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I. INTRODUCTION

One of the key problems of blockchain technology is the lack of control of users, organized societies, and state authorities over the transactions and assets on the decentralized network.\(^1\) The distributed ledger and blockchain are interesting examples of new technologies, which revolutionize rules not only for users, but also for governments.\(^2\) Technology-driven rules can be viewed as technological law for blockchain users and legislative authorities.\(^3\) No legal regulation can change the anonymity or immutability of blockchain.\(^4\) Only another technology could turn the situation around.\(^5\) This is a lesson for every lawyer to learn not only the law, but also the scope of technology.\(^6\)

The purpose of this Article is to analyze modern determinants of control distribution over assets, transactions, and decentralized organizations on blockchain distributed network.\(^7\) This Article shows how control appears in a variety of different situations on blockchain networks.\(^8\) Examples range from individual to organizational control over the networking system—including the possibility for the participants to exercise control.\(^9\)

This Article will derive the effectiveness and the best practice for the regulation of blockchain technology.\(^10\) On the base of the legal cases in blockchain industry, this Article will discuss the ability of users, governments, and founders of crypto-communities to control both transactions and assets on decentralized blockchain network.\(^11\)

* Aleksei Gudkov is a PhD candidate for the 2018 year at Autonomous University of Barcelona. Aleksei is grateful for the NSU Shepard Broad College of Law and all of those with whom he has had the pleasure to meet during the 2017 Nova Law Review Symposium Entrepreneurship 2.0 and for their wonderful hospitality. He also wishes to thank his wife, Tatiana, who provided support. Aleksei would especially like to thank the Editor-in-Chief of the Nova Law Review Vol. 42 Mr. Stephen Ayeni, the Lead Articles Editor Ms. Brittany Ehrenman, and editors for their hard work and dedication to improving this Article.

3. See id.
5. See id.
7. See infra Parts II–VII.
8. See infra Parts III–VI.
9. See infra Parts IV–VI.
10. See infra Parts II–VI.
11. See infra Parts IV–VI.
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A. The History of the Networking Groups

1. Roman Associations

We have a long-lasting history of communities. The blockchain and smart contract technology enables individuals to initiate and participate in organized societies and networking groups. New virtual communities and distributed network organizations are spread across the world. But these are all the same, well-known, old-fashioned communities. The main difference between them are technological features. Due to newer technology, information spreads faster. The transactions executed on distributed ledgers are more reliable. Yet, the networking groups themselves are very simplistic, and their governance system is very primitive. It is noteworthy that the process of the groups’ formations on the blockchain is spontaneous, and similar to ancient Roman associations’ practice of establishment.

According to the Roman law of the Twelve Tables, the first associations were rural, professional, and religious associations. These associations had freedom of action and could exist in any form. The first Roman associations acted on the basis of simple community statutes and had no duty of registration. Similarly, the contemporary decentralized organizations on blockchain—in most cases—act only on the grounds of a white paper.

14. See id.
16. See id. at 120.
17. See id. at 123.
18. See id.; Crider, supra note 13.
19. See Iansiti & Lakhani, supra note 2, at 120–21.
20. See id.
24. See id.; Samuelsson, supra note 21, at 21.
25. See DOZHDIEV, supra note 23, at 297.
Later, the *lex Iulia de collegiis*, at the time of Augustus,

determined the types of associations that could exist. The creation of
associations was subject to the authorization of the Senate or the Emperor—
i.e., *ex senatus consulto coire licet*. The *Gaius* describes the types of permitted associations: Farmers—
i.e., *societates vectigalium publicorum*; fishermen—i.e., *pistorum*; and sailors—i.e., *naviculariurum*.

In this historical example, you can see what happened with society and its regulation. It took four centuries to restrict the freedom of association. But now, everything happens faster. We should expect that decentralized network organizations, based on the blockchain, will also be classified and restricted in every possible way.

2. Canon Law

Another historical example is church regulation. According to
Harold J. Berman, a corporation was often formed under Canon law—church law—in absence of state permission, which is similar to the formation of decentralized network organizations. Under Canon law, any group of persons who had the requisite structure and purpose—for example, “a hospital or a body of students, as well as a bishopric”—constituted a corporation without special permission of a higher authority.

28. *Id.*
29. *Id.* at 299.
31. See *DOZHDEV*, supra note 23, at 297; *GAIUS*, supra note 30, at 119.
32. See Conant, supra note 22, at 231; *DOZHDEV*, supra note 23, at 119.
33. See Conant, supra note 22, at 231.
34. See Alison E. Berman & Jason Dorrier, *Technology Feels Like It’s Accelerating — Because It Actually Is*, SINGULARITYHUB (Mar. 22, 2016), http://www.singularityhub.com/2016/03/22/technology-feels-like-its-accelerating-because-it-actually-is/#sm.0000fu109t1fthz83ei3van7z.
36. HAROLD J. BERMAN, LAW AND REVOLUTION: THE FORMATION OF WESTERN LEGAL TRADITION 219 (1983); see also What Is a DAO?, supra note 35.
It can be said under Canon law, although the head of a corporation—church—did not own the property of the corporation, he was entitled the power to control the corporation. At the same time, members of the corporation have the right to make decisions in some cases, and also elect the head of a corporation. The same governance structure can be established in the decentralized autonomous organization (“DAO”). Participants of an organization can vote and make certain decisions. The founders control the assets of the organization.

II. THE FEATURES OF BLOCKCHAIN

A. Code Dependence

The entire distributed ledger network is based on the logic of a few lines of code. Every block in the blockchain is a software-generated container that bundles together the messages relating to a particular transaction.

B. Anonymity

The blockchain technology provides privacy and anonymity to users, despite transaction information being publicly available. Blockchain public addresses hide identity. The public address is just a string of random characters. At the same time, the blockchain is transparent so everyone can see transaction information, which is included in a block. Using a block explorer you can discover: A block number, hash of a transaction, the address of the sender or recipient, the value of the transaction, and the balance.

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38. Id. at 216, 221.
39. See id. at 219, 221.
40. See SEC, supra note 35, at 7–8.
41. Id. at 7.
42. Id. at 7–8.
44. Cox, supra note 43; Kaal & Calcaterra, supra note 4, 118.
45. Kaal & Calcaterra, supra note 4, at 113.
46. Id. at 111.
47. See id.
48. Id.; Cox, supra note 43.
Therefore, we can say that investments in decentralized network organizations are pseudonymous—“i.e., an individual’s or entity’s pseudonym was [used as its] blockhchain address.” This pseudonymous aspect of decentralized network organizations presents a challenge for state authority to exert effective control over blockchain transactions. To determine a person’s identity on the blockchain, a cluster analysis—a location of addresses—and a big data analysis can be used, but it is still a complicated process.

C. **Immutability and Irreversibility**

All transactions on the blockchain network are immutable. The history of transactions is built upon a distributed ledger—layer by layer. More importantly, the chain of blocks cannot be destroyed. The key implication is that every mistake on a blockchain is fatal. Once a mistake is made, it cannot be revised.

D. **Distributed Jurisdiction**

Due to the intersection of a large number of users and providers on the distributed network, there is a great uncertainty about applicable law and jurisdiction. The jurisdiction is shared by many participants in every single case. Distributed Jurisdictional means, to necessitate governance from within the blockchain technology itself to effectively address the inherent problems within blockchain-based smart contracts.

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50. SEC, supra note 35, at 6.
51. See id. at 6; Kaal & Calcaterra, supra note 4, at 125.
53. Kaal & Calcaterra, supra note 4, at 114.
54. Id. at 114–15, 118.
55. See id. at 125.
56. See id. at 115.
57. Id.
59. Id. at 151.
60. Id. at 142–43.
E. Reputation

“[B]lockchain [operates as] a trustless . . . system.” 61 Most interactions in blockchain communities are fulfilled remotely and in the absence of traditional community recommendations. 62 Contrary to common opinion, blockchain does not provide trust. 63 Blockchain is a trustless system due to cryptographic technology. 64 Smart contracts guarantee the execution of a transaction, regardless of the personal relationship or trust. 65 The cryptographic technology ensures the execution, but not the relationship. 66

The relationships among users on the decentralized network are based on reputation. 67 The impartiality among members of the blockchain network community is possible on the basis of shared reputations. 68 Publicly available profiles, transparency of historical data, and the absence of legalities are the foundations of all transactions on a blockchain network. 69 In a system where rule-codes in blockchain applications are unclear—even for experienced users—and there is no applicable law, a user’s reputation is the most important asset. 70 Natural law prevails on the decentralized network. 71

Justice and culture are based on morality and traditions, 72 especially on the blockchain network. 73 The positive law—the law adopted by proper authority—does not work in communities based on the blockchain

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61. Featherston, supra note 1.
63. Featherston, supra note 1.
64. Id.; see also Cox, supra note 43.
66. Featherston, supra note 1.
68. See MOUGAYAR, supra note 65, at 34; Atzori, supra note 67, at 22; Carano, supra note 67.
69. See ALLEN & OVERY LLP, supra note 62, at 3; Crider, supra note 13.
70. See MOUGAYAR, supra note 65, at 34; Crider, supra note 13.
71. See Atzori, supra note 67, at 10.
73. See Featherston, supra note 1; What Is a DAO?, supra note 35.
technology due to the decentralized character of the network. Presently, there is imbalance between positive and natural law in the blockchain industry, with there being a preference for natural law. However, many state authorities are taking action.

F. The Cohesion of Users

The users of blockchain networks are linked to each other on the foundation of individual interests to obtain benefits. At the same time, participants of the decentralized network organization are focused not only on individual benefits, but also on common tasks that are dedicated to the specific project of the decentralized organization. The cohesion of members of the network increases proportionally to the members’ input to the project.

III. The Control Definition

There are general, legal, social, technological, and economic approaches to the control aspect.

A. General Understanding of Control

Broadly speaking, the term control as a state means: Power to order, limit, or rule; power to influence or direct; power to make decisions about


75. See ALLEN & OVERY LLP, supra note 62, at 5; Atzori, supra note 67, at 9–10.


77. See Crider, supra note 13; Featherston, supra note 1.

78. See Crider, supra note 13.

79. See ALLEN & OVERY LLP, supra note 62, at 3.

how something is managed or done; or the ability to direct the actions of someone or something. 83 Having no control means having freedom to do something independent from everyone. 84 The objects of control are something, someone’s actions or behavior, 85 or the course of events. 86

B. Legal Definition of Control

In legislation, control is usually defined as a right to hold the majority of the voting rights, or to appoint or remove the majority of the members of the board of directors, 87 and to possibly exercis[e] decisive influence 88 or dominant influence. 89 According to the U.S. Code of Federal Regulations, the “[c]ontrol of a company means the power to exercise a controlling influence over the management or policies of a company whether through ownership of securities, by contract, or otherwise.” 90 According to European Union accounting standards, “[c]ontrol is the power to govern the financial and operating policies of an entity so as to obtain benefits from its activities.” 91

These legal definitions of control are of more concern to the management of a corporation with a sophisticated governance structure. 92 The legal person could be a participant of blockchain networks—although,

82. Id.
83. Id.
84. See id.; Control, supra note 80.
86. Event, OXFORD PAPERBACK DICTIONARY AND THESAURUS (3d ed. 2009).
90. 17 C.F.R. § 160.3(j) (2014).
92. See 17 C.F.R. § 160.3(j); Commission Regulation 632/2010, supra note 91, at 6; Control, supra note 80.
the decentralized virtual organization on the blockchain is rarely organized as a legal entity.93

C. **Social Approach to Control**

As a network is more about humans than assets, I believe that the ability to direct the actions of a network community denotes control of the community.*

D. **Economic Approach to Control**

Economic indicators of control can be grounded on the base of tax and other similar legislation.94 From an economic point of view defined in the Taxation Act,95 control is the ability of controlling persons to receive directly or indirectly and whether at the time of the event or later:

[I]f the whole of [company’s] share capital were disposed of, receive—directly or indirectly and whether at the time of the disposal or later—over [fifty percent] of the proceeds of the disposal,

[I]f the whole of [company’s] income were [disposed of], receive—directly or indirectly and whether at the time of the [disposal] or later—over [fifty percent] of the distributed amount, or

[I]n the event of the winding-up of [company] or in any other circumstances, receive—directly or indirectly and whether at the time of the winding-up or other circumstances or later—over [fifty percent] of [company’s] assets which would then be available for distribution.96

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93. See SEC, supra note 35, at 1–3; CHRISTOPHER JENTZSCH, DECENTRALIZED AUTONOMOUS ORGANIZATION TO AUTOMATE GOVERNANCE 1 (2016).
94. See Taxation (International and Other Provisions) Act 2010, c.18, § 371RB (Eng.).
95. Id.
96. Id. (emphasis added).
E. **Technological Approach to Control**

Inability to manage and appropriately use program code and software leads to loss of information, crypto assets, and communication channels with communities.\(^97\)

F. **Blockchain Approach**

There is a special definition of control for the blockchain industry.\(^98\) According to the Uniform Law Commission, “\textit{control} means, \textit{when used in reference to a transaction or relationship involving virtual currency, [the] power to execute unilaterally or prevent indefinitely a virtual-currency transaction}.”\(^99\) In regard to the distributed network, we can define control on an individual level as a technical control, control on an organizational level as a control over group, and control on a system level as a governmental control.\(^100\)

IV. **INDIVIDUAL CONTROL**

Individual control over a network or decentralized organization starts with the control of the user’s own assets and transactions.\(^101\) The user has to manage a wallet, store a private key, and make transactions through ambiguous intermediaries with confusing algorithms, for which its functioning principle is unclear.\(^102\) Most challenging is maintaining control over the technological features and processes, which are not even fully comprehensible.\(^103\) Control over the cryptocurrency wallet can be lost due to

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99. \textit{Id.}

100. See \textit{id.} § 102(3)(B), (10).

101. See Aitken, \textit{supra} note 97; Allen & Overly LLP, \textit{supra} note 62, at 3; \textit{What Is a DAO?}, \textit{supra} note 35.


103. See Aitken, \textit{supra} note 97; Featherston, \textit{supra} note 1; Sparkes, \textit{supra} note 97.
a user’s mistake, carelessness, software problems, or hardware failure. As a result, more than twenty-five percent of bitcoins are lost forever.

A. Program Code Vulnerability: The Parity Case

As the blockchain technology is completely founded on code-based rules, understanding the program script is very important for successful management of assets. Even experienced developers cannot guarantee code security. One example of a code-based attack was a Parity case in 2017. An unknown hacker used a vulnerability in an Ethereum wallet client to steal over 150,000 Ether, worth over $30 million. The hack was possible due to a flaw in the Parity Ethereum’s client. The coding patterns were not effectively and securely implemented. The hacker made a call to initWallet and moved the constructor logic into a separate library, which made all functions from the library publicly available.

The hacker transferred 10,000 Ether to each of the seven addresses. As all addresses were available on the distributed ledger, we can trace all transactions. Here is an example of the chain of transactions:

1. Balance ether 83,017 address 0xB3764761E297D6f121e79C32A65829Cd1dDb4D32 send ether 10,000 to;
   1.1. 0x4De76b3dfD38292Ba71cF2465Ca3a1d526dCB567 send ether 100 to;
   1.2. 0x73e76b3dfD38292Ba71cF2465Ca3a1d526dCB567 send ether 100 to;
   1.3. 0x73e76b3dfD38292Ba71cF2465Ca3a1d526dCB567 send ether 100 to;
   1.4. 0x73e76b3dfD38292Ba71cF2465Ca3a1d526dCB567 send ether 100 to;
   1.5. 0x73e76b3dfD38292Ba71cF2465Ca3a1d526dCB567 send ether 100 to;

104. Sparkes, supra note 97.
108. Id.; Qureshi, supra note 106.
110. Qureshi, supra note 106.
111. See id.
113. Memoria, supra note 112.
114. Id.; see also Crider, supra note 13.
115. Memoria, supra note 112.
1.1.1. 0x2027Cd5FB86A73c68775a366D1c2d9e8fE029483 sent ether 99.9 to; 1.1.1.1. 0x96fC4553a00C117C5b0bED950Dd625d1c16Dc894. The last address 0x96fC4553a00C117C5b0bED950Dd625d1c16Dc894 was cryptocurrency exchange, changelly.com, which works as a mixer, in which a sender and recipient could be a different person or have different addresses, but use the same wallet. Most of the hacker’s funds were then transferred through intermediaries’ addresses to changelly.com.

B. Fatal Program-Program Interaction Case

A mistake can be derived not only from user-program interaction, but also program-program interplay. We assume that a program works properly, but their interaction could be fatal for a user. For example, to make transactions on blockchain you need an account’s private key. This is an automatic process.

This seemingly simple action can lead to an unexpected result. Non-English-speaking countries often use Google Chrome with automatic translation of websites. While you are going to obtain a private key, Google Chrome automatically translates the private key from English to a foreign language. Unfortunately, the translated private key cannot be used. Access to the account and cryptocurrency is effectively lost. To illustrate this fatal program-program interaction, I have chosen a bitcoin online wallet—Bitwala. The wallet produces a private key encrypted with the wallet password.

116. Id.
117. See id.
118. See id.
119. See Iansiti & Lakhani, supra note 2, at 120–21, 123; Aitken, supra note 97; Sparkes, supra note 97.
120. Crider, supra note 13.
122. Id.; Featherston, supra note 1.
123. See Khatwani, supra note 121.
125. See id.
126. See id.; Khatwani, supra note 121.
127. See Khatwani, supra note 121; Sharkland, supra note 124.
128. Your Bitcoin Banking Experience, supra note 102; see also Iansiti & Lakhani, supra note 2, at 120–21, 123; Sharkland, supra note 124.
129. Your Bitcoin Banking Experience, supra note 102.
This is the original private key:

```json
{"iv":"6htm0TUYJhEQNwXlcVWJgA==","v":1,"iter":10000,"ks":256,"ts":64,"mode":"ccm","adata":"","cipher":"aes","salt":"skziDA4LN9M=","ct":"9d3cyR546SDOwvufxcnecqGpLjBKeufwS+XVDvqw1s5peeVDH4zILe9G4fx
 tbXt1tw6B9/Wo1jxHhWhVu5fyYX7p8arKE8tbDRItfp3NqUHCAlYdnk3hsl
36izwYO2FG5Gf5VTMCEquTXmYBltNhtf4RFmgeMOhk="}
```

But what if an user from China and uses Google Translate, which is built into Chrome?* In this picture, the private key is translated to traditional Chinese. Now, it has additional spaces, capital letters—green; hieroglyphs—yellow; and new signs—blue.*

```json
{"IV":"6htm0TUYJhEQNwXlcVWJgA==","V":1,"ITER":10000,"KS":256,"TS":64,"模式":"CCM","ADATA":"","密碼":"AES","鹽":"skziDA4LN9M==","CT":"9d3cyR546SDOwvufxcnecqGpLjBKeufwS+XVDvqw1s5peeVDH4zILe9G4fx
 tbXt1tw6B9/Wo1jxHhWhVu5fyYX7p8arKE8tbDRItfp3NqUHCAlYdnk3hsl
36izwYO2FG5Gf5VTMCEquTXmYBltNhtf4RFmgeMOhk="}
```

Translation to French:

```json
{"IV":"6htm0TUYJhEQNwXlcVWJgA==","v":1,"iter":10000,"ks":256,"ts":64,"mode":"ccm","adata":"","chiffre":"aes","salt":"skziDA4LN9M==","ct":"9d3cyR546SDOwvufxcnecqGpLjBKeufwS+XVDvqw1s5peeVDH4zILe9G4fx
 tbXt1tw6B9/Wo1jxHhWhVu5fyYX7p8arKE8tbDRItfp3NqUHCAlYdnk3hsl
36izwYO2FG5Gf5VTMCEquTXmYBltNhtf4RFmgeMOhk="}
```
Translation to Hebrew:

{ "Iv": "6htm0TUYJhEQNwXiCVWJgA == ", "s": 1, "iter": 10,000, "KS": 256, "TS": 64, "CCM": "CCM", "ADATA": ", "password": "AES", "salts": "skziDA4LN9M =", "CT": "+9d3cyR546SDOwxfwxcQGpLjBKufwS + XVDvqwsL5peeVDH4zILe9G4fxtbXxt1tw6B9 / WoljxHhVv5fYX7p8arKE8tbDRltp3NqUHCAIYdnk3hsl36izwYO2F G5G5VTMCEqUTxMvNhtf4RFmgeMOhk ="
}

Here is an attempted recovery using a reverse translation of the wrong key.* Reverse translations from Chinese to English by Google Translate:

{{"Iv": "6htm0TUYJhEQNwXiCVWJgA == ", "V": 1, "ITER": 10000, "KS": 256, "TS": 64, "mode": "CCM", "ADATA": "password": "AES", "salts": "skziDA4LN9M =", "CT": "+9d3cyR546SDOwxfwxcQGpLjBKufwS XVDvqwsL5peeVDH4zILe9G4fxtbXxt1tw6B9 / WoljxHhVv5fYX7p8arKE8tbDRltp3NqUHCAIYdnk3hsl36izwYO2F G5G5VTMCEqUTxMvNhtf4RFmgeMOhk ="}}

Reverse translation does not work.130 We cannot get the right private key back.131 Without the correct private key, a user cannot gain access to his or her wallet.132 The cryptocurrency is lost.133 This case illustrates the manifold technological problems that could hinder control over crypto assets.134 The user’s control over blockchain means having control over software, program language used for making software, executable codes, smart contracts, and the process of user-program and program-program interactions.135

130. See ANDREAS M. ANTONOPOULOS, MASTERING BITCOIN: UNLOCKING DIGITAL CRYPTO-CURRENCIES 63 (Mike Loukides & Allyson MacDonald eds., 2014); Khatwani, supra note 121.
131. See ANTONOPOULOS, supra note 130, at 63; Khatwani, supra note 121.
132. ANTONOPOULOS, supra note 130, at 63; Khatwani, supra note 121.
133. See ANTONOPOULOS, supra note 130, at 63.
134. See id.; Khatwani, supra note 121.
V. CONTROL OVER THE DECENTRALIZED NETWORK ORGANIZATION

A. Definition of the Decentralized Network Organization

There are a lot of names for a decentralized network organization. It can be called a virtual organization, distributed computing system, DAO, decentralized autonomous community, a group of users, an association of individuals, partnership, or company.

We can definitely say that the decentralized network organization is an entity based on a blockchain technology, token placement performance, and an unlimited number of participants. The functions and legal status of the decentralized network organization “depend on many factors, including how . . . [the e]ntity code is used, where it is used, and who uses it.”

If the users of a decentralized network organization become shareholders, the virtual organization becomes a registered corporate entity.

B. The Structure of Decentralized Network Organization

The decentralized network organization can take any form of a legally recognized organization, or associated relationship, existing in the real world. In most cases, the decentralized organization results from the interplay of the group of founders and group of token holders.

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136. See SEC, supra note 35, at 1–2, 10; What Is a DAO?, supra note 35.
138. See ALLEN & OVERY LLP, supra note 62, at 3; SEC, supra note 35, at 1, 6; What Is a DAO?, supra note 35.
139. SEC, supra note 35, at 4 n.10 (quoting JENTZSCH, supra note 93, at 1).
140. See id. at 1–2; What Is a DAO?, supra note 35.
141. SEC, supra note 35, at 10.
142. Id. at 11.
143. See id. at 3–4 & n.10 (citing JENTZSCH, supra note 93, at 1).
144. See id. at 1, 5–6.
There are three general organizational models of the decentralized network organization: (1) club of purchasers; (2) organization with membership; and (3) trust.\textsuperscript{145}

As the blockchain network is a collection of anonymous users, it is reasonable to implement social, economic, and technological indicators for determining control over its users’ assets and the whole system.\textsuperscript{146} Control over the decentralized organization depends on organizational structure.\textsuperscript{147}

C. **Club of Purchasers**

The decentralized organization, as a club of purchasers, has two main groups: Founders and token holders.\textsuperscript{148} Founders of a decentralized network organization are considered a separate entity.\textsuperscript{149} Meanwhile, the token holders group is a club, crowd, or network with informal communication.\textsuperscript{150} The token can take the form of a license agreement—bonus or discount, certificate on property rights or property equivalent, gold, or fiat money.\textsuperscript{151}

If the decentralized organization is established as an informal association, club, crowd of consumers, pool of investors, or property rights holders, then there is no control over the crowd—except contractual conditions.\textsuperscript{152} Features of control over a club include the process of group formation initiated by founders; founders organize, but do not control the crowd—the founders and users have no common assets, transactions are code dependent, and there is a free-flow of members.\textsuperscript{153}

In most cases, there is no need to control a club of users.\textsuperscript{154} The emission of tokens is carried out by the founders’ company, which is established by the founders of the decentralized organization.\textsuperscript{155} All digital assets and technology belong to the founders’ company.\textsuperscript{156} As noted by the

\begin{itemize}
\item \textsuperscript{145} See Van Valkenburgh et al., supra note 106, at 5–7.
\item \textsuperscript{146} See SEC, supra note 35, at 8, 10; Kaal & Calcaterra, supra note 4, at 109–10.
\item \textsuperscript{147} See SEC, supra note 35, at 14–15.
\item \textsuperscript{148} See id. at 5; Van Valkenburgh et al., supra note 106, at 7.
\item \textsuperscript{149} See SEC, supra note 35, at 3 n.10; Kaal & Calcaterra, supra note 4, at 120–21, 139–40.
\item \textsuperscript{150} SEC, supra note 35, at 5, 14–15.
\item \textsuperscript{151} See Van Valkenburgh et al., supra note 106, at 5–7, 11.
\item \textsuperscript{152} See id. at 11; SEC, supra note 35, at 4; Kaal & Calcaterra, supra note 4, at 125.
\item \textsuperscript{153} See SEC, supra note 35, at 5–6, 8; Van Valkenburgh et al., supra note 106, at 5.
\item \textsuperscript{154} See SEC, supra note 35, at 4; What Is a DAO?, supra note 35.
\item \textsuperscript{155} ALLEN & OVERY LLP, supra note 62, at 3.
\item \textsuperscript{156} See SEC, supra note 35, at 1.
\end{itemize}
SEC, “the pseudonymity and dispersion of . . . [t]oken holders ma[ke] it difficult for them to . . . effect[uate] change or to exercise meaningful control.”

D. Single Organization with a Membership

The founders of a decentralized network organization and the token holders can form a single legal entity. A single group is based on formal corporate rules and a governance system. Tokens constitute a membership right in the company. The token can be viewed as a share, which grants members a right to vote and make decisions on fund allocation. Token holders are considered stockholders of the company. Aspects include: Pseudonymity of some shareholders, problems with the register of shareholders, Know Your Customer and Anti-Money Laundering problems—as identities cannot be verified in real life—and the organization’s corporate rules may not comply with corporate law.

Control over the organization as a single entity can be determined by the foundation’s corporate rules. Possession of the majority of voting rights and the ability to make a decision on the company’s assets, or appoint managers, indicates control over the decentralized organization, regardless of the technological information features and nature of a digital asset.

E. Trust

Founders of a decentralized network organization can establish a managing or trust company, which manages the assets of the decentralized organization. The assets are placed in a decentralized organization by the investor. Then the beneficiaries receive tokens. The token holder

157. Id. at 14.
158. See id. at 1, 3–4 n.10; ALLEN & OVERY LLP, supra note 62, at 5.
159. See SEC, supra note 35, at 3.
160. ALLEN & OVERY LLP, supra note 62, at 3.
161. Id.; SEC, supra note 35, at 4, 15.
162. See SEC, supra note 35, at 15.
164. See SEC, supra note 35, at 3, 3–4 n.10; Van Valkenburgh et al., supra note 106, at 5.
166. See id. at 3, 6; SEC, supra note 35, at 2; What Is a DAO?, supra note 35.
167. See ALLEN & OVERY LLP, supra note 62, at 3; What Is a DAO?, supra note 35.
effectively becomes a beneficiary. The problem with this structure is the anonymity of token holders, which prevents the ability to maintain a beneficiary registry.

VI. CONTROL OVER NETWORK BY GOVERNMENT AUTHORITIES

State authorities are deeply concerned with money laundering and criminal activities on blockchain networks, and are seeking a new way to design controls and regulations of the market’s behavior by tailoring legal norms to blockchain features. The Economic and Financial Affairs Council and the Justice and Home Affairs Council of the European Union pointed out that terrorist groups are able to transfer money into the Union’s financial system or within virtual currency networks by concealing transfers or by benefiting from a certain degree of anonymity on those platforms. Competent authorities have started to monitor the use of virtual currencies and seek ways to obtain control over the distributed blockchain network system—or, in other words, attempt to get power to exercise a controlling influence over the network’s transactions and participants. It is a difficult task due to anonymity. Technically, only the pool of miners is able to have partial control over separate cryptocurrencies in exceptional circumstances.

The intention of state authorities to control is in contradiction with rights to privacy and freedom. At the same time, the blockchain technology creates a problem for participants too. The users cannot restore the situation after a mistake or remove information about transactions on blockchain, and have a right to be forgotten, as all information about

168. ALLEN & OVERY LLP, supra note 62, at 3; see also What Is a DAO?, supra note 35.

169. See ALLEN & OVERY LLP, supra note 62, at 3.

170. See id. at 5–6; Adler, supra note 163; What Is a DAO?, supra note 35.


173. See id. at 7, 9.

174. Id. at 2, 12.

175. See id. at 7.

176. See Bogost, supra note 35.

177. COM (2016) 450 final, supra note 172, at 2–3; Bogost, supra note 35.
transactions is immutable. A lot of questions arise concerning compliance with Know Your Customers policy, and the transfer of personal data from a state or intermediary to a third country, or an intermediary with an inadequate level of data protection.

A. Entrance-Exit Nodes

The blockchain technology makes it possible to hide information and identity inside the network—but, there is a loophole. The anonymity and pseudonymity can be partially overcome by control of an Entrance-Exit Node (“EEN”) of the network system. EENs are nodes of the blockchain network that simultaneously interact with other nodes of the blockchain network. More specifically, an EEN is a node between decentralized and centralized systems. Usually, the EEN is a virtual currency exchange platform—or custodian wallet provider—that the European parliament views as a threat for money laundering.

B. EEN—Vinnik Case

The United States Financial Crimes Enforcement Network investigated the operations of money transmitter, BTC-e, which was involved in money laundering. Mr. Vinnik, who was an operator of BTC-e, was tracked and discovered by links between his cryptocurrency account and an account on a WebMoney payment system.


180. See id.; ANTONOPOULOS, supra note 130, at 140; Bill Buchanan, It’s All About Entry and Exit Nodes, LINKEDIN (Dec. 7, 2015), http://www.linkedin.com/pulse/its-all-entry-exit-nodes-william-buchanan.

181. Kaal & Calcaterra, supra note 4, at 118; Buchanan, supra note 181.

182. Kaal & Calcaterra, supra note 4, at 117, 125; Buchanan, supra note 181.

183. See COM (2016) 450 final, supra note 172, at 2; ANTONOPOULOS, supra note 130, at 140.


This case shows that focusing on an EEN, such as WebMoney, can assist in revealing the identity of the user on a blockchain network.  

C. Control over Network Is Control over Identity

Control over an EEN only partially addresses the problem of control over the network, users, and criminal transactions. As noted by European authorities, strict regulation of:

[V]irtual exchange platforms and custodian wallet providers will not entirely address the issue of anonymity attached to virtual currency transactions, as a large part of the virtual currency environment will remain anonymous because users can also transact without exchange platforms or custodian wallet providers. To combat the risks related with anonymity, national Financial Intelligence Units . . . should be able to associate virtual currency addresses to the identity of the owner of virtual currencies.

VII. CONCLUSION

We can state that blockchain decentralized organizations are structured and managed in a simplistic manner like the first Roman communities. The improvement of network organizations regulations is similar to the development of ancient communities, moving forward along a complex path. Though, there is a difference. For ancient communities, the regulations were invented; but for the decentralized organization, existing regulations were implemented.

nabbed-at-last; Detained Russian Controlled Bitcoin Exchange, HYPE.CODES (July 27, 2017), http://www.hype.codes/russian-was-detained-greece-controlled-bitcoin-exchange.

187. See Detained Russian Controlled Bitcoin Exchange, supra note 186.

188. See COM (2016) 450 final, supra note 172, at 2–3; Detained Russian Controlled Bitcoin Exchange, supra note 186.

189. COM (2016) 450 final, supra note 172, at 22.

190. See Berman, supra note 36, at 216; Iansiti & Lakhani, supra note 2, at 120–21; Samuelsson, supra note 21, at 22–23.

191. See COM (2016) 450 final, supra note 172, at 2–3; Berman, supra note 36, at 216; Samuelsson, supra note 21, at 23; Buchanan, supra note 181.

192. Compare Iansiti & Lakhani, supra note 2, at 120–21, with Samuelsson, supra note 21, at 21–22.

193. See Kaal & Calcaterra, supra note 4, at 109, 139; Samuelsson, supra note 21, at 21.
Realization of control on the blockchain network is a difficult task for every participant, including state authorities and users. At the same time, the founders of a decentralized organization can effectively attract and fulfill control over the accumulated funds. The anonymity of decentralized network participants and peculiarities of technology prevent governments from efficient control over the network. Only the goodwill of participants to disclose information and their willingness to pay taxes—or in other words, the high morality of participants—can confirm governments’ authority.

194. See SEC, supra note 35, at 13, 15; ALLEN & OVERY LLP, supra note 62, at 6; Kaal & Calcaterra, supra note 4, at 125, 142.
196. Kaal & Calcaterra, supra note 4, at 134.
197. See id. at 136; SEC, supra note 35, at 2, 7 n.25.
EQUITY CROWDFUNDING PORTALS SHOULD JOIN AND ENHANCE THE CROWD BY PROVIDING VENTURE FORMATION RESOURCES

JEFF THOMAS*

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I. INTRODUCTION

On May 16, 2016, the Securities Exchange Commission’s (“SEC”) final equity crowdfunding rules went into effect.¹ These rules meant it would be easier for United States companies to issue their stock, debt, and

* Jeff Thomas, JD, is the Entrepreneurship Chairperson at Central Michigan University. He has experience counseling entrepreneurial ventures through law firms and law school clinics in Chicago and Silicon Valley. He wishes to thank Carter Ballinger, Kalee Teeter, and Azharul Islam for their research assistance regarding the information summarized in Appendix A of this Article. He would also like to thank attendees at the 2018 Law and Entrepreneurship Association Retreat, and in particular J. Brad Bernthal, Associate Professor of Law at Colorado Law, for their thoughtful comments.

other securities to both accredited and non-accredited investors, the crowd, without registering those securities with the SEC. Before this regulation crowdfunding exemption (“Regulation Crowdfunding”) from SEC registration, it was very difficult to raise funds from non-accredited investors, which make up approximately 90% of the population. Thus, Regulation Crowdfunding is important because it gives entrepreneurial companies and issuers easier access to a new and large source of potential capital. However, in order to raise funds under Regulation Crowdfunding, issuers must offer their securities through an SEC-registered broker-dealer or funding portal and comply with numerous other rules. These rules include initial disclosure requirements, where issuers must provide information about their business and the securities being offered; ongoing reporting obligations; and limits on the amount of money they can raise under the exemption. Complying with these rules makes it difficult for companies to raise funds under the exemption. In short, transaction costs can quickly become a large portion of the funds the companies are trying to raise.

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10. See BRAD FELD & JASON MENDELSON, VENTURE DEALS: BE SMARTER THAN YOUR LAWYER AND VENTURE CAPITALIST 127 (3d ed. 2016) (stating that Title III financings require “a significant burden of SEC-mandated information disclosures that can easily cost a company tens of thousands of dollars to comply with”); JD Alois, Wefunder Publishes Open Letter to SEC: Six Recommendations to Improve Regulation Crowdfunding, CROWDFUND INSIDER (May 16, 2017, 9:54 AM),
reduce transaction costs, funding portals are providing form investment contracts that issuers and investors can use when the companies raise capital.\textsuperscript{11} Despite some of the potential shortcomings associated with using these form contracts,\textsuperscript{12} funding portals have demonstrated there is a strong demand for them and the standards they create.\textsuperscript{13} However, to date, U.S. funding portals have not provided venture formation-related resources such as form by-laws, initial resolutions, founder stock purchase agreements, or stock plans.\textsuperscript{14} In addition to further reducing transaction costs for issuers and investors, providing these resources would steer resource-strapped issuers into organizational structures proven to accelerate growth and create value.\textsuperscript{15} Thus, providing these resources may give Regulation Crowdfunding a much needed boost and help achieve more of the expectations and hopes of Title III of the JOBS Act.\textsuperscript{16}


Congress intended Regulation Crowdfunding to help small businesses with limited access to capital. Instead, the current regulations force these early-stage companies to spend capital they cannot afford to lose on accountants or lawyers, before they are even allowed to discover if any investors are actually interested. The current regulations directly harm the issuers Congress intended to help.

Alois, supra.

\textsuperscript{11} See Jack Wroldsen, Crowdfunding Investment Contracts, 11 VA. L. & BUS. REV. 543, 598 (2017). “[F]unding portals are driving innovative and influential contractual approaches to crowdfunding investment through standardized, cost-effective template agreements.” Id.

\textsuperscript{12} See Green & Coyle, supra note 9, at 169–70 (stating that one of the commonly used investment securities, the SAFE, “is not the right tool for channeling retail investment capital to crowdfunding companies”).

\textsuperscript{13} See Wroldsen, supra note 11, at 588. “Most companies take advantage of funding portals’ economies of scale by adopting the ready-made template agreements designed specifically for crowdfunding offerings.” Id.

\textsuperscript{14} But see GUST: FOR STARTUPS, http://www.gust.com/startups (last visited Apr. 18, 2018); Wroldsen, supra note 11, at 595. While this Article focuses on Regulation Crowdfunding and United States funding portals, crowdfunding platforms in other jurisdictions do provide formation resources. Wroldsen, supra note 11, at 595. Moreover, there is at least one United States platform aimed at angel investment groups and other accredited investors that offer formation resources. FUNDERBEAM, http://markets.funderbeam.com/raise (last visited Apr. 18, 2018) (promoting “[f]ree company incorporation and structuring services”).

\textsuperscript{15} See Wroldsen, supra note 11, at 598; About the CfPA, CROWDFUNDING PROF. ASS’N, http://www.crowdfundingprofessionalassociation.org/about/ (last visited Apr. 18, 2018).

This Article takes the position that funding portals should not only provide formation-related resources but they should also require their issuers to use them.\textsuperscript{17} Specifically, Part II of this Article describes what these formation-related resources could include.\textsuperscript{18} Part III explains why requiring issuers to use these resources would not be considered practicing law.\textsuperscript{19} Part IV examines the benefits of providing these resources.\textsuperscript{20} Part V suggests that a trade association could play an important role in both making the resources available and encouraging wide adoption.\textsuperscript{21}

II. WHAT VENTURE FORMATION RESOURCES COULD INCLUDE

In order to explore what formation-related resources could include, this Part looks at how Regulation Crowdfunding issuers are currently formed.\textsuperscript{22} Then, to get a better idea of what is possible, the formation resources used by venture capital-backed companies are considered.\textsuperscript{23} Interestingly, several reputable law firms with long histories of representing these companies share formation-related resources online.\textsuperscript{24} Considering that venture capital ("VC") investing is far more established than Regulation Crowdfunding\textsuperscript{25} and the striking similarity of the practices of venture capital-PM), http://www.forbes.com/sites/chancebarnett/2016/07/18/the-house-passes-fixes-to-equity-crowdfunding-laws/. Stating that:

\begin{quote}
[T]he highly anticipated \textit{boom} of access to non-accredited investors, namely regulated under Title III, is a bit of bust. \ldots Title III was intended to allow non-accredited investors to invest in private businesses but created barriers, burdens, and costs too significant for many otherwise investable startups and small businesses to want to take on.
\end{quote}

Barnett, \textit{supra}. See infra Parts II–V. Funding portals could provide these resources by acting unilaterally or by working with a collaborative organization that supports the equity crowdfunding industry, such as a trade association. See \textit{About the CfPA, supra} note 15.

\begin{itemize}
\item See infra Part II.
\item See infra Part III.
\item See infra Part IV.
\item See infra Part V.
\item See \textit{Garret James Black et al., PitchBook 2016 Annual Global League Tables 15 (2017)}; see infra Part II.B.
\end{itemize}
backed companies, these resources arguably reflect best practices for new, high-growth, for-profit companies seeking capital. Since typical Regulation Crowdfunding issuers are also new, high-growth, for-profit ventures seeking capital, funding portals could cause issuers to adopt these best practices by requiring issuers to use a comprehensive set of formation-related resources resembling the resources routinely used by venture capital-backed companies—but include adjustments to address issues unique to equity crowdfunding. However, because a single set of formation-related resources will not necessarily work well for every venture seeking capital, funding portals could offer separate platforms, which include distinct sets of resources to different types of issuers—such as lifestyle firms, social ventures, and previously-formed businesses.

A. Characteristics of United States’ Equity Crowdfunded Companies

As part of the fundraising process, issuers must file a Form C with the SEC. The Form C collects various information about the issuer—such as their name, organizational form, jurisdiction, date of organization, etc.

[VC] funds came into their own in the 1960s after the seminal funding of Fairchild Semiconductor by Venrock Associates in 1959. With few exceptions, such as the occasional friends and family or employee investor, retail investors are excluded from investing in [VC] funds. [VC] funds, however, have become indispensable as one of the most important drivers of innovation and growth in our economy and as an important—and high return—asset class for institutional investors.

Cartwright, supra.

26. See Feld & Mendelson, supra note 10, at 127; Green & Coyle, supra note 9, at 169.


28. Green & Coyle, supra note 9, at 169; Vladimir Ivanov & Anzhela Knazeva, U.S. Securities-Based Crowdfunding Under Title III of the Jobs Act 2–3 (2017). Even though venture capital-backed companies and Regulation Crowdfunding issuers share many common goals and needs, there are key differences and the resources should reflect these differences. Ivanov & Knazeva, supra, at 2–4, 14. For example, VC firms typically demand seats on the boards of their portfolio companies; whereas founders of Regulation Crowdfunding issuers are reluctant to give up control to large numbers of unsophisticated investors. See John S. (Jack) Wroldsen, The Social Network and the Crowdfund Act: Zuckerberg, Saverin and Venture Capitalists’ Dilution of the Crowd, 15 Vand. J. Ent. & Tech. L. 583, 616 (2013).


physical address, number of employees at the time of the Form C filing, and issuance—like the target offering amount, “description of the purpose and intended use of the offering proceeds,” and “terms of the securities being offered.” Appendix A of this Article summarizes characteristics of the first 139 companies to file a Form C that went on to successfully raise over $50,000 via Regulation Crowdfunding, according to the list provided by Wefunder, Inc. (“Wefunder List”). Below is a summary of the data in Appendix A:

- 68.35% of the issuers were corporations;
- 43.17% of the issuers were Delaware corporations;
- 30.94% of the issuers were Limited Liability Companies (“LLCs”);
- 60.43% of the issuers were formed after January 1, 2014;
- 26.62% of the issuers were formed after January 1, 2016; and
- The median number of employees issuers reported was 4.

31. 17 C.F.R. § 227.201(a)–(b)(1), (g), (i), (m)(1).
32. See Statistics on Numbers of Reg CF Companies That Have Hit Their Funding Target, WEFUNDER, http://www.wefunder.com/stats/all (last visited Apr. 18, 2018). As of April 18, 2018, statistics provided by Wefunder Inc.—maintained at https://wefunder.com/stats/all—reported that “185 [Regulation Crowdfunding] companies have hit their funding target.” Id. However, the amount 185 only reflects issuers that raised over $50,000. The Current Status of Regulation Crowdfunding, supra note 29. SEC Edgar searches were conducted to obtain Form C data for each of the 139 companies to first appear on the Wefunder List. Id. Appendix A includes select information from these Form Cs, including: Issuer name(s) including DBAs and A/K/As, for instances when the name on the Wefunder List differed from the name provided on the Form C; entity type; entity jurisdiction; formation date; physical address; number of employees; and, funding portal. See infra Appendix A. Appendix A is sorted first by entity type and then by entity jurisdiction. See infra Appendix A. Further, intermediary names provided on Form Cs for the funding portals popularly known as Indiegogo and Republic were First Democracy VC and OpenDeal Inc., respectively. See Regulation Crowdfunding Education Center, MICROVENTURES: BLOG, http://www.microventures.com/what-is-first-democracy-vc (last visited Apr. 18, 2018). “First Democracy VC is [the] registered funding portal formed through a partnership between Indiegogo and MicroVentures” or MicroVenture Marketplace Inc. Id. OpenDeal Inc. is the company that owns and operates the Republic funding portal.Republic, http://www.republic.co (last visited Apr. 18, 2018). Appendix A identifies Indiegogo and Republic as the applicable funding portals. See infra Appendix A. Finally, some issuers that used the StartEngine funding portal provided their own name—i.e., the issuer name—as the intermediary name on their Form C. See infra Appendix A. For those cases, Appendix A identifies StartEngine as the funding portal. See infra Appendix A.

33. See infra Appendix A. At least three of the Delaware corporations listed on Appendix A—i.e., My Trail Company, PBC; Powur, PBC; Meow Wolf, Inc.—are Public Benefit Corporations. See infra Appendix A; Statistics on Numbers of Reg CF Companies That Have Hit Their Funding Target, supra note 32.

https://nsuworks.nova.edu/nlr/vol42/iss3/1
This information is consistent with data provided by the StartEngine Index, which started reporting on entity types of issuers in its July 2017 Index. According to the October 2017 StartEngine Index, which includes Regulation Crowdfunding raises between May 16, 2016—the date Regulation Crowdfunding started—and October 31, 2017:

- 68.9% of the issuers were corporations;
- 30.5% of the issuers were LLCs;
- The average issuer is three years old; and
- The average issuer had five employees.

Thus, the typical Regulation Crowdfunding issuer is a recently formed Delaware corporation with a handful of employees.

B. Resources Used by Venture Capital-Backed Companies

To gain an understanding of the formation resources used by venture capital-backed companies, one can look at the resources provided by the law firms that frequently advise those companies. PitchBook Data, Inc. lists the fourteen most active U.S. VC law firms in 2016. Five of those firms share...
the following comprehensive sets of formation-related resources publicly via the internet:

- Cooley Limited Liability Partnerships (“LLP’s”) Cooley GO Incorporation Package (“Cooley Forms”); 39
- Orrick, Herrington & Sutcliffe LLP’s Startup Forms Library (“Orrick Forms”); 40
- Goodwin Procter LLP’s Founders Workbench Document Driver (“Goodwin Forms”); 41
- Perkins Coie LLP’s Startup Percolator/Delaware Startup Forms Wizard (“PC Forms”); 42 and
- Wilmer Cutler Pickering Hale and Dorr LLP’s WilmerHale LAUNCH (“WH Forms”). 43

Upon inspection, these resources are strikingly similar. 44 For example, each resource uses Delaware for the state of formation. 45 All of the resources also support the corporate entity type. 46 The universal focus on Delaware corporations leads to similar specific formation documents, including a Certificate of Incorporation, By-laws, Action by Incorporator, and Initial Organizational Board Resolutions. 47 Specific provisions in these documents are also similar; for example, each firm’s Certificate of Incorporation uses a default, or suggested, capital structure of ten million

39. Incorporation Package (Delaware), supra note 37.
40. Startup Forms Library, supra note 37.
41. Founders Workbench: Formation Tools, supra note 37.
42. Perkins Coie Delaware Startup Forms Wizard, supra note 37.
43. Document Generator, supra note 37.
44. Bernice Grant et al., Expanding Our Reach: Online Tools & the Democratization of Legal Documents (2017), http://www.teachvlgcom.Files.wordpress.com (follow “PDF Version of 1-Pager of Links to Open Source Resources” hyperlink). At the 2017 Transactional Clinical Conference in Philadelphia, PA, the author’s panel distributed a comparison of specific documents included as part of the resources made available online by several respected parties, including the five firms on the PitchBook List (“TCC Summary”). See id. The Author also co-authored an article with members of the TCC panel. See Jeff Thomas et al., Democratizing Entrepreneurship: Online Documents, Tools, and Startup Know-How, 26, 1 J. Affordable Housing & CMTY. DEV. L. 193 (2017).
45. Grant et al., supra note 44.
46. See id. However, the Goodwin Forms also include formation-related resources for Delaware LLCs and the Cooley Forms offer a Public Benefit Corporation option. See Founders Workbench: Formation Tools, supra note 37; Incorporation Package (Delaware), supra note 37.
47. Grant et al., supra note 44.
authorized shares of common stock having a par value of $0.0001 per share.\textsuperscript{48}

Additional formation-related documents provided by these firms—and specific provisions in those documents—are also similar.\textsuperscript{49} For example, each firm provides a document designed to issue a company’s common stock to its founders.\textsuperscript{50} Moreover, each firm offers the ability for this document to include a repurchase option that allows the company to repurchase the founder’s shares, at the founder’s original cost—generally, $0.0001 per share—instead of the then potentially much higher fair market value, if the founder departs the company before his or her repurchase option has fully vested.\textsuperscript{51} Further, each law firm’s resources permit, and in some cases recommend, using a repurchase option that lapses—i.e., vests—over a period of forty-eight months.\textsuperscript{52}

\textsuperscript{48} See Incorporation Package (Delaware), supra note 37 (noting that the Cooley Forms set “authorized capital to [ten million] shares of Common Stock . . . [and the] par value of the shares of Common Stock” at $0.0001); Founders Workbench: Formation Tools, supra note 37 (stating “[y]ou may not issue more than the Company’s authorized capital, which is preset at [ten million] shares of common stock” and, upon examination of the Certificate of Incorporation, the stock has a par value of $0.0001 per share); Perkins Coie Delaware Startup Forms Wizard, supra note 37 (stating “[w]e suggest starting with 10 million authorized shares” and, upon examination of the Certificate of Incorporation, the stock is common stock having a par value of $0.0001 per share).

\textsuperscript{49} Compare Incorporation Package (Delaware), supra note 37, with Perkins Coie Delaware Startup Forms Wizard, supra note 37.

\textsuperscript{50} See GRANT ET AL., supra note 44.

\textsuperscript{51} See Incorporation Package (Delaware), supra note 37 (providing resources that: (i) assume founders contribute $0.0001 per share; (ii) permit founders to be subject to vesting; and (iii) note that “[forty-eight] months is a common vesting period”); Startup Forms Library, supra note 37 (providing: (i) a Common Stock Purchase Agreement that contains Section 3(a), giving the company “an irrevocable, exclusive option—the Repurchase Option—. . . to repurchase all or any portion of the Unvested Shares . . . held by [founder] as of the Termination Date at the original purchase price per Share;” and (ii) initial organizational resolutions of the board of directors that utilize a [forty-eight]-month vesting schedule); Founders Workbench: Formation Tools, supra note 37 (providing resources that: (i) assume each founder will contribute $0.0001 for each share; and (ii) permit founder stock to vest over a period of one to four years—in equal quarterly installments); Perkins Coie Delaware Startup Forms Wizard, supra note 37 (providing resources that: (i) indicate the amount paid for founders’ stock “should be equal to the fair market value of such stock, which for most newly formed companies is a nominal amount, such as $0.0001 per share;” (ii) permit founders’ share be subject to vesting; and (iii) state it “is customary for vesting to last anywhere from [twenty-four] to [forty-eight] months, with [thirty-six] months generally being the most common”); Document Generator, supra note 37 (providing resources that: (i) use a purchase price of $0.0001 per share for founders’ stock; and (ii) state its founder restricted stock agreement is “written with a [four]-year vesting period” and that “[t]ypically, all of the shares will be subject to vesting”).

\textsuperscript{52} See GRANT ET AL., supra note 44; Incorporation Package (Delaware), supra note 37.
Researching these resources and the law firms on the PitchBook List also reveals interesting uses of technology.\textsuperscript{53} For example, four of the five firms that provide a comprehensive set of resources offer a \textit{document generator} or \textit{wizard} to help website users generate a ZIP file containing numerous formation-related documents after they enter a few specific pieces of information online.\textsuperscript{54} This allows users to generate custom transactional documents, without getting lost in the legalese they contain.\textsuperscript{55} Moreover, at least three VC law firms on the PitchBook List have their clients leverage comprehensive third-party equity management platforms, such as Shoobx, Inc. (“Shoobx”) and eShares, Inc. (“eShares”).\textsuperscript{56} Shoobx and eShares can be used to, among other things, incorporate companies, onboard employees, grant stock options, manage stock ownership—such as, by keeping track of owners and vesting provisions—communicate with board members and stockholders, and work with attorneys and others.\textsuperscript{57} Finally, resources such as Thomson Reuters’ Practical Law (“Practical Law”) provide focused educational resources to quickly bring entrepreneurs and attorneys up to speed on key issues surrounding entrepreneurial transactions they are currently embarking on, or preparing for.\textsuperscript{58}

\begin{thebibliography}{99}
\bibitem{note53} See \textsc{Black et al.}, supra note 24, at 28–35.
\bibitem{note54} \textit{Incorporation Package (Delaware)}, supra note 37; \textit{Startup Forms Library}, supra note 37; \textit{Founders Workbench: Formation Tools}, supra note 37. The Orrick Forms do not leverage an online generator or wizard; they do, however, include an \textit{Incorporation Questionnaire} to collect information similar to that entered by users of online generators or wizards. \textit{Incorporation Questionnaire}, ORRICK, http://www.orrick.com/Total-Access/Tool-Kit/Start-Up-Forms/Corporate-Formation/Incorporation\%20Questionnaire (follow “Download Form”) (last visited Apr. 18, 2018).
\bibitem{note55} See \textit{Document Generator}, supra note 37; \textit{Founders Workbench: Formation Tools}, supra note 37.
\bibitem{note58} See \textit{Startup Company Toolkit}, supra note 23 (offering “[r]esources to assist startup companies and the attorneys representing them with the array of legal issues facing new business ventures, including entity formation, capital raising, corporate governance and housekeeping, shareholder relations”).
\end{thebibliography}
C. **One Size Does Not Fit All—but It Fits Many**

Given the typical Regulation Crowdfunding issuer—a relatively new Delaware corporation with a handful of employees—funding portals would likely please their target market by providing formation-related resources similar to those used by venture capital-backed companies.\(^5^9\)

Specific resources could include the following documents: A certificate of incorporation; by-laws; founder stock purchase agreements; stock plans; indemnification agreements; form resolutions—such as actions by written consent of incorporators, initial organizational board resolutions, board and stockholder approvals of the stock plan, and board approvals of stock option grants; form employee offer letters; and form confidential information and invention assignment agreements.\(^6^0\)

If funding portal issuers mirrored a typical venture capital-backed company, they would be formed as Delaware corporations with ten million shares of authorized stock, having a par value of $0.0001 per share.\(^6^1\) They would also issue common stock to their founders and options to purchase common stock to their other employees.\(^6^2\) The founders’ stock would be

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59. Ivanov & Knyazeva, supra note 28, at 2, 27; Thomas, supra note 23, at 71; see also Epstein, supra note 56. Per Part II.A, the typical Regulation Crowdfunding issuer was formed as a Delaware corporation within the last three years and had four or five employees at the time it filed its Form C. See supra Part II.A; Ivanov & Knyazeva, supra note 28, at 1–2, 14. Presumably, such an issuer would have benefited from access to resources designed to: (i) form Delaware corporations; and (ii) use equity to recruit, motivate, and retain employees. See Epstein, supra note 56; Thomas, supra note 23, at 72–73.

60. Grant et al., supra note 44; Cooley GO Incorporation Package (Delaware), supra note 37; Startup Forms Library, supra note 37. These resources could include caveats for issuers to consult attorneys licensed in the applicable jurisdictions. Incorporation Questionnaire, supra note 54; Perkins Coie Delaware Startup Forms Wizard, supra note 37. This is because employment laws, for example, can vary from state to state. Lauren Kreps, Employee Innovation: Does Your Company Own Your Inventions?, LegalShield: Shake (July 10, 2015), http://www.shakelaw.com/blog/employee-inventions/. These laws may require unique disclosures regarding an employee’s potential intellectual property rights. See id. To address such differences, the resources would have some built-in flexibility—e.g., form riders and/or schedules of exceptions to satisfy an issuer’s unique need. See id.

61. See Perkins Coie Delaware Startup Forms Wizard, supra note 37. Some of these initial shares may include a special class of stock that is designed for future equity crowdfunding investors. See id.; Thomas, supra note 23, at 62. Such shares could include superior economic rights but less control rights, when compared to common stock. See Perkins Coie Delaware Startup Forms Wizard, supra note 37; Thomas, supra note 23, at 72–73.

subject to a repurchase option that lapses over a period of forty-eight months, but founders would be given credit for time spent working on the venture before their stock was issued.\textsuperscript{63} Similarly, the employee options would vest over a forty-eight month period.\textsuperscript{64} Further, the issuers would leverage a two-tier stock structure, whereby relatively inexpensive common stock is reserved for the issuer’s team and relatively more expensive stock, with special rights, is sold to outside investors.\textsuperscript{65} The inexpensive common stock


\textsuperscript{64} The corporation typically retains the option to repurchase unvested shares at the initial purchase price at the time of termination of a shareholder’s employment. Vesting usually occurs over [four] years, i.e., if the employee remains employed by the corporation for the entire period, all shares become \textit{vested} and the repurchase option ends.

\textsuperscript{65} See Incorporation Package (Delaware). supra note 37. [A] common vesting schedule for rank-and-file employees is for all stock underlying the option to be completely unvested at the time of issuance, with one-fourth of the underlying stock vesting after one year—\textit{cliff vesting}—and with the remaining stock vesting in equal portions monthly over the next [thirty-six] months.
motivates the team, while the special rights protect outside investors and justify the price differential for tax purposes.\textsuperscript{66} While mirroring these practices of venture capital-backed companies, Regulation Crowdfunding issuers will also need resources that reflect their unique needs.\textsuperscript{67} For example, VC firms typically demand seats on the boards of their portfolio companies, whereas founders of Regulation Crowdfunding issuers are reluctant to give up control to large numbers of unsophisticated investors.\textsuperscript{68} Thus, Regulation Crowdfunding resources should provide outside investors with less—or perhaps no—voting rights as opposed to the control provisions granted to VC investors.\textsuperscript{69} Regardless, because Regulation Crowdfunding issuers share this need amongst themselves, funding portals could efficiently address it through the resources they provide.\textsuperscript{70}

Instead of just providing form documents—or even wizards—funding portals could incorporate many of the matters contemplated by the various formation-related documents as \textit{terms and conditions} that issuers, and in some cases, investors using the portals, \textit{must} comply with.\textsuperscript{71} Thus, while some documents, such as the Certificate of Incorporation, would still need to be available in the traditional format, in order to be filed with Delaware’s Division of Corporations, other items could be behind the scenes.

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\textsuperscript{66.} See id. at 96–97.

\textsuperscript{67.} Wroldsen, \textit{supra} note 11, at 557–58.

\textsuperscript{68.} \textit{Id.} at 558.

Of course, not all investor protections that venture capitalists negotiate are appropriate for crowdfunding investors. For instance, venture capitalists are typically involved with portfolio companies in a hands-on way and assist the start-up team with substantial expertise and industry connections. Accordingly, venture capitalists usually hold a seat on their portfolio companies’ board of directors. But a board seat may not be appropriate or feasible for crowdfunding investors, due, for instance, to the small amount of money that each crowdfunder invests and the dispersed nature of crowdfunding investors.

\textit{Id.} (footnotes omitted).

\textsuperscript{69.} See \textit{id.} at 554–56, 567. A future article may go into depth on how to accomplish this, particularly given the need to justify a higher value on the stock issued to outside investors—i.e., the stock with low or no voting rights—when compared to the common stock, or options to purchase common stock, issued to employees. Bagley & Dauchy, \textit{supra} note 62, at 100, 105; Wroldsen, \textit{supra} note 11, at 558, 568. For purposes of this Article, such shares could include an initial liquidation preference and a cumulative dividend that increases the liquidation preference over time. See Wroldsen, \textit{supra} note 11, at 557, 567–68.

\textsuperscript{70.} See Wroldsen, \textit{supra} note 11, at 558, 628–32.

terms and conditions that would be incorporated by reference, as issuers register with a funding portal and attempt to raise capital through it.\textsuperscript{72} For example, standard by-laws, Founder Stock Purchase Agreements, and Stock Plans could be used by every issuer using a particular funding portal.\textsuperscript{73} Much shorter forms, containing issuer and transaction-specific information—such as the number of directors, names of employees, share amounts, and particular vesting commencement dates—could also be maintained by the funding portal.\textsuperscript{74} Further, the funding portal could provide a schedule of exceptions that would aggregate and report any necessary deviations from its standard templates.\textsuperscript{75}

Given the similarity of the documents and provisions currently being used by venture capital-backed companies represented by several different—and prominent—law firms, it seems feasible that one set of standard formation-related resources could work for a significant number of Regulation Crowdfunding issuers.\textsuperscript{76} Moreover, a funding portal could aim

\begin{itemize}
\item See 17 C.F.R. § 227.402(1)–(3); 112 Cong. Rec. S2231–33 (daily ed. Mar. 29, 2012) (statement of Sen. Bennet); Incorporation Questionnaire, supra note 54. Issuers could apply to funding portals in advance of raising capital. See 17 C.F.R. § 227.402 (7)–(10). In fact, doing so would help justify issuing founder and other employee equity interests at lower prices, when compared to the price of any equity issued as part of the equity crowdfunding financing. See Bagley & Dauchy, supra note 62, at 97.
\item The more time that elapses between the issuance of the common to the founders and the issuance of the preferred to investors, the easier it is to defend a larger differential. This is but one reason why it usually makes sense to incorporate and issue founders’ stock as early as possible. The more time separating the issuance of the founders’ stock from a subsequent event that establishes a higher valuation, the lower the risk that the founders will be treated as having purchased their stock at a discount with resulting taxable compensation income. Id.
\item Thomas, supra note 23, at 72; see also Grant et al., supra note 44.
\item See 17 C.F.R. § 227.201(a)–(b)(1); Grant et al., supra note 44; Perkins Coie Delaware Startup Forms Wizard, supra note 37.
\item See 17 C.F.R. § 227.302(b)(ix)(2). For example, if an issuer has unique by-law provisions, the schedule of exceptions would highlight the issuer’s deviation from the portal’s standard form by-laws. See Perkins Coie Delaware Startup Forms Wizard, supra note 37.
\item See Incorporation Package (Delaware), supra note 37. In fact, several data points support the notion that one set of resources could support a large number—and substantial percentage—of issuers. See Crowdfunding, Securities Act Release No. 9974, Exchange Act Release No. 76,324, 17 C.F.R. pts. 200, 227, 232, 239, 240, 249, 269, 274 (Nov. 16, 2015). First, per Appendix A, just a few funding portals have conducted the majority of the equity crowdfunding financings to date. See infra Appendix A. Similarly, according to the October 2017 StartEngine Index, only four of the portals completed 85.4% of the financings that closed between May 16, 2016, and October 31, 2017. Hynes, supra note 35 (reporting that WeFunder, StartEngine, Seed Invest, and Indiegogo—a/k/a First Democracy VC—represented 36.7%, 22.5%, 13.4%, and 12.9% of the financings between May 16, 2016, and October 31, 2017, respectively). Thus, even a single portal has the potential to reach a
\end{itemize}
its set of formation-related resources at its most likely issuers: New, high-growth Delaware corporations, with four or five employees, which plan to seek additional funding. If all of the portal’s users shared these characteristics, then they would be likely to have their needs met by the same set of documents or terms and conditions, as the case may be. Further, funding portals could encourage use of services similar to—and/or be designed to work with—services provided by Shoobx, eShares, and

large portion of issuers. See id. Second, even though multiple leading VC law firms use similar documents with similar provisions—suggesting that a common set of documents already supports a large volume of activity taking place at several firms—just a single firm’s volume of activity supports the notion that one size can fit many. Id. For example, Cooley LLP completed 457 venture capital deals in 2016 alone. BLACK ET AL., supra note 24, at 29. Whereas, from May 16, 2016 through August 30, 2017, there were only 139 total Regulation Crowdfunding raises that exceeded $50,000. Statistics on Numbers of Reg CF Companies Have Hit Their Funding Target, supra note 32. Thus, in only one year, a single law firm completed more than three-times the number of financings reported on the WeFunder List. Id. While Cooley Forms were most likely not used to form all of the companies, it completed venture capital deals for Cooley LLP which has demonstrated its commitment to using a comprehensive set of resources to assist with the formation process and it clearly engages in a large volume of activity. See BLACK ET AL., supra note 24, at 29. Incorporation Package (Delaware), supra.


78. IVANOV & KNAYEZVA, supra note 28, at 14, 27; Startup Company Toolkit, supra note 23. This is why the VC law firms are able to use the same resources—i.e., they repeatedly represent the same types of clients doing similar transactions. eSHARES, supra note 56; SHOOBX, supra note 56; Startup Company Toolkit, supra note 23.

79. eSHARES, supra note 56; SHOOBX, supra note 56; Startup Company Toolkit, supra note 23. Funding portals could empower Regulation Crowdfunding issuers to more efficiently communicate with directors and stockholders; manage their capitalization tables; onboard employees; get help with the Internal Revenue Code (“IRC”) 409A compliance; and work with their attorneys and others. See 17 C.F.R. § 227.402(b)(14). However, portals will need to ensure that any such services comply with the regulations. See id. Regulations permit funding portals to:

Provide communication channels by which investors can communicate with one another and with representatives of the issuer through the funding portal’s platform about offerings through the platform, so long as the funding portal—and its associated persons: (i) [d]oes not participate in these communications, other than to establish guidelines for communication and remove abusive or potentially fraudulent communications; (ii) [p]ermits public access to view the discussions made in the communication channels; (iii) [r]estricts posting of comments in the communication channels to those persons who have opened an account on its platform; and (iv) [r]equires that any person posting a comment in the communication channels clearly disclose with each posting whether he or she is a founder or an employee of the issuer engaging in promotional activities on behalf of the issuer, or is otherwise compensated, whether in the past or prospectively, to promote an issuer’s offering.

Id.
educational materials like those offered by Practical Law. These tools and resources could also be customized for high-growth Delaware corporations that have employees and plan to seek capital.

D. Different Platforms for Different Types of Ventures

While many Regulation Crowdfunding issuers will welcome the Delaware corporate structure used by venture capital-backed companies, others will prefer a different entity form. In part, this is because some issuers will be social ventures that are entrepreneurial enterprises driven by social purposes, while others will be lifestyle companies, which are small businesses that generate sufficient cash but are not VC fundable. Thus, different funding portals could cater to different types of ventures and investors. For example, some portals could specialize in social ventures, while others could focus on lifestyle businesses. The specific formation-

80. See Thomas et al., supra note 44, at 202. These resources would be designed for both entrepreneurs and attorneys, who may represent them. Id.
81. See Startup Company Toolkit, supra note 23.
82. See infra Appendix A. Per Part II.A, 43.17% of the Regulation Crowdfunding issuers on the WeFunder List were formed as Delaware corporations. See supra Part II.A.
83. See infra Appendix A.
84. See Roger L. Martin & Sally R. Osberg, Two Keys to Sustainable Social Enterprise, HARV. BUS. REV., May 2015, at 86, 88. Social ventures are referred to as “[a] hybrid of government intervention and pure business entrepreneurship” that “can address problems that are too narrow in scope to spark legislative activism or to attract private capital.” Id.
85. See Fred Wilson, Lifestyle Businesses, AVC (Apr. 6, 2015), http://www.avc.com/2015/04/lifestyle-businesses/ (stating that lifestyle businesses will be “too small for VC, but will generate enough annual cashflow to be a great business to own and operate”).
86. See Incorporation Package (Delaware), supra note 37; Founders Workbench: Formation Tools, supra note 37.
87. See Martin & Osberg, supra note 84, at 88; Wilson, supra note 85. While this Article focuses on formation-related resources, different types of ventures will also desire different types of securities, creating additional efficiencies for portals specializing on specific types of ventures. See Adrian Camara, Anonymous Capital: Managing Shareholder Volume for Equity Crowdfunded Companies in Canada, 31 BANKING & FIN. L. REV. 259, 275–76 (2016). For example, lifestyle businesses, which are less likely to have an exit event, may desire to issue revenue sharing agreements instead of equity or securities that later convert into equity. See Alois, supra note 29. Alois interviewed a Startwise co-founder as to why her new funding portal focuses on revenue sharing agreements:

We work with consumer small and medium businesses where founders and owners are actually looking to build a legacy, grow the company long-term and make sure they stay true to the mission that lays at the core of their business. These are not the tech startups that will get acquired fast. So revenue sharing provides the

https://nsuworks.nova.edu/nlr/vol42/iss3/1
related resources provided would depend on the type of ventures being courted. For example, portals aimed at social ventures could provide formation-related resources for public benefit corporations and portals aimed at lifestyle firms could provide formation-related resources for LLCs. Instead of having separate portals for each type of venture, single portals could simply offer different platforms or tracks—each having its own set of resources—for the different types of ventures. Further, special platforms or tracks could help existing entities convert into a structure used by the portal. While forming a new entity may work well for many potential Regulation Crowdfunding issuers, other issuers will have already been formed using different resources.

alternative capital option for small businesses, enabling them to tap into the consumers for support and pay them back as they grow their business.

Id. 88. See Camara, supra note 87, at 275–76. In locations with a longer history of equity crowdfunding, different portals have adopted different structures for their specific issuers. As Camara states:

Id. 89. See PBC Incorporation Package (Delaware), COOLEY LLP, http://www.cooleygo.com/documents/pbc-incorporation-package-delaware/ (last visited Apr. 18, 2018). For example, the Cooley Forms provide a package for Delaware Public Benefit Corporations. Id.

90. See Founders Workbench: Formation Tools, supra note 37. For example, the Goodwin Forms provide packages for both single member Delaware LLCs and multi member Delaware LLCs. Id.

91. See id.

92. See Camara, supra note 87, at 275–76; Founders Workbench: Formation Tools, supra note 37.

93. See BAGLEY & DAUCHY, supra note 62, at 97; Alois, supra note 29. Many Regulation Crowdfunding issuers are relatively newly-formed entities. See Alois, supra note 29. Thus, it seems reasonable to assume that many founders of future issuers have not yet formed entities and would welcome resources to help with that process. See id. However, funding portals requiring the use of certain formation-related resources will need to communicate this to entrepreneurs before they form entities using different resources. See What Happens at Y Combinator, Y COMBINATOR (Nov. 2016), http://www.ycombinator.com/atyc/#. Moreover, while forming entities to meet a portal’s requirements from the onset would be desirable, conversion to a portal’s structure would be possible. See id. In fact, applicants to leading accelerator programs have faced similar issues and undergone similar conversations. Id.
III. PROVIDING RESOURCES WITHOUT PRACTICING LAW

Funding portals may be hesitant to provide formation-related documents to issuers because of concerns that doing so constitutes practicing law. Moreover, because funding portals are not licensed to practice law, they could be “engaging in the unauthorized practice of law.” Initially, this concern seems warranted given some of the actions taken against those who provide legal documents to the public.

Regardless, this concern also seems to contradict the trend of top law firms providing these resources, the fact so many non-attorneys already

If your company is unincorporated when it is accepted into [Y Combinator], [we will] help you get it incorporated in Delaware using standard formation documents. These documents include provisions for vesting of founder’s shares and proper protection of the company’s intellectual property. If your company is already incorporated in the [United States], we will do a review of your formation documents before we make our investment. If there are problems that prevent [Y Combinator] from purchasing its stock or that could cause problems with investors in future, we will point you in the right direction to get the problems fixed, which could be using a standard template that we provide or could require you to work with your own external counsel. If your company is not a corporation but an LLC, we can provide resources to convert your company into a corporation. Similarly, if your company is an entity formed outside of the [United States], we can help you find the right expert to flip your foreign entity into the [United States].

Id.

94. See Thomas, supra note 23, at 72.
95. Id. (emphasis added).
96. See Caroline E. Brown, Note, LegalZoom: Closing the Justice Gap or Unauthorized Practice of Law?, N.C. J.L. & TECH. ON., May 2016, at 219, 222. “A large facet of unauthorized practice of law regulation is ensuring that non-lawyers are not offering legal advice. Most recently, websites that provide legal services have been under attack as conducting unauthorized practice of law.” Id.
97. See Incorporation Package (Delaware), supra note 37; Perkins Coie Delaware Startup Forms Wizard, supra note 37. Unlike funding portals, law firms do practice law. Epstein, supra note 56. However, even law firms take the position that providing these resources does not constitute providing legal advice and that no attorney-client—or other professional—relationship is being created by providing these resources by requiring users to agree with these positions before they can gain access to the applicable resources. Cooley GO Docs Terms of Use, COOLEY LLP, http://www.cooleygo.com/documents/incorporation-package/ (follow “click here” hyperlink) (last visited Apr. 18, 2018). The “Cooley GO Docs Terms of Use” states:

You acknowledge and agree that the making available of these documents (the “Cooley GO Docs”) to you by Cooley LLP and Cooley (UK) LLP shall not create any attorney-client or other confidential or special relationship between you and Cooley LLP and does not constitute the provision of legal advice or other professional advice by Cooley LLP or Cooley (UK) LLP.

Id. The Terms & Conditions for the forms provided by Orrick, Herrington & Sutcliffe LLP state:

Nothing in the Start-Up Forms Library including the document descriptions and help resources (the “Forms Library”), and the documents produced by the Forms Library (the “Documents”) is to be considered as the rendering of
provide these types of resources, the congressional intent expressed during the passage of the JOBS Act, the Crowdfunding Regulations, and the fact

legal or business advice, either generally or in connection with any specific issue or case. These materials are intended for general informational and educational purposes only. Neither the availability, operation, transmission, receipt nor use of the Forms Library or the Documents is intended to create, nor does it create, an attorney-client relationship or any other relationship.

_Incorporation Questionnaire, supra_ note 54. The “Disclaimers & Terms of Use” for the forms provided by Goodwin Procter LLP states:

By using Document Driver, you agree to the following: Document Driver and documents generated by Document Driver have been prepared by Goodwin Procter LLP for general informational purposes only, and are provided with the understanding and subject to the user’s agreement that they do not constitute the rendering of legal advice or other professional advice by Goodwin Procter LLP, and do not create any attorney-client or other special relationship.

_Founders Workbench: Disclaimer & Terms of Use, supra_ note 71. The “Acceptance of Terms of Use” and the “Disclaimer and Terms of Use” for the forms provided by Perkins Coie LLP state:

The Delaware Startup Forms Wizard, including the online questionnaires and annotations (collectively, the “Wizard”) and the documents generated by the Wizard (collectively, the “Documents”) have been prepared by Perkins Coie LLP for general informational purposes only and do not constitute advertising, a solicitation or legal advice. Neither the availability, operation, transmission, receipt nor use of the Wizard or of the Documents is for the purpose of requesting legal advice, securing legal services, or retaining a lawyer nor is intended to create, or constitutes the formation of any attorney-client relationship or other special relationship or privilege.

_Perkins Coie Delaware Startup Forms Wizard, supra_ note 37. The “Document Generator Terms and Conditions” for the forms provided by Wilmer Cutler Pickering Hale and Dorr LLP (“WilmerHale”) state:

You agree and acknowledge that the Generated Materials are prepared by WilmerHale for your informational purposes only without any knowledge of your industry, business model or other specific circumstances. You further agree that the provision of Generated Materials to you, and your provision of information to WilmerHale through the Document Generator or otherwise, (i) does not constitute the provision of legal, tax or other professional advice by WilmerHale and (ii) shall not create an attorney-client or other confidential or privileged relationship between you and WilmerHale.

_Document Generator, supra_ note 37.


99. _See_ 112 CONG. REC. S2231–33. “[F]unding portals should be allowed to engage in due diligence services. This would include providing templates and forms, which will enable issuers to comply with the underlying statute. In crafting this law, it was our intent to allow funding portals to provide such services.” _Id._

100. _See_ 17 C.F.R. § 227.402(b)(5) (2017), “A funding portal may [a]dvise an issuer about the structure or content of the issuer’s offering, including assisting the issuer in preparing offering documentation.” _Id._
the funding portals, and others, already provide form investment contracts. Moreover, if a funding portal required all its issuers to use a set of documents or standard terms—for bona fide business reasons—it would not be providing any advice—legal or otherwise—in connection with an issuer’s formation. On the contrary, it would be saying, this is the deal, if you want to use our service, take it or leave it. Thus, instead of providing advice, funding portals would be establishing conditions to using their service. This position is similar to positions taken by other online service providers—like Amazon.com, Inc.—when they require their users to agree to terms and conditions as a condition to using their services. In some ways, this puts funding portals on the opposite side of the issuers, instead of turning the funding portal into the issuers’ legal counsel. This logic is amplified when the funding portal takes an equity position on an issue, as part of the portal’s fee, since the portal would then become an investor—and thus be on the opposite side of the issuer raising funds to the extent there is an opposing side for the transaction.


102. See Thomas, supra note 23, at 71–72, 71 n.54; Incorporation Questionnaire, supra note 54. Required resources could still provide flexibility. See Model Legal Documents, supra note 27. For example, each issuer using the form by-laws would specify its number of directors. See Incorporation Questionnaire, supra note 54. Moreover, if necessary, issuers could modify by-law provisions themselves via a rider. See Thomas, supra note 23, at 72; GRANT ET AL., supra note 44. Rider, WEBFINANCE INC.: BUSINESS DICTIONARY, http://www.businessdictionary.com/definition/rider.html (last visited Apr. 18, 2018). Further, some resources, such as form resolutions, would be available, but not required. See GRANT ET AL., supra note 44. While funding portals would provide educational content about these resources, they would stay clear of providing any advice—legal or otherwise—regarding an issuer’s particular facts and circumstances. Incorporation Questionnaire, supra note 54.

103. See Thomas, supra note 23, at 71–72. Portals would clarify to issuers they are not providing any legal advice and that issuers are encouraged to seek counsel. See Incorporation Questionnaire, supra note 54.

104. See 17 C.F.R. § 227.402(b)(1); Thomas, supra note 23, at 72. A funding portal may “[d]etermine whether and under what terms to allow an issuer to offer and sell securities in reliance on [Regulation Crowdfunding] . . . through its platform.” 17 C.F.R. § 227.402(b)(1).

105. See Incorporation Questionnaire, supra note 54.


108. See id. § 227.403(a).
While funding portals could avoid practicing law when requiring formation-related resources, they would still affect the practice of law. This is because issuers may seek legal advice from counsel not affiliated with funding portals about the consequences of using funding portals—to understand the impact of the applicable formation-related resources and terms. Because issuers deciding whether to use a particular portal would become subject to the terms and conditions of its formation-related resources, it would be reasonable for them to first seek counsel to better understand the implications of committing to the particular resources. Furthermore, counsel may be desired for assistance with related matters, such as helping with user specific information—for example, determining how many shares to grant to members of the team—and/or a necessary rider.

IV. Benefits of Portals Providing Venture Formation Resources

In addition to reducing transaction costs, using these resources will increase the odds of issuers’ success. Further, benefits created by using the resources will not just flow to issuers and investors. Employees, funding portals, service providers, and entrepreneurial ecosystems can all realize gains.

A. An Assembly Line That Reduces Transaction Costs

By providing formation-related resources, funding portals can reduce formation and other transaction costs for issuers and investors. On the issuer side, it can easily cost thousands of dollars to form a Delaware corporation. By requiring issuers to use a particular set of resources,

109. See id. §227.403; Thomas, supra note 23, at 72; Incorporation Questionnaire, supra note 54.
110. See Thomas, supra note 23, at 72 & n.60.
111. See Incorporation Questionnaire, supra note 54.
112. See Thomas, supra note 23, at 72 & n.60.
113. See Wroldsen, supra note 11, at 597–98; Barnett, supra note 16.
114. See Barnett, supra note 16.
116. Wroldsen, supra note 11, at 559, 598–99; Thomas, supra note 23, at 73.
117. FENWICK & WEST LLP, supra note 63, at 3. “Filing fees, other costs, and legal fees through the initial organizational stage usually total about $3500 to $5000, with a Delaware corporation being at the high end of the range.” Id.
portals could significantly reduce, and perhaps eliminate, such costs.\textsuperscript{118} Moreover, if all issuers are organized using the same templates, post-formation resources can be more easily leveraged to reduce ongoing transaction costs as well—for both issuers and investors.\textsuperscript{119} For example, resolutions approving future stock option grants and financings can be more easily prepared, and due diligence can be performed more efficiently, if an issuer’s underlying foundational documents are a known commodity.\textsuperscript{120} By way of further example, portals could provide Frequently Asked Questions and other educational content to explain complex topics, such as employee equity vesting provisions and their tax consequences.\textsuperscript{121} Similarly, portals and others could publish information about deal term norms and trends.\textsuperscript{122} This content could be leveraged by multiple issuers and their employees, as well as potential investors who seek to better understand how their positions would relate to securities previously granted to employees of issuers.\textsuperscript{123}

B. An Engine That Accelerates Growth and Creates Wealth

Thus, the potential for reducing transaction costs for issuers and investors is significant.\textsuperscript{124} However, even if transaction costs are reduced to zero, perhaps a much larger benefit results from portals providing formation-related resources.\textsuperscript{125} By requiring the use of these resources, portals will also empower Regulation Crowdfunding issuers to take at least three plays from the proven venture capital-backed company playbook.\textsuperscript{126} By executing these plays, issuers will increase their chances of success and their expected

\begin{itemize}
\item \textsuperscript{118} Wroldsen, supra note 11, at 559, 598–99; Model Legal Documents, supra note 27. However, issuers would still need to pay Delaware’s Secretary of State filing fees and possibly some attorney fees—e.g., for advice on the consequences of using a particular portal, and for assistance with state and issuer specific items, such as qualifications to transact business filings in the states where issuers are physically located and where employment and intellectual property issue. See Fenwick & West LLP, supra note 63, at 1–3.
\item \textsuperscript{119} See Wroldsen, supra note 11, at 588, 598–99; Model Legal Documents, supra note 27.
\item \textsuperscript{120} See Thomas, supra note 23, at 72; Wroldsen, supra note 11, at 591.
\item \textsuperscript{122} See Hynes, supra note 34. Also, members of the VC ecosystem regularly publish information about deal terms and trends. See Wilson Sonsini Goodrich & Rosati Prof’l Corp., supra note 121, at 1–6.
\item \textsuperscript{123} See Hynes, supra note 34.
\item \textsuperscript{124} See Wroldsen, supra note 11, at 598.
\item \textsuperscript{125} See Thomas, supra note 23, at 71.
\item \textsuperscript{126} See id. at 71–73.
\end{itemize}
value—that is why venture capital-backed companies habitually call these plays.\footnote{127}

First, venture capital-backed companies understand the importance of granting founders, and other employees, an equity stake.\footnote{128} They use equity to recruit, screen, motivate, and retain their employees.\footnote{129} Per Part II.A, the typical Regulation Crowdfunding issuer has four or five employees at the time it files its Form C.\footnote{130} When compared to venture capital-backed companies, these issuers should be even more dependent on utilizing equity.\footnote{131} This is because they are likely to have less cash available for salaries—making equity a more important component of total compensation—and they will likely be earlier in their lifecycles, signaling a bigger opportunity for individual employees to impact an issuer’s future valuation.\footnote{132} The portals’ resources will make it easier to grant equity to founders and other employees.\footnote{133}

Second, venture capital-backed companies understand the importance of making founder and employee equity sticky through the use of repurchase options and vesting provisions, respectively.\footnote{134} Repurchase options and vesting provisions do more than protect investors—they help employees who stay at firms after others depart.\footnote{135} Without these provisions, co-founders and other employees, who quit would take more shares with them and, thus, free ride off the hard work of those who stay.\footnote{136} This would allow former employees to benefit too much from the sweat of others and, thereby, demotivate the remaining team members.\footnote{137} Thus, venture capitalists require these provisions before investing funds in a company.\footnote{138}
Unfortunately, because Regulation Crowdfunding issuers do not have experienced venture capitalists to require these types of provisions, they are less likely to use them. Therefore, portal resources could add value by making employee equity sticky, by requiring resources that include repurchase options and vesting provisions. While not advising any individual issuers or investors, portals would be protecting the interests of the ecosystem as a whole by requiring best practices as a condition to using their services. Crowdfunding investors should welcome this because they are likely to invest amounts that are too small to justify the costs of professional advice or to exert influence over issuers.

Third, venture capital-backed companies understand the importance of issuing founders and employees common stock and options for common stock, respectively, at relatively low prices and issuing outside investors a different security, series seed or preferred stock, at relatively higher prices. Because Regulation Crowdfunding issuers do not have venture capitalists advising them, they are more likely to issue common stock to outside investors and forego the benefits available under a two-tier equity model. Platform resources would ensure that common stock and options to purchase common stock are reserved for members of their issuers’ teams. These resources would also reflect the unique needs of Regulation Crowdfunding issuers with respect to voting rights. Again, while not advising any individual issuers or investors, portals would be protecting the interests of

139. See id.; Wrolsen, supra note 11, at 557. Additional research is necessary to determine how many Regulation Crowdfunding issuers utilize employee equity and repurchase options and vesting provisions. See Wrolsen, supra note 11, at 557–58.
140. See FENWICK & WEST LLP, supra note 63, at 8.
141. Fenwick Helps Startup Companies Streamline Equity Management Processes Through eShares Partnership, supra note 56.
142. See Wrolsen, supra note 11, at 600–05; The Current Status of Regulation Crowdfunding, supra note 29. The average Regulation Crowdfunding investment size is approximately $873. See The Current Status of Regulation Crowdfunding, supra note 29 (reporting on January 27, 2018 that “[i]nvestors funded $56,128,822 in [Regulation Crowdfunding] offerings” and that “[i]nvestor participation has been $6,263 investments”).
143. See BAGLEY & DAUCHY, supra note 62, at 96–97.
144. See id.; Green & Coyle, supra note 9, at 178 n.30; Hynes, supra note 35. For example, from the inception of Regulation Crowdfunding through October 31, 2017, common stock has been the most widely used type of security offered. Hynes, supra note 35. “Companies are increasingly offering common shares with 36% of the total raises” Id.
145. See BAGLEY & DAUCHY, supra note 62, at 95, 97.

By requiring the use of resources that institutionalize these three practices for Regulation Crowdfunding issuers, funding portals will not just reduce transaction costs—they will appropriately structure issuers for high-growth, and they will be furthering the interests of their ecosystem.\footnote{148. See About the CfPA, supra note 15. The resources will also help institutionalize additional best practices, such as requiring founders to assign applicable intellectual property rights—i.e., established before an issuer’s formation—to the issuer upon formation, and requiring all employees, including founders, to sign Confidentially and Invention Assignment Agreements as a condition to their employment with the issuer—thereby, ensuring the issuer’s post-formation ownership rights and protections. Bagley & Dauchy, supra note 62, at 33, 98–99; Formation, supra note 98. However, issuers will be encouraged to seek counsel licensed in the applicable jurisdictions. Thomas, supra note 23, at 72.}

C. Benefits That Transcend Issuers and Investors


However, by requiring issuers to use formation-related resources, funding portals would also benefit several others including issuer employees, attorneys, and other service providers, students and educators, and the overall ecosystem.\footnote{150. See Bagley & Dauchy, supra note 62, at 94, 105–06; Protalinski, supra note 115; Barnett, supra note 16.}

The formation-related resources would make it easier for issuers to grant equity to employees as part of their total compensation packages.\footnote{151. See Bagley & Dauchy, supra note 62, at 95, 105; Protalinski, supra note 115.}

Thus, more employees could share in the economic gains realized by their respective issuers—gains they helped produce.\footnote{152. See Erick Schonfeld, Counting the Google Millionaires, TechCRUNCH (Nov. 12, 2007), http://www.techcrunch.com/2007/11/12/counting-the-google-millionaires/; Microsoft Corporation, Google Inc.—now Alphabet Inc.—and Facebook, Inc., provide examples of how thousands of one company’s employees may become millionaires due to their stock options. Id. (reporting that “[i]n the 1990s, we loved to tally up the number of Microsoft millionaires”); Protalinski, supra note 115 (reporting that Facebook, Inc.’s public offering will soon create over 1000 new millionaires). “Now, it is Google’s turn. The New York Times cites estimates that there are 1000 Google employees whose stock grants and options are worth more than $5 million.” Schonfeld, supra.}

In addition to sharing some of the wealth created by their new ventures, employees would be more
likely to feel motivated about their positions.\textsuperscript{153} Further, making it easier for issuers to raise funds should lead to more entrepreneurial ventures and, thus, more positions for employees.\textsuperscript{154}

Attorneys and other professionals could advise issuers on the consequences of using funding portals.\textsuperscript{155} They could also develop niche practices designed to assist issuers that use portals to form businesses, raise capital, and complete related and ongoing matters.\textsuperscript{156} For example, tax consultants could have practices that focus on IRC section 351 exchanges, IRC section 83(b) filings, IRC section 409A compliance, and Internal Revenue Service (“IRS”) form 1120 filings.\textsuperscript{157} As standards develop, professionals should also become more efficient at representing issuers on seemingly unrelated matters.\textsuperscript{158} For example, attorneys representing issuers on employment matters, intellectual property issues, commercial contracts, and acquisitions should benefit from knowledge of the issuers’ formation documents.\textsuperscript{159}

As funding portals use a comprehensive set of formation-related resources, it will become more practical for academic courses and co-curricular initiatives, like accelerators and incubators, to address and use materials built for real transactions.\textsuperscript{160} In addition to being able to examine a more reasonable number of documents, educators and students could focus on a particular jurisdiction’s laws, such as Delaware’s General Corporation

\textsuperscript{153} See Bagley & Douc
ame{y}, supra note 62, at 94; Ivanov & Knyazeva, supra note 28, at 14. A scene from the film Office Space provides a humorous illustration of how employees might otherwise lack motivation. See Office Space (Twentieth Century Fox 1999). This Meeting with the Bobs scene is available on YouTube. Arresteddevelopfan, Office Space: Meeting with the Bobs, YouTube (March 8, 2012), http://www.youtube.com/watch?v=BTdOHBlppx8.

\textsuperscript{154} See Thomas, supra note 23, at 63.

\textsuperscript{155} See Gust: Launch, http://www.gust.com/launch/ (last visited Apr. 18, 2018). Several law firms, accountants, and other service providers are listed as friends on the The Gust Launch Network part of the Gust accredited investor platform. Id.

\textsuperscript{156} See From Formation to Exit, supra note 57; Thomas, supra note 23, at 72 n.60.

\textsuperscript{157} See I.R.C. § 351 (2012); I.R.S. Form 1120 (2017); From Formation to Exit, supra note 57; eShares, supra note 56.

\textsuperscript{158} See Startup Company Toolkit, supra note 23; Thomas, supra note 23, at 72 n.60.

\textsuperscript{159} See From Formation to Exit, supra note 57; Startup Company Toolkit, supra note 23; Thomas, supra note 23, at 72 n.60.

\textsuperscript{160} See Thomas, supra note 23, at 72, 74 n.60. For example, the University of Chicago’s New Venture Challenge provides a form Simple Agreement for Future Equity on its website. Resources, New Venture Challenge: C. NVC, http://research.chicagobooth.edu/nvc/collegenvc/resources/ (last visited Apr. 18, 2018).
This focus would allow entrepreneurship education to become less theoretical and more practical. This shift would trigger more experiential learning opportunities and better connect classrooms and campuses to the real world.

As alluded to in Part IV.B, by requiring use of formation-related resources that reflect best practices, funding portals can protect the interests of the crowdfunding ecosystem. By serving this role and benefitting so many constituents, funding portals could significantly enhance the ecosystem. However, it is possible that they could make even more of an impact if they worked together with a collaborative organization that supports equity crowdfunding.

V. POTENTIAL TRADE ASSOCIATION ROLE

A trade association dedicated to equity crowdfunding, such as the Crowdfunding Professional Association (“CfPA”), could play a key role in helping funding portals provide formation-related resources. In fact, the CfPA could oversee the creation and maintenance of the resources and encourage their wide adoption. This would make it easier for the resource authors to achieve economies of scale and for issuers to move from one portal to another. Trade associations have an interest in providing tools to make their ecosystems healthy and these tools sometimes include legal templates. For example, the National Venture Capital Association

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162. Thomas, supra note 23, at 73.
163. See id. at 73, 75.
164. See supra Part IV.B; About the CfPA, supra note 15.
165. See About the CfPA, supra note 15.
166. See Wroldsen, supra note 11, at 599.
167. See About the CfPA, supra note 15.
168. See id.; Epstein, supra note 56.
169. See About the CfPA, supra note 15.
170. Id.; Wroldsen, supra note 11, at 588.
171. About the CfPA, supra note 15; see also Wroldsen, supra note 11, at 587–88.
(“NVCA”) provides model legal documents for VC financings.\textsuperscript{172} One of NVCA’s reasons for providing these resources is clearly to reduce transaction costs:

By providing an industry-embraced set of model documents that can be used as a starting point in [VC] financings, it is our hope that the time and cost of financings will be greatly reduced and that all principals will be freed from the time consuming process of reviewing hundreds of pages of unfamiliar documents and instead will be able to focus on the high level issues and trade-offs of the deal at hand.\textsuperscript{173}

However, the NVCA aims to do more than minimize costs: “[O]ne of our goals in drafting these documents is also to reflect best practices and avoid hidden legal traps, even if doing so means straying from current custom and practice.”\textsuperscript{174} When comparing Regulation Crowdfunding issuers to companies on the verge of raising VC, Regulation Crowdfunding companies seem more likely to appreciate free or low cost resources.\textsuperscript{175} This is because venture capital-backed companies are generally in a better position to afford sophisticated legal counsel and other transaction costs.\textsuperscript{176} Moreover, the investors are likely to have counsel protecting their interests.\textsuperscript{177} Thus, the amount of benefits created by the NVCA for its

\textsuperscript{172} Wroldsen, supra note 11, at 588; see also Model Legal Documents, supra note 27. Realtor Associations offer another example of how associations add value to their members by providing model documents as resources. Transact, NC REALTORS, http://www.ncrealtors.org/business-center/transact/ (last visited Apr. 18, 2018).

\textsuperscript{173} Id.

\textsuperscript{174} Id. Explaining further that the model legal documents aim to: Reflect and in a number of instances, guide and establish industry norms; [b]e fair, avoid bias toward the VC or the company/entrepreneur; [p]resent a range of potential options, reflecting a variety of financing terms; [i]nclude explanatory commentary where necessary or helpful; anticipate and eliminate traps for the unwary—e.g., unenforceable or unworkable provisions; . . . [p]rovide a comprehensive set of internally consistent financing documents; [p]romote consistency among transactions; [r]educe transaction costs and time.

\textsuperscript{175} See Alois, supra note 10; Model Legal Documents, supra note 27.

\textsuperscript{176} See Alois, supra note 10; Model Legal Documents, supra note 27; Startup Company Toolkit, supra note 23.

\textsuperscript{177} See Alois, supra note 10; Model Legal Documents, supra note 27; Startup Company Toolkit, supra note 23.
ecosystem, by providing model legal documents, would seem to be exceeded by the benefits that could be created by the CfPA for its ecosystem, by providing formation-related resources.178

VI. CONCLUSION

The typical Regulation Crowdfunding issuer is a new Delaware corporation.179 It is a growth company.180 It currently has four or five employees.181 It lacks the cash and expertise available to venture-capital backed companies.182

Several leading VC law firms share their formation-related resources online.183 These resources are for high-growth ventures that will become Delaware corporations and use their equity to recruit, motivate, and retain employees.184 Despite the fact that different law firms provide these materials, the resources and their specific contents are quite similar.185 Leading VC law firms also leverage technology tools that help users generate tailored formation-related documents, manage equity ownership, and improve communications with stockholders, attorneys, and others.186 The NVCA adds further to the VC ecosystem by providing a comprehensive set of model legal documents.187 These various resources help venture capital-backed companies reduce transaction costs while encouraging best practices.188

Many of the resources used by venture capital-backed companies are well suited for Regulation Crowdfunding issuers.189 This is because the typical company, in both cases, is a new, high-growth Delaware corporation

178. Alois, supra note 10; About the CfPA, supra note 15; Model Legal Documents, supra note 27.
179. See IVANOV & KNYAZEVA, supra note 28, at 2.
180. See id. at 2, 14.
181. See id. at 14.
182. See Hynes, supra note 34; Wroldsen, supra note 11, at 558.
183. See Incorporation Package (Delaware), supra note 37; Founders Workbench: Formation Tools, supra note 37; Document Generator, supra note 37.
184. See IVANOV & KNYAZEVA, supra note 28, at 2, 14; BAGLEY & DAUCHY, supra note 62, at 94.
185. See GRANT ET AL., supra note 44.
186. See Press Release, Goodwin Procter LLP, supra note 56; Fenwick Helps Startup Companies Streamline Equity Management Processes Through eShares Partnership, supra note 56.
187. See Model Legal Documents, supra note 27.
188. See id.
189. See IVANOV & KNYAZEVA, supra note 28, at 4; Wroldsen, supra note 11, at 557.
with employees that seek outside capital. While the resources should be tweaked for Regulation Crowdfunding issuers, they should still reflect certain best practices of venture capital-backed companies and empower issuers to provide equity to employees, to make that equity subject to vesting, and to take advantage of a two-tier stock structure. Further, an equity crowdfunding association could develop and maintain these resources. Funding portals could then select which resources to require their issuers to use. By requiring issuers to use a set of formation-related resources, funding portals could reduce transaction costs and accelerate growth and the creation of wealth without practicing law.

It is time to make entrepreneurial finance more entrepreneurial. The established VC ecosystem has demonstrated that a comprehensive set of formation-related resources can support many of its members. It has also demonstrated what those resources should include and the benefits of providing them. Unfortunately, VC is unavailable to most entrepreneurial ventures. Thus, we need the emerging equity crowdfunding ecosystem to join and enhance the crowd. We need equity crowdfunding portals to provide venture formation resources.

190. See IVANOV & KNYAZEVA, supra note 28, at 2, 4; Incorporation Package (Delaware), supra note 37.
191. See Wroldsen, supra note 11, at 556, 588–89.
192. See About the CfPA, supra note 15; Model Legal Documents, supra note 27.
193. See Wroldsen, supra note 11, at 557.
194. Thomas, supra note 23, at 71; see also Model Legal Documents, supra note 27.
195. See Cartwright, supra note 25.
196. See Hynes, supra note 34.
197. See Model Legal Documents, supra note 27; Transact, supra note 172.
198. See Cartwright, supra note 25.
199. Thomas, supra note 23, at 63–64.
200. See id. at 71.
### Appendix A – Summary of Regulation Crowdfunding Issuer Data

<table>
<thead>
<tr>
<th>Issuer Name(s)</th>
<th>Entity Type</th>
<th>Entity Jurisdiction</th>
<th>Formation Date</th>
<th>Physical Address</th>
<th>Number of Employees</th>
<th>Funding Portal</th>
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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. Currently, the most widely known is

* Ors Penzes, Pénzes Örs, Dr., LLM., is an attorney and a freelance thinker. His interests include fundamental legal concepts, behaviors of the masses, game theories, and
Bitcoin, but there are other serious players in the game such as Ethereum, NEO, and Ripple, to name just a few.  

Cryptocurrencies extend beyond the pre-established limits, and thus do not fit easily into the existing paradigm. In fact, their scope is so vast, it is almost impossible to predict their future impact. 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. At this stage, it is impossible to predict accurately what will

global simulations. He is a regular contributor to the World Bank doing business reports from 2015 through 2018. He has written articles and delivered speeches pertaining to digital security, bank law, and mass phenomena. He received his LLM in the United States, Global Business Law in 2012 from Suffolk University Law School in Massachusetts, his degree in Legal and Political Science, Hungarian and EU Law, in 2009 in Hungary, and his International Business Certificate in 2008 in Pennsylvania. He was a scholar in Vienna, Constanta, and Bangkok, Thailand. In addition, he would like to say thanks to the Nova Law Review.

3. See Bolt & van Oordt, supra note 1, at 1, 5–6.
4. See id. at 1; Ogilo, supra note 2.
happen even in the short to medium term future. 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.”

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

However, the problem here is that cryptocurrency works globally, not locally. It knows and respects no borders. 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).
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.
creating justifications and objections for each existing legal category and term.\textsuperscript{13}

The category-based approach is extremely interesting in its diversity.\textsuperscript{14} However, we do not really get closer to finding the answer to this most very modern of conundrums.\textsuperscript{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.\textsuperscript{16} We need to understand the phenomenon instead of categorizing it merely in arbitrary legal terms.\textsuperscript{17} It means we need to get out of the jurisdiction of the isolated, closed loop of the legal system, and expand the horizons.\textsuperscript{18} This kind of approach is absolutely necessary to make sense of the bigger picture.*

\begin{itemize}
\item \textit{Id.} at 622.
\item \textit{See id.} at 621, 624.
\item \textit{Id.} at 624; \textit{see also} Bierer, \textit{supra} note 9, at 90.
\item \textit{See} Hewitt, \textit{supra} note 13, at 622–23.
\item \textit{See} Bierer, \textit{supra} note 9, at 89–90, 94.
\end{itemize}
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.*

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.
25. See Grubb, supra note 19, at 1779; Moers, supra note 24, at 10.
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. Or, if it was accepted, it was done under punitive exchange rates.

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. So, it seems that some currencies just die out while others remain and even prosper. This pattern looks true for government-backed fiat currencies, cryptocurrencies, and other currencies. The legal tender is determined by space and time.

A. The Turbo Car Cards Dilemma

Turbo was a brand of chewing gum popular in the 1990s. The gum had collectable inserts, which featured the images of various vehicles along with their top speed, horsepower, and engine size. 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

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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.
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. 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.*

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.*

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.*

B. \textit{The Swiss Franc, Zimbabwean Dollar, and Transnistrian Ruble}

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

36. See id.


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


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 dollar\(^{46}\) 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 Transnistria\(^{48}\) 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

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.
47. See id.; Special Drawing Right (SDR), supra note 40.
50. Id.
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.\textsuperscript{55} Other than that, only the Russian Federation accepts the Transnistrian ruble as a legitimate currency—i.e., unit of account.\textsuperscript{56} The Zimbabwean dollar, Swiss franc, and Transnistrian ruble exist in parallel worlds.\textsuperscript{57} All three are excluded from the SDR basket.\textsuperscript{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.\textsuperscript{59} There exists 5 to 8 relevant currencies world-wide; 5 of them are also part of the SDR basket.\textsuperscript{60} The remaining circa 170-plus currencies are not part of the SDR basket and so are essentially considered irrelevant in international business.\textsuperscript{61}

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

C. \textit{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.\textsuperscript{64} On one hand, one could compare the relevant currencies of the currency market to an extremely exclusive private golf club.\textsuperscript{65} On the other

\begin{itemize}
\item \textsuperscript{54} Transnistrian Ruble, supra note 53.
\item \textsuperscript{55} Id.; TransDniester, supra note 48.
\item \textsuperscript{56} See Special Drawing Right (SDR), supra note 40; Transnistrian Ruble, supra note 53; ZWD – Zimbabwean Dollar, supra note 49.
\item \textsuperscript{57} See Special Drawing Right (SDR), supra note 40.
\item \textsuperscript{59} Richard Lee, \textit{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.
\item \textsuperscript{60} See Quickbooks Canada Team, supra note 59; Special Drawing Right (SDR), supra note 40.
\item \textsuperscript{61} See Special Drawing Right (SDR), supra note 40; CHF-Swiss Franc, supra note 44; Lee, supra note 60.
\item \textsuperscript{62} See Bierer, supra note 9, at 81–83.
\item \textsuperscript{63} See Special Drawing Right (SDR), supra note 40.
\item \textsuperscript{64} 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
\end{itemize}
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.*


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


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

70. See Bajpai, supra note 66; Special Drawing Right (SDR), supra 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. 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. 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.

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

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 territory.


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-fdd6-11e2-8785-00144feabde0; Saleeth, supra note 73.


77. Docevski, supra note 75.

78. Id.

79. See id.

80. See id.
territory. Specifically, a different kind of legal tender was used depending on where you went.

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. The USD has been used for just 226 years, and the euro only for about twenty years.

Of course, 225 years has the potential to become 1500 years. 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.

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. 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.
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.  

Let us recall our earlier discussion that it is hard to predict the future of the cryptocurrencies. 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.  

The court, in case C-264/14, 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.’”  

F. The Infrastructure of the Blockchain—Budapest Taxi Strike

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

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93. Id.


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

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

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

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.
107. See Interview with Gyula Kodolányi, supra note 99; Citizens Band Radio Service (CBRS), supra note 105.
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. Today, there are central radio stations, and the P2P connection of taxi CBs no longer exists. 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 FireChat which was used in the Hong Kong Revolution, in a Catalan pro-independence demonstration, at the University of Hyderabad, India, Iraq, demonstrations in Ecuador, during a flood in Kashmir, during a hurricane in Mexico, and an election in Venezuela.

But, this is not the case with cryptocurrencies. The cryptocurrencies are mainly non-centralized. 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.
117. TNN, supra note 114.
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.\textsuperscript{125} It is neither centralized, nor controllable.\textsuperscript{126} The P2P system can pose a threat\textsuperscript{127} to the existing top-down power structures indeed.\textsuperscript{128}

IV. SIMULATIONS

A cryptocurrency has a bottom-up, P2P, decentralized character.\textsuperscript{129} Furthermore, it is almost organic in nature.\textsuperscript{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.\textsuperscript{131} This is exponential growth at work.\textsuperscript{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

\begin{thebibliography}{13}
\bibitem{125} See Fletcher, \textit{supra} note 96; Interview with Gyula Kodolánlya, \textit{supra} note 95; Marshall, \textit{supra} note 95.
\bibitem{126} See Fletcher, \textit{supra} note 96; Holmes, \textit{supra} note 89; Interview with Gyula Kodolányi, \textit{supra} note 99.
\bibitem{127} See Holmes, \textit{supra} note 89; Marshall, \textit{supra} note 95.
\bibitem{129} See id.
\bibitem{130} See Holmes, \textit{ supra} note 95.
\bibitem{132} See id.
\end{thebibliography}
people. Amazingly, television broadcasts reached the same number of people in only fifteen years. The Internet has grown at an astounding rate of almost ten times greater than that of television. In 1987, there were 10,000 hosts, and by 1992, the number of hosts surpassed 1,000,000. 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!

However, today this is not the case when it comes to cryptocurrencies and blockchain technology. The infrastructure is largely already in place, and the Internet is getting faster and more powerful by the hour. Remember the poppy, it would need only nine years to disseminate itself across the earth. 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. 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.


134. Id.


136. Id. at 3–4.


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.

The total *market capitalization*\textsuperscript{143} of cryptocurrencies exceeds $377 billion USD as of April 2018.\textsuperscript{144} Competing vegetation and natural borders—oceans, deserts, mountains, etc.—create barriers and limit the spread of poppies;\textsuperscript{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.\textsuperscript{146}

B. *Acceleration. Increasing value.*

The fastest land mammal is the cheetah—*acinonyx jubatus*.\textsuperscript{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.\textsuperscript{148} Impressively, cheetahs can accelerate to 86.9 km per hour—53.9 miles per hour in 2.75 seconds.\textsuperscript{149} But, their high speed can only be kept up for a short period of time.\textsuperscript{150}

We do not need to imagine if there is an animal that can quickly accelerate and sustain its high speed.\textsuperscript{151} Such an animal already exists: the pronghorn—*antilocapra americana*.\textsuperscript{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.\textsuperscript{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.\textsuperscript{154}


\textsuperscript{145.} See *If the Animals Were Alive Forever*, supra note 131.


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

\textsuperscript{148.} *Id.*

\textsuperscript{149.} *Id.*

\textsuperscript{150.} *Id.*

\textsuperscript{151.} See *id.*

\textsuperscript{152.} *Animal Records: Fast and Slow*, supra note 147.

\textsuperscript{153.} *Id.*

\textsuperscript{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. 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. That represents a huge increase.

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. The gestation period varies between 147 to 150 days. Therefore, their reproductivity does not belong to any specific season. The hugely reproductive Cameroon sheep raises an average of two to three sheep per year. And with each new female offspring, more new lambs are delivered twice a year. With an average lifetime of 10 to 12 years—which is high for most animals—these characteristics make the sheep a highly reproductive species.

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


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, CRYPTO Ninjas (July 1, 2017), http://www.cryptoninjas.net/2017/07/01/eos-token-sale-generates-185-million-first-5-days/.
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, EXTREMETECH (Sept. 17, 2013, 10:32 AM),
Another interesting example of time and motion perception is the tiger beetle.\textsuperscript{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.\textsuperscript{177}

The slow-moving bulk of today’s standard currencies cannot grasp that something new and much faster is evolving around them.\textsuperscript{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.\textsuperscript{179} Unless, of course, they begin to move too fast like the above tiger beetle and lose their focus.\textsuperscript{180}

E. \textit{Optical Paradox, Tetris Effect, Game Theory, and Other Trends}

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

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\textsuperscript{177} \textit{Id.}

\textsuperscript{178} See Bajpai, supra note 66.

\textsuperscript{179} Bierer, supra note 9, 83–84; Friedlander, supra note 176.

\textsuperscript{180} Friedlander, supra note 176.


\textsuperscript{182} \textit{Id.}


\textsuperscript{184} See Seidenfeld, supra note 181, at 541.

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

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.\(^\text{191}\) 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.\(^\text{192}\) The subjects made irrational decisions playing the game.\(^\text{193}\) The game consisted of a one dollar note auction.\(^\text{194}\) The outcome during the experiment—with a large group—was that the average sale price for $1 USD note was $3.40 USD.\(^\text{195}\) Sometimes, it even went as high as twenty dollars.\(^\text{196}\) 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.\(^\text{197}\)

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187. Sinicki, supra note 186.
188. Id.
190. See Earling, supra note 189; Sinicki, supra note 186.
191. See Bowles, supra note 185.
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.
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. A bit like designer drugs, no one really knows where they come from, or what they are made of, or what their side effects might be. If something is a trend, then it is boosted in the market. Every month there is a hip, new designer drug that teenagers want to try. These trends come and go, just like in the ICO cryptocurrency world. 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. The buying and selling price of cryptocurrencies influence the exchange rate. 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!*

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199. See Ariane Wohlfarth & Wolfgang Weinmann, Bioanalysis of New Designer Drugs, 2 BIOANALYSIS 965, 965–66 (2010).
200. See id.
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; Holnes, supra note 89.
We can see that there is a huge informational asymmetry among those who operate within the cryptocurrency world and those who do not. 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. Anyone who is on the inside cannot be objective and will move together like bees with the same hive mind. Anyone who is on the outside does not even see the point of what is happening with cryptocurrencies. Traders and Information Technology guys are into it, but those outside the cryptocurrency bubble do not have a clue.

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. We need a more critical scientific approach; however, is there anyone who understands cryptocurrency and can observe it impartially and objectively?

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. 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. 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.
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,


217. See id.

218. Id.


221. Bustillos, supra note 72.

222. See id.

223. See McKenna, supra note 8.

a land registry process, a tax process, and a mortgage, etc. In each legal situation, the legal definitions vary. 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. 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. The highest entropy is the greatest diffusion. Put it this way: A gold bar means low entropy—the wealth is concentrated into a gold bar, instead of spreading itself universally. The gold bar represents a very strong material density. 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.

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. Its density value is even higher than that of gold.

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


228. See id. at 1–2.

229. See Stanczyk, supra note 166.

230. See id.

231. See id.


233. See *Fancy Color Diamonds to Remain the Top Wealth Concentration Investment Vehicle*, supra note 232.
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/CID177 unit of bitcoin. As far as I know, the cryptocurrency represents the lowest entropy and density in the material world. It represents huge value and small expanse size. The black hole has infinite density and almost zero expanse. It means we are close to *diabolical singularity.*

<table>
<thead>
<tr>
<th>Weight (app)</th>
<th>Volume (app)</th>
<th>Special Unit (app)</th>
<th>Price (app)</th>
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<tbody>
<tr>
<td>311.0 g of gold</td>
<td>17 000 mm³</td>
<td>app 11 oz t</td>
<td>$15,000 USD</td>
</tr>
<tr>
<td>0.3 g of diamond</td>
<td>52 mm³</td>
<td>app 1.5 c app, 6.5 mm d</td>
<td>$15,000 USD</td>
</tr>
<tr>
<td>Less than 0.1 g of bitcoin</td>
<td>Less than 1 mm³</td>
<td>app 1–4 bitcoin</td>
<td>$15,000 USD</td>
</tr>
</tbody>
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*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? Because of the exchange rate movements, investors like it. 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.

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. Right?

So, we are back at the beginning. What we see now is the potential of the, as of yet, unused block-chain technology. 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. 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. 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.” 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.
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.\textsuperscript{251} One of the main sins appears, as well, because of profit maximization.\textsuperscript{252} From a religious perspective, cryptocurrency is mammon, money, and an asset.\textsuperscript{253} From a business perspective, cryptocurrency is money, security, and an asset.\textsuperscript{254} From a legal perspective, it is digital money, a property right, a security, and an asset—a coin with many sides.\textsuperscript{255} From a social-psychological perspective, it is money—an online pebble stone.\textsuperscript{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.\textsuperscript{257} So far, they have not had to survive any serious crisis events.\textsuperscript{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?*


\textsuperscript{254} See Bierer, supra note 9, at 89–90.

\textsuperscript{255} See id. at 93–94; McKenna, supra note 8.

\textsuperscript{256} See Gilliland, supra note 81, at 1.

\textsuperscript{257} See Bolt & van Oordt, supra note 1, at 1; Bajpai, supra note 66; Bustillos, supra note 72.

\textsuperscript{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.\(^{263}\)

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\(^{259}\) 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.
ECONOMIC LIBERTY “IN A WORLD OF PURE IMAGINATION”: A THEORETICAL ANALYSIS OF WILLY WONKA, NATURAL RIGHTS, AND THE NEW AGE OF INNOVATION

TAMMY M. EICK*

“Invention, my dear friends, is ninety-three percent perspiration, six percent electricity, four percent evaporation, and two percent butterscotch ripple.”

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I. INTRODUCTION

There is something uniquely captivating about the original film Willy Wonka and the Chocolate Factory that seems to touch the heart and spirit,

* Tammy M. Eick, J.D. Candidate, 2019, Nova Southeastern University, Shepard Broad College of Law. Tammy would like to first give thanks to God, always and for all things. She would also like to thank Professor Ishaq Kundawala for his invaluable mentorship and encouragement. For all of their hard work and dedication on refining this Comment, she gives many thanks to her fellow colleagues of the Nova Law Review. And finally, a special thank you to her loving parents, for everything.

3. See Casey Robinson, Born to Be Wild(er): The Willy Wonka Effect, FORDHAM OBSERVER: ARTS/CULTURE (Sept. 29, 2016),
Throughout the film we learn that if there was one thing Willy Wonka valued above all else, it was the limitless belief he had in the capacity of his imagination. Like Wonka, entrepreneurs are also driven by some unknown force of relentless hope and optimism. Even in failure, they still find value.

Having the freedom to choose how one builds their life financially has long been a core value weaved into the quilt-work of the American dream. This is fundamentally true for those born with an entrepreneurial spirit. As the creator of a confectionary enterprise, Willy Wonka is much like the metaphorical embodiment of the entrepreneurial spirit itself.

According to the 2013 Forbes Top Fictional 15, Wonka’s fictional portfolio, valued against “real-world commodity and share prices,” puts his net worth somewhere in the neighborhood of $2.3 billion. Not bad, for a candy man.


4. See Robinson, supra note 3.


7. Id.


12. WILLY WONKA & THE CHOCOLATE FACTORY, supra note 2.
However, the economic realities faced by entrepreneurs in America today paint a much different picture. The rapidly diminishing cost of information is fundamentally changing how developed countries operate; impacting not only the economy, but also the political institution itself. Many believe that America is falling behind in this new era. Global access to low-cost information has given rise to a surge in global competition—which, in turn, is “quickly separating winners from losers, [and revealing that] [t]he spoils are going to the boldest innovators,” say the finance experts at McKinsey & Company. To survive, businesses across all major industries are uprooting their business models to be rebuilt, fostering one thing above all: Innovation—not just breakthrough innovation, but continuous innovation.

This major development in the American economy serves to highlight the broad impact over-government regulation has on entrepreneurs. For the ninth time since 2008, the United States has dropped on the global Index of Economic Freedom for entrepreneurs.

A new study by the Mercatus Center at George Mason University revealed that over-government regulation “has created a considerable drag on the economy, amounting to an average reduction in the annual growth rate of the U.S. gross domestic product (“GDP”) of 0.8[%].” In addition, “[t]he

19. See Ohlhausen, supra note 13, at 1; NAT’L SMALL BUS. ASS’N, supra note 13, at 2.
growth of government has been accompanied by increase[d] cronyism [which] has undermined the rule of law and perceptions of fairness.”

In trying to deconstruct the regulatory issues faced by entrepreneurs, federal administrators have even acknowledged that “many . . . Americans still face significant government barriers that restrict participation in the economy. [Moreover is that] few of these barriers have a substantial public safety or health rationale,” stressed standing Chairman of the Federal Trade Commission ("FTC"), Maureen Ohlhausen.

Despite the growing public dissatisfaction with government, and the rising economic hardships faced by many, the courts have almost universally chosen not to get involved. Rather, courts leave it to the democratic process itself as relief for plaintiffs who have been injured by arbitrary government abuse. But this was not always so. There was a time in America’s history when the Supreme Court of the United States declared that economic liberty was a fundamental right protected under the Fifth and Fourteenth Amendments of the United States Constitution.

The unfortunate reality is that for many—particularly conservatives—on the judicial bench, this period of constitutional history represents an abhorrent activity; often colorfully referred to by names such as: Judicial activism, judicial overreach[, or legislat[ing] from the bench. However it is phrased, the emphasis remains the same—that is, that the proper role of judges when reviewing economic regulations is to defer to the Legislature.

Decades of such judicial deference has left the Legislature and administrative agencies with virtually free rein, resulting in vast regulatory accumulation. “The buildup of regulations over time [has] lead[!] to duplicative, obsolete, conflicting, and even contradictory rules,” making it

22. Kim, supra note 20.
23. Ohlhausen, supra note 13, at 1.
27. Lochner, 198 U.S. at 53; Livingston, supra note 8.
30. See Levy, supra note 24, at 344; NAT’L SMALL BUS. ASS’N, supra note 13, at 2.
difficult for entrepreneurs and businesses to comply. With over-complicated, costly compliance demands, in conjunction with the competitive market, it leaves no question as to why small business has been on the decline.

The goal of this Comment is to add current economic developments to the discourse of originalist jurisprudence reform; aided with a little help from Willy Wonka himself, who might yet be able to still inspire. Part II will delve into economic liberty, focusing on its importance to the individual and to society; as well as discussing the current events leading to its gradual decline. Part III will examine the historical, constitutional barriers to economic liberty, and how they have shaped current barriers. Part IV will shed light on the rising defense for economic liberty in lower federal courts, and from both the private and public sectors. Finally, Part V will set forth a conclusion supported by the political philosophy of America’s Founding Fathers.

II. ECONOMIC LIBERTY

The definition of economic liberty is largely dependent on who is asked to define it. On an individual level, the definition is often a reflection of one’s view on the relationship between government and individual autonomy. For example, liberal progressives might argue it means having the ability to earn a livable wage to cover the basic needs for one’s self and family. Modern conservatives might argue it means having the ability to pursue “the occupation of [one’s] choosing” without unnecessary government interference. Regardless of where one’s policy preference sits on the ideological spectrum, economic liberty has always represented the American

31. Coffey et al., supra note 21, at 1.
32. NAT’L SMALL BUS. ASS’N, supra note 13, at 2; see also Gresham, supra note 6.
33. See infra Parts II–V.
34. See infra Part II.
35. See infra Part III.
36. See infra Part IV.
37. See infra Part V.
39. Id.
41. Economic Liberty, supra note 8; see also Miller & Kim, supra note 38, at 25.
values of enabling “social mobility, economic opportunity, and personal freedom.”

For a basic definition, economic liberty can be understood as an individual’s ability to undertake certain “economic pursuits—[such as] producing, selling, and buying goods, services, and labor—as [one] choose[s].” Economic scholars have long argued that economic freedom “is [the] key to economic growth, rising living standards, and political liberty.” In this sense, economic liberty can be understood as an important means to achieve other valuable ends. Ends that not only benefit one person, but also benefit society as a whole.

A. **Wonka the Entrepreneurial Icon**

“My dear boy, do you ask a fish how it swims? . . . Or a bird how it flies? . . . No sir’ree, you don’t! They do it because they were born to do it.” Just as audiences were told that Wonka “was born to be a candy man,” many others are said to have been *born to be* entrepreneurs. Few would deny that entrepreneurs play a vital role to the success of a nation’s economic growth. What inspires entrepreneurs is something former Deputy Assistant Attorney General and Professor of Law, Philip Weiser, refers to as

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42. *See Dicke, supra* note 8, at 11.
44. *Id.*
45. *Id.*
47. Robinson, *supra* note 3; *see also* WILLY WONKA & THE CHOCOLATE FACTORY, *supra* note 2.

“Entrepreneurs have been embraced by both political parties, along with a wide swath of the American people, who tell pollsters they trust small business more than almost any other institution.” Chatterji & Robinson, *supra*. 

https://nsuworks.nova.edu/nlr/vol42/iss3/1

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entrepreneurial DNA—a common trait that drives them "to try, and then ultimately, to succeed." As Perry Gresham, defined it:

The entrepreneur in America can be truly classified a rare bird. [One that] differs from the conventionally defined businessman in many ways. The entrepreneur’s motives are not merely to avoid loss; turn a modest profit, if possible; defend the organization; maintain a position; and win approval for exemplary conduct. The entrepreneur is possessed above all with drive, insight, and ingenuity.  

The fictional character Willy Wonka first appeared in Roald Dahl’s 1964 children’s novel, Charlie and the Chocolate Factory. In 1971, its cinematic adaptation, Willy Wonka and the Chocolate Factory, opened in theaters. Despite the film being a box office flop, it would later become a beloved cult classic for many Americans. In 2014, the film, Willy Wonka and the Chocolate Factory, would be named a cinematic treasure that was to then be preserved, for all time, on the National Film Registry in the Library of Congress for its significance in American culture.  

Dahl’s joyful, yet devious, storyline has provided fertile ground for countless fan theories, even to this day. In many ways, Charlie’s journey is a classic underdog story, whose popularity can be accredited to what some scholars have theorized as being a reflection of our desire for justice. Although Charlie is technically the story’s protagonist, for many, it is Willy Wonka’s child-like character who continues to inspire today.
Despite some of the story’s critics, many still see Wonka as something of an entrepreneurial icon. In recent years, several entrepreneurs have been dubbed the Willy Wonka of various consumer products, such as cars, soap, gum, cheese, and even marijuana. In the world of coffee, former Starbucks CEO, Howard Schultz, has credited Willy Wonka as being the primary inspiration for the company’s new, high-end, Seattle-based coffeehouse, the “Reserve Roastery and Tasting Room.” Schultz, who stepped down as CEO to focus on the company’s new premium brand, said in a media interview that, “[the company’s] intent with the Roastery was to create a multi-sensory retail experience not only that would elevate coffee, but that was really unlike any retail experience in the world.” Since then, other big retailers—such as Whole Foods and Urban Outfitters—have followed Starbucks’s lead towards incorporating Wonka’s style of experience-driven marketing. As the Business Insider reports, Wonka’s

60. See Cheryl Corbin, Deconstructing Willy Wonka’s Chocolate Factory: Race, Labor, and the Changing Depictions of the Oompa-Loompas, 19 BERKELEY McNAIR RES. J., Apr. 2012, at 47, 53. “The fact that Wonka smuggled the Oompa-Loompas out of Africa in crates and into this factory speaks to its illegality and takes on the characteristic of the Trans-Atlantic Slave Trade.” Id. at 53 (citation omitted). “And what I found was that the classic I remember, being full of childlike fantasy, is actually kind of a story about a raging psychopath who solicits children worldwide to murder.” Heady, supra note 56.


64. Feldman, supra note 59.


69. Taylor, supra note 68.
Chocolate Factory has become “the blueprint for the future of retail.”\(^70\) The importance of Willy Wonka’s influence as an inspirational, entrepreneurial icon is becoming increasingly more important as America’s economy continues to decline.\(^71\)

B. **Entrepreneurs in the New Age of Innovation**

In the United States, the small business sector employs “nearly half of the [current] workforce, and produc[es] over one-third” of the nation’s GDP.\(^72\) In addition to being the leading creator of jobs in the private sector, small business is also credited as being the driving force behind innovation.\(^73\)

1. **New Age of Innovation**

Innovation has become a buzzword in recent years.\(^74\) As Professor Kevin Werbach playfully observed, “[i]nnovation: [It is] something everyone is in favor of . . . yet no one really understands it.”\(^75\) Virtually every definition of innovation will be based on what it produces, rather than a process itself.\(^76\) For example, “[i]nnovation is significant positive change .

\(^{70}\) Id.
\(^{71}\) See André van Stel et al., *The Effect of Entrepreneurial Activity on National Economic Growth*, 24 *SMALL BUS. ECON.* 311, 312 (2005).

The last two decades have witnessed both large—conglomerate—companies increasingly concentrating on core competences and experiencing mass lay-offs—especially in traditional manufacturing industries—and high-technology innovative small firms hav[e] come to the forefront of technological development in many—new—industries. These developments would suggest the key importance for modern economies [is] a sound entrepreneurial climate for achieving economic progress.

\(^{72}\) Dicke, *supra* note 8, at 11. “United States small businesses employed 57.9 million people, or 47.8% of the private workforce, in 2014.” *Small Business Profile, 2017 U.S. SMALL BUS. ADMIN.: OFF. ADVOCACY* 1.

\(^{73}\) Dicke, *supra* note 8, at 15–16.


\(^{75}\) *Why Innovation Is Tough to Define — and Even Tougher to Cultivate*, *supra* note 74.

\(^{76}\) See Berkun, *supra* note 74.

[H]ere is the best definition: [I]nnovation is significant positive change. [I]t is a result. [I]t is an outcome. [I]t is something you work towards achieving on a project. If you are successful at solving important problems, peers you respect will call your work innovative and you an innovator. Let them choose the word.

\(^{Id.}\)
The importance of entrepreneurship—and the impact of innovation—becomes particularly important when placed in context with developments in *The Information Age*. The Information Age began in 1970, with the invention of the microcomputer. Forty years later, one-half of the Earth’s population is connected by smartphone—for perspective, in 2017, that is approximately 3,739,698,500 people. In simple terms, internet and technology has made it easier than ever to share massive volumes of information on a global scale.

“The impact of entrepreneurship in the information age is being felt across the globe.” The surge of globally accessible information has led to an equally forceful surge of new innovations in digital technology, which many have suggested are fundamentally changing “not only business, but [also] society, politics, and the economy.” For this reason, many scholars have more accurately termed our current era as being: The New Age of Innovation.

The concept of a *New Age of Innovation* was first introduced by Professor C.K. Prahalad, who argues that a new global market of competition is rising, which is being fueled “by digitization, ubiquitous connectivity, and

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77. *Id.*


79. *Allis, supra* note 78.


81. *See Allis, supra* note 78. “The Information Age . . . has brought with it the greatest forty-five years in the history of human progress, leading to substantial increases in life-expectancy, per capita income, and literacy and significant decreases in infant mortality and the number of people living in poverty around the world.” *Id.*

82. *Weiser, supra* note 50, at 3.

Increasingly, entrepreneurs are finding business models that can deliver the information age to populations around the world. Consider, for example, how Iqbal Quadir, a Bangladeshi who emigrated to the [United States], developed a plan for using microfinance to enable women in villages to buy mobile phones and charge for access to them. Based on that plan, Bangladesh now has over 270,000 *phone ladies*, who, using a specially designed mobile phone with long-lasting batteries, are selling minutes to local villagers. The venture now enjoys annual revenues in the neighborhood of $1 billion—all by tapping an entrepreneurial spirit and hunger for access to the information age.

*Id.*


84. *See Prahalad & Krishnan, supra* note 17, at 6.
Because of this, it is now imperative for the survival of firms—in all industries—to restructure their organization in order to foster innovation as “not just episodic big breakthroughs,” but continuous innovation.\textsuperscript{86}

2. Impact of Regulations on Innovation

The rise of digital information technology has led to what some Harvard scholars have termed as disruptive innovation.\textsuperscript{87} The theory of disruptive innovation is that “a smaller company with fewer resources can unseat an established, successful business by targeting segments of the market that have been neglected by the incumbent, typically because it is focusing on more profitable areas.”\textsuperscript{88} The impact of disruptive innovation, as explained by finance experts at the $8.8 billion dollar management firm, McKinsey & Company, is that:

Digital technology is disrupting industry after industry—and quickly separating winners from losers. The spoils are going to the boldest innovators. A McKinsey survey of more than 2000 executives in industries affected by digital disruption shows that the companies with the highest revenue and earnings growth led the disruption . . . .

Most insurers, though, do not have innovation in their DNA. Regulation has curbed incumbents’ ability to experiment . . .


By all accounts, we are living in a golden age of innovation. In the last decade alone, we have witnessed the introduction of landmark inventions, from driverless cars, to bionic limb reconstructions, to the discovery of the Higgs Boson. Advancements like these are inspiring new generations of innovators, agents of change, and curious minds to dream of a better future.

On the surface, our analysis confirmed this thesis, finding that total worldwide patent volume has reached a record high, with over 2.1 million unique inventions published over the past year.

Moftah, supra.

\textsuperscript{86} See \textit{PRAHALAD & KRISHNAN}, supra note 17, at 2–3.

\textsuperscript{87} Birkinshaw, supra note 14; Rosamond Hutt, \textit{What Is Disruptive Innovation?}, WORLD ECON. F.: AGENDA (June 25, 2016), http://www.weforum.org/agenda/2016/06/what-is-disruptive-innovation/.

\textsuperscript{88} Hutt, supra note 87.
... But innovate they must... [T]hey will get left behind if they fail simultaneously to use digital technology to innovate and build new business.  

In the global economy, “[t]he international dynamics of entrepreneurship [and innovation] are spurring competition between countries.” Curtis Carlson, head of California’s Stanford Research Institute, warns that “America’s information technology, services, and medical-devices industries are about to be lost.” The biggest threats, Carlson points out, are from India and China. Sergey Brin, co-founder of Google, when asked about whether government should regulate innovation said: “[T]he best innovation policy is probably one that does the least. Liberty is a powerful force.” Robert Fridel observed that “[t]echnology and the pursuit of improvement are ultimate expressions of freedom; of the capacity of humans to reject the limitations of their past and their experience, to transcend the boundaries of their biological capacities and their social traditions.

When both Google co-founders, Sergey Brin and Larry Page, were asked if there was any future of Google entering the health industry, Page expressed flatly that:

[Health is just so heavily regulated, [it is] just a painful business to be in. ... Even though we have some health projects, [we will] be doing it to a certain extent. But I think the regulatory burden in

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90. Id.
91. Id.
92. Id.
93. Id.
94. Id.
the [United States] is so high . . . it would dissuade a lot of entrepreneurs.95

Regulatory build-up concerns are not only appearing in insurance, technology, and health, but are also showing up in banking and finance.96 In a letter to the Office of Comptroller of the Currency last year, the Independent Community Bankers of America wrote that:

Community banks today are subject to an unprecedented level of regulation and supervisory review that regulators continually point to as a signal of great financial strength in the vast financial services industry. . . . [T]he biggest barrier to future innovation for community banks is the regulatory burden these institutions face on a daily basis.97

3. Impact of Regulations on Entrepreneurship

A 2017 survey conducted by the National Small Business Association (“NSBA”) revealed that the average small business owner spends $12,000 each year on government regulations.98 The average regulatory start-up cost for small businesses is almost seven times that—at the cost of $83,019.99 The study also revealed that 44% of businesses reported spending a minimum of forty hours each year dealing with federal regulations, with 30% spending the same amount on state and local regulations.100 When coupled with the market risks already inherent in the start-up industry, these unchecked regulatory burdens “represent a major hurdle . . . [for] many would-be entrepreneurs.”101


98. NAT’L SMALL BUS. ASS’N, supra note 13, at 2.

99. Id. at 9.

100. Id. at 5.

101. Id. at 9; see also Sreekanth Ravi, When Launching Your Startup, Consider These 5 Risks, ENTREPRENEUR: STARTING BUS. (May 21, 2014), http://www.entrepreneur.com/article/234094.
In 2017, the Heritage Foundation released its global Index of Economic Freedom. The results of this study caught the attention of FTC’s acting chairwoman, Maureen Ohlhausen, who emphasized in her remarks at the George Mason Law Review’s Twentieth Annual Antitrust Symposium that: “For the ninth time since 2008, America has lost ground. The United States now ranks [seventeenth] out of 180 ranked economies. Business freedom and labor freedom, two of the twelve factors evaluated, are among those that have declined since 2011.”

Ohlhausen particularly expressed her concerns about excessive occupational licensing regulations and the disproportionate impact they have on lower and middle-class Americans. Many of the current occupational licensing regulations beg the question of what, if any, legitimate state interest in protecting public health and safety they could possibly be advancing to justify limiting the economic liberties of Americans.

Occupational licensing stands out as a particularly egregious example of this erosion in economic liberty. In the 1950s, less than [5%] of jobs required a license. Estimates today place that figure between 25 and 30[%]. Today, licensing requirements reach far beyond doctors, electricians, and other fields where public health and safety issues are clearer. Instead, licensing requirements extend to auctioneers, interior designers, make-up artists, hair-braid, and numerous other occupations.

The public safety and health rationale for regulating many of those occupations ranges from dubious to ridiculous. Consumers can, and do, easily evaluate the quality of interior designers, make-up artists, hair-braid, and others. I challenge anyone to explain why the state has a legitimate interest in protecting the public from rogue interior designers carpet-bombing living rooms with ugly throw pillows.

The proliferation of unnecessary and overbroad occupational licensing regimes not only burdens consumers and the economy, it hurts many average Americans who want to enter these occupations. A 2011 study using standard economic models estimated that restrictions from occupational licensing resulted in

103. Ohlhausen, supra note 13, at 2 (footnotes omitted).
104. Id. at 3–4.
105. See id. at 1, 3–4.
up to 2.85 million fewer jobs with an annual cost to consumers of $203 billion.\textsuperscript{106}

Two important points can be drawn from the impact excessive regulations have on economic liberty: (1) that innovation, entrepreneurship, and economic liberty are growing increasingly important in the rapidly advancing digital age; and (2) that the time may now be ripe to re-examine judicial review of economic regulations.\textsuperscript{107}

III. CONSTITUTIONAL CHALLENGES TO ECONOMIC LIBERTY

For over a century, the legal institution has been at odds in a \textit{great intellectual debate} on the meaning of economic liberty in constitutional law.\textsuperscript{108} Legal scholars often define economic liberty as an individual right.\textsuperscript{109} Specifically, as a property and contract right—that is, “the right to acquire, use, and possess private property, and the right to enter into private contracts of one’s choosing.”\textsuperscript{110} The Institute for Justice and many other organizations take the position that economic rights are fundamental rights, protected under the Federal Constitution.\textsuperscript{111} However, for almost a century, the Supreme Court has taken a very different stance on the topic of individual economic

\textsuperscript{106} Id. at 3–4 (emphasis added).
Market dynamics . . . naturally weed out those who provide a poor service, without danger to the public. For many other occupa[nts], the costs of added regulation limit the number of providers and drive up prices. These costs often dwarf any public health or safety need and may actually harm consumers by limiting their access to beneficial services.

\textsuperscript{107} See Birkinshaw, supra note 14; Economic Liberty Backgrounder, INST. FOR JUST., http://www.ij.org/issues/economic-liberty/backgrounder/ (last visited Apr. 18, 2018).


\textsuperscript{109} See Randy E. Barnett, \textit{Does the Constitution Protect Economic Liberty?}, 35 HARV. J.L. & PUB. POL’Y 5, 5 (2012). Georgetown University of Law, Professor Randy Barnett, takes on the task of defending the right to contract, as an economic liberty, under the Privileges or Immunities Clause. \textit{Id.}

\textsuperscript{110} \textit{Id.}

\textsuperscript{111} See Economic Liberty Backgrounder, supra note 107.
The philosophy of [the Institute for Justice] . . . is simple: People have a right to engage in productive activity—i.e., to make a living—free from undue government interference. The [United States] Supreme Court and lower federal courts acknowledge the existence of that right but have all too often refused to enforce it in any meaningful way. [The Institute for Justice] aims to correct that error by demonstrating that economic liberty not only matters morally, but that protection for economic liberty has a genuine basis in the text, history, and original meaning of the [United States] Constitution and that economic liberty is entitled to a meaningful level of judicial review.

\textit{Id.}
rights.112 Unlike many of the unenumerated privacy rights protected under substantive due process, such as marriage and reproduction, the Supreme Court has long rejected recognizing economic liberty as a fundamental right.113 However, there was a time in constitutional history when the Supreme Court was not so deferential towards legislative intrusions on economic liberties.114 In fact, there was a time when “the Court stood in [strong] opposition to an ever-increasing tide of economic and social legislation.”115 History remembers it beginning in 1905, when the Supreme Court issued one of its most notorious constitutional rulings, which would later become the namesake for an era in *Lochner v. New York.*116

A. Lochner v. New York

For decades, the conventional narrative has been that the Supreme Court’s ruling in *Lochner* “was obviously and irredeemably wrong.”117 It has been referred to as “the touchstone of judicial error,” which now firmly resides in *the American [constitutional] anticanon.*118 Most often, *Lochner* is cited for the evils of *judicial overreach*[] or *judicial activism*—that is, the “illegitimate intrusion by the courts into a realm properly reserved to the political branches of government.”119 Despite the overwhelming consensus among legal scholars of *Lochner’s* disfavored status, the reason for why *Lochner* was wrong is still a matter of unsettled debate.120

113.  See id. at 529; Levy, *supra* note 24, at 344.
115.  Id. at 342–43.
116.  198 U.S. 45 (1905); see also Colby & Smith, *supra* note 28, at 528, 533, 535.
118.  Jamal Greene, *The Anticanon*, 125 HARV. L. REV. 379, 380, 417–18 (2011) (quoting David E. Bernstein, *Lochner’s Legacy’s Legacy*, 82 TEX. L. REV. 1, 2 (2003)); see also *Lochner*, 198 U.S. at 45; Colby & Smith, *supra* note 28, at 536. The *American anticanon* is often understood in *legal and political culture* to be among the few Supreme Court decisions “whose central propositions all legitimate decisions must refute.” Greene, *supra* at 380. They are often identified as being “the Supreme Court’s worst decisions” for their *weak constitutional analysis.* *Id.* However, the author interestingly argues that the “anticanonical cases do not involve unusually bad reasoning, nor are they uniquely morally repugnant.” *Id.* Rather, they are a product of *historical happenstance*, and their status is merely reaffirmed by “subsequent interpretive communities’ use of [them] as a rhetorical resource.” *Id.*
120.  Colby & Smith, *supra* note 28, at 529, 540–41; see also *Lochner*, 198 U.S. at 45.
In *Lochner*, the Supreme Court was tasked to review the constitutionality of a New York labor regulation prohibiting bakeries from allowing their employees to work for more than sixty hours per week.\(^\text{121}\) In a five-four decision, the Court held that the labor regulation “interfer[e][d] with the right of contract between the employer and employee[s].”\(^\text{122}\) The right to contract, the Court declared, “is part of the liberty of the individual protected by the Fourteenth Amendment of the [United States] Constitution.”\(^\text{123}\) After reviewing the regulation under what would later be known as strict scrutiny, the Court’s majority found that it “was not necessary to protect bakery employees from an imbalance in bargaining power, to protect the public health, or to protect the health of bakery employees.”\(^\text{124}\) In doing so, the Court concluded that the labor regulation was “an unreasonable, unnecessary, and arbitrary interference with the right of the individual to his personal liberty.”\(^\text{125}\)

In what would later become his famous dissent, Justice Holmes rejected that the right to contract was a liberty protected under the Fourteenth Amendment.\(^\text{126}\) Holmes argued that the Justices on the majority had wrongly decided the case based on their personal or moral agreement with “an economic theory . . . a large part of the country [did] not entertain,” rather than on the “values . . . codified in the Constitution.”\(^\text{127}\) The Constitution, he declared, “is not intended to embody a particular economic theory, whether of paternalism and the organic relation of the citizen to the State or of *laissez faire*.\(^\text{128}\) Holmes suggested that if courts are to strike down *democratically enacted* legislation in defense of “liberty in the Fourteenth Amendment,” it must be only when “it can be said that a rational and fair man necessarily

\(^{121}\) *Lochner*, 198 U.S. at 46, 52.
\(^{122}\) *Id.* at 53; Colby & Smith, *supra* note 28, at 533.
\(^{123}\) *Lochner*, 198 U.S. at 53. In support of its rationale, the Court noted that there may be times an “employ[ee] may desire to earn the extra money, which would arise from his working more than the prescribed time, but this statute forbids the employer from permitting the employ[ee] to earn it.” *Id.* at 52–53.
\(^{125}\) *Lochner*, 198 U.S. at 56.
\(^{126}\) *Id.* at 74–76; Colby & Smith, *supra* note 28, at 534; Sunstein, *supra* note 28, at 877–78.
\(^{127}\) *Lochner*, 198 U.S. at 75; Greene, *supra* note 118, at 418; see also Colby & Smith, *supra* note 28, at 534.
\(^{128}\) *Lochner*, 198 U.S. at 75. “[The Constitution] is made for people of fundamentally differing views, and the accident of our finding certain opinions natural and familiar or novel and even shocking ought not to conclude our judgment upon the question whether statutes embodying them conflict with the Constitution of the United States.” *Id.* at 76.
would” agree that it infringed on “fundamental principles as they have been understood by the traditions of our people and our law.”

Much of the controversy giving rise to *Lochner*’s infamy was the apparent discrepancy between the Court’s conclusion that the New York law was not a health regulation, and “the realities of the sweatshop-era workplace” conditions of the time. The next three decades would become an era, as the activist Lochner-era Court struck down the majority of the progressive labor, health, and workplace laws under the New Deal, which arguably may have “contribut[ed] to or worsen[ed] the Great Depression.”

It was not until 1937 when the new, liberal-majority Supreme Court ended the *Lochner* era in the case *West Coast Hotel Co. v. Parrish.* In upholding a state minimum wage law, the Court declared that:

> [T]he Constitution does not speak of freedom of contract. It speaks of liberty and prohibits the deprivation of liberty without due process of law. In prohibiting that deprivation, the Constitution does not recognize an absolute and uncontrollable liberty. . . . [T]he liberty safeguarded is liberty in a social organization which requires the protection of law against the evils which menace the health, safety, morals, and welfare of the people.

The Court added that “the [L]egislature . . . necessarily [has] a wide field of discretion” to pass legislation in order to protect public health and safety. In other words, in direct contrast with the *Lochner* Court, the Court announced that the Due Process Clause of the Constitution no longer protected unenumerated rights from economic regulations. By doing so,

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129. *Id.* at 76; Greene, *supra* note 118, at 418.

130. Colby & Smith, *supra* note 28, at 537–38; see also *Lochner,* 198 U.S. at 75.

The Legislature passed the law at issue in *Lochner* on the heels of a *New York Press* story, entitled “Bread and Filth Cooked Together,” that detailed the unsanitary conditions in many New York City bakeries. As one late-nineteenth century bakers’ union spokesman put it, “consumers like clean, wholesome bread, yet if they could go into the shops at night and see the men at work they would lose their appetites altogether.” . . . Bakers at the turn of the century often worked [100] hours per week in abysmal conditions, and there was evidence to support their claim that working long hours in such an environment caused what they referred to as white lung disease.


131. *Id.* at 538–39.

132. 300 U.S. 379 (1937); Colby & Smith, *supra* note 28, at 543.

133. *W. Coast Hotel Co.,* 300 U.S. at 391.

134. *Id.* at 393.

135. See *id.* at 391–92; Colby & Smith, *supra* note 28, at 543.
the Court effectively “promulgate[d] a jurisprudence of deference” to the Legislature.136

B. **Shifting Scales of Selective Judicial Scrutiny**

Despite the Supreme Court having recently declared broad judicial deference to economic regulations, one year later, it made some exceptions.137 “In the famous footnote four” of *United States v. Carolene Products Co.*,138 the Court suggested that there may be times when searching [judicial] scrutiny is needed for economic legislation that interferes with enumerated rights found in the text of the Bill of Rights, restricts the political process, “or imposes burdens on [insular] minorities.”139 The historical significance of this footnote was that it not only acknowledged the incorporation of the textual Bill of Rights into the Due Process Clause of the Fourteenth Amendment, but it also recognized that there may be non-textual rights deserving of some constitutional protection.140

From Justice Stone’s footnote four, rose a bifurcated rubric of judicial scrutiny for due process challenges of economic regulations.141 All things that the Supreme Court has ordained as being life, liberty, or property under the Due Process Clause of the Fifth and Fourteenth Amendments of the Constitution are considered *fundamental rights*, which are protected as such by application of strict scrutiny review.142 The benefit of this heightened review is that many regulations interfering with recognized fundamental rights will often be struck down for having failed to be “necessary to fulfill a compelling governmental purpose.”143 In contrast, all other challenges to protect rights not yet recognized as being *fundamental* are left with virtually no protection under the exceedingly deferential rational

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136. Colby & Smith, supra note 28, at 543.
137. See United States v. Carolene Products Co., 304 U.S. 144, 152 n.4 (1938); Colby & Smith, supra note 28, at 544–45; Levy, supra note 24, at 361.
138. 304 U.S. 144 (1938).
139. Carolene Prods. Co., 304 U.S. at 152 n.4; Colby & Smith, supra note 28, at 544; Levy, supra note 24, at 361.
140. Levy, supra note 24, at 361.
142. U.S. CONST. art. V; id. amend. XIV, § 1; Levy, supra note 24, at 335 n.19, 361 & n.125 (citing JOHN E. NOWAK & RONALD D. ROTUNDA, CONSTITUTIONAL LAW 575–76 (4th ed. 1991)). “Strict scrutiny requires that a law be narrowly tailored, or necessary, to fulfill a compelling governmental purpose, and almost always requires the invalidation of the legislation in question. Strict scrutiny applies to legislation burdening fundamental rights or employing classifications based on race or national origin.” Levy, supra note 24, at 335 n.19 (citations omitted) (citing NOWAK & ROTUNDA, supra, at 575–76).
143. Levy, supra note 24, at 335 n.19 (citing NOWAK & ROTUNDA, supra note 142, at 575–76).


basis review. This is a much more deferential form of review, where the court need only find some “colorable [public] health or safety justification[,]” for the regulation to be legitimate. The practical effect will almost always result in a court upholding regulations interfering with non-fundamental rights, irrespective of the harm it may cause.

The problem, however, with this sliding scale of scrutiny is that the history of its use by the Supreme Court reflects an obvious bias against protecting economic rights. As argued by Professor Richard Levy, the Court in Carolene Products “never fully explained why some rights are entitled to special protection,” and other non-textual rights are not. In 1965, the Court’s bias was amplified by its holding in Griswold v. Connecticut, when Justice Douglas argued that a non-textual right of privacy—specifically, the marital privacy to use contraceptives—emanated from the “specific guarantees in the Bill of Rights.” As such, the Court held that the non-textual right to privacy was to be protected as a fundamental right under the Constitution. However, the Court’s bias against economic rights hit center stage in 1973 when it decided in Roe v. Wade that a non-textual right to abortion—under the right to privacy—was protected by the Constitution.

Instead of attempting to distinguish its logic from the Lochner error, as the Griswold Court had done, the Court in Roe simply held outright that the right to privacy was, in fact, a fundamental right, irrespective of its lack of textual support. The parallels between the Court’s ruling in Roe in

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144. Id. at 335 n.19, 337 n.39, 362 (citing NOWAK & ROTUNDA, supra note 142, at 575).

The most deferential form of review is the rational basis test, which requires only that a law be reasonably related to some conceivable legitimate purpose, and which almost always results in a decision upholding the legislation. This test applies unless there is some justification to employ a stricter form of rationality review, i.e., heightened scrutiny.

145. Id. at 335 n.19 (citations omitted) (citing NOWAK & ROTUNDA, supra note 142, at 574–75).

146. Id. at 335 n.19, 361, 391 n.256 (citing NOWAK & ROTUNDA, supra note 142, at 574–75).


148. Id. at 362; see also United States v. Carolene Prods. Co., 304 U.S. 144, 152–53 n.4 (1938).

149. 381 U.S. 479 (1965).

150. Id. at 484; Levy, supra note 24, at 362.

151. Griswold, 381 U.S. at 484–85.

152. 410 U.S. 113 (1973).

153. See id. at 164–65; Levy, supra note 24, at 360–61.

protecting the non-textual right to privacy, and the *Lochner* Court’s error in protecting the non-textual right to contract, is still an issue of contention today.\(^{155}\)

### C. *The Originalist Barrier*

Unsurprisingly, many conservative judges and scholars heavily criticized the liberal Supreme Court for its preferential logic during the rise of privacy rights.\(^{156}\) After the fall of *Lochner* in 1937, both liberals and conservatives condemned the *Lochner* Court for erroneously overreaching into the legislative domain, in order to protect non-textual rights.\(^{157}\) However, the liberal Court’s departure from judicial deference to selective incorporation of non-textual rights is beyond the scope of this Comment.\(^{158}\) The intent of this subsection is to highlight the theory advanced by Professors Thomas Colby and Peter Smith.\(^{159}\)

What Professors Colby and Smith present in *The Return of Lochner* is an exhaustive analysis of the historical evolution of both liberal and conservative legal thought during and after *Lochner* was decided in 1905.\(^{160}\) Their conclusion is that the theory of originalism, which underlies modern conservative legal thought, is on the verge of changing to where it will soon accept judicial protection of non-textual economic rights.\(^{161}\) Unlike the history of liberal legal thought—which quickly departed from judicial deference to incorporating non-textual privacy, and then struggled to justify itself after—conservative legal thought first requires an intellectual framework to justify incorporating non-textual economic rights.\(^{162}\) According to Professors Colby and Smith, “after a forthcoming period of hand-wringing and ideological and jurisprudential soul-searching, conservative legal orthodoxy will ultimately embrace judicial protection for unenumerated economic rights, including the right to contract. Conservative legal thought . . . is about to come full circle.”\(^{163}\)

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\(^{155}\) *See Roe*, 410 U.S. at 164–65; *Lochner*, 198 U.S. at 63–64; Colby & Smith, supra note 28, at 555–56.

\(^{156}\) *See* Colby & Smith, supra note 28, at 528.

\(^{157}\) *Id.* at 528–29; *see also Lochner*, 198 U.S. at 45.

\(^{158}\) Colby & Smith, supra note 28, at 529.

\(^{159}\) *Id.* at 527.

\(^{160}\) *See Lochner*, 198 U.S. at 45; Colby & Smith, supra note 28, at 532–33.

\(^{161}\) *See* Colby & Smith, supra note 28, at 531, 580.

\(^{162}\) *See id.* at 555, 558–61.

\(^{163}\) *Id.* at 579.
IV. THE STAGE FOR DEFENSE OF ECONOMIC LIBERTY

A. Rising Opposition in the Lower Courts

The Supreme Court of the United States has justified its denial of greater protection of economic liberties on the democratic process itself.\footnote{Vance v. Bradley, 440 U.S. 93, 96–97 (1979).} Meaning that the proper avenue of relief for plaintiffs whose economic liberties have been injured by the Legislature is the ballot box, rather than judicial intervention.\footnote{See id. at 97.}\footnote{Id. (emphasis added) (footnote omitted).} In 1979, the Supreme Court said as much when it held, “[t]he Constitution presumes that . . . even improvident decisions will eventually be rectified by the democratic process and that judicial intervention is generally unwarranted no matter how unwisely [the Court] may think a political branch has acted.”\footnote{Id. at 480–83.}

In reply to the Supreme Court’s disengagement, a powerful concurring opinion in defense of economic liberties came when the United States Court of Appeals for the District of Columbia (“D.C.”) Circuit decided \textit{Hettinga v. United States} in 2012.\footnote{Id. at 474–75.} At issue was a constitutional challenge to a recent federal regulation governing the price milk processors and distributors pay to dairy farmers.\footnote{Id. at 477, 479 (quoting Dan Morgan et al., \textit{Dairy Industry Crushed Innovator Who Bested Price-Control System}, \textit{Wash. Post}, Dec. 10, 2006, at A1).} Despite there being evidence that the legislation had been specifically targeted at Hettinga, the Court was nevertheless forced to reject the plaintiff’s challenge.\footnote{Id. at 481–82 (quoting Dan Morgan et al., \textit{Dairy Industry Crushed Innovator Who Bested Price-Control System}, \textit{Wash. Post}, Dec. 10, 2006, at A1).} However, touching on the growing concerns of many Americans, Judge Brown, joined by Chief Judge Sentelle, responded in a powerful concurring opinion:

I agree fully with the [C]ourt’s opinion. Given the long-standing precedents in this area, no other result is possible. Our
precedents forced the Hettingas to make a difficult legal argument. No doubt they would have preferred a simpler one—that the operation and production of their enterprises had been impermissibly collectivized—but a long line of constitutional adjudication precluded that claim.

... The judiciary justifies its reluctance to intervene by claiming incompetence—apparently, judges lack the acumen to recognize corruption, self-interest, or arbitrariness in the economic realm—or deferring to the majoritarian imperative. . . . The practical effect of rational basis review of economic regulation is the absence of any check on the group interests that all too often control the democratic process. It allows the [L]egislature free rein to subjugate the common good and individual liberty to the electoral calculus of politicians, the whim of majorities, or the self-interest of factions.

The hope of correction at the ballot box is purely illusory. . . . Rational basis review means property is at the mercy of the pillagers. The constitutional guarantee of liberty deserves more respect—a lot more.171

Although the D.C. Circuit denied any form of heightened review on arbitrary economic legislation, there has been positive movement for protection of economic rights in lower federal courts for occupational licensing.172

In *St. Joseph Abbey v. Castille*, 173 the United States Court of Appeals for the Fifth Circuit was tasked to assess the validity of a state law regulating the funeral casket market.174 The court noted the significant regulatory burdens were two-fold: Under the law in question, casket sales could only “be made . . . by . . . state-licensed funeral director[s] and only at a state-licensed funeral home.”175 Having found no consumer or public health and safety purpose rationally related to the regulation, the court affirmed the district court’s judgment that it violated Due Process and Equal Protection

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172. *Hettinga*, 677 F.3d at 478–79; *see also* *St. Joseph Abbey v. Castille*, 712 F.3d 215, 218, 226 (5th Cir. 2013); Craigmiles v. Giles, 312 F.3d 220, 222, 228–29 (6th Cir. 2002).
173. 712 F.3d 215 (5th Cir. 2013).
174. *Id.* at 217.
175. *Id.* at 218.
under the Fourteenth Amendment.\textsuperscript{176} In doing so, the court said that although \textit{great deference} was due to economic regulations, that did not “demand judicial blindness to the history of [the] challenged rule or the context of its adoption nor does it require courts to accept nonsensical explanations for regulation.”\textsuperscript{177} Prefacing with its respect for the \textit{principles of federalism}, the court announced that “[t]he principle we protect from the hand of the State today protects an equally vital core principle—the taking of wealth and handing it to others when it comes not as economic protectionism in service of the public good but as \textit{economic} protection of the rulemakers’ pockets.”\textsuperscript{178}

Under a similar fact pattern, in \textit{Craigmiles v. Giles},\textsuperscript{179} the United States Court of Appeals for the Sixth Circuit invalidated a state law granting state-licensed funeral directors the exclusive right to sell caskets.\textsuperscript{180} Most notably, in its holding, the court emphasized that “rational basis review, while deferential, is not toothless. . . . This measure to privilege certain businessmen over others at the expense of consumers is not animated by a legitimate governmental purpose and cannot survive even rational basis review.”\textsuperscript{181}

The Sixth Circuit’s holding in \textit{Craigmiles} is particularly noteworthy because it is the only time a federal court has expressly stated that judicial review of economic regulations could be afforded more protection than rational basis.\textsuperscript{182} \textit{[R]ational basis with bite}, although not as exacting as strict scrutiny, is still movement in the right direction for federal courts.\textsuperscript{183}

\section{V. CONCLUSION}

If contemporary constitutional jurisprudence has accepted that the non-textual right to privacy is found within the meaning of \textit{liberty} in the Due Process Clause of the Fifth and Fourteenth Amendments, could it not also extend that logic to economic rights?\textsuperscript{184} In \textit{Griswold}, the Court drew from the Bill of Rights the concept of personal liberty, from which it justified

\begin{footnotesize}
\begin{enumerate}
\item \textsuperscript{176} \textit{Id.} at 226; \textit{see also} U.S. \textit{CONST.} amend. XIV, § 1.
\item \textsuperscript{177} \textit{St. Joseph Abbey}, 712 F.3d at 226.
\item \textsuperscript{178} \textit{Id.} at 226–27.
\item \textsuperscript{179} 312 F.3d 220 (6th Cir. 2002).
\item \textsuperscript{180} \textit{Id.} at 222, 228.
\item \textsuperscript{181} \textit{Id.} at 229 (quoting Peoples Rights Org., Inc. v. City of Columbus, 152 F.3d 522, 532 (6th Cir. 1998)).
\item \textsuperscript{182} \textit{See id.}
\item \textsuperscript{183} \textit{See id.; Levy, supra note} 24, at 400 n. 301.
\end{enumerate}
\end{footnotesize}
holding that the right to privacy was a fundamental right.\footnote{185} Later, in \textit{Roe}, the Court reaffirmed the existence of the right to privacy in “the Fourteenth Amendment’s concept of personal liberty” and extended protection for it in “the Ninth Amendment’s reservation of rights to the people.”\footnote{186} Just as the right to privacy emanates from the Bill of Rights, could the right to contract and the right to private property emanate from not only the Bill of Rights, but also the Declaration of Independence?\footnote{187}

Within the very text of the Declaration, it leaves no doubt “that all [people] are created equal, [and] that they are endowed by their Creator with certain unalienable Rights” the chief of which are expressly “Life, Liberty, and the pursuit of Happiness.”\footnote{188} These fundamental rights “did not simply come from a piece of paper,” but rather emanated from the natural rights inherent in all, which existed \textit{before} government.\footnote{189} It is only the People’s consent to be governed that empowers governments to regulate.\footnote{190} This is the social contract between the people and their government—that only for the necessary purpose of protecting these rights is the government authorized to act.\footnote{191}

When judges engage with these principles as they review government regulations, they engage in what current Justice Thomas terms as a \textit{higher law}.\footnote{192} This is a law that resonates with the “political philosophy of the Founding Fathers,” “of limited government, of . . . separation of powers, and of . . . judicial restraint that flows from the commitment to limited government.”\footnote{193}

For Justice Thomas, “the Constitution is a \textit{logical} extension of the principles of the Declaration of Independence,” “whether explicitly invoked or not.”\footnote{194} “If the Constitution is not a logical extension of the principles of the Declaration of Independence, important parts of the Constitution are inexplicable.”\footnote{195} Justice Thomas adds that it was also Abraham Lincoln whose opposition to slavery advanced that “[w]ithout the guidance of the

\begin{figure}
\caption{Graphical representation of the text content.}
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\caption{Table of cited statutes and cases.}
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Declaration of Independence . . . the Constitution can be a mask for the most awful tyranny, and not just over a particular race."^{196}

If there is one thing to take away from Willy Wonka, it is to believe in the power of entrepreneurial inspiration and innovation.^{197} Just as Willy Wonka reflects the entrepreneurial spirit, the American entrepreneur reflects the spirit of the Founding Fathers.^{198} Entrepreneurship has long been considered the heart of the American dream.^{199} Since its founding, “Americans have pictured small business as [the] equalizing force providing social mobility, economic opportunity, and personal freedom.”^{200} As America marches ever forward into the challenges of the new age of innovation, will the Supreme Court continue to pay obedient deference to the regulatory leviathan?^{201} Or, will it appeal to a higher law, in the spirit of the Founding Fathers, to right the scales of democracy?^{202} One hopes for the latter.^{203}

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196. *Id.* (emphasis added).
201. Livingston, *supra* note 8; *see also* Birkshaw, *supra* note 14.