, or any internationally recognized currency, can be considered a *transitional currency*, such as the previously discussed Pennsylvanian pound.⁸⁷ Imagine that someday in the future, there could easily be no one alive who can remember using the USD.*

Of course, this an extreme example; it is unlikely that we will go back to using stones.* Because instead of using stones, we now use *metal* coins and *wood* chips—banknotes, in the *oh so modern* digital age.⁸⁸ Are

81. See Cora Lee C. Gilliland, *The Stone Money of Yap: A Numismatic Survey*, SMITHSONIAN STUD. HIST. & TECH., Oct. 23, 1975, at 1, 1.

82. See *id.*

83. See *id.*; Docevski, *supra* note 75; *English Finderlist: Y*, TRUSEEL 2: YAPESE DICTIONARY, <http://www.trussel2.com/yap/yap-eng-y.htm> (last updated Jan 6, 2017).

84. See Council Regulation No 1103/97 of 17 June 1997 on Certain Provisions Relating to the Introduction of the Euro, 1997 O.J. (L 162) 1, 1; Coinage Act of 1792, ch. 16, § 20, 1 Stat. 246, 250 (1792).

85. See § 20, 1 Stat. at 250; Docevski, *supra* note 75.

86. See § 20, 1 Stat. at 250; Kimberly Amadeo, *Why the Dollar Is the Global Currency*, BALANCE: US ECON., <http://www.thebalance.com/world-currency-3305931> (last updated Feb. 19 2018); Docevski, *supra* note 75.

87. See BORAWSKI, *supra* note 19, at 3; Ed Steer, *The Transactional Currency . . . May Well Be Gold!*, CASEY DAILY DISPATCH (Oct. 6, 2009), <http://www.caseyresearch.com/transitional-currency-may-well-be-gold/>.

88. Bustillos, *supra* note 72; *Coin Specifications*, U.S. MINT: LEARN, <http://www.usmint.gov/learn/coin-and-medal-programs/coin-specifications> (last updated Aug.

metal and wood more advanced than stone?* Is the stone more primitive than base metal and wood?* I do not think so.* All are basically the same.*

Most people agree that in life, anything can happen; trends come and go.⁸⁹ Let us recall our earlier discussion that it is hard to predict the future of the cryptocurrencies.⁹⁰ It is just like how we want to imagine, from a seed, the possible magnitude and extension of a mature tree.* Something positive can come out from a roots-up system and organic movement; however, we just have no idea how it will pan out.*

Keep in mind that the cryptocurrency concept is merely a *pebble stone* or, better yet, just a *virtual pebble stone*.* In addition, the Court of Justice of the European Union used the same analysis for cryptocurrency and currency.⁹¹ The court, in case C-264/14,⁹² held that the cryptocurrency “transactions are exempt from [value added tax] under the provision concerning transactions relating to ‘currency, bank notes, and coins used as legal tender.’”⁹³

F. *The Infrastructure of the Blockchain*⁹⁴—*Budapest Taxi Strike*

Cryptocurrency is P2P.⁹⁵ But what does that really mean?* In 1990, the price of crude oil almost doubled.⁹⁶ Taxi drivers went on strike in

18, 2017); *How Money is Made - Paper and Ink*, BUREAU OF ENGRAVING & PRINTING, <http://www.moneyfactory.gov/hmimpaperandink.html> (last visited Apr. 18, 2018).

89. See Frank Holmes, *Bitcoin Is Just the Latest in the Trend Toward Decentralization*, FORBES: INVESTING (Jan. 31, 2018, 10:40 AM), <http://www.forbes.com/sites/greatspeculations/2018/01/31/bitcoin-is-just-the-latest-in-the-trend-toward-decentralization-infographic/>.

90. See Kohwo Ogilo, *Too Late for Bitcoin? Here are Other Cryptocurrencies That You Could Profit Off in 2018*, ORACLE TIMES (Nov. 28, 2017), <http://oracletimes.com/too-late-for-bitcoin-here-are-other-cryptocurrencies-that-you-could-profit-off-in-2018/>.

91. Court of Justice of the European Union Press Release No. 128/15, *The Exchange of Traditional Currencies for Units of the ‘Bitcoin’ Virtual Currency Is Exempt from VAT* (Oct. 22, 2015); *What Is VAT?*, EUR. COMMISSION, http://www.ec.europa.eu/taxation_customs/business/vat/what-is-vat_en (last visited Apr. 18, 2018).

92. Court of Justice of the European Union Press Release No. 128/15, *supra* note 91.

93. *Id.*

94. See Mohit Mamoria, *The Ultimate 3500-word Guide in Plain English to Understand Blockchain*, LINKEDIN (July 4, 2017), <http://www.linkedin.com/pulse/blockchain-absolute-beginners-mohit-mamoria/>.

95. Andrew Marshall, *P2P Cryptocurrency Exchanges, Explained*, COINTELEGRAPH: EXPLAINED (Apr. 7, 2017), <http://www.cointelegraph.com/explained/p2p-cryptocurrency-exchanges-explained>.

96. George P. Fletcher, *The Day Budapest Shut Down*, N.Y. REV. BOOKS (Dec. 6, 1990), <http://www.nybooks.com/articles/1990/12/06/the-day-budapest-shut-down/>.

Budapest because of it.⁹⁷ They stopped and brought the city to a standstill.⁹⁸ A total of 25,000 cabs were on the streets in Budapest, Hungary, creating merry mayhem.⁹⁹ The taxi drivers blockaded all important roads.¹⁰⁰ Only emergency vehicles and the departing Soviet military were allowed through the road blocks.¹⁰¹ Public transport stopped, private vehicles stopped, factory production stopped, people could not get to work, and teachers and students stopped going to school.¹⁰² Everything stopped.¹⁰³ The whole capital ground to a halt.¹⁰⁴

In Budapest, at the start of the 1990s, taxi drivers took their instructions via Citizens Band Radio 80 (“CB”).¹⁰⁵ A CB system consists of short-distance radio communications.¹⁰⁶ The CB radio played a key role in the taxi drive blockade because the taxi drivers organized the strike through their CB radios.¹⁰⁷ The CB system was decentralized in the 1990s.¹⁰⁸ Every taxi driver was able to get in touch with every other taxi driver.¹⁰⁹ This meant that the authorities were helpless to stop it because it was a decentralized system that they could not easily interfere with.¹¹⁰

They were unable to eliminate a central server because there was no central server.¹¹¹ Literally thousands of CB radios were connected to each

97. *Id.*; Erika Laszlo, *Taxi Strike Brings Hungarian Transport to a Halt*, UNITED PRESS INT’L: ARCHIVES (Oct. 26, 1990), <http://www.upi.com/Archives/1990/10/26/Taxi-strike-brings-Hungarian-transport-to-a-halt/1253656913600/>.

98. See Fletcher, *supra* note 96; Laszlo, *supra* note 97.

99. See Fletcher, *supra* note 96; Interview by Nora Szeker with Gyula Kodolányi, Editor-in-Chief, Hungarian Review, in Budapest, Hung. (May 12, 2016).

100. Laszlo, *supra* note 97.

101. *Id.*

102. *Id.*

103. See *id.*; Fletcher, *supra* note 96.

104. Fletcher, *supra* note 96; Laszlo, *supra* note 97.

105. See Interview with Gyula Kodolányi, *supra* note 99; *Citizens Band Radio Service (CBRS)*, FED. COMM. COMMISSION, <http://www.fcc.gov/wireless/bureau-divisions/mobility-division/citizens-band-radio-service-cbrs> (last updated Apr. 13, 2017).

106. *Citizens Band Radio Service (CBRS)*, *supra* note 105.

107. See Interview with Gyula Kodolányi, *supra* note 99; *Citizens Band Radio Service (CBRS)*, *supra* note 105.

108. Opinion & Editorial, *Firing the Messenger*, N.Y. TIMES (Mar. 19, 1994), <http://www.nytimes.com/1994/03/19/opinion/firing-the-messenger.html>.

109. See Interview with Gyula Kodolányi, *supra* note 99; *Citizens Band Radio Service (CBRS)*, *supra* note 105.

110. See Opinion & Editorial, *supra* note 108; Interview with Gyula Kodolányi, *supra* note 99.

111. See Fletcher, *supra* note 96; Laszlo, *supra* note 97; Marshall, *supra* note 95.

other in a P2P system.¹¹² Today, there are central radio stations, and the P2P connection of taxi CBs no longer exists.¹¹³ Today, taxi drivers would not be able to organize a strike and stop the transportation of Budapest quite so easily because the authorities would now be able to take down the radio station and stop their communication, unless the taxi drivers adopted some new P2P system, like FireChat¹¹⁴ which was used in the Hong Kong Revolution,¹¹⁵ in a Catalan pro-independence demonstration,¹¹⁶ at the University of Hyderabad, India,¹¹⁷ Iraq,¹¹⁸ demonstrations in Ecuador,¹¹⁹ during a flood in Kashmir,¹²⁰ during a hurricane in Mexico,¹²¹ and an election in Venezuela.¹²²

But, this is not the case with cryptocurrencies.¹²³ The cryptocurrencies are mainly non-centralized.¹²⁴ Its weakness is its strength, because the P2P system cannot be *taken down*, like the taxis cabs' CB radios

112. See Interview with Gyula Kodolányi, *supra* note 102; Marshall, *supra* note 95.

113. See Opinion & Editorial, *supra* note 108; John Young, *Whatever Happened to CB Radio?*, TURBOFUTURE: MISCELLANEOUS (Aug. 24, 2015), <http://www.turbofuture.com/misc/Whatever-Happened-to-Cb-Radio>.

114. See Fletcher, *supra* note 96; Marshall, *supra* note 95; TNN, *'FireChat' Comes to UoH Students' Rescue*, TIMES INDIA (Jan. 23, 2016, 5:23 AM), <http://www.timesofindia.indiatimes.com/city/Hyderabad/Firechat-comes-to-UOH-students-rescue/articleshow/50691376.cms>.

115. Archie Bland, *FireChat — the Messaging App That's Powering the Hong Kong Protests*, GUARDIAN (Sept. 29, 2014, 12:20 PM), <http://www.theguardian.com/world/2014/sep/29/firechat-messaging-app-powering-hong-kong-protests>.

116. Enric Borrás, *The Application That You Could Communicate with on the Via Lliure Will Also Be a Catastrophe*, ARA.CAT (Sept. 17, 2015, 2:39 PM), http://www.ara.cat/societat/aplicacio-podies-comunicar-via-lliure-servira-catastrofe_0_1432056955.html (Spain).

117. TNN, *supra* note 114.

118. Alex Hern, *Firechat Updates As 40,000 Iraqis Download 'Mesh' Chat App in Censored Baghdad*, GUARDIAN (June 24, 2014, 9:00 AM), <http://www.theguardian.com/technology/2014/jun/24/firechat-updates-as-40000-iraqis-download-mesh-chat-app-to-get-online-in-censored-baghdad>.

119. James Griffiths, *FireChat, Darling of Occupy Control Protestors, Throws Down Gauntlet to WhatsApp with Off-the-Grid Texting*, S. CHINA MORNING POST (July 30, 2015, 10:31 AM), <http://www.scmp.com/tech/social-gadgets/article/1844837/firechat-darling-occupy-central-protesters-throws-down-gauntlet>.

120. *Id.*; Firechat, OPEN GARDEN, <http://www.opengarden.com/Firechat.html> (last visited Apr. 18, 2018).

121. Griffiths, *supra* note 119; Firechat, *supra* note 120.

122. Griffiths, *supra* note 119; Firechat, *supra* note 120.

123. See Marshall, *supra* note 95.

124. *Id.*; Holmes, *supra* note 89.

in Budapest in 1990.¹²⁵ It is neither centralized, nor controllable.¹²⁶ The P2P system can pose a threat¹²⁷ to the existing top-down power structures indeed.¹²⁸

IV. SIMULATIONS

A cryptocurrency has a bottom-up, P2P, decentralized character.¹²⁹ Furthermore, it is almost *organic* in nature.¹³⁰ So, let us consider for a moment, as a thought experiment if you will, that cryptocurrency is a new organism—a new species—and compare it to its living counterpart.* Let us see cryptocurrency as an organic process and compare its traits and characteristics, shall we? First though, remember this kind of thought experiment can be misleading and requires an open mind.* Just bear in mind then that these biological properties will not be used as direct analogies, but rather to illustrate the exponential possibilities of cryptocurrencies.* What I am suggesting is that a cryptocurrency can be compared to the characteristics displayed in our natural living world.*

A. *Spread. Inhabit. Takeover the World.*

A single poppy flower producing just fifty seeds per year could in just nine years populate the entire surface of the Earth.¹³¹ This is exponential growth at work.¹³² Now, let us look at some other examples of the rapid spread phenomena that have actually happened across the world.*

The radio—one of the oldest *modern* information network technologies—reached sixty million people in its first thirty years; remember, this was when the world’s population was still under two billion

125. See Fletcher, *supra* note 96; Interview with Gyula Kodolányi, *supra* note 95; Marshall, *supra* note 95.

126. See Fletcher, *supra* note 96; Holmes, *supra* note 89; Interview with Gyula Kodolányi, *supra* note 99.

127. See Holmes, *supra* note 89; Marshall, *supra* note 95.

128. See Holmes, *supra* note 89; Marshall, *supra* note 95.

129. Holmes, *supra* note 89.

130. Steve Andriole, *Cryptocurrency Is Here – and It’s Frightening*, FORBES: TECH (Aug. 11, 2017, 4:23 PM), <http://www.forbes.com/sites/steveandriole/2017/08/11/cryptocurrency-is-here-its-frightening/#6b3/c58f4fcb>.

131. *Ha az állatok örökké élnének [If the Animals Were Alive Forever]*, HUSZADIK SZÁZAD: TUDOMÁNY-TECHNIKA, <http://www.huszadikszazad.hu/1909-junius/tudomany/ha-az-allatok-orokke-elnenek> (last visited Apr. 18, 2018) (Hung).

132. See *id.*

people.¹³³ Amazingly, television broadcasts reached the same number of people in only fifteen years.¹³⁴ The Internet has grown at an astounding rate of almost ten times greater than that of television.¹³⁵ In 1987, there were 10,000 hosts, and by 1992, the number of hosts surpassed 1,000,000.¹³⁶ This growth is even more extraordinary considering that the appropriate Internet infrastructure—antennas, masts, network providers, fiber optic cables, Wi-Fi routers, 4G, etc.—barely existed, and some not even at all!¹³⁷

However, today this is not the case when it comes to cryptocurrencies and blockchain technology.¹³⁸ The infrastructure is largely already in place, and the Internet is getting faster and more powerful by the hour.¹³⁹ Remember the poppy, it would need only nine years to disseminate itself across the earth.¹⁴⁰ Cryptocurrencies, unlike poppies, do not even need wind, birds, or animals to spread their seeds—antennas, masts, network providers, fiber optic cables, Wi-Fi routers, and 4G already exist.¹⁴¹ So, based on what we know about the rate at which the Internet evolved, a cryptocurrency could easily go global as a currency in under ten years' time—maybe much sooner.¹⁴²

133. *E-commerce Portal Development*, WEBSOFT NEPAL, <http://www.webssoftnepal.com/e-commerce-portal-development/> (last visited Apr. 18, 2018).

Without a doubt, the Internet is ushering in an era of sweeping change that will leave no business or industry untouched. In just three years, the Net has gone from a playground for nerds into a vast communications and trading center where some [ninety] million people swap information or do deals around the world. Imagine: It took radio more than [thirty] years to reach [sixty] million people, and television [fifteen] years. Never has a technology caught fire so fast.

Id.

134. *Id.*

135. *The VeriSign Domain Name Primer*, DOMAIN NAME INDUSTRY BRIEF, Feb. 2004, at 2.

136. *Id.* at 3–4.

137. See *The Physical Internet*, NETWORKS LAND, <http://networks.land/reference/physical/> (last visited Apr. 18, 2018). A *domain name* or *host* performs “the simple, straightforward function of mapping names to Internet Protocol (IP) addresses and back.” *The VeriSign Domain Name Primer*, *supra* note 135, at 2.

138. See *The Physical Internet*, *supra* note 137.

139. See *id.*; *The VeriSign Domain Name Primer*, *supra* note 135, at 2.

140. *If the Animals Were Alive Forever*, *supra* note 131.

141. See *The Physical Internet*, *supra* note 137.

142. See Gertrude Chavez-Dreyfuss, *Fears of Global Crackdown Fail to Dampen Cryptocurrency Interest*, REUTERS (Jan. 18, 2018, 3:34 PM), <http://www.reuters.com/article/us-bitcoin-crackdown-fail-to-dampen-cryptocurrency-interest-idUSKBN1F72YM>; *E-commerce Portal Development*, *supra* note 133; *The VeriSign Domain Name Primer*, *supra* note 135, at 2.

The total *market capitalization*¹⁴³ of cryptocurrencies exceeds \$377 billion USD as of April 2018.¹⁴⁴ Competing vegetation and natural borders—oceans, deserts, mountains, etc.—create barriers and limit the spread of poppies;¹⁴⁵ whereas, the barriers for cryptocurrencies are fiat currencies, government intervention, capital controls, competing cryptocurrencies, and technological issues such as: Hackers, artificial intelligence implications, cybercrime, warfare, electromagnetic pulse events, national firewalls, catastrophic infrastructure issues, etc.¹⁴⁶

B. *Acceleration. Increasing value.*

The fastest land mammal is the cheetah—*acinonyx jubatus*.¹⁴⁷ Its elastic vertebral column and *well-developed* muscles allow it to reach speeds of 90 to 100 kilometers (“km”) per hour—55 to 62 miles per hour.¹⁴⁸ Impressively, cheetahs can accelerate to 86.9 km per hour—53.9 miles per hour in 2.75 seconds.¹⁴⁹ But, their high speed can only be kept up for a short period of time.¹⁵⁰

We do not need to imagine if there is an animal that can quickly accelerate and sustain its high speed.¹⁵¹ Such an animal already exists: the pronghorn—*antilocapra americana*.¹⁵² This remarkably speedy animal has been recorded as comfortably running at 56 km per hour—35 miles per hour for 6 km—3.7 miles per hour without any sign of fatigue.¹⁵³ Can the cryptocurrencies display similar characteristics, such as the ability to rapidly accelerate and keep its speed and its value—who is an *acinonyx jubatus* and who is an *antilocapra americana* in the crypto-fiat currencies world.¹⁵⁴

143. *Frequently Asked Questions*, COINMARKETCAP, <http://coinmarketcap.com/faq/> (last visited Apr. 18, 2018).

144. *See Global Charts: Total Market Capitalization*, COINMARKETCAP, <http://coinmarketcap.com/charts/> (last visited Apr. 18, 2018).

145. *See If the Animals Were Alive Forever*, *supra* note 131.

146. *See* Moers, *supra* note 24, at 14; Qin Chen, *This Is How You Can Protect Your Cryptocurrencies from Hackers*, CNBC: BITCOIN (Nov. 3, 2017, 10:39 AM), <http://www.cnbc.com/2017/11/02/heres-how-to-protect-your-bitcoin-and-ethereum-from-hacking.html>.

147. *Allati Rekordó: A Gyors es a Lassu* [*Animal Records: Fast and Slow*], NAT'L GEOGRAPHIC: NATURE (Feb. 10, 2005), http://www.ng.hu/Termesztet/2005/02/Allati_rekordok_a_gyors_es_a_lassu (Hung.).

148. *Id.*

149. *Id.*

150. *Id.*

151. *See id.*

152. *Animal Records: Fast and Slow*, *supra* note 147.

153. *Id.*

154. *See* Bajpai, *supra* note 66; *Bitcoin Price History Chart*, BUY BITCOIN WORLDWIDE, <http://www.buybitcoinworldwide.com/price/> (type “2017-09-01” into the From

When Bitcoin started in 2009, one bitcoin was worth less than \$1 USD.¹⁵⁵ By September 3, 2017 one bitcoin was worth 4,623 USD, by December 17, 2017 one bitcoin was worth 20,078 USD, and by May 1, 2018 one bitcoin worth \$8,917 USD.¹⁵⁶ That represents a huge increase.¹⁵⁷

C. *Proliferation, Quickness, and Productivity*

In matters of reproductivity, we cannot narrow our focus simply to animals living native to us, like our pets.* We need to look for some highly reproductive animals as well, such as the Cameroon sheep.* The Cameroon sheep reaches maturity at the early age of five months and the female can easily deliver lambs twice a year.¹⁵⁸ The gestation period varies between 147 to 150 days.¹⁵⁹ Therefore, their reproductivity does not belong to any specific season.¹⁶⁰ The hugely reproductive Cameroon sheep raises an average of two to three sheep per year.¹⁶¹ And with each new female offspring, more new lambs are delivered twice a year.¹⁶² With an average lifetime of 10 to 12 years—which is high for most animals—these characteristics make the sheep a highly reproductive species.¹⁶³

Sheep live in the natural, human world.¹⁶⁴ These animals have average characteristics, nothing extraordinary;¹⁶⁵ however, cryptocurrencies already show extraordinary abilities.¹⁶⁶ An extreme species does not have

box and type “2017-09-30” into To box, then scroll over graph until box that states “Saturday, Sep. 23, 2017” appears) (last visited Apr. 18, 2018).

155. *Bitcoin Price History Chart*, *supra* note 154.

156. *Id.*

157. *See id.*

158. VEREIN DER KAMERUNSCHAFZÜCHTER UND HALTER E.V.: RASSEVIELFALT [ASS’N CAMEROON SHEEP BREEDERS & KEEPERS E.V.: RACIAL DIVERSITY] (Ger.), <http://www.kamerun-schafe.de> (last visited Apr. 18, 2018).

159. *Cameroon Sheep*, ZOO LEIPZIG, <http://www.zoo-leipzig.de/en/our-animals/animal-detail/caneroon-sheep/> (last visited Apr. 18, 2018).

160. *See* ASS’N CAMEROON SHEEP BREEDERS & KEEPERS E.V.: RACIAL DIVERSITY, *supra* note 158.

161. *Id.*

162. *Id.*

163. *See id.*

164. *See id.*

165. *See* ASS’N CAMEROON SHEEP BREEDERS & KEEPERS E.V.: RACIAL DIVERSITY, *supra* note 158. Credit to Nassim Nicholas Taleb for the inspirational thought of categories like ordinary, extraordinary, and extreme; however, I used them in a different way. *See* NASSIM NICHOLAS TALEB, *THE BLACK SWAN: THE IMPACT OF THE HIGHLY IMPROBABLE* 242, 256 (1st ed. 2007).

166. *See* Alex Stanczyk, *A Gold Guys View of Crypto, Bitcoin, and Blockchain*, MEDIUM (Dec. 10, 2017), <http://www.medium.com/@alex.stanczyk/a-gold-guys-view-of-crypto-bitcoin-and-blockchain-26e42eeab6b7>.

average characteristics; it has extreme characteristics.* An extreme species has extreme characteristics, which makes cryptocurrency more like an extreme species.* The Initial Coin Offering (“ICO”) collect more millions of USD in the first few days.¹⁶⁷ Dozens of new ICOs come up each week.¹⁶⁸ More and more people are using and investing in cryptocurrencies, thus the volume and business of cryptocurrencies is growing.¹⁶⁹

D. *Perception of Time: The Fast-Moving Animal Senses Time Differently*

The perception of time for animals is closely related to how fast their metabolism works or how fast they are.¹⁷⁰ For example, the fly is able to escape a swatting newspaper because it detects movements more subtly and precisely than we do.¹⁷¹ The perception of time is dependent on how much information can be processed over a given period of time.¹⁷² This is an important factor, especially in the case of predators and their potential prey.¹⁷³ The perception of time for common prey animals such as rabbits, squirrels, mice, and flies are much faster than those for larger animals and slower ones.¹⁷⁴ Dogs perceive time twice as fast as humans—more precisely, they process information at twice the rate—making our movements appear like a slow motion movie to them; this is why they make catching flying balls and Frisbees look so darn easy.¹⁷⁵

167. *EOS Token Sale Generates over \$185 Million in First 5 Days*, CRYPTONINJAS (July 1, 2017), <http://www.cryptoninjas.net/2017/07/01/eos-token-sale-generates-185-million-first-5-days/>.

168. *See Current*, ICO TRACKER, <http://www.icotracker.net> (last visited Apr. 18, 2018); *ICOs Launching Soon*, TOKENMARKET, <http://www.tokenmarket.net/ico-calendar/upcoming> (last visited Apr. 18, 2018); *ICO Results*, COINSCHEDULE: RESULTS, <http://www.coinschedule.com/icos.html> (last visited Apr. 18, 2018).

169. *See The Cryptocurrency Market Is Growing Exponentially*, MIT TECH. REV.: EMERGING TECH. FROM THE ARXIV (May 29, 2017), <http://www.technologyreview.com/s/607947/the-cryptocurrency-market-is-growing-exponentially/>.

170. Kevin Healy et al., *Metabolic Rate and Body Size Are Linked with Perception of Temporal Information*, 86 ANIMAL BEHAV. 685, 686 (2013); Emilie Reas, *Small Animals Live in a Slow-Motion World*, SCI. AM.: MIND (July 1, 2014), <http://www.scientificamerican.com/article/small-animals-live-in-a-slow-motion-world/>.

171. Press Ass’n, *Time Passes More Slowly for Flies, Study Finds*, GUARDIAN (Sept. 16, 2013, 4:53 PM), <http://www.theguardian.com/science/2013/sep/16/time-passes-slowly-flies-study>.

172. *Id.*; *see also* Healy et al., *supra* note 170, at 685–86.

173. Healy et al., *supra* note 170, at 686; Press Ass’n, *supra* note 171.

174. *See* Healy et al., *supra* note 170, at 686.

175. *See* Sebastian Anthony, *Small Animals See the World in Slow Motion, or Why Your Puppy Is So Hyperactive*, EXTREME TECH (Sept. 17, 2013, 10:32 AM),

Another interesting example of time and motion perception is the tiger beetle.¹⁷⁶ It runs so fast when it hunts, that its eyes cannot process what it is seeing—thus, making it necessary to stop from time to time so it can actually reassess the position of its prey.¹⁷⁷

The slow-moving bulk of today's standard currencies cannot grasp that something new and much faster is evolving around them.¹⁷⁸ Those who are involved in the faster-moving world of cryptocurrencies and blockchain technology are like the animals that have a more finely-tuned perception of time, allowing them to see on-going trends and new opportunities.¹⁷⁹ Unless, of course, they begin to move too fast like the above tiger beetle and lose their focus.¹⁸⁰

E. *Optical Paradox, Tetris Effect, Game Theory, and Other Trends*

The masses create a collective soul, a group within which people think and feel differently.¹⁸¹ In other words, the masses behave differently than the individual people in it—group think, if you will.¹⁸² Its science even has a name: Crowd Psychology, which was first brought to our attention by Gustave Le Bon nearly 200 years ago.¹⁸³ As groups get larger, their behavior becomes more emotionally charged, rigid in attitudes, and less intelligent.¹⁸⁴ The members of the crypto world create a mass as well, based on my concern.¹⁸⁵

<http://www.extremetech.com/extreme/166694-small-animals-see-the-world-in-slow-motion-or-why-your-puppy-is-so-hyperactive>.

176. Blaine Friedlander, *When Tiger Beetles Chase Prey at High Speeds They Go Blind Temporarily, Cornell Entomologists Learn*, CORNELL CHRON. (Jan. 16, 1998), <http://www.news.cornell.edu/stories/1998/01/tiger-beetles-go-blind-chasing-prey-high-speeds>.

177. *Id.*

178. See Bajpai, *supra* note 66.

179. Bierer, *supra* note 9, 83–84; Friedlander, *supra* note 176.

180. Friedlander, *supra* note 176.

181. Mark Seidenfeld, *Cognitive Loafing, Social Conformity, and Judicial Review of Agency Rulemaking*, 87 CORNELL L. REV. 486, 541 (2002).

182. *Id.*

183. See GUSTAVE LE BON, *THE CROWD: A STUDY OF THE POPULAR MIND* 24 (1996), <http://www.gutenberg.org/cache/epub/445/pg445-images.html>.

184. See Seidenfeld, *supra* note 181, at 541.

185. See Nellie Bowles, *The Crypto Fanatics Making Millions and Looking to Change the World*, AUSTRALIAN FIN. REV.: TECHNOLOGY (Jan. 16, 2008, 9:08 AM), <http://www.afr.com/technology/the-crypto-fanatics-making-millions-and-looking-to-change-the-world-20180115-h0it2y>; Seidenfeld, *supra* note 181, at 541; Izabella Kaminska, *Information Asymmetry, Crypto Currency Edition*, FINANCIAL TIMES: ALPHAVILLE (Nov. 25, 2013, 6:15 AM), <https://ftalphaville.ft.com/2013/11/25/1702992/information-asymmetry-crypto-currency-edition/>.

The Tetris Effect gets its name from the 1980s computer game Tetris.¹⁸⁶ Research showed that if a person played too much Tetris, it began to pattern their dreams, mental images, thoughts, visions, and even created hallucinations.¹⁸⁷ It affected their reality so much that they began to see the world in terms of Tetris cubes.¹⁸⁸ Tetris created a new mental disorder—the subjects saw falling Tetris blocks at night in the darkness.¹⁸⁹ The subjects saw Tetris shapes everywhere—in the streets, in shops—and they imagined them falling and fitting together all the time.¹⁹⁰

Likewise, if somebody is fanatical about the crypto world, their objectivity regarding its value and the acceleration of acceptance of the crypto money in the real world can start to become all consuming.¹⁹¹ My concern is that the crypto fans may start to see crypto everywhere.*

Schubik's Dollar Auction—a non-zero sum sequential game—illustrates the psychological effects of large groups influencing decision making.¹⁹² The subjects made irrational decisions playing the game.¹⁹³ The game consisted of a one dollar note auction.¹⁹⁴ The outcome during the experiment—with a large group—was that the average sale price for \$1 USD note was \$3.40 USD.¹⁹⁵ Sometimes, it even went as high as twenty dollars.¹⁹⁶ Why would anybody pay more than \$1 for a \$1 note?* Why would you pay above the market price?* Interviews showed that the participants were shocked by their own behavior and could not believe what they had done.¹⁹⁷

186. Adam Sinicki, *What Is the Tetris Effect?*, HEALTH GUIDANCE, <http://www.healthguidance.org/entry/17147/1/What-Is-the-Tetris-Effect.html> (last visited Apr. 18, 2018); see also *Tetris Mix — 1980's Tetris Classic Comes over to the Pico-8 as a First Preview!*, INDIE RETRO NEWS <http://www.indieretronews.com/2017/01/tetris-mix-1980s-tetris-classic-comes.html> (last modified Jan. 26, 2017, 4:27 PM).

187. Sinicki, *supra* note 186.

188. *Id.*

189. *Id.*; see also Annette Earling, *The Tetris Effect: Do Computer Games Fry Your Brain?*, MY CITY PAPER (Mar. 21–28, 1996), <http://www.mycitypaper.com/articles/032196/article038.shtml>.

190. See Earling, *supra* note 189; Sinicki, *supra* note 186.

191. See Bowles, *supra* note 185.

192. Martin Shubik, *The Dollar Auction Game: A Paradox in Noncooperative Behavior and Escalation*, 15 J. CONFLICT RESOL. 109, 110–11 (1971).

193. See ANDREW TREES, *DECODING LOVE: WHY IT TAKES TWELVE FROGS TO FIND A PRINCE AND OTHER REVELATIONS FROM THE SCIENCE OF ATTRACTION* 162, 164 (2009); Shubik, *supra* note 192, at 111.

194. See Shubik, *supra* note 192, at 109.

195. See TREES, *supra* note 193, at 163.

196. *Id.*

197. *Id.*; see also Shubik, *supra* note 192, at 111.

There are dozens of new and ongoing ICOs popping up each month.¹⁹⁸ A bit like designer drugs,¹⁹⁹ no one really knows where they come from, or what they are made of, or what their side effects might be.²⁰⁰ If something is a trend, then it is boosted in the market.²⁰¹ Every month there is a hip, new designer drug that teenagers want to try.²⁰² These trends come and go, just like in the ICO cryptocurrency world.²⁰³ They come out of nowhere and can fly away with the wind.* Anything can happen and sometimes amazingly good things happen.*

Cryptocurrencies, in general, are extremely closed systems, yet are still affected by things externally.²⁰⁴ The buying and selling price of cryptocurrencies influence the exchange rate.²⁰⁵ Currencies can also be influenced by a solar eclipse, a surprise statement by the prime minister or president, a rise in unemployment rates, a state sanctioned ban, blogs, video blogs, extreme weather, terror events, export data, import data, unemployment data, crude oil prices, gold prices, house prices, Gross Domestic Product, Good Manufacturing Product, interest rates, and natural disasters—in fact the list is endless!²⁰⁶

198. See *The Best Cryptocurrency Token Sales and ICO List*, COINSCHEDULE, <http://www.coinschedule.com/> (last visited Apr. 18, 2018).

199. See Ariane Wohlfarth & Wolfgang Weinmann, *Bioanalysis of New Designer Drugs*, 2 *BIOANALYSIS* 965, 965–66 (2010).

200. See *id.*

201. See *id.*; Daniel J. DeNoon, *New Black Market Designer Drugs: Why Now?*, WEBMD: MENTAL HEALTH, <http://www.webmd.com/mental-health/addiction/features/new-black-market-designer-drugs-why-now?#1> (last visited Apr. 18, 2018).

202. See Wohlfarth & Weinmann, *supra* note 199, at 965; DeNoon, *supra* note 201.

203. See DeNoon, *supra* note 201; *Evolution of Blockchain and Cryptocurrency*, *supra* note 5; Holmes, *supra* note 89.

204. See *How Is the Price of Cryptocurrency Defined?*, BITCONNECT, <http://www.bitconnect.co/bitcoin-information/10/how-is-the-price-of-cryptocurrency-defined> (last visited Apr. 18, 2018).

205. *Who Really Affect Bitcoin Exchange Rates*, CRYPTOPAY (Jan. 13, 2017), <http://blog.cryptopay.me/who-really-affects-bitcoin-exchange-rate/>.

206. See *Factors Affecting Currency Trading: Currency Fluctuations*, CURRENCIESFX, <http://www.currenciesfx.com/index.php/currencies/fx-currencies> (last visited Apr. 18, 2018); Fletcher, *supra* note 96; *How Does President Trump's Twitter Use Impact Forex, Markets and Stocks?*, FXCM MKT. INSIGHTS, <http://www.fxcm.com/insights/President-trumps-twitter-impact-forex-markets-stocks/> (last visited Apr. 18, 2018); *How Global Events Affect the Forex Market*, INVESTOPEDIA, <http://www.investopedia.com/articles/forex/11/international-events-affect-forex.asp> (last visited Apr. 18, 2018); *What Backs Bitcoin?*, APMEX, <http://www.apmex.com/education/investing/what-backs-bitcoin> (last visited Apr. 18, 2018).

We can see that there is a huge informational asymmetry among those who operate within the cryptocurrency world and those who do not.²⁰⁷ Those in cryptocurrency can overestimate it—dollar auction, Tetris effect, tiger beetle, trends—while those not in cryptocurrency do not even know on what they should even estimate.²⁰⁸ Anyone who is on the inside cannot be objective and will move together like bees with the same hive mind.²⁰⁹ Anyone who is on the outside does not even see the point of what is happening with cryptocurrencies.²¹⁰ Traders and Information Technology guys are into it, but those outside the cryptocurrency bubble do not have a clue.²¹¹

Right now, the scientific world and the investment groups are becoming interested in cryptocurrencies and blockchain technologies, but are still outsiders on the sidelines and aliens to the real inner workings of this mysterious digital realm inhabited by geeks, coders, gamers, and bitcoin miners.²¹² We need a more critical scientific approach; however, is there anyone who understands cryptocurrency and can observe it impartially and objectively?²¹³

V. CONCLUSION: LEGAL COMPLEXITY VERSUS SIMPLICITY—BACK TO THE STONE AGE

As we looked at earlier, the legal term for cryptocurrency spans from legal tender to intellectual property in different jurisdictions.²¹⁴ However, the online-pebble-stone analogy is still a good mechanism to see through the murky cryptocurrency mysticism.*

Think about this: Even though cybercrime does not occur in a physical space, nor does defamation; these are still *real* events that just occurred in *virtual reality*—from a legal perspective.²¹⁵ The *cyber* label

207. Kaminska, *supra* note 185.

208. See Shubik, *supra* note 192, at 109, 111; Friedlander, *supra* note 176; Kaminska, *supra* note 185; Sinicki, *supra* note 186.

209. See Shubik, *supra* note 192, at 109, 111; Kaminska, *supra* note 185; Sinicki, *supra* note 186.

210. See Shubik, *supra* note 192, at 109, 111; Kaminska, *supra* note 185; Sinicki, *supra* note 186.

211. See Bowles, *supra* note 185.

212. See *id.*

213. See *id.*

214. See EBA Opinion on 'Virtual Currencies', *supra* note 12, at 7, 11, 13; Wendy McElroy, *The Fraud of Intellectual Property*, BITCOIN NEWS (Apr. 23, 2017), <http://news.bitcoin.com/the-fraud-of-intellectual-property/>; McKenna, *supra* note 8.

215. John DiGiacomo, *Legal Issues in Virtual Reality*, REVISION LEGAL (Feb. 17, 2016), <http://www.revisionlegal.com/revision-legal/legal-issues-in-virtual-reality/>.

simply marks the space of the committal.²¹⁶ The space—cyberspace—of the crime should not mislead us because it is related only to the question of *where*.²¹⁷ Of course, cyberspace does not nullify the crime or the violation; it is merely a subcategory of the crime.²¹⁸ It actually means that these acts will occur in front of a bigger potential audience.²¹⁹

Similarly, if we execute a contract online, the agreement will still be an agreement even though we do not have it in a paper-based form.²²⁰ Likewise, most money now in existence that is circulating in the central banking system is actually digital.²²¹ The truth of the matter is that we are living in an increasingly paper cash free world already—just not yet a decentralized, cryptocurrency one.²²²

As far as I see, the different jurisdictions—cultural, political, and even religious backgrounds—have greater significance to the categories of crime, defamation, libel, or slander than any cyberspace factor.* We can classify cryptocurrencies based on legal terms; however, because new legislation almost certainly will be rolled out in the future, that legislation will quickly make it all up to now obsolete—or at best, extremely out of date and irrelevant.²²³ In fact, it might even be amusing to look back in the future at articles, such as this, about the first legal classifications of the cryptocurrencies during the years between 2009 and 2017.* Now, there is a thought.*

Furthermore, the legal classification of cryptocurrency depends on the legal situation.²²⁴ Like a house, cryptocurrency can be subject to a lease,

216. See *Cybersecurity Overview*, U.S. DEP'T OF HOMELAND SEC. (Sept. 27, 2016), <http://www.dhs.gov/cybersecurity-overview>.

217. See *id.*

218. *Id.*

219. See Ian Carnaghan, *Cybercrime vs Traditional Crime*, CARNAGHAN: BLOG (Feb. 5, 2013), <http://www.carnaghan.com/2013/02/cybercrime-vs-traditional-crime/>; *These Cyber Statistics Will Make You Think Twice About Your Password: Where's the CSI Cyber Team When You Need Them?*, CBS: CYBER (Mar. 3, 2015, 6:00 AM), <http://www.cbs.com/shows/csi-cyber/news/1003888/these-cybercrime-statistics-will-make-you-think-twice-about-your-password-where-s-the-csi-cyber-team-when-you-need-them-/>.

220. *Electronic Signatures and Online Contracts*, NOLO, <http://www.nolo.com/legal-encyclopedia/electronic-signatures-online-contracts-29495.html> (last visited Apr. 18, 2018).

221. Bustillos, *supra* note 72.

222. See *id.*

223. See McKenna, *supra* note 8.

224. See Craig W. Smalley, *The Classification of Bitcoin and Cryptocurrency by the IRS*, CPA PRACTICE ADVISOR: TAX (Nov. 12, 2017), <http://www.cpapracticeadvisor.com/news/12380583/the-classification-of-bitcoin-and-cryptocurrency-by-me-irs>.

a land registry process, a tax process, and a mortgage, etc.²²⁵ In each legal situation, the legal definitions vary.* Think about it.* Cryptocurrency could potentially be classified as a legal claim in case of an obligation, income in a tax-related situation, collateral security, or credit in other cases, etc.²²⁶ The legal minefield here is daunting to say the least.*

A. *Gold, Diamonds, and Entropy*

Entropy is a physics term, related to order and disorder.²²⁷ The highest entropy is the greatest diffusion.²²⁸ Put it this way: A gold bar means low entropy—the wealth is concentrated into a gold bar, instead of spreading itself universally.²²⁹ The gold bar represents a very strong material density.²³⁰ A few gold bars may represent—and be equal in value to—a substantial piece of land, a property, ten years of constant hard labor, and thousands of USD.²³¹

In other words, gold represents a huge density of space and time: One gold bar equals ten years of labor—time expanse—and one small gold bar equals three acres of land—space expanse.* The entropy here is very low, the value is extremely concentrated.* Diamonds show extremely low entropy as well.²³² Its density value is even higher than that of gold.²³³

225. *Banking Is Only the Beginning: 36 Industries Blockchain Could Transform*, CB INSIGHTS: RESEARCH FINTECH (Feb. 1, 2018), <http://www.cbinsights.com/research/industries-disrupted-blockchain/>; see also McKenna, *supra* note 8; Smalley, *supra* note 224.

226. See McKenna, *supra* note 8; Smalley, *supra* note 224.

227. *Entropy (Order and Disorder)*, BASIC KNOWLEDGE 101, 1 [http://www.basicknowledge101.com/pdf/maintain/Entropy%20\(order%20and%20disorder\).pdf](http://www.basicknowledge101.com/pdf/maintain/Entropy%20(order%20and%20disorder).pdf) (last visited Apr. 18, 2018).

228. See *id.* at 1–2.

229. See Stanczyk, *supra* note 166.

230. See *id.*

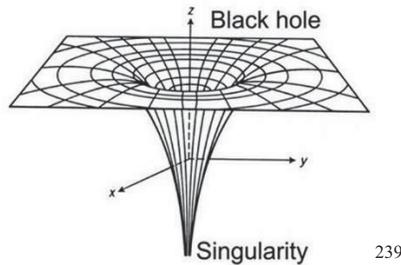
231. See *id.*

232. See *Entropy (Order and Disorder)*, *supra* note 227, at 2–3; *Fancy Color Diamonds to Remain the Top Wealth Concentration Investment Vehicle*, DIAMOND INV. & INTELLIGENCE CTR. (Dec. 4, 2017), <http://www.investments.diamonds/fancy-color-diamonds-to-remain-the-top-wealth-concentration-investment-vehicle/>.

233. See *Fancy Color Diamonds to Remain the Top Wealth Concentration Investment Vehicle*, *supra* note 232.

Weight (app)	Volume (app)	Special Unit (app)	Price (app)
311.0 g of gold	17 000 mm ³ ²³⁴	app 11 oz t	\$15,000 USD
0.3g of diamond	52 mm ³ ²³⁵	app 1.5 c app, 6.5mm d	\$15,000 USD
Less than 0.1 g of bitcoin	Less than 1 mm ³ ²³⁶	app 1–4 bitcoin	\$15,000 USD

The cryptocurrency can represent more value than platinum, gold, diamonds, or anything else in the material world.* The cryptocurrency has the highest value in the material world: Approximately 1 mm³ and 0.1 g of 1–4 unit of bitcoin.²³⁷ As far as I know, the cryptocurrency represents the lowest entropy and density in the material world.²³⁸



It represents huge value and small expanse size.²⁴⁰ The black hole has infinite density and almost zero expanse.²⁴¹ It means we are close to *diabolical singularity*.²⁴²

234. See *Gold*, NASDAQ, <http://www.nasdaq.com/markets/gold.aspx?timeframe=10y> (last visited Apr. 18, 2018).

235. See *Diamond Size Chart*, BRILLIANCE, <http://www.brilliance.com/education/diamond-size-chart> (last visited Apr. 18, 2018).

236. See *Bitcoin Price History Chart*, *supra* note 154.

237. *Id.*; see also Stanczyk, *supra* note 166; *What Backs Bitcoin?*, *supra* note 206.

238. See *Entropy (Order and Disorder)*, *supra* note 227, at 1–3; *Black Holes and Wormholes*, PHYSICS UNIVERSE: MAIN TOPICS, http://www.physicsoftheuniverse.com/topics_blackholes_singularities.html (last visited Apr. 18, 2018).

239. *Black Holes and Wormholes*, *supra* note 237.

240. See *Entropy (Order and Disorder)*, *supra* note 227.

241. *Black Holes and Wormholes*, *supra* note 233.

242. See *Black Holes and Wormholes*, *supra* note 237. “In the centre of a black hole is a gravitational singularity, a one-dimensional point which contains a huge mass in an infinitely small space, where density and gravity become infinite and space-time curves infinitely, and where the laws of physics as we know them cease to operate.” *Id.*

B. *Investment Versus Money—The Nest Egg Era?*

It is clear that cryptocurrency has a value and as we saw, the real question is: Can we use it as a form of money because of its huge exchange rate movements?²⁴³ Because of the exchange rate movements, investors like it.²⁴⁴ If it did not have such huge exchange rate fluctuations, would anybody be interested in it? We see the accumulation feature, as well, with burgeoning cryptocurrency investment portfolios.²⁴⁵

Akos—a friend of mine—thinks, “I do not pay for my petrol at the gas station with cryptocurrency, rather I hide it in my safe deposit box, as it would be the new online gold.” The investors say it could be a good, long-term investment which is not necessarily a barrier of the money function.²⁴⁶ Right?*

So, we are back at the beginning.* What we see now is the potential of the, as of yet, unused block-chain technology.²⁴⁷ If the market really starts to use it, healthcare, social media, tech companies, electoral voting, arbitration and legal documents—intellectual rights, copyright, land leases, wills and testaments—would mean it would move up to another level.²⁴⁸ What are the implications of that? Nobody knows, but in all likelihood, they will just be as paradigm shifting on a mass scale.*

The cryptocurrency can spread like our fertile poppy seeds; however, we do not know exactly which cryptocurrency it will be and where it will first spring up from.²⁴⁹ The Holy Script says: “Lay not up for yourselves treasures upon earth, where moth and rust doth corrupt, and where thieves break through and steal.”²⁵⁰ Storage can be hacked, the thieves can steal the private key and the cryptocurrency, and rust and pestilence can destroy the

243. See Bierer, *supra* note 9, at 87, 90.

244. See *id.* at 83, 87.

245. Ubiquitech Software Corp., *Ubiquitech Software Corp to Enter Burgeoning and Lucrative New Cryptocurrency Industry with Its New Division CryptoBuy.com*, MARKETWIRED (Aug. 2, 2017, 7:00 AM), <http://www.marketwired.com/press-release/ubiquitech-software-corp-enter-burgeoning-lucrative-new-cryptocurrency-industry-with-otc-pink-ubqu-2228597.htm>.

246. Alex Sandoval, *Blockchain for the People: How to Break down Entry Barriers to Digital Money*, COINTELEGRAPH: NEWS (Oct. 14, 2016), <http://www.cointelegraph.com/news/blockchain-for-the-people-how-to-break-down-entry-barriers-to-digital-money>.

247. See *Banking Is Only the Beginning: 36 Industries Blockchain Could Transform*, *supra* note 225.

248. *Id.*

249. See *If the Animals Were Alive Forever*, *supra* note 131; Shen, *supra* note 39.

250. *Matthew 6:19* (King James).

hardware.²⁵¹ One of the main sins appears, as well, because of profit maximization.²⁵² From a religious perspective, cryptocurrency is mammon, money, and an asset.²⁵³ From a business perspective, cryptocurrency is money, security, and an asset.²⁵⁴ From a legal perspective, it is digital money, a property right, a security, and an asset—a coin with many sides.²⁵⁵ From a social-psychological perspective, it is money—an online pebble stone.²⁵⁶

VI. CONCLUSION

This article is mainly my philosophical musings on cryptocurrencies and the fact that someday they may well replace—or semi-replace—the fiat-based currencies that dominate the world today.* The threats are well known and serious—as well, so called dot-com crises, privacy issues, the crypto-fiat convertibility, the governmental interventions, the public and market sentiments, and so on.*

All cryptocurrencies were launched after the financial crisis of 2008.²⁵⁷ So far, they have not had to survive any serious crisis events.²⁵⁸ So, we cannot know how they will behave.* How might a new *species* cope under unusual circumstances?* We cannot know how closely they are bound up to the movement of the exchange rate of fiat currencies, share prices, and other financial instruments.* The variables are mind-boggling.* Or, will they manage to operate independently and move in the opposite direction of the other markets?*

251. See *id.*; Becky Peterson, *Thieves Steal Potentially Millions of Dollars in Bitcoin in a Hacking Attack on a Cryptocurrency Company*, SOUTH CHINA MORNING POST: TECH (Dec. 7, 2017, 12:09 PM), <http://www.scmp.com/tech/article/2123253/thieves-stole-potentially-millions-dollars-bitcoin-hacking-attack>.

252. See Susan Pace Hamil, *An Evaluation of Federal Tax Policy Based on Judeo-Christian Ethics*, 25 VA. TAX REV. 671, 682 (2006); Thomas J. Molony, *Charity, Truth, and Corporate Governance*, 56 LOY. L. REV. 825, 848 (2010).

253. Bierer, *supra* note 9, at 89–90; Jaime Redman, *Bitcoin's Relationship with 'Mark of the Beast' Theories*, BITCOIN NEWS (July 27, 2017), <http://news.bitcoin.com/bitcoins-relationship-with-the-mark-of-the-beast-theories/>.

254. See Bierer, *supra* note 9, at 89–90.

255. See *id.* at 93–94; McKenna, *supra* note 8.

256. See Gilliland, *supra* note 81, at 1.

257. See Bolt & van Oordt, *supra* note 1, at 1; Bajpai, *supra* note 66; Bustillos, *supra* note 72.

258. See Bustillos, *supra* note 72.

A. *Final Musings on Cryptocurrency in Simple Summary Form*

- i. Cryptocurrency has a value—whether it is a property element or asset—it is mammon.²⁵⁹
- ii. Cryptocurrency can satisfy receivables and obligations, which is the most relevant function of money.* It means we can pay our debts and obligations with it.²⁶⁰
- iii. Cryptocurrency is a unit of account in economic terms.²⁶¹
- iv. Cryptocurrency is close to the features of intellectual property rights and securities.²⁶²
- v. Cryptocurrency is transferable, liquid, and semi-quickly convertible to a fiat currency—or other items of value—with relatively low costs.²⁶³

259. See Bierer, *supra* note 9, at 89–90; Bolt & van Oordt, *supra* note 1, at 1.

260. Bolt & van Oordt, *supra* note 1, at 3.

261. *Id.* at 9.

262. See DiGiacomo, *supra* note 215.

263. See Bolt & van Oordt, *supra* note 1, at 3.