Recoupling Founders with Their IP—Improving Innovation by Rationalizing IRC Section 351

(Licensing vs. Assignment of Founders' IP in VC Backed Startups)

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ABSTRACT

This Article questions the conventional wisdom of the U.S. practice of early assignment of founder's intellectual property to venture capital backed startup companies. The Article shows that certain U.S. tax rules motivate founders to rush to assign their individually owned intellectual property to a startup company rather than license it to the company. This tax enhanced distortion of the founders' choice may have socially inefficient effects that, under certain circumstances, hinder innovation by decoupling the intellectual property from those who are most apt to exploit it. Thus, this Article offers proposals to reform the current tax treatment of intellectual property transfers. The proposed reform

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* Judge Solomon Casseb, Jr. Research Professor in Law, University of Texas School of Law. I would like to thank Bobby Bartlett, Brad Bernthal, Vic Fleisher, John Golden, Calvin Johnson, Susie Morse, Sean O'Connor, Bob Peroni, Elizabeth Pollman, George Triantis, Jay Westbrook, and participants in the Winter Deals Conference; UT Law, Business, and Economics Workshop; and Law & Entrepreneurship Conference for very helpful discussions, comments, and suggestions. Jonathan Pevey provided excellent research assistance. I would also like to thank the students of *The Journal of Corporation Law* for valuable editorial work. Comments are welcome and can be sent to me at mganor@law.utexas.edu.

will level the playing field from a tax perspective and prevent distorting the founders' choice between intellectual property assignment and intellectual property licensing.

I. INTRODUCTION

Conventional wisdom and common practice require that founders assign to the startup company all intellectual property rights that they individually own and that the company uses at a very early stage.[1] Without such assignment, the argument goes, the founders will not be able to secure venture capital funding.[2] Delaying transfer of founder IP to the startup company may have negative tax implications and other ramifications that could be expensive.[3] Thus, U.S. startup founders typically assign their IP rights to the startup company upon the company's formation in exchange for founder stocks.[4]

Anecdotally, however, this is not a complete description of the spectrum of tech-based startup IP allocation. Most notably, the Skype-eBay case was a success story of founders who retained personal property rights to their intellectual property.[5] The Skype story, however, is an example of a foreign startup company. This fact raises the question of whether different business culture, customs, and legal rules explain the different practices. Are U.S. entrepreneurs discouraged from retaining IP rights, and does it negatively affect innovation and social welfare? This Article explores the U.S. practice of early founder assignment of IP in the context of venture capital (VC) backed startup companies, the motivations for this practice, and its potential inefficiencies and suboptimal effects on innovation.

This Article argues that the U.S. tax rules, in particular Section 351,[6] potentially distort founders' decisions by motivating them to assign their IP rights to the startup company at an early stage. Seeking to avoid negative tax consequences, ex-ante, founders are incentivized to transfer the technology to the company rather than to keep the ownership of the IP separated from the business entity. The Article further argues that under certain situations, the premature assignment of IP may result in inefficient use of

1. *See, e.g.*, *Intellectual Property Assignment Agreement*, UPCOUNSEL, https://www.upcounsel.com/intellectual-property-assignment-agreement (last visited Mar. 13, 2018) ("During the formation of a new company a best practice is to assign all relevant intellectual property to the company . . . .").

2. *See, e.g.*, PHILIP MENDES, TO LICENSE A PATENT – OR, TO ASSIGN IT: FACTORS INFLUENCING THE CHOICE, https://docplayer.net/380419-To-license-a-patent-or-to-assign-it-factors-influencing-the-choice.html (last visited Jan. 14, 2019) ("[R]aising investment capital . . . is perceived by capital[-]raising professionals to be more easily done when the start up company owns its major asset, namely the patent, rather than just has licensed rights to it."); Gary Schall & John Hobgood, *The Best Times to Get a Grip on Your Startup's IP*, TECHCRUNCH (Aug. 31, 2015), https://techcrunch.com/2015/08/31/the-best-times-to-get-a-grip-on-your-startups-ip/ ("[I]nvestors often make funding contingent on having all rights to IP signed over to the company.").

3. *See, e.g.*, Anna Remis, *Reality Check: Does Your Company Own the Intellectual Property You Think it Does?*, TECHLI (Dec. 24, 2013) https://webcache.googleusercontent.com/search?q=cache:EOZj7Y9_6hIJ:https://techli.com/reality-check-does-your-company-own-the-intellectual-property-you-think-it-does/47841/+&cd=1&hl=en&ct=clnk&gl=us ("Typically, founders would assign this IP, including rights in business plans, when stock is initially issued to them. If that did not happen, investors will worry about . . . what the cost and tax consequences of transferring it now will be.").

4. *Id.*

5. *See infra* Part VII.A.

6. 26 U.S.C. § 351(a) (2012).

innovation and reduction of the total social welfare.

However, if, contrary to current common practice, the IP is kept separately from the startup company, and the company receives only a license to use the technology, then the use of the founders' IP may be more efficient. For example, should the company end up in bankruptcy, the founders can continue to develop and exploit the technology with no delay since the IP is not the property of the bankrupt company. On the other hand, if the technology is transferred to the company instead of being merely licensed to the company, a lengthy liquidation process can hijack the technology. Until the bankruptcy procedures are resolved, the technology may not be put to use.

This Article further argues that the anticipated forfeiture of the IP from its original author discourages entrepreneurships. The decoupling of the idea from the inventor discourages innovation in two distinct ways. First, this Article argues that inventors are likely more capable and better motivated to advance their own invention than anybody else.[7] Second, the risk of a forced separation from the invention decreases the expected benefit from inventing ex-ante, thus demotivating the entrepreneurs.

The disturbing decline in new U.S. startup companies,[8] described as a "national emergency,"[9] makes the case for lifting hurdles to entrepreneurship and amending legal rules that distort entrepreneurial choices and increase the cost of innovation. It should be noted that while a few of the concerns related to assignment of IP created by founders also encompass IP created by inventors who are ordinary employees; this Article focuses on founders because they create startups, which are important to economic growth, innovation and employment.[10]

The Article proceeds as follows. Part I delineates the process of founders transferring IP rights to startups. Part II describes relevant patent laws and their relation to assignment of founders IP to startups. Part III outlines the special protections that bankruptcy law affords to IP agreements and demonstrates that both the VC fund and the founders can be protected in bankruptcy should the founders only license the IP to the startup. Part IV explains the inconsistent tax treatment of IP assignment. It also shows the tax consequences of delayed IP assignment and the resulting bias against IP licensing. Part V considers the special connection between the founder and their creation and the potential costs of decoupling one from the other. Part VI describes anecdotal evidence of successful startups that were not assigned all the IP created by their founders. Part VII lays out this Article's proposed reform of the tax laws, which will eliminate the tax distortion and remove the incentive of founders to rush to assign their IP to the startup.

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7. *See infra* note 66 and accompanying text for a discussion of tacit knowledge.

8. Leigh Buchanan, *American Entrepreneurship is Actually Vanishing. Here's Why*, INC. (May 2015), https://www.inc.com/magazine/201505/leigh-buchanan/the-vanishing-startups-in-decline.html ("The U.S. startup rate has been falling for decades. . . . [T]he number of companies less than a year old had declined as a share of all businesses by nearly 44 percent between 1978 and 2012. And those declines swept across industries, including tech. . . . [T]he number of new businesses is down across the country . . ."); Ben Casselman, *A Start-Up Slump is a Drag on the Economy. Big Business May Be to Blame.*, N.Y. TIMES (Sept. 20, 2017), https://www.nytimes.com/2017/09/20/business/economy/startup-business.html ("[N]ew business creation is at 30-year lows . . .").

9. Buchanan, *supra* note 8 (quoting John Dearie, a policy officer at the Financial Services Forum, as saying that because "[n]ew businesses are disproportionately responsible for the innovation that drives productivity and economic growth . . . [including] virtually all net new job creation," the shortage of new business startups "is nothing short of a national emergency").

10. *Id.*

II. TRANSFERRING IP RIGHTS

The creation of a startup is usually preceded by entrepreneurs pursuing a business idea. The conception of the startup—and often the invention of new technology, novel intellectual property and, potentially, even registration of patents authored by the entrepreneurs—drive the startup formation. To be sure, founders may be motivated by a desire to work together or generally wish to form their own startup without having formed a concrete idea about the contemplated business, but with the belief that a business idea will materialize once a concentrated effort by the new venture is in motion. However, the cost of forming a business entity will render this attempt at early formation economically prohibitive. A few states, including California, even have statutes encouraging entrepreneurs to start working on a new venture while still employed elsewhere. This is done by making pre-assignment of future inventions unenforceable, provided that the inventions are unrelated to the employer's business, are invented without the use of the employer's resources, and are created in the entrepreneurs own free time.[11] Furthermore, in the startup business cycle, funding by venture capital firms will come only after formation of the business entity and usually after advancement of the business; unless the founders are serial entrepreneurs with a proven record of success, investors will not be clamoring to fund their nascent venture without further work done by the startup.[12]

This natural course of events leads to the startup company's use of technology that was created before its formation and that belongs to the founders. Thus, the need of transfer of technology rights from the founders to the startup arises so the startup owns the IP rights needed for its operations. Potential sophisticated investors, such as venture capitalists, will appraise the startup and usually perform an IP due diligence on the startup when evaluating the startup prior to any investment. Owning clean rights to all the technology the startup needs for its business is important for its funding prospects.

Generally, the founders can grant the startup rights to use IP in one of two ways: either by licensing or by assignment of full ownership. Licensing the IP grants a contractual right to use the founder's IP. The design of the license agreement may take several forms and may include restrictions and limitations of use in various degrees. The license agreements may provide that the founders who created the IP maintain rights to use and even license the IP. The rights granted to the startup may be limited in various scopes: by territory, by time, and by field of use. Such license agreements may or may not require future payment of royalties to the licensing inventors. The license agreement may be similar to license agreements that companies enter into with third parties that own rights to technology that the startup needs to use.[13] Assignment of IP, on the other hand, transfers the title and all the rights to the technology to the startup. The inventors may retain the honorary title as authors or inventors of the technology, but they will be prohibited from using the

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11. CAL. LAB. CODE §§ 2870–72 (Deering 2018); *see also, e.g.*, DEL. CODE ANN. tit. 19, § 805 (2017); 765 ILL. COMP. STAT. ANN. 1060/2 (LexisNexis 2018); KAN. STAT. ANN. § 44-130 (West 2018); MINN. STAT. ANN. § 181.78 (West 2018); N.C. GEN. STAT. §§ 66-57.1, 66-57.2 (West 2018); WASH. REV. CODE §§ 49.44.140–50 (LexisNexis 2018).

12. Initial capital needs of the business are usually met by infusions of relatively small amounts of funds by family and friends of the founders and later by angel investors who provide seed financing to the company before the VC funds back the startup.

13. *See infra* notes 78–80 and accompanying text (describing the license agreement between Stanford and Google).

technology independently from the startup.

To be sure, everything else being equal, the VC funds investing in the startup company will prefer more rather than fewer rights to the IP. However, as this Article argues, the founders of the startup are also affected by the transfer of IP rights to the startup and their willingness to transfer control over major decisions to the VC funds and to professional managers is likely to increase if they retain separate rights to the IP. A balancing compromise, which addresses these opposing interests, may well be an exclusive license agreement granted by the founders to the VC-backed startup with no restrictions but for an *ipso facto* clause that will cause the IP to revert to the founders in case of company failure.[14]

The founders' choice between licensing and assignment of IP has implications on myriad aspects of their future rights and liabilities and implicates laws such as patent law, bankruptcy law, and tax law.

III. PATENT LAW

Patent law is designed to encourage innovation by rewarding inventors with exclusive rights to use their inventions.[15] However, the assignment of the IP to the startup at an early stage likely lowers the expected reward from the invention, because business failure traps IP in the startup and the founders may no longer be able to use it.[16] Thus, the pressure to assign the IP to the startup may lower the incentive to innovate ex-ante. This diminished incentive effect is similar to the general problem with innovation in large corporate entities, which, as Mark Lemley points out, may break the "link between innovation and patent reward," because the corporation, rather than the inventor, reaps a major part of the rewards of the innovation.[17] This Article argues that the incentive problem created by decoupling the inventor from the fruit of their invention in large corporate entities is amplified when it resurges as the inventor starts their own startup. As Mark Lemley aptly explains, patents are used "as financial tools" and "one of the reasons people are patenting at a very early stage in the process is precisely in order to attract or appease venture capital."[18]Furthermore, the technology that the founders rush to assign to the startup, at least partly because of the tax laws, is likely in a nascent stage of development, which still requires further inventor nourishment, even if it is already patented. Patent law encourages inventors to patent inventions at a very early stage before it is complete, let alone tested.[19]

14. *See infra* note 33 and accompanying text for a discussion of *ipso facto* clauses in IP licensing agreements in bankruptcy.

15. U.S. CONST. art. I, § 8 cl. 8 ("Congress shall have power . . . [t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries . . . .").

16. *See infra* Part VI.

17. Mark A. Lemley, *Reconceiving Patents in the Age of Venture Capital*, 4 J. SMALL & EMERGING BUS. L. 137, 140 (2000) ("It may be that as we move away from the model of . . . the individual innovator working in their garage . . . toward large corporate entities, the link between innovation and patent reward might be broken. . . . The reward goes to a corporation and is a somewhat more diffuse incentive.").

18. *Id.* at 143–44.

19. Mark A. Lemley, *Ready for Patenting*, 96 B.U. L. REV. 1171, 1172–73 (2016) ("[P]atent law . . . reward[s] those who run to the patent office before they are fully done with the invention . . . The problem is even worse under the new America Invents Act ('AIA') passed in 2011, which [implemented a first-to-file priority system] . . . . [T]he law encourages an inventor to file first and figure out later how (or even if) the invention works . . . .").

In addition, as Lemley points out, the rush to patent contributes to the incidence of patent trolls.[20] The pressure to assign the patent to the startup, rather than to license it, further exacerbates the predicament of the patent trolls' rise and separates the founder from their invention prematurely.

A related but distinct doctrine is the "assignor estoppel doctrine."[21] The assignor estoppel doctrine bars a named inventor of a patent, as well as their employer, from challenging the validity and enforceability of the patent.[22] As Lemley points out, the assignor estoppel doctrine raises concerns for both innovation and employee mobility.[23]

The concerns surrounding the assignor estoppel doctrine apply to patents invented by employees of VC-backed companies as well as to patents invented by entrepreneurs before they found the startup company. Whether the founders choose to assign or license the IP to the startup does not change their status as inventors of the patents and thus the potential application of the problematic assignor estoppel doctrine. However, since the founders are incentivized to rush to patent the IP in order to be able to assign it to the startup before the VCs invest, the assignor estoppel doctrine may worsen the outcome. The founders have to refrain from using—for private purposes other than the startup—not only valid patents but also invalid patents that they have rushed to patent and assign to the startup before the VCs invest in the startup.

On the other hand, if the founders license the IP to the startup company rather than assign it, the startup, as the licensee, should be able not just to use the IP, but also to assert its rights against third-party infringers. In the United States, a license agreement has to grant exclusionary rights to a patent in order to enable the licensee to sue for infringement.[24] The exclusive license agreement may grant the startup all the substantial rights to the patent, which will allow the startup to have standing to sue for infringement and to ask for an injunction as well as for damages, even without the founder-inventor joining the suit, as if the IP was assigned to the startup.[25]

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20. *Id.* at 1173 (noting that the rush to patent "facilitates the rise of patent trolls who obtain patents but never bother to produce a product, instead making a business of suing those who do").

21. *See, e.g.*, Husky Injection Molding Sys. v. Athena Automation Ltd., 838 F.3d 1236, 1245 (Fed. Cir. 2016) ("[T]he doctrine of assignor estoppel . . . arose in the patent infringement context to prohibit an assignor or his or her privies from stating the patent rights earlier assigned are of no value.")

22. *See, e.g.*, Mark A. Lemley, *Rethinking Assignor Estoppel*, 54 HOUS. L. REV. 513, 515, 519–20 (2016) ("The century-old doctrine of assignor estoppel precludes inventors who file patent applications from later challenging the validity or enforceability of the patents they receive. . . . [T]he Federal Circuit has held that not just the patent assignor but anyone in privity with that assignor is subject to the estoppel. . . . [T]he court [has] extended estoppel to the inventor's new employer when the assignor is so actively involved in the allegedly infringing activity as to be more than a 'mere employee.'").

23. *Id.* at 513–14.

24. *See, e.g.*, Luminara Worldwide, LLC v. Liown Elecs. Co. Ltd., 814 F.3d 1343, 1347 (Fed. Cir. 2016) ("Under our precedent, only parties with exclusionary rights to a patent may bring suit for patent infringement.") (citing Morrow v. Microsoft Corp., 499 F.3d 1332, 1339 (Fed. Cir. 2007); WiAV Sols. LLC v. Motorola, Inc., 631 F.3d 1257, 1264–65 (Fed. Cir. 2010)); Rite-Hite Corp. v. Kelley Co., 56 F.3d 1538, 1552 (Fed. Cir. 1995) ("To be an exclusive licensee for standing purposes, a party must have received, not only the right to practice the invention within a given territory, but also the patentee's express or implied promise that others shall be excluded from practicing the invention within that territory as well.").

25. *See, e.g.*, Duckweed, USA, Inc. v. Behrens, No. 15-5387, 2016 U.S. Dist. LEXIS 42074, at *9 (E.D. Pa. Mar. 30, 2016) ("In the case where a patent owner transfers all substantial rights, the transferee is treated as the patentee and has standing to sue in its own name."); Int'l Gamco, Inc. v. Multimedia Games, Inc., 504 F.3d 1273, 1276 (Fed. Cir. 2007) ("An exclusive licensee has standing to sue in its own name, without joining the patent holder, where 'all substantial rights' in the patent are transferred."). *But cf.*, Textile Prods. v. Mead Corp.,

VI. BANKRUPTCY LAW

Keeping their IP somewhat separate from the VC-backed company, by merely granting the company a license, is clearly beneficial to the founders: they can maintain the technology and protect it if the company goes into bankruptcy. On the other hand, there is no bankruptcy related risk on the part of the VC backed company, if the licensors, the founders, are bankrupt. This is because the Bankruptcy Code explicitly protects licensees of intellectual property and allows them to retain their rights under the license agreement even if the trustee attempts to reject the license as an executory contract.

Executory contracts are contracts in which both parties still have to perform material obligations thereunder.[26] Generally, under bankruptcy law, a trustee may choose to reject an executory contract subject to the approval of the court.[27] However, founders licensing their IP to the company can receive stock as full consideration for the license, at the time the license is granted, with no continued royalty rights, similar to the consideration they receive in exchange for assigning their IP. Thus, a trustee's attempt to classify such a license agreement as executory is unlikely to succeed. Moreover, the bankruptcy code specifically protects licensees of IP from the general power of trustees to reject executory contracts by allowing them to retain their rights to the IP.[28] Thus, if the founders license the intellectual property to the VC-backed company, the rights granted to the company will be protected under the bankruptcy code even if the founders go bankrupt.

On the other hand, many failed startup companies do not go through bankruptcy, but simply cease to operate. Even if the company just ceases to exist, the uncertainty about the IP complicates further development and use of the IP and may deter the founders from taking advantage of it once they have relinquished their IP rights and assigned it to the VC backed startup-company. Similar to the tragedy of the anti-commons, which arises because of the complexity of gaining the permission required to use a resource,[29] the assignment of the founders' IP increases the risk that the patent will be underused, innovation will be suppressed, and some entrepreneurs might even refrain from founding startups to begin with.[30]

Thus, granting a license to use the IP, rather than assign the IP to the startup company,[31] may well support innovation. First, the license agreement may maintain the

134 F.3d 1481, 1484 (Fed. Cir. 1998) ("At least one exception to that rule exists, however: an exclusive licensee that does not have all substantial rights does have standing to sue in his own name when 'necessary to prevent an absolute failure of justice, as where the patentee is the infringer, and cannot sue himself.'").

26. *See, e.g.*, Phoenix Expl. v. Yaquinto (*In re* Murexco Petroleum, Inc.), 15 F.3d 60, 62–63 (5th Cir. 1994).

27. 11 U.S.C. § 365(a) (2012).

28. *Id.* § 365(n)(1) ("If the trustee rejects an executory contract under which the debtor is a licensor of a right to intellectual property, the licensee under such contract may elect . . . to retain its rights (including a right to enforce any exclusivity provision of such contract, but excluding any other right under applicable nonbankruptcy law to specific performance of such contract) under such contract . . . .").

29. *See, e.g.*, Carl Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard Setting*, 1 INNOVATION POL'Y & ECON. 119, 124 (2001) (explaining the tragedy of the anti-commons).

30. *Id.* at 126 ("The result will be that some companies avoid the mine field altogether, that is, refrain from introducing certain products for fear of holdup.").

31. *See, e.g.*, Michelle Morgan Harner et al., *Debtors Beware: The Expanding Universe of Non-Assumable/Non-Assignable Contracts in Bankruptcy*, 13 AM. BANKR. INST. L. REV. 187, 211 (2005) ("A license agreement, as opposed to a sale or assignment of intellectual property, does not transfer title in the patent from the licensor to the licensee. . . . Under federal common law, patent license agreements are personal to the licensee and, consequently, are not assignable by the licensee to a third party without the consent of the licensor unless

right of the founders to use the IP, which may include a time limitation that is shorter than the life of the patent but long enough to protect the startup. The agreement may also include a condition that provides that the founders may use the patent, including licensing the patent to another startup, if the initial licensee-startup no longer pursues the commercialization of the licensed patent.[32]

Second, the license agreement may also include an *ipso facto* provision,[33] a provision that provides that the agreement will terminate if the startup becomes insolvent. The benefit of such a provision is that it attempts to stop the trustee from assuming the license and assigning it to a third party, such as a patent troll, and grants the founders an exclusive right to use the patent in such event. Generally, Sections 365(a) & (f) of the Bankruptcy Code empower a trustee to assume executory contracts and also assign such contracts when the original executory contract includes a non-assignment clause. Furthermore, Section 541(c) states that a contractual right of the debtor becomes part of the property of the estate despite of a contrary provision in the contract itself.[34] However, the law provides an exception to this general rule which the courts applied in the case of IP licensing.[35]

To begin with, if the licensing contract provides for termination in case of insolvency and the failed startup does not enter into bankruptcy, but is simply shut down, then the contract may be terminated and the IP rights revert to the founders.[36] Furthermore, even if the startup is in bankruptcy, the Bankruptcy Code allows the enforcement of an *ipso facto* clause in special cases that require the licensor's consent for the assignment of the IP by the debtor or trustee.[37] Due to the personal nature of IP and the policy of promoting innovation by allowing the owners of the IP to control its use,[38] the courts have applied Section 365(c)(1) of the Bankruptcy Code to IP licenses,[39] similarly to the treatment of

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the license agreement expressly provides otherwise.").

32. The license agreement between Stanford and Google includes similar provisions. *See infra* note 78 and accompanying text.

33. *See, e.g.*, Bob Eisenbach, *Are "Termination On Bankruptcy" Contract Clauses Enforceable?*, COOLEY LLP (Sept. 16, 2007), https://bankruptcy.cooley.com/2007/09/articles/business-bankruptcy-issues/are-termination-on-bankruptcy-contract-clauses-enforceable/ ("Termination on bankruptcy provisions are often known as *ipso facto* clauses (the Latin phrase meaning 'by the fact itself') because the language provides that the fact of bankruptcy itself is enough to trigger the termination of the agreement.").

34. *Id.* ("Section 541(c) of the Bankruptcy Code provides that an interest of the debtor (the bankrupt company or person) in property becomes 'property of the estate,' meaning that the debtor does not lose the property or contract right, despite a provision in an agreement . . . . [T]his statute means that a clause that terminates a contract because of the 'insolvency' or 'financial condition' of the debtor, or due to the filing of a bankruptcy case, will be unenforceable once a bankruptcy case has been filed.").

35. *See, e.g.*, Peter S. Menell, *Bankruptcy Treatment of Intellectual Property Assets: An Economic Analysis*, 22 BERKELEY TECH. L.J. 733, 770 (2007).

36. *See* Eisenbach, *supra* note 33 ("But be forewarned: if a bankruptcy case is later filed, an insolvency-based termination made before the bankruptcy filing may not be enforced in the bankruptcy case.").

37. *Id.* ("Section 365(e)(2) of the Bankruptcy Code, in conjunction with Section 365(c)(1), provides that an *ipso facto* clause can be enforceable . . . . [I]f applicable law provides that an IP license or another executory contract cannot be assumed by the debtor or trustee without the other party's consent, then the non-debtor contracting party can force rejection of the license or seek relief from the automatic stay to terminate the agreement based on the *ipso facto* clause.").

38. *See, e.g.*, Menell, *supra* note 35, at 786 ("The courts have long held that the federal intellectual property policies of promoting innovation . . . favor intellectual property owners having the ability to control the uses of their works. These policies disfavor assignability of such rights by licensees without the owner/licensor's consent.").

39. *See, e.g.*, Harner et al., *supra* note 31, at 212 ("[I]nvoking section 365(c)(1) of the Bankruptcy Code,

personal service contracts, and required the licensor's consent to the assignment of IP licenses by the trustee.[40]

As Peter Menell explains, non-assignment clauses in nonexclusive patent and copyright licenses are more readily enforced by the courts.[41] In the case of exclusive patent licenses the law is less consistent, yet "the one bankruptcy court decision to address the assignability of exclusive patent licenses barred the licensee from assigning the interest."[42] In copyright, however, the courts are divided, yet the Ninth Circuit has held that the licensor must consent to the assignment of exclusive licenses in accordance with the Copyright Act.[43]

Yet, while the rights of both the licensee and licensor may be protected under bankruptcy law, the VCs investing in the startup company have no incentive to replace the custom of assignment of the founders' IP with mere licensing rights. The VCs do not directly benefit from the continued separate development of the technology by the founders in case the startup company fails. For the VC investors, the potential increase in innovation and subsequent improvement in social welfare that will be created if the founders retain the rights to develop the IP are merely externalities.

V. TAX TREATMENT

Tax considerations influence VC-backed startups and famously contribute to the VCs' choice of convertible preferred stock as the investment vehicle in U.S. startups.[44] This

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courts generally have given effect to these restrictions on the assignment of patent licenses in bankruptcy."); *In re* Aerobox Composite Structures, LLC, 373 B.R. 135, 141 (Bankr. D. N.M. 2007) ("Because the License Agreement involves use of a patent, 'applicable law' means federal patent law."); *see also* Perlman v. Catapult Entm't, Inc. (*In re* Catapult Entm't, Inc.), 165 F.3d 747, 750 (9th Cir. 1999) ("[O]ur precedents make it clear that federal patent law constitutes 'applicable law' within the meaning of § 365(c). . . ."); Institut Pasteur v. Cambridge Biotech Corp. (*In re* Cambridge Biotech Corp.), 104 F.3d 489, 492 (1st Cir. 1997) (acknowledging that the federal common law of presumptive nonassignability of patents qualifies as "applicable law" within the meaning of § 365(c)(1)); *In re* Hernandez, 285 B.R. 435, 438 (Bankr. D. Ariz. 2002) (applying federal patent law in construing § 365(c)(1)); Cargill, Inc. v. Nelson (*In re* LGX, LLC), No.WO-05-009, 2006 B.A.P LEXIS 635, at 11 (10th Cir. Jan. 13, 2006) (acknowledging that "[b]ankruptcy courts have held that the federal common law preventing the non-consensual assignment of patent licenses constitutes 'applicable law'" for purposes of § 365(c)(1)). Federal patent law generally prohibits assignment of both exclusive and non-exclusive license agreements absent consent of the licensor. *See Catapult*, 165 F.3d at 750 (noting that under federal patent law, "nonexclusive patent licenses are 'personal and assignable only with the consent of the licensor'" (quoting Everex Sys., Inc. v. Cadtrak Corp. (*In re* CFLC, Inc.), 89 F.3d 673, 680 (9th Cir. 1996)); *Hernandez*, 285 B.R. at 440 (finding that federal patent law requires consent to assignment by the licensor whether the license is exclusive or non-exclusive).

40. *See, e.g.*, Rhone-Poulenc Agro, S.A. v. DeKalb Genetics Corp., 284 F.3d 1323, 1328 (Fed. Cir. 2002) ("[P]atent licenses are personal and non-transferable in the absence of an agreement authorizing assignment, contrary to the state common law rule that contractual rights are assignable unless forbidden by an agreement."); *In re* Alltech Plastics, Inc., 71 B.R. 686, 689 (Bankr. W.D. Tenn. 1987) ("[T]he century old common law classification of patent licenses appears to place them within the realm of the types of contracts traditionally associated with section 365(c).").

41. Menell, *supra* note 35, at 742.

42. *Id.* at 786. "[T]he court seems to have acknowledged that licensors of exclusive rights may have a special interest in determining the identity of their licensees." *Id.* at 797.

43. *Id.* at 802.

44. *See, e.g.*, Ronald J. Gilson & David M. Schizer, *Understanding Venture Capital Structure: A Tax Explanation for Convertible Preferred Stock*, 116 HARV. L. REV. 874, 877, 889, 901 (2003); William A. Sahlman, *The Structure and Governance of Venture-Capital Organizations*, 27 J. FIN. ECON. 473, 510 (1990); Jesse M. Fried & Mira Ganor, *Agency Costs of Venture Capitalist Control in Startups*, 81 N.Y.U. L. REV. 967, 971 (2006)

choice leads to an unusual corporate governance structure that may give rise to inefficient decision-making and reduction in total social welfare.[45] Similarly, U.S. tax rules provide a significant incentive to assign the founders' IP to the startup company at an early stage, long before VC funds invest, lest the founders forgo a favorable tax exemption. Even if the founders initially decide to retain their individual ownership in the IP, they may later change their minds and wish to assign the IP to the company after the VCs already invested in the company. At this later time, however, the assignment of the founders' IP to the company, which takes the form of an exchange of technology for stock, is viewed as a disposition of investment and is subject to tax payment. The founders will incur a tax liability at the time of the IP disposition transaction, even though they receive illiquid stocks of a private company with no established market for those stocks.[46]

However, if the founders transfer their IP to the company before the VCs invest in the company, they can take advantage of IRC § 351 which allows for a tax free exchange of IP for stock.[47] In this case, the transfer of the founders' IP is viewed as an investment changing form, rather than a disposition of an investment.[48] This choice, to transfer the IP to the company at an early stage, allows for a deferral of tax payment.[49] The tax will be due only when the stocks, received in exchange for the founders' IP, are ultimately sold. The basis, for the purpose of calculating the tax liability at the time of the sale of the stock, will be the basis of the IP exchanged for the stock.[50]

In order to qualify for this lucrative 351 tax free exchange of IP for stock, the founders, who transfer their IP, have to be in control of the corporation that receives the IP immediately after the exchange takes place.[51] Being in control of the corporation, for the purpose of the 351 exchange tax deferral, is defined in Section 368(c) of the Internal Revenue Code[52] as owning at least 80% of the voting power of the corporation as well as at least 80% of the non-voting stock.[53] Thus, waiting to assign the IP to the company after the VCs invest will forego the advantage of a tax deferral under a 351 exchange. This is because once the VCs invest, the founders generally no longer own 80% of the company. Mid-stream assignments, assignments that take place after the VCs have invested in the

("There is evidence that VCs' use of preferred stock may be driven by these tax considerations in many cases. For example, outside the United States, where tax rules are different, VCs frequently use common stock when investing in startups.").

45. Fried & Ganor, *supra* note 45, at 1020 ("Our claim is that tax considerations may induce some startups to use preferred rather than common stock, and that eliminating the tax distortion would lead to more efficient investment arrangements in those cases.").

46. The transfer will constitute a taxable exchange under 26 U.S.C. § 1001 (2012), and the founders will be required to recognize gain on it.

47. 26 U.S.C. § 351(a) (2012).

48. *Cf.* Portland Oil Co. v. Comm'r of Internal Revenue, 109 F.2d 479, 488 (1st Cir. 1940), *cert. denied*, 310 U.S. 650 (1940) ("It is the purpose of [§ 351] to save the taxpayer from an immediate recognition of a gain, or to intermit the claim of a loss, in certain transactions where gain or loss may have accrued in a constitutional sense, but where in a popular and economic sense there has been a mere change in the form of ownership and the taxpayer has not really 'cashed in' on the theoretical gain, or closed out a losing venture.").

49. For the legislative intent of this tax deferral, see *infra* note 93 and accompanying text.

50. 26 U.S.C. § 358(a) (1) (2012).

51. *Id.*

52. 26 U.S.C. § 368(c) (1999).

53. To determine the existence of control following the transfer for purposes of Section 351, the rules allow grouping all the transferors and aggregating their equity interests provided that the transferors participated in the same transaction and meet certain other regulatory requirements. *See* 26 C.F.R. § 1.351-1 (2016 LEXIS).

company while the founders still own the technology individually, do not qualify for a tax deferral. Without the tax deferral, the assignment of the IP to the company is likely to be economically prohibitive, especially if it is delayed, since with time the value of the technology will increase and so will the associated tax liability for its sale.[54]

However, this focus on the control of the assignee, the startup company, immediately after the IP assignment in determining whether the founders should recognize gain or be able to defer the tax liability is unwarranted in the context of founders and inconsistent with other rules. First, the founders only receive illiquid shares of a private company in exchange for their IP, rather than cash or publicly traded shares. Thus, founders maintain a strong interest in the transferred IP. Second, while the IRC focuses on the control of the startup in the event of assignment of a founders' IP, the issuance of additional shares by the startup—which dilutes the founders' stake in the startup and transfers the control of the startup to new investors—is not considered a taxable event for the existing shareholders.[55]

In addition, the IRC treats partnerships differently than it treats corporations. The contribution of IP to a partnership in exchange for partnership interest does not trigger a tax liability even if the partner does not own at least 80% of the partnership interest following the exchange.[56] This disparate treatment may be explained by the different characteristics of the two legal-entities and the rights of their respective owners. The default rules allow a partner in a partnership to exercise control over the legal-entity regardless of the percentage of their interest in the partnership's capital. On the other hand, a shareholder's control over the corporation is limited. Shareholders have voting rights, which usually include the right to vote for members of the board of directors, and which are usually proportional to their equity stake in the corporation, but shareholders do not have the right to manage or bind the corporation merely because of their ownership of shares of the corporation. However, the ownership of 80% or more of the equity of the corporation may well convey effective control over the corporation—in fact lower percentages may suffice for de-facto control.[57] Thus, it seems that in both cases—of a partnership and of an 80% owned corporation—the tax rule exempts the transfer of property to a controlled entity. To be sure, in certain situations a shareholder who owns less than 80% of a corporation may have more control over a business than a partner who owns only 1% of the interest of the business or a member of an LLC without the right to manage or control the LLC. Yet the tax law is not looking past the rule of thumb of 80%.

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54. Also, before the VCs invest, it is easier to justify assigning a low value to the stock received in exchange for the IP and credibly argue that the startup is not worth much at this early stage; however, once the VCs invest in the startup, the price the VCs pay for their stock may be used to evaluate the stock the founders receive in exchange for the IP, even though it is a highly speculative, risky, and illiquid investment. While the VCs' use of preferred stock mitigates this problem, *see* Fried & Ganor, *supra* note 45, at 1074–77 (2006), a link between the price of the VC stock and the founders' stock still exists.

55. The issuance of stock as equity compensation to an employee, may trigger income tax liability and allow the company to recognize a compensation expense and receive a tax deduction. Facebook, for example, estimated their corporate income tax deduction due to employee equity compensation at approximately $16 billion in 2012, the year of its initial public offering. *See, e.g.*, Facebook, Inc., Amendment No. 8 to Registration Statement (Form S-1) (May 16, 2012), at 74, https://www.sec.gov/Archives/edgar/data/1326801/000119312512235588/d287954ds1a.htm.

56. 26 U.S.C. § 721(a) (2012).

57. *Cf. e.g.*, Mira Ganor, *Why do Dual Class Firms Have Staggered Boards?*, 10 OHIO ST. BUS. L.J. 147, 181 (2016) ("[A shareholder] who controls 45% of the votes of a publicly traded company with a dispersed shareholder base, for example, may well possess de facto control over the company . . . .").

However, VC backed startups are formed as corporations rather than partnerships,[58] thus founders who assign their IP to the startup for stock are subject to the 80% control requirement if they want to defer the tax liability for the property exchange.

Tax planning that attempts to circumvent the current control requirement of Section 351 is likely to fail, as the IRS may well see through such schemes and treat them as sham transactions[59] or step transactions.[60] Even though the transaction may take the form of an exchange or reorganization, the IRS will likely conclude that, in substance, it is a sale and thus does not qualify for tax deferral.[61] The transaction may well be viewed as a disposition of the property and thus will not qualify for a Section 351 tax deferral nor a Section 368 tax deferral, which covers reorganizations.[62]

For example, instead of transferring the technology directly to the startup, the founders may use a separate corporation and transfer the technology to it in the first step of a two-step scheme. Since the founders fully own the corporation, they can enjoy the tax deferral of Section 351 on the transfer. The next step is to merge the two corporations: using a stock-for-stock merger, the VC backed startup company will acquire the company that owns the technology. The founders will likely incur a tax liability upon the merger, and the merger will not qualify as an exempt reorganization. While a stock-for-stock merger can generally qualify as a tax-free transaction, Section 368 requires that the merger transaction serve a valid business purpose other than tax avoidance.[63] Rather than an intention to reorganize or readjust the corporate structure, the sale of the IP to the company is the obvious motivation for this two-step transaction.

Another example of poor tax planning strategies focuses on the ability to aggregate investors' equity stakes in the company for the calculation of control following the transfer.

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58. *See generally e.g.*, Victor Fleischer, *The Rational Exuberance of Structuring Venture Capital Startups*, 57 TAX L. REV. 137 (2003) (explaining the rationality of choosing the corporate form for VC backed startups); *cf. generally* Calvin Johnson, *Why Do Venture Capital Funds Burn Research and Development Deductions?*, 29 VA. TAX REV. 29 (2009) (arguing against the use of C-corporations for VC backed startups).

59. *See, e.g.*, Rice's Toyota World, Inc. v. Comm'r of Internal Revenue, 752 F.2d 89, 92 (4th Cir. 1985) ("To treat a transaction as a sham, the court must find that the taxpayer was motivated by no business purposes other than obtaining tax benefits in entering the transaction, and that the transaction has no economic substance because no reasonable possibility of a profit exists.").

60. *See, e.g.*, Penrod v. Comm'r of Internal Revenue, 88 T.C. 1415, 1428 (1987) ("The step transaction doctrine is in effect another rule of substance over form; it treats a series of formally separate 'steps' as a single transaction if such steps are in substance integrated, interdependent, and focused toward a particular result.").

61. *See, e.g.*, I.R.S. Notice CC-2002-003 (Oct. 18, 2001), https://www.irs.gov/pub/irs-ccdm/merge.pdf ("Section 351 is meant to cover mere changes in form of doing business, not what is effectively a sale of the asset transferred.").

62. *See, e.g.*, Purpose and Scope of Exception of Reorganization Exchanges, 26 C.F.R. § 1.368-1(b) (LEXIS through the March 12, 2018 issue of the Federal Register) ("The purpose of the reorganization provisions of the Code is to except from the general rule certain specifically described exchanges incident to such readjustments of corporate structures made in one of the particular ways specified in the Code, as are required by business exigencies and which effect only a readjustment of continuing interest in property under modified corporate forms . . . a sale is nevertheless to be treated as a sale even though the mechanics of a reorganization have been set up.").

63. *Id.* § 1.368-1(c) ("A plan of reorganization must contemplate the bona fide execution of one of the transactions specifically described as a reorganization in section 368(a) and for the bona fide consummation of each of the requisite acts under which nonrecognition of gain is claimed. . . . A scheme . . . such as a mere device that puts on the form of a corporate reorganization as a disguise for concealing its real character, and the object and accomplishment of which is the consummation of a preconceived plan having no business or corporate purpose, is not a plan of reorganization.").

If the founders postponed the assignment of their IP to the startup company and later decide to transfer the IP to the company when they no longer satisfy the control requirement, they may transfer the IP simultaneously with a new round of VC financing transaction. Following the new transaction, the founders along with the VC investors, should own at least 80% of the company on an aggregate basis to satisfy Section 351 requirements. To be sure, it may not be practical to secure such a high investor participation in the new round. More importantly, the IRS may well conclude that the stock of the VCs should not be taken into account for determining whether or not the control requirement was satisfied since the IRS may view the primary purpose of their participation as accommodating the use of Section 351.[64]

VI. FOUNDERS ATTACHMENT TO INVENTIONS

The effect of bankruptcy on the reduced use of the technology may be exacerbated by the separation of the founders from their technology. This Article argues that founders may be better positioned to continue and explore the IP. As they are emotionally and actively invested in the development and creation, founders may be best positioned to utilize the technology going forward. That is because of the costs of conveying "tacit knowledge" to third parties,[65] and because of the psychological attachment of the founders to their creation.[66] Instead, bankruptcy proceedings may leave the technology in the hands of third parties, including patent trolls[67] who may acquire the technology from the bankrupt company in the hopes of using it to sue unsuspected users rather than with the intent to develop it further. Even if the founders value the technology more than third parties getting it from the bankrupt company, liquidity constraints may prevent the founders from competing for the technology.

Anecdotally, founders who have used a certain technology in one venture were able to apply the same technology in an innovative way in different unrelated ventures. Their special familiarity with the technology may well have played a major role in the continued

64. *See, e.g.*, 1 JOSEPH W. BARTLETT, EQUITY FINANCE: VENTURE CAPITAL BUYOUTS, RESTRUCTURINGS AND REORGANIZATIONS § 5.3 (2d ed. 1995) ("[T]he IRS is sensitive to preexisting shareholders coming into the syndicate only as 'accommodation' investors, for purposes of meeting the § 351 test.").

65. *See, e.g.*, John F. Duffy, *Reviving the Paper Patent Doctrine*, 98 CORNELL L. REV. 1359, 1389, 1395 (2013) ("[E]specially highly technical information—can be very costly to transfer from one person to another, and it often cannot be done well by anything so simple as writing the information down on paper and passing the paper to another. . . . Michael Polanyi pioneered the concept of 'tacit' knowledge, which is knowledge that, while possessed by an individual, is extremely difficult to write down or to convey to others.").

66. The founders will gain unique benefits from the development of the technology because they are the original inventors. These benefits include reputational recognition as successful inventors and personal satisfaction that their prior work was not in vain.

67. *See, e.g.*, John M. Golden, *"Patent Trolls" and Patent Remedies*, 85 TEX. L. REV. 2111, 2112 (2007) ("T]he 'patent troll' [is] apparently one of a class of patent owners who do not provide end products or services themselves, but who do demand royalties as a price for authorizing the work of others."). Patents trolls are also known as non-practicing entities (NPEs). *See* Michael Carroll, *Study: Lawsuits Down, but Non-Practicing Entities Buying Patents at 'Steady Rate'*, FORBES (Apr. 21, 2016), https://www.forbes.com/sites/legalnewsline/2016/04/21/study-lawsuits-down-but-non-practicing-entities-buying-patents-at-steady-rate ("[N]on-practicing entities, or NPEs [are some of] those who hold patents and launch patent-infringement lawsuits against people or companies for allegedly using or profiting from an element of the patents the NPE holds. As a rule, NPEs obtain patents for products but don't develop or market them. Some refer to NPEs as 'patent trolls.'").

innovation. This unique bond and close familiarity with the IP may enable the entrepreneur to invent new uses for the IP even in situations in which it may seem that asset specificity prevents such potential innovation.[68] The case of the spinning-technology is one example that supports and helps illustrate the argument that under certain situations, preventing the founders from continuing to pursue new innovative uses of their original IP, separately from the startup company, may be inefficient.[69]

John Osher, a serial entrepreneur, ran Cap Toys, a company that developed the Spin Pop, which is a spinning lollipop. After selling Cap Toys to Hasbro in 1997, Osher used the same technology behind the Spin Pop in a new product developed at his new company, Dr. John's Products. This time the technology was used to create an inexpensive electric toothbrush named the Spinbrush. Dr. John's Products was acquired by Procter & Gamble in 2001 for $475 million.[70] The ability to use the same technology that was developed in his old company helped Osher find an innovative solution to a problem in a different market.[71] The familiarity and close understanding of the technology was catalytic to continued innovation and increased social welfare. Thus, maintaining rights to the IP in the hands of the founders, separately from the VC backed company, may be important to promoting innovation, because the founders may be better positioned to exploit the IP further.

To be sure, realizing that an idea is not working and moving on is an important business skill. Yet, total abandonment is not necessarily required—the IP created in the failing startup may be used in a new venture once the founder pivots and reinvents the project. For example, Evan Williams, one of the co-founders of Twitter, volunteered—and one might even say insisted—on giving back money to the investors of a failing startup that preceded Twitter. His motivation for this unusual act was to keep the predecessor's IP so that the founders could continue to work on projects, which eventually gave birth to Twitter.[72]

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68. *See, e.g.*, Brian J.M. Quinn, *Asset Specificity and Transaction Structures: A Case Study of @Home Corporation*, 15 HARV. NEGOT. L. REV. 77, 82 (2010) ("Asset specific investments exhibit two important traits: first, costs are incurred in advance of the anticipated exchange; second, the assets are particular to a single location, use, or customer, such that their next best use is of much lower value than their anticipated use.").

69. To be sure, claims about efficient or inefficient outcomes should be qualified. For example, in this case I argue that because a founder is uniquely connected to their own innovation, they are likely to improve it at a lower cost than any third party could, thus efficiently increasing the innovation level and benefiting society as a whole. However, allowing the founder to keep the rights to their IP could also have negative consequences if their judgement is clouded by cognitive dissonance and fixation, thus enabling them to continue and pursue a failing path rather than moving on to a new and unrelated innovation. *See* Richard S. Markovits, *Monopoly and the Allocative Inefficiency of First-Best-Allocatively-Efficient Tort Law in Our Worse-Than-Second-Best World: The Whys and Some Therefores*, 46 CASE W. RES. L. REV. 313, 319–20 (1996) (discussing the general theory of Second Best, the deficiency of an isolated allocative efficiency analysis without a study of the aggregate effects, and the applications of this theory to the law).

70. *Toys and Spinning Brushes: How John Osher Found His Way to Profits*, KNOWLEDGE@WHARTON (Nov. 19, 2003), http://knowledge.wharton.upenn.edu/article/toys-and-spinning-brushes-how-john-osher-found-his-way-to-profits/.

71. The patent that applies to the spinning technology and that belonged to the Spin Pop manufacturer seems to be restricted to candy holding devices and thus does not cover dental products, allowing Osher to produce the Spinbrush without infringing on the IP rights of the sold company. *See, e.g.*, U.S. Patent No. 5,209,692 col. 1 l. 5 (filed Jan. 8, 1992), https://patents.google.com/patent/US5209692 ("This invention is directed to a novelty toy and in particular to a battery-operated candy holding device that spins a piece of candy or any other item.").

72. Mike Maples, *Quora Question: What Was It Like to Invest Early in Twitter?*, NEWSWEEK (Aug. 28, 2016), http://www.newsweek.com/quora-question-what-was-it-make-early-investment-twitter-493189 ("Evan

Founders returning capital to the VC funds investing in the startup in order to retain the technology and be able to use it in the new adventure is not a common practice. It is far more common for startups to burn the money invested trying to make the startup work and not have funds left to enter into an agreement with the investors that would allow them to continue and use the technology. Staged financing—the practice of VC funds investing through multiple rounds of financing, each round only infusing the startup with a limited amount of capital—contributes to the restricted amount of funds that the VC backed startup has in any given time.[73] Undoing the assignment is often economically prohibitive and practically unfeasible, first the startup has to agree to the transfer of the IP back to the founder, and second, even if the startup approves the founder/inventor has to pay the startup for the invention and may not be able to afford the required consideration. The Twitter case is an exception, where the founders were able to pay back the investment to keep the IP. This case also shows the special connection between the founders and the IP, and the value they assign to it.[74]

Furthermore, licensing rather than assigning the IP may increase the risk tolerance of the founders. For example, the founders may be more willing to step aside earlier and allow the VC fund to replace them with professional management if they can maintain property rights to the technology. In such a case, the founders know that even if the company chooses to take what they believe to be the wrong course, they can continue to explore other options for the technology. On the other hand, if the founders assign the IP to the company, they may delay approaching potential VC investors until a time when the course of the company is more secure. This decision, however, may be inefficient because the experienced VCs could add valuable input early on.

The founders' concerns could be mitigated by allowing them to retain licensing rights to the IP. Yet, negotiating in order to reach this result may be difficult. Not only do VCs not directly benefit from the continued development of the IP by the founders after the company fails, but the licensing of the founders' IP rights is less attractive to the VCs than assignment of the IP. Licensing entails the risk of future disputes between the company and the founders about the scope of the license, as was the case in the eBay-Skype acquisition.[75]

Williams tried and tried to make a go of it. One day he called me and said 'look, we don't have a business. I'm going to give the investors their money back.' . . . [H]e [then] said, 'By the way, as part of the agreement, I am going to experiment with some stuff we have been working on with a side project.'").

73. For the use of staged financing as a control mechanism in venture capital investments, *see, e.g.*, William A. Sahlman, *The Structure and Governance of Venture-Capital Organizations*, 27 J. FIN. ECON. 473, 506 (1990); Paul A. Gompers, *Optimal Investment, Monitoring, and the Staging of Venture Capital*, 50 J. FIN. 1461, 1461–62 (1995); Manuel A. Utset, *Reciprocal Fairness, Strategic Behavior & Venture Survival: A Theory of Venture Capital-Financed Firms*, 2002 WIS. L. REV. 45, 64–66 (2002); D. Gordon Smith, *The Exit Structure of Venture Capital,* 53 UCLA L. REV. 315, 323 (2005).

74. For another example of the special attachment between the founders and the IP and their efforts to keep it, see Q.G. Prods, Inc. v. Shorty, Inc., 992 F.2d 1211 (Fed. Cir. 1993). In *Shorty*, the court noted that "[d]ue to a falling-out between Simon and the Lalliers, Shorty reassigned the '377 application to Simon in July 1988 in exchange for $3,000, a promise for $17,000 more, and return of the Shorty stock." *Shorty, Inc.*, 992 F.2d at 1212 (internal quotation marks omitted).

75. Brad Stone, *EBay Plans Public Offering for Skype*, N.Y. TIMES (Apr. 14, 2009), http://www.nytimes.com/2009/04/15/technology/companies/15skype.html ("One problem for eBay in selling Skype is an escalating intellectual property dispute between eBay and the Skype founders. Joltid, a company founded by Mr. Zennstrom and Mr. Friis, retained ownership of the peer-to-peer technology used in Skype and licensed it back to eBay.").

Should the founders be willing to trade for the right to maintain individual personal rights to the IP, they cannot offer much to the VCs in exchange for these rights. The capital needs of the venture do not permit the VCs to invest less in the company even if the IP is only licensed and not assigned, since the company uses the VC funds for its growth. Diluting the founders more, by giving the VCs a larger stake in the equity of the company in exchange for leaving the IP rights in the founders' hands, may also prove inefficient. The VCs are interested in keeping the founders motivated to work hard for the company, and the founders' equity interest in the company helps achieve this. However, because of the tax distortion, the VCs may well face a done deal: the founders will have already transferred the IP to the company prior to the VCs investing in order to take advantage of Section 351, even though the VC might have been willing to negotiate a license agreement instead.

VII. GETTING FUNDED WITHOUT IP ASSIGNMENT

There are famous exceptions to the general rule of founders' rush to assign the IP to the corporation to secure investors. One subset of successful startups that acquired only a license to the IP created by their founders are foreign startups. These startups are formed outside the United States and are not subject to the U.S. rules. Another subset of such startups were formed by founders who were affiliated with academic institutions while creating the initial IP, and assigned their IP to those institutions prior to the formation of the startup. Despite the fact that the universities license the IP, rather than assign it to the startups, VCs invest in the startups. Skype and Google are examples of these two subsets respectively. A third related category of startups that enjoy VC backing despite lack of IP assignment is more complicated by nature—IP is not assigned to these startups because of disputes between the startups and third parties who claim to own the IP and may also allege to be founders. Square is an example of such a startup. A fourth, and last, example is a complete departure from the traditional financing structure in which VC funds are using equity interest in the startup as the vehicle for their investment. VCs that invest in the blockchain industry experiment with a new vehicle for their investing that does not involve equity rights in the startup, rather a mere promise to receive tokens in a future offering, which does not include the grant of any IP rights. I now turn to consider each of these four examples.

A. Skype

The founders of Skype Technologies S.A., a voice-over-IP software and service provider, have retained individual rights to a significant portion of the technology used by their startup company. The startup did not own full rights to the IP it used. It only owned rights to use the technology through a license agreement, yet the company was able to raise funds and was eventually sold to eBay for a few billion dollars. After the acquisition of Skype by eBay, the founders still continued to own the technology separately. While, subsequently, the retained separate ownership rights to the technology caused disputes regarding the scope of eBay's rights under the license agreement, it did not prevent the founders of Skype from reaping the monetary fruits of the company they had created.[76]

76. *Id.*

B. Google

Stanford University and Google Inc. entered into license agreements that granted Google the right to use patents conceived by Lawrence Page and/or Sergey Brin while the two founders were affiliated with the university.[77] The license was a restricted exclusive license, which was limited both in time (five to eight years) and scope (restricted to internet applications).[78] Stanford retained its right to use the licensed patents for research.[79]

The Google example is not an exception to the rule. Research universities routinely license patents for royalties as part of their commercialization efforts.[80] Since the enactment of the Bayh-Dole Act in 1980, universities are permitted to own patents and commercialize inventions that were funded by the federal government.[81] The royalties that the universities receive are a significant source of their income. In 2014 universities owned 5898 U.S. patents with a gross annual patent licensing revenue of $2.2 billion.[82]

To be sure, a license granted by a reputable academic institution, such as Stanford University, may be regarded differently by VC investors than a license granted by founders. VCs may be willing to accept fewer restrictions on the exclusive license agreement granted by founders than the restrictions in the license that Stanford granted Google. To assure the investors, and also in order to simplify the drafting of the license agreement, the founders may grant the startup an exclusive license agreement with almost no restrictions on the licensee, which is more similar to assignment of IP rights than the license agreement that Google received from Stanford, but which includes a termination clause that is triggered in the event that the startup fails.[83]

C. Square

Startups receive VC financing and conduct public offerings on U.S. securities exchanges despite active disputes regarding rights to the IP they use. A famous example is

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77. *See, e.g.*, BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY AND GOOGLE, INC., LICENSE AGREEMENT (JULY 2, 2001), https://www.sec.gov/Archives/edgar/data/1288776/000119312504142742/dex10101.htm.

78. *Id.* § 3.2 ("Thereafter, said license shall be nonexclusive until expiration of the last to expire of Licensed Patent(s).").

79. *Id.* § 3.3 ("[Stanford] shall have the right to practice the Licensed Patent(s) for its own bona fide research, including sponsored research and collaborations.").

80. Lisa M. Krieger, *Stanford's Ideas Generate $65.1 Million in Revenues*, MERCURY NEWS (Dec. 21, 2010), https://www.mercurynews.com/2010/12/21/stanfords-ideas-generate-65-1-million-in-revenues/ ("[S]chools like Stanford harvest great ideas and then try to send them out in the world. There they can be turned into commercial products — and reward the campus with royalty income from licensing rights.").

81. *See, e.g.*, *Bayh-Dole Act at a Glance*, U. PITT. INNOVATION INST., http://www.innovation.pitt.edu/resource/bayh-dole-act-at-a-glance/ (last visited Mar. 15, 2018) ("The Bayh-Dole Act [Patent and Trademark Act Amendments of 1980] . . . enables universities . . . to own, patent, and commercialize inventions developed under federally funded research programs within their organizations."); David Levenson, *Consequences of the Bayh-Dole Act*, 1 MIT L. CLUB J. (2006), http://web.mit.edu/lawclub/www/Bayh-Dole%20Act.pdf ("The Bayh-Dole Act permits a university . . . using federal funds for research to produce an invention to retain the title on any patent issued for such inventions. Prior to this act, the government retained ownership of all patents granted using government money.").

82. Dave Merrill et. al., *Billions at Stake in University Patent Fights*, BLOOMBERG (May 24, 2016), https://www.bloomberg.com/graphics/2016-university-patents/.

83. *See generally* Menell*, supra* note 35 and accompanying text for a discussion about *ipso facto* clauses and the IP exception.

Square, Inc. which was co-founded by Jack Dorsey. Square successfully secured the backing of famous Silicon Valley VC firms, including Sequoia Capital and Khosla Ventures,[84] and went public on the New York Stock Exchange (NYSE) in 2015.[85] However, the infusion of VC capital and the initial public offering took place in the backdrop of public claims by Professor Robert Morley that he had invented an essential part of the technology that was used by Square, which he patented.[86] Professor Morley further claimed that he "planned to assign the patent to Square in exchange for ownership shares" but that negotiations failed.[87] Square went public despite pending litigation about patent rights.[88] Only after the initial public offering of the company did it settle the dispute for a reportedly significant sum of money.[89]

D. Blockchain and SAFTs

As shown in previous subparts, there are a few anecdotal accounts of VCs investing without the VC backed startup company owning all the rights to the IP. These accounts challenge the conventional wisdom that VCs will not and do not invest unless the founders' IP is assigned to the startup company. The innovative and budding blockchain industry and cryptographic focused startups pokes further holes in the conventional wisdom.

In order to invest in startups that specialize in the blockchain technology, VCs, including veteran VC firms and some of the most successful VCs in the industry, such as Sequoia Capital, are turning to innovative investment structures that only remotely resemble the traditional VC investment norms.[90] The use of Simple Agreements for Future Tokens (SAFTs) enables VCs to invest in the startup early, before an initial coin offering (ICO). However, the SAFT gives VCs the right to receive future tokens of the startup, but not an equity stake in the startup.[91] Thus, VCs investing through SAFTs are receiving

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84. Leena Rao, *Square Raises $27.5M From Sequoia And Khosla, On Track To Process $40M In Q1 Payments*, TECHCRUNCH (Jan. 10, 2011), https://techcrunch.com/2011/01/10/sequoia-leads-27-5-million-round-in-mobile-payments-startup-square/.

85. Square, Inc., Amendment No. 1 to Form S-1 Registration Statement (Form S-1) (Oct. 26, 2015) at 23, https://www.sec.gov/Archives/edgar/data/1512673/000119312515352937/d937622ds1a.htm#toc937622_2 [hereinafter Square, Inc.]

86. Anthony Ha, *Professor Claims Square Took his Credit Card Reading Technology*, VENTUREBEAT (Dec. 15, 2009), https://venturebeat.com/2009/12/15/professor-claims-square-took-his-credit-card-reading-technology/.

87. *Id.*

88. Square, Inc., *supra* note 85, at 147 ("In two related proceedings, we are litigating disputes over certain patents and over Mr. Morley's early involvement in the business enterprise that became Square."); *id.* at 39 ("Mr. Morley contends that he was an equal partner with Jack Dorsey and Jim McKelvey in the business enterprise that ultimately evolved into Square, and that Mr. Dorsey and Mr. McKelvey breached their alleged oral joint venture agreement with Mr. Morley by excluding him from ownership in Square.").

89. Leena Rao, *Square Settled Lawsuit with Refuted Co-Founder for $50 Million*, FORTUNE (May 5, 2016), http://fortune.com/2016/05/05/square-settled-lawsuit/ ("The company has settled an ongoing lawsuit brought about by Robert Morley for a whopping $50 million. Morley claims to have invented the Square credit card reader.").

90. *See, e.g.*, Becky Peterson, *Venture Capital Has a New Way of Cashing in on Blockchain Bonanza — Here's What You Need to Know About SAFTs*, BUS. INSIDER (Nov. 19, 2017, 9:00 AM), http://www.businessinsider.com/bitcoin-price-what-is-a-saft-blockchain-the-crypto-fundraising-craze-shaking-up-venture-capital-2017-11 ("Among the pioneers is Matt Huang at Sequoia Capital.").

91. *Id.* ("In traditional venture capital investing, investors give a startup money in exchange for an ownership stake in the company. But with SAFTs, venture capitalists receive the rights to future tokens instead.");

neither rights to the IP of the startup nor of the IP of the founders. Instead, the investors receive a promise to receive tokens, or cryptocurrencies, in a future ICO. This willingness to replace equity for a promise of future performance exemplifies the VCs' flexibility and willingness to invest in diverse and risky ways.

Thus, it is not the VCs that are responsible for the rush to assign founders IP; the VCs are customarily not even given the option to invest without the founders assigning their IP to the startup. The rush to assign before the VCs invest is fueled by tax rules that may distort the founders' decision about whether and in what fashion to transfer IP rights, and thus may adversely affect innovation by decoupling the founders from their IP and potentially also distort the decision about the formation of a startup ex-ante.

VIII. PROPOSED REFORM

In order to promote innovation, tax rules should not affect the founders' decision regarding whether and when to assign or license their individually owned intellectual property to the startup. The founders' decision should not be further complicated by potential tax liability consequences. This Article argues that Section 351 of the IRC should be amended to achieve this goal. The same tax treatment should apply to all transfers of technology to startup companies in exchange for stock of the receiving company, regardless of the percentage the transferring founders end-up owning in the company afterward. Whether the founders own 10% of the company immediately after the transfer or 100% should not affect their tax liability. In fact, such an amendment coincides with the motivation behind the enactment of the original rule. Prior to the enactment of the original Section 202(c) of the 1921 Act—the section that later became Section 351 of the IRC—the Senate Finance Committee Report on the proposed bill stated that the section "provides new rules for those exchanges or 'trades' in which, although a technical 'gain' may be realized under the present law, the taxpayer actually realizes no cash profit" and explained that the previous law "seriously interfered with necessary business readjustments."[92]

Eliminating the control requirement completely could achieve this result. Founders, under the proposal, will be allowed to defer tax payment in connection with the assignment of IP until the time of sale of the stock that is received in exchange for the IP, even if they do not control the company that receives the rights to the IP and even if they own only a diminutive percentage of the company, which is substantially less than the current requirement of 80% of the company.

Alternatively, to eliminate the distortion regarding the timing of the assignment of the intellectual property caused by the current requirements for qualifying as a tax deferred transfer, the tax code can be amended so that the founders incur tax liability upon transfer regardless of the percentage of their ownership following such transfer.[93] This change

J. Brad Bernthal, *The Evolution of Entrepreneurial Finance: A New Typology*, 2018 BYU. L. REV. 774, 812 (2019) ("[R]ather than purchasing ownership in a venture, the SAFT investor secures a right to 'tokens' . . . . An investor lacks voting rights, board rights, protective provisions, or virtually any type of control over the company." and "VCs . . . invest in SAFTs . . . . A SAFT investor is not a company owner. . . .").

92. S. REP. NO. 275 (1921).

93. Such amendment will undo the reform of the 1921 Act. *See, e.g.*, John Herbert Roth, Comment, *The Disparate Treatment of Nonqualified Preferred Stock: Yet Another Tax Classification Nightmare?*, 32 CUMB. L. REV. 605, 616 (2001–2002) ("Prior to the Revenue Act of 1921, a contribution to a corporation, regardless of control, was governed by the general recognition rules outlined in Section 1001 of the Code. Thus, when a taxpayer exchanged property for the stock of a controlled corporation . . . , the entire transaction was considered

would eliminate the tax incentive to rush to transfer the intellectual property to the startup-company, before the venture capitalist invests and before the founders no longer control the startup-company. However, such an amendment is undesirable, because it would result in a premature tax on the founders that may well deter efficient transactions by making them economically prohibitive. This is because assignment of the founders' intellectual property rights to the startup-company may be more efficient than merely licensing those rights to the company, in certain situations.

IX. CONCLUSION

This Article argues that should the startup fail, the founders may well be better positioned to use the technology they have created than the VCs who invested in the startup, because of the founders' special knowledge of and connection to the IP. VCs gain control of startups relatively quickly, but their focus is limited and short, and once the startup fails they move on. While entrepreneurs often fail, they also often persevere. Success is often preceded by many failures, and successful serial entrepreneurs often endured numerous past failures. However, the VCs are not likely to return the IP to the founders who usually cannot afford to pay for it once the startup fails. Liquidity constraints and bankruptcy procedures may prevent an efficient transfer if the IP is assigned to the company, and thus trap it in the company decoupling it from its more efficient user—the founders.

Thus, it may be preferable to license rather than assign founders' IP to the startup. This Article does not suggest barring the assignment of founders' IP to the startup, since a license may not always be the optimal solution. Rather this Article advocates for the removal of distortions that cloud the parties' decision about whether to assign or grant a limited exclusive license of the IP to the company upon its formation. Specifically, Section 351 of the IRC distorts the founders' choice by effectively penalizing a delay of the assignment of the founders' IP to the startup, which may hurt innovation.

Generally, legal rules and regulations should favor one course of action over another only where there is a clear policy objective that is advanced by such legislation. Further study into the psychology of entrepreneurs may uncover additional unintended consequences of the current rules and regulations that distort entrepreneurial decisions and harm the innovative process. On the other hand, studies that shed light on incentives that promote innovation and startup creation may help legislators reshape the law efficiently.

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a taxable event, i.e., a sale, and the taxpayer would incur an immediate tax liability on the transaction.").