

2019

Risk Taking and Rights Balancing in Intellectual Property Law

Clark D. Asay

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Recommended Citation

Asay, Clark D. (2019) "Risk Taking and Rights Balancing in Intellectual Property Law," *Akron Law Review*. Vol. 53 : Iss. 4 , Article 3.

Available at: <https://ideaexchange.uakron.edu/akronlawreview/vol53/iss4/3>

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RISK TAKING AND RIGHTS BALANCING IN INTELLECTUAL PROPERTY LAW

Clark D. Asay*

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ABSTRACT

Scholars have long worried that risk aversion can have significant negative effects in the marketplace. In the intellectual property law domain, some have worried that risk-averse actors can negatively influence the development of important intellectual property law doctrines, which can ultimately hamper innovation. For instance, risk-averse actors may frequently choose to obtain licenses for rights that the relevant laws do not actually require of them. When they do so, they inadvertently increase the scope of intellectual property rights because their risk-averse activities inform courts' development of key intellectual property law doctrines.

* Professor of Law, BYU Law School. Many thanks to Stephanie Plamondon Bair, Ryan Holte, Camilla Hrdy, Erika Lietzan, Glynn Lunney, Michael Madison, Liam O'Melinn, Zahr Said, Joshua Sarnoff, and Mark Schultz for helpful comments on the ideas in this Article.

In this Article, prepared as part of the IP Scholars Forum at Akron Law, I look at the other side of the risk coin. In particular, I argue that early-stage companies, and sometimes later-stage companies as well, are often willing to take on significant intellectual property risks in pursuit of commercial opportunities. And by providing courts with opportunities to take head-on key intellectual property questions, these risk-taking activities, in effect, may often help counterbalance whatever negative effects the behavior of risk-averse actors entails. I examine reasons why both types of entities are often willing to take on intellectual property risks. And I review a number of examples where both early and later-stage companies have heavily influenced the development of key intellectual property law doctrines by being willing to take their intellectual property disputes to court.

This review, however, highlights several reasons why early-stage companies are more dependable risk-taking entities than later-stage companies. I thus conclude by briefly assessing two intellectual property-related means by which to specifically encourage early-stage companies to continue to take on intellectual property risks.

I. INTRODUCTION

When commercial actors face uncertain or risky prospects, those uncertainties and risks frequently influence how they behave.¹ For instance, parties lacking enough information to accurately assess their chances of success in a given setting (what some scholars define as *uncertainty*) may frequently choose to avoid those uncertain commercial waters altogether.² In other situations, parties may have enough information to accurately assess their chances of commercial success. Yet because the ultimate outcome remains up in the air (what scholars often refer to as *risk*), parties unable to calm their risk-averse nerves may simply steer clear of the opportunity.³ Because both uncertainty and risk are relevant to my purposes in this Article, for simplicity I will refer to them collectively as *risk* throughout.

1. Economist Frank Knight importantly distinguished between what he called risk, where the ultimate outcome is unknown but the odds of a given outcome are calculable, and what he called uncertainty, where lack of information makes it impossible to calculate the odds of a given outcome. See FRANK KNIGHT, RISK, UNCERTAINTY, AND PROFIT (1921); Peter Dizikes, *Explained: Knightian Uncertainty*, MIT NEWS (June 2, 2010), <http://news.mit.edu/2010/explained-knightian-0602> [<https://perma.cc/8Y4Q-ASGE>]. In this Article, I will generally use the term *risk* to mean both types of situations, though at some points I will distinguish between the two.

2. Dizikes, *supra* note 1.

3. *Id.*

Scholars have long worried that risk-aversion can cause parties to act in undesirable ways, depriving society of any number of benefits.⁴ In the intellectual property law domain, some have worried that risk-averse behavior may actually lead to expansions of intellectual property rights, in ways that ultimately hinder innovation.⁵

For instance, risk-averse parties may rationally fear that their innovative activities will draw the ire of intellectual property owners who believe those innovative activities infringe upon their rights.⁶ In response to the prospect of intellectual property owners asserting their rights against them, many innovators preemptively seek and obtain intellectual property licenses that the relevant intellectual property laws may not actually require.⁷ Or even if some innovative parties were initially willing to take on the risks, many of them ultimately decide that licensing the rights is the best approach once the relevant intellectual property rights owners institute formal legal proceedings against them.⁸ As more and

4. The literature in this area is voluminous, and this footnote cannot possibly cover it. For a sampling, see Francisco Reyes & Erik P.M. Vermeulen, *Company Law, Lawyers and “Legal” Innovation: Common Law Versus Civil Law*, 28 BANKING & FIN. L. REV. 433, 465 (2013) (discussing how risk aversion can lead lawyers to avoid innovative new contractual means of addressing legal issues); Joseph Bankman & Ronald J. Gilson, *Why Start-Ups?*, 51 STAN. L. REV. 298, 306 (1999) (discussing how risk aversion may affect employees’ choices relating to job opportunities); MICHAEL E. PORTER, *THE COMPETITIVE ADVANTAGE OF NATIONS* 528–29 (1990) (discussing how risk aversion may lead to a “slowing of true strategic innovation.”); Leo E. Strine, Jr., *Derivative Impact? Some Early Reflections on the Corporation Law Implications of the Enron Debacle*, 57 BUS. LAW. 1371, 1374 (2002) (noting that over “the last two decades, much thought has been devoted to finding ways to direct the attention of boards and directors away from a safe managerialist perspective focusing on entity preservation, and toward a more entrepreneurial, risk-taking, and competitive-enhancing attitude.”); J.H. Reichman, *Legal Hybrids Between the Patent and Copyright Paradigms*, 94 COLUM. L. REV. 2432, 2531 (1994) (“[P]atents help to overcome the high risk-aversion associated with the prospecting function of developing markets for major new discoveries.”); Kenneth Arrow, *Economic Welfare and the Allocation of Resources for Invention*, in *THE RATE AND DIRECTION OF INVENTIVE ACTIVITY: ECONOMIC AND SOCIAL FACTORS* 610–14 (Nat’l Bureau for Econ. et al. eds., Princeton Univ. Press 1962) (suggesting that risk aversion can stifle innovation); Jonathan R. Macey & Geoffrey P. Miller, *Corporate Governance and Commercial Banking: A Comparative Examination of Germany, Japan, and the United States*, 48 STAN. L. REV. 73 (1995) (arguing that certain factors in the Japanese and German corporate environments lead to risk aversion and thereby less innovation).

5. James Gibson, *Risk Aversion and Rights Accretion in Intellectual Property Law*, 116 YALE L.J. 882 (2007).

6. For an example of why parties may fear intellectual property issues, see Adam C. Uziako, *Copyright Infringement: Are You Stealing Intellectual Property?*, BUS. NEWS DAILY (Sept. 16, 2019), <https://www.businessnewsdaily.com/6043-intellectual-property-tips.html> [<https://perma.cc/LMR3-7QNJ>].

7. Gibson, *supra* note 5.

8. For a discussion of this type of behavior in the patent context, see Mark A. Lemley & A. Douglas Melamed, *Missing the Forest for the Trolls*, 113 COLUM. L. REV. 2117 (2013) (discussing how some types of patent trolls are able to extract rents from practicing entities in part because of the high costs of litigation).

more innovators go these rational but risk-averse routes, courts may increasingly interpret intellectual property laws expansively because they deem that this pattern of license-seeking reflects a common understanding that such licenses are necessary for the types of activities that the innovators pursue.⁹ The result is that, over time, intellectual property rights grow.¹⁰ And as they grow, follow-on innovators have less leeway to pursue their innovative activities.¹¹ Furthermore, the growing constriction of their freedoms pushes innovators into the same risk-averting behaviors of their predecessors.¹² Ultimately, this negative feedback loop causes courts to morph intellectual property laws into something those laws were never meant to be, making innovation more expensive and, in some cases, impossible.¹³

Recent research has partially countered some of these concerns.¹⁴ For instance, creative parties may actually typically be risk seekers, not risk averters.¹⁵ This could mean that even if some risk-averse innovators contribute to the above-discussed negative feedback loop, risk-seeking innovators at times provide a counterweight to whatever distortive effects risk-averting parties' behavior may have. Some of the concerns about lost innovation and intellectual property doctrines gone amok may thus be overstated, even if in certain respects valid.

This Article contributes to this discussion by examining two scenarios in which greater risk-taking is more likely, and which thus may provide some comfort to those that worry about the negative effects of all-too-prevalent risk aversion. First, early-stage companies are often ardent risk takers.¹⁶ The very purpose behind many start-up companies is to pursue some novel, innovative idea in the marketplace and ultimately reap the rewards therefrom.¹⁷ Thus, early-stage companies often have a greater

9. Gibson, *supra* note 5.

10. *Id.*

11. *Id.*

12. *Id.*

13. *Id.*

14. See, e.g., Vaibhav Tyagi et al., *The Risky Side of Creativity: Domain Specific Taking in Creative Individuals*, 8 FRONT PSYCH. 145 (2017) (providing an overview of some of this research and finding a correlation between social risk-taking and certain levels of a person's creativity).

15. See, e.g., Andres Sawicki, *Risky IP*, 48 LOY. U. CHI. L.J. 81 (2016) (arguing, based on reviewing a significant amount of creativity research, that creative parties are typically risk seekers and thus are more likely than not to embrace intellectual property risks in their creative endeavors).

16. See, e.g., Robert E. Hall & Susan E. Woodward, *The Burden of the Nondiversifiable Risk of Entrepreneurship*, 100 AM. ECON. REV. 1163 (2010) (discussing the financial risks that entrepreneurs often take in pursuit of greater returns).

17. For this reason, "[n]ovel startup companies often face not only risk, but also unforeseeable uncertainty (the inability to recognize and articulate all relevant variables affecting performance)."

appetite for risk than is typical, and they are often committed to seeing those risks through.¹⁸

This is certainly not to say that start-ups don't face significant risks in uncertain environments,¹⁹ or that they are impervious to those risks in deciding whether to continue their entrepreneurial pursuits.²⁰ After all, most fail due to the constant struggle to amass sufficient resources, making start-up life one of constant peril.²¹ And it is certainly true that not all start-up companies are risk takers.²² Yet among early-stage companies, the will to take on significant risks in hopes of eventually overcoming them is prevalent enough, as the ongoing formation of start-up companies attest.²³ Indeed, though in an absolute sense entrepreneurs may not actually prefer risk any more than the next person, research suggests that many entrepreneurs perceive less risk in situations than others due to a number of cognitive biases that they frequently exhibit.²⁴ Early-stage companies' willingness to test uncharted waters thus provide one significant counterweight to occurrences of risk aversion, and that risk-

Svenja C. Sommer et al., *Managing Complexity and Unforeseeable Uncertainty in Startup Companies: An Empirical Study*, 20 ORG. SCI. 118, 129 (2009).

18. Akira Hirai, *What Kills Startups?*, CAYENNE CONSULTING, <https://www.caycon.com/what-kills-startups> [<https://perma.cc/7L2Z-69BA>] ("Entrepreneurs are, by definition, risk takers.")

19. Sommer et al., *supra* note 17 (discussing some of the types of risks and uncertainty that startup companies face).

20. See, e.g., Marco van Gelderen et al., *Success and Risk Factors in the Pre-Startup Phase*, 24 SMALL BUS. ECON. 365 (2005) (presenting empirical results suggesting that entrepreneurs who perceive their venture to entail significant risk are more likely to fail than those perceiving their ventures to be less risky).

21. See, e.g., Neil Patel, *90% of Startups Fail: Here's What You Need to Know About the 10%*, FORBES (Jan. 16, 2015), <https://www.forbes.com/sites/neilpatel/2015/01/16/90-of-startups-will-fail-heres-what-you-need-to-know-about-the-10/#11982dfe6679> [<https://perma.cc/LF9Y-PFKK>].

22. Trevor Clawson, *The Corporate Hunt for Startup Innovation Continues But Risk Aversion Gets in the Way*, FORBES (Dec. 31, 2018), <https://www.forbes.com/sites/trevorclawson/2018/12/31/the-corporate-hunt-for-startup-innovation-continues-but-risk-aversion-gets-in-the-way/#631ffe684a92> [<https://perma.cc/2EQT-GMCN>] (discussing how growing economic uncertainty is causing many startup companies to increasingly avoid risk).

23. See, e.g., *Bloomberg U.S. Startup Barometer*, BLOOMBERG (Apr. 6, 2020), <https://www.bloomberg.com/graphics/startup-barometer/> [<https://perma.cc/SWD3-PENZ>] (showing the growth of startup companies in the U.S. since 2007). *But see* Ben Casselman, *Risk-Averse Culture Infects U.S. Workers, Entrepreneurs*, WALL ST. J. (June 2, 2013), <https://www.wsj.com/articles/SB10001424127887324031404578481162903760052> [<https://perma.cc/JB5A-767M>] (discussing an overall decline in U.S. entrepreneurship as companies and people grow more risk-averse in response to a number of factors).

24. See, e.g., Mark Simon, *Cognitive Biases, Risk Perception, and Venture Formation: How Individuals Decide to Start Companies*, 15 J. BUS. VENTURING 113 (2000) (discussing how certain cognitive biases, such as overconfidence, illusions of control, and belief in the law of small numbers, lead many entrepreneurs to perceive less risk than the average person).

taking has important implications for how intellectual property laws develop, as this Article will explore.

Second, even larger, later-stage incumbents, known for their lumbering, risk-averse ways,²⁵ sometimes also take on significant risks because the benefits of certain innovation routes appear to outweigh the costs of those same routes, including by way of intellectual property rights assertions.²⁶ Admittedly, later-stage companies almost certainly avoid risk more frequently than their early-stage counterparts.²⁷ In part, this is because later-stage companies simply face a different, in some cases more expansive, set of risks than early stage companies.²⁸ Yet when they do throw caution to the wind, later-stage companies' risk-seeking exploits can also significantly help shape intellectual property laws, as this Article will further explore below.

This Article first briefly assesses how others have examined the prevalence and effects of risk in the intellectual property domain. It then turns to examining how the maturity of companies often affects their approaches to risk, with early-stage companies frequently being greater risk-takers than their later-stage counterparts. Despite this, later-stage companies also sometimes have reason to take on risk when the benefits of doing so outweigh the perceived costs. Hence, despite the prevalence of risk aversion, risk-seeking is also prevalent in certain circumstances, and that activity can have important balancing effects on how intellectual property law doctrines develop. Finally, I assess some of the more important implications of my analysis. In particular, I argue that because of their risk-taking tendencies, ensuring that early-stage companies

25. See Tim Koller, *Overcoming a Bias Against Risk*, MCKINSEY & CO. (Aug. 2012), <https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/overcoming-a-bias-against-risk> [<https://perma.cc/H7KK-3PB5>] (discussing how CEOs at large companies are often more risk-averse than overconfident).

26. See, e.g., John Rampton, *Businesses That Took Huge Risks That Paid Off*, INC. (Oct. 11, 2016), <https://www.inc.com/john-rampton/15-businesses-that-took-huge-risks-that-paid-off.html> [<https://perma.cc/J8PG-B4ZK>] (discussing several large companies that took on significant risks in pursuit of commercial opportunities, including Microsoft and Google).

27. For reasons why this may be so, see George Deeb, *The 5 Reasons Big Companies Struggle With Innovation*, FORBES (Jan. 8, 2014), <https://www.forbes.com/sites/georgedeeb/2014/01/08/the-five-reasons-big-companies-struggle-with-innovation/#693045aa2958> [<https://perma.cc/65EZ-P6ZW>] (discussing as one reason why big companies avoid innovative new paths is because so much consensus-building must occur).

28. See, e.g., Robert W. Vossen, *Relative Strengths and Weaknesses of Small Firms in Innovation*, 16 INT'L SMALL BUS. J. 88 (1998) (pointing to research indicating that one of the weaknesses of large firms is that they are often plagued with bureaucracy and thus have a more difficult time reacting to changing market conditions, thus posing the risk that they will miss out on significant opportunities).

continue to thrive is vital to the overall development and efficacy of our intellectual property laws.

II. RISK AND ITS EFFECTS ON INTELLECTUAL PROPERTY LAW

As mentioned above, the literature surrounding risk and its possible effects on innovation is voluminous. This Article focuses on a narrower piece of the risk puzzle: what is the effect of risk on intellectual property doctrines? This question is relevant to the broader question of how risk affects innovation because intellectual property laws, depending on how they are structured, can arguably affect the pace and direction of innovation either positively or negatively.²⁹ Hence, rather than directly grappling with the broader issue of risk and innovation, I confine myself to how risk and the behavior it influences may affect the development of certain intellectual property law doctrines.

I use Professor James Gibson's influential 2007 *Yale Law Journal* article as a jumping off point for this discussion.³⁰ In the article, Gibson gives a persuasive account of how rational parties facing intellectual property risks often engage in licensing practices that ultimately expand a number of key intellectual property doctrines.³¹ Those expansions, in turn, may eventually hinder innovative activities.³²

To illustrate: suppose a filmmaker wishes to incorporate some copyrighted work within a documentary they are making, but they fear doing so without first obtaining permission from the copyright owner. This is so despite the reality that a number of copyright limitations, including the fair use and *de minimis* defenses, may actually permit them to include the copyrighted work within their film without obtaining permission.³³ However, these limitations are ex post court determinations, meaning that the filmmaker would need to litigate the matter to know for sure whether their use of the copyrighted work required permission.³⁴

29. See, e.g., Jason Wiens & Chris Jackson, *How Intellectual Property Can Help or Hinder Innovation*, KAUFFMAN FOUND. (Apr. 7, 2015), <https://www.kauffman.org/what-we-do/resources/entrepreneurship-policy-digest/how-intellectual-property-can-help-or-hinder-innovation> [<https://perma.cc/TH63-4FF9>] (discussing this reality).

30. Gibson, *supra* note 5.

31. *Id.*

32. *Id.*

33. For a discussion of both the fair use and *de minimis* defenses, see *Measuring Fair Use: The Four Factors*, STAN. UNIV. LIBR., https://fairuse.stanford.edu/overview/fair-use/four-factors/#too_small_for_fair-_use_the_de_minimis_defense [<https://perma.cc/V3N8-Z649>].

34. As Larry Lessig has famously said, fair use is no more "than a right to hire a lawyer." Stephen Manes, *Let's Have Less of Lessig*, FORBES (Apr. 2, 2004),

The copyright owner, after all, may object to their use, and sue the filmmaker on the basis of it. If that scenario were to unfold, the filmmaker may have to pay tens of thousands of dollars—and probably even more—in defending their use in court.³⁵ Furthermore, they may incur all of that time and money defending their use for naught; a court may ultimately agree with the copyright owner that the filmmaker needed the copyright owner's permission to use the work in their film.³⁶ In order to avoid all of these risks and uncertainties, the filmmakers may rationally choose to negotiate and obtain permission from the copyright owner—typically in the form of a paid license—to use the copyrighted work.

While this single example may seem rather benign, Gibson argues that many rational, risk-averse parties regularly undertake similar behavior.³⁷ Consequently, in the aggregate, this type of behavior is possibly quite pervasive.³⁸ And the pervasiveness of that behavior can, over time, expand the scope of intellectual property entitlements in ways that ultimately harm the direction and pace of innovation.

For example, one of the most important factors under copyright's fair use defense is the use's effect on the potential market for, or value of, the copyrighted work.³⁹ In assessing this factor, courts often look to the existence of licensing markets in determining whether a particular use negatively affects a copyright owner's market for the work.⁴⁰ If parties regularly pay license fees for particular uses of copyrighted works, it is more likely that a court will deem that a market for the work exists and that an unlicensed use negatively affects the work's market.⁴¹ Hence, to the extent that many risk-averse parties act similarly to the filmmaker described above in a variety of copyright markets, the result is that courts assessing fair use questions will frequently be confronted with pervasive

https://www.forbes.com/2004/04/02/cz_sm_0402manes.html#29723d0d3663

[<https://perma.cc/466Z-34U3>] (critiquing this argument).

35. See, e.g., Keli Johnson Swan, *United States: The True Cost of Defending Against Copyright Infringement Litigation*, MONDAQ (Aug. 19, 2015), <http://www.mondaq.com/unitedstates/x/421188/Copyright/The+True+Cost+Of+Defending+Against+Copyright+Infringement+Litigation> [<https://perma.cc/3ZMH-3CZH>] (suggesting that defending against claims of copyright infringement typically cost parties "several thousand dollars per month.").

36. Indeed, one of the most frequent complaints about the fair use defense is its supposed unpredictability. See NEIL WEINSTOCK NETANEL, *COPYRIGHT'S PARADOX* 66 (2008) (arguing that the defense's open-endedness makes predicting a fair use outcome difficult).

37. Gibson, *supra* note 5.

38. *Id.*

39. 17 U.S.C. § 107(4) (2018).

40. See, e.g., Matthew Africa, *The Misuse of Licensing Evidence in Fair Use Analysis: New Technologies, New Markets, and the Courts*, 88 CAL. L. REV. 1145 (2000) (critiquing when courts do so, among other things).

41. *Id.*

licensing activities that suggest negative market impacts for unlicensed uses. In other words, risk-aversion leading to widespread licensing means that a finding of fair use becomes a less likely outcome in future cases. But that outcome is not necessarily rational from a law and policy standpoint, even if it was rational for many risk-averse parties to seek out licenses.

In Gibson's narrative, then, widespread risk-aversion creates a negative feedback loop. Parties rationally avoid risk by taking licenses for uses of works that the law may not actually require of them. And as more and more parties engage in this type of behavior, the law eventually changes in response to the pervasive risk-averting behavior. The change comes in the form of rights expansion. After all, if the scope of copyright's fair use defense shrinks in response to courts taking into account pervasive licensing markets, that means that copyright owners are more likely to win their cases against those relying on such a defense in the future. And over time, as intellectual property rights continue to expand in response to pervasive risk-aversion, that expansion only makes additional, ever-growing risk-aversion more likely.

The ultimate result may be less innovation and creativity overall. Limitations on intellectual property entitlements are often grounded in a belief that those limits are necessary to strike a healthy balance between incentivizing rights holders on the one hand and allowing for follow-on creators to use preexisting materials in their own creative efforts on the other.⁴² Hence, if that balance tilts too much in favor of rights holders, we may stunt much of the beneficial follow-on creativity that we seek to foster with limits on intellectual property rights.⁴³

Despite these bleak possibilities, creativity and innovation have continued apace since Gibson wrote his article. Indeed, by some metrics, innovation has expanded rapidly in the past decade since his article's publication.⁴⁴ Is that innovation happening in spite of intellectual property

42. See, e.g., Jennifer M. Urban, *How Fair Use Can Help Solve the Orphan Works Problem*, 27 BERKELEY TECH. L.J. 1379, 1389 (2012) (describing the purpose of copyright law's fair use limitation on copyright rights as helping "balanc[e] incentives to create original works with the social benefits that flow from the broad dissemination of those works, and by preserving fundamental First Amendment rights and free expression.").

43. Stefan Bechtold et al., *Innovation Heuristics: Experiments on Sequential Creativity in Intellectual Property*, 91 IND. L.J. 1251, 1257 (2016) (suggesting that copyright's fair use doctrines helps limit rights such that follow-on creators have some space for creativity).

44. See, e.g., Alison Berman & Jason Dorrier, *Technology Feels Like It's Accelerating – Because It Actually Is*, SINGULARITYHUB (Mar. 22, 2016), <https://singularityhub.com/2016/03/22/technology-feels-like-its-accelerating-because-it-actually-is/> [https://perma.cc/778P-ZY6U] (reviewing RAY KURZWEIL, *THE SINGULARITY IS NEAR: WHEN HUMANS TRANSCEND BIOLOGY* (2005)).

entitlements experiencing slow, steady accretion? Perhaps we would have even greater levels of innovation and creativity but for the constant expansion of intellectual property rights? Taking a step back, are courts actually expanding intellectual property entitlements over time?⁴⁵ At best, it seems to be a mixed bag.⁴⁶ Even more provocatively, do intellectual property entitlements actually affect the pace and direction of innovation all that much, regardless of whether they are expanding or shrinking?⁴⁷

Or perhaps Gibson's account is simply incomplete? It is certainly true that many parties rationally act in the way that he suggests. Anecdotes of this type of behavior abound.⁴⁸ It is also certainly the case that many courts take their risk-inspired activities into account in deciding whether a variety of intellectual property rights limitations should apply.

Yet other parties are not so risk-averse as the rational actors upon which Gibson focuses. Indeed, certain parties are more typically risk seekers. Or, in other cases, parties simply deem risks that they would normally shun to be worth it. The next part identifies and discusses two important classes of risk seekers: early-stage companies and, in some cases, later-stage companies. Overall, while risk aversion may be prevalent enough to affect intellectual property entitlements, risk seekers may often help balance out the behavior of risk averters, thereby helping preserve the balances that intellectual property laws seek to achieve.

III. THE RISK TAKERS

Some recent research suggests that creative parties in particular frequently have an appetite for risk. Professor Andres Sawicki, for instance, points to a body of creativity research in arguing that creative types may typically be greater risk takers than their less creative

45. Andrew Beckerman-Rodau, *The Problem With Intellectual Property Rights: Subject Matter Expansion*, 13 YALE J. L. & TECH 36 (2010–2011) (discussing how the subject matter of intellectual property rights has expanded over time).

46. See, e.g., Russell Slifer, *Weakened Patent System Causes U.S. to Slip as a Global Leader of IP Protection*, THE HILL (Aug. 4, 2017), <https://thehill.com/blogs/congress-blog/judicial/345370-weakened-patent-system-causes-us-to-slip-as-a-global-leader-of> [<https://perma.cc/M3QK-UCSS>] (arguing that the U.S. patent system has weakened); George Ford, *Putting "Fair" Back in "Fair Use"*, FED. SOC'Y (June 26, 2018), <https://fedsoc.org/commentary/blog-posts/putting-fair-back-in-fair-use> [<https://perma.cc/HCE6-ELPV>] (making an increasingly common argument that the fair use doctrine has expanded beyond what is productive).

47. For an argument in this direction relating to patenting standards, see Mark A. Lemley, *The Surprising Resilience of the Patent System*, 95 TEX. L. REV. 1 (2016).

48. See, e.g., Michael A. Carrier, *Copyright and Innovation: The Untold Story*, 2012 WIS. L. REV. 891 (2012) (discussing how in the wake of courts finding peer-to-peer file sharing systems to infringe copyright owners' rights, many subsequent innovators and investors shunned the technological field altogether).

counterparts.⁴⁹ As a result, they may not only more willingly take on greater risks in pursuit of their creative activities, but they may also prefer the riskier nature of intellectual property entitlements to more certain rewards such as salaries and grants.⁵⁰ Hence, while many rational actors facing intellectual property risks may shun them in favor of a safer approach, innovative parties at times embrace those risks, whether rationally or irrationally, in pursuit of some creative enterprise and the greater opportunities associated therewith. Or in other cases, they may simply be ignorant of the risks, allowing them (at least for a time) to blissfully pursue commercial opportunities largely unaware of the circling sharks. The following sections explore two settings where creative parties may often take on, rather than shun, significant intellectual property risks.

A. *Early-Stage Companies*

One important group of risk takers is early-stage companies. Early-stage companies may take on risk more frequently than others for a number of reasons. One is that for many early-stage companies, risk is part of their identity.⁵¹ The very reason many parties found start-up companies, after all, is to venture into some uncharted territory in pursuit of greater economic returns.⁵² Hence, while risk may certainly affect how they go about pursuing those returns, including by way of efforts to reduce the risks, for entrepreneurs risk-taking is, in some sense, “part of the game.”⁵³

This risk-taking may often be rational, in the sense that the founders have taken into account the risks, calculated their chances of success, and

49. Sawicki, *supra* note 15.

50. *Id.*

51. See Sari Pekkala Kerr et al., *Personality Traits of Entrepreneurs: A Review of Recent Literature* 1 (Harv. Bus. Sch., Working Paper No. 18-047, 2017) (discussing attitudes towards risk as one possible means of identifying entrepreneurs, though suggesting that the literature on this topic is far from conclusive).

52. Craig Bloem, *Starting a Business Is Risky. Here’s How to Determine if That Risk Outweighs the Reward*, INC. (Apr. 29, 2019), <https://www.inc.com/craig-bloem/starting-a-business-is-risky-heres-how-to-determine-if-that-risk-outweighs-reward.html> [<https://perma.cc/A464-8N2X>] (discussing research showing that successful startup founders were often those willing to take on “tremendous uncertainty” in pursuit of significant economic rewards).

53. Paul B. Brown, *Why Entrepreneurs Are the Most Risk-Averse People on the Planet*, INC. (May 28, 2014), <https://www.inc.com/paul-brown/entrepreneurs-most-risk-averse-people-on-the-planet.html> [<https://perma.cc/UKQ4-5PN2>] (arguing that entrepreneurs are actually typically risk-averse in the sense that they work extremely hard to minimize risk, all the while accepting risk “as part of the game.”).

chosen to roll the dice.⁵⁴ Or it may often be irrational, in the sense that the company's founders lack sufficient information to accurately assess their chances of success, but choose to proceed anyway.⁵⁵ Either way, their entrepreneurial outlook is a key factor pushing them to make the bet.

In fact, in many cases start-up companies may be willing to take on more risk than others because their founders simply don't always accurately recognize the risks that they face.⁵⁶ This inability to see or appreciate risks may simply be part of the entrepreneurial personality.⁵⁷ For instance, some evidence suggests that start-up founders perceive less risk than is typical due to cognitive biases relating to overconfidence, illusions of control, and beliefs in the law of small numbers.⁵⁸ Hence, it may not always be the case that, subjectively, entrepreneurial types are greater risk takers than others. But objectively, they may often take on greater risks than others because cognitive biases inhibit their ability to accurately assess their chances of success. Hence, those biases may often propel them forward in pursuit of their commercial goals, regardless of whether doing so is rational or not.

In other cases, early-stage companies are able to stomach the relevant risks because there simply isn't much risk to swallow. Put differently, many early-stage companies' limited resources and market exposure make them less of a target to intellectual property owners (at least early on). For instance, intellectual property owners may often find it makes little economic sense to sue early stage companies because, at that early stage of market entry, so little money is in play.⁵⁹ In many cases, it is only later, when the stakes are higher, that litigation makes economic sense. Of course, this is not always true—sometimes suing a start-up may be the

54. For a discussion of how law firms and venture capitalists often help startup companies mediate such risks, see Mark C. Suchman, *On Advice of Counsel: Law Firms and Venture Capital Funds as Information Intermediaries in the Structuration of Silicon Valley* (1994) (Ph.D. thesis, Stanford University) (on file with Stanford Law Libraries, University of Stanford).

55. See KNIGHT, *supra* note 1.

56. L.E. Palich & D.R. Bagby, *Using Cognitive Theory to Explain Entrepreneurial Risk-Taking: Challenging Conventional Wisdom*, 10 J. BUS. VENTURING 425 (1995).

57. James Carland III et al., *Risk Taking Propensity Among Entrepreneurs, Small Business Owners and Managers*, 7 J. BUS. & ENTREPRENEURSHIP 15 (1995) (finding that entrepreneurs are more likely than others to take on risk).

58. See SIMON C. PARKER, *THE ECONOMICS OF ENTREPRENEURSHIP* 185–86 (2018) (discussing psychology literature providing reasons why entrepreneurs may be particularly subject to overconfidence biases); Simon, *supra* note 24 (discussing some of the same biases).

59. See Tim Molino, *If Your Startup Really Is Disruptive, Expect to Be Sued by a Patent Troll*, ENTREPRENEUR (Aug. 4, 2017), <https://www.entrepreneur.com/article/296625> [<https://perma.cc/ZVF9-46TR>] (discussing how disruptive startups are often the targets of lawsuits, with the implication being that other startups may often be less clear targets).

best option for stopping the competition in its tracks.⁶⁰ And owners of intellectual property who don't practice their rights, but sue others that do—often referred to as *trolls*—frequently target start-ups for a quick buck.⁶¹ Nevertheless, for many intellectual property owners suing start-ups simply makes little economic sense, so that start-ups in some (though certainly not all) respects simply face fewer intellectual property risks.

Finally, start-ups may often take on more risks than others because their founders are ignorant of the risks that they face. This ignorance is different than the biases discussed above; in these scenarios, early-stage companies may take on risks simply because they don't perceive them, not because their biases lead them to underestimate or dismiss those risks. One common reason for such ignorance is that start-up companies often have less access to lawyers and others whose job it is to identify those risks for them.⁶² Lacking that sophistication, many start-ups thus stumble their way through commercial terrain fraught with plausible perils, but which they simply don't see. And in many cases, the doomsday scenarios that lawyers are adept at articulating simply don't materialize, meaning that the start-up company is able to forge ahead in blissful ignorance of the hazards they never saw. In the end, it may have been rational or irrational to take on the risks that they did. Either way, they have their ignorance to thank (or blame).

Of course, these generalities certainly don't apply to all early-stage companies. Not all start-ups take on significant risks, and not all entrepreneurs experience the same cognitive biases in favor of risk-taking.⁶³ Some, in fact, have biases pushing them away from risk.⁶⁴ Indeed, the culture of risk taking that I have described in this section may mostly apply to a particular breed of start-up—the Silicon Valley start-

60. *Id.*

61. Nathaniel Borenstein, *More Patent Trolls Are Targeting Startups. Here's What You Can Do*, ENTREPRENEUR (Apr. 10, 2018), <https://www.entrepreneur.com/article/310648> [<https://perma.cc/9JU7-PLMC>].

62. Anne Fisher, *Starting a Company? Don't Hire a Cheap Lawyer*, FORTUNE (May 23, 2016), <https://fortune.com/2016/05/23/starting-a-company-dont-hire-a-cheap-lawyer/> [<https://perma.cc/2CFR-ZXMV>] (“[M]any company founders think they don't need a lawyer at all.”).

63. Ju-min Park & Hyunjoo Jin, *No Uber or Airbnb in South Korea – Red Tape, Risk-Aversion Hobble Start-Ups*, REUTERS (Dec. 17, 2018), <https://uk.reuters.com/article/uk-southkorea-startups-insight/no-uber-or-airbnb-in-south-korea-red-tape-risk-aversion-hobble-start-ups-idUKKBN1OG2GV> [<https://perma.cc/MQ2D-P4LT>].

64. See, e.g., Gennaro Bernile, *What Doesn't Kill You Will Only Make You More Risk-Loving: Early-Life Disasters and CEO Behavior*, 72 J. FIN. 167 (2017) (discussing research showing that CEOs who experienced the extreme downsides of early-life disasters were more reluctant to take on risks than CEOs who had experienced traumatic events without extremely negative consequences).

up—whereas start-ups from other regions may frequently exhibit quite different behaviors.⁶⁵

Furthermore, according to a growing body of research, the start-up world has become increasingly more risk-averse, as an uncertain economic environment pushes venture capitalists and other funders to mostly place safe bets where high returns in relatively short order are more likely.⁶⁶ That kind of straightjacket can certainly push start-up companies out of uncertain endeavors into less risky waters.⁶⁷ And as investors exercise ever greater control over their funded companies, they are more likely to discipline the companies so as to avoid significant risks, including those relating to intellectual property rights.⁶⁸

But investor demands for significant returns can also push companies to seek out ever greater risks in hopes of hitting the jackpot.⁶⁹ “No risk, no reward” may sound trite, but it is a common motif in the start-up world for a reason.⁷⁰ Furthermore, it is also simply the case that many start-ups lack traditional forms of investor backing, and thus some of the

65. For a discussion of how law firms and venture capitalists often help Northern California startups navigate and overcome a variety of risks, see Mark. C. Suchman & Mia L. Cahill, *The Hired Gun as Facilitator: Lawyers and the Suppression of Business Disputes in Silicon Valley*, 21 L. & SOC. INQUIRY 679 (1996).

66. See generally Julius Krein, *Taking Stock of Venture Capital*, AM. CONSERVATIVE (May 27, 2019), <https://www.theamericanconservative.com/articles/taking-stock-of-venture-capital/> [<https://perma.cc/3U5Q-LXPT>] (reviewing recent research showing that venture capitalists tend to invest conservatively and in certain sectors that more readily allow for quick, large returns); Erin Griffith, *More Start-Ups have an Unfamiliar Message for Venture Capitalists: Get Lost*, N.Y. TIMES (Jan. 11, 2019), <https://www.nytimes.com/2019/01/11/technology/start-ups-rejecting-venture-capital.html> [<https://perma.cc/EB5J-3Y4J>] (discussing a recent phenomenon where startups are more frequently declining venture capital because their pressures to grow faster than is healthy can effectively kill the startup’s business in the long run).

67. Brendan Coffey, *Venture Capitalists Become Risk Averse*, FORTUNE (Oct. 20, 2011), <https://fortune.com/2011/10/20/venture-capitalists-become-risk-averse/> [<https://perma.cc/58PQ-Y5Q5>] (discussing the trend of venture capitalists increasingly investing in less risky ventures).

68. See, e.g., Richard Harroch, *A Guide to Venture Capital Financings for Startups*, FORBES (Mar. 29, 2018), <https://www.forbes.com/sites/allbusiness/2018/03/29/a-guide-to-venture-capital-financings-for-startups/#41476f9951c9> [<https://perma.cc/XY7K-CWZU>] (discussing some of the types of controls over funded companies venture capitalists often seek).

69. See Ranjay Gulati & Alicia DeSantola, *Start-Ups That Last*, HARV. BUS. REV. (Mar. 2016), <https://hbr.org/2016/03/start-ups-that-last> [<https://perma.cc/L5YH-MTRZ>] (discussing how many startups have difficulty growing as quickly as funders demand because they fail to successfully scale their businesses, which can include seeking “different avenues for growth,” including “developing new products or services, entering new markets, or engaging in other forms of innovation.”).

70. Martin Zwilling, *10 Calculated Risks That Lead to Startup Success*, FORBES (Aug. 27, 2014), <https://www.forbes.com/sites/martinzwilling/2014/08/27/10-startup-calculated-risks-that-lead-to-success/#128149e870fc> [<https://perma.cc/FC3V-MSM7>] (discussing this perception in the startup world).

concomitant control (and identification of risk) as well.⁷¹ While this may mean that they have fewer resources at their disposal (and thus face significant risks of failing for want of funds), it also means that they have greater liberty to take on risks, including intellectual property risks, in charting their own rational, irrational, or ignorant paths.

B. Early-Stage Companies' Effects on IP Law

Examining intellectual property case law provides evidence in support of the argument that early-stage companies are often willing to take on significant intellectual property related risks in pursuit of commercial opportunities. Indeed, intellectual property case law is littered with examples of early-stage companies taking on significant intellectual property risks in pursuit of innovation.⁷² And as these early-stage companies have pursued innovation and thrown caution to the wind, they have helped define important intellectual property law doctrines.

Of course, these cases are anecdotal and don't represent a scientific sampling that proves the point that early-stage companies are more willing than others to take on intellectual property risks. But they do provide some substantiation of the intuitions discussed above as to why early-stage companies may frequently take on risks in pursuit of commercial opportunities.

One example of this dynamic lies in the innovative efforts of many early-stage companies in shaping the contours of copyright law's fair use defense. Fair use is copyright law's most important defense to claims of copyright infringement; largely based on a four-factor statutory test, it provides courts with leeway to allow an otherwise infringing use that they deem encourages, rather than discourages, overall creative activity.⁷³ For instance, if someone parodies a copyrighted work, and that parody makes use of copyrighted expression from the work, a judge may allow use of that expression on the basis of fair use.⁷⁴ Or if some technology provider's device enables innovative uses of copyrighted works, a court may deem

71. See, e.g., Cherly Contee, *Advice on Launching a Tech Startup When You're Not a White Man*, HARV. BUS. REV. (Oct. 8, 2019), <https://hbr.org/2019/10/advice-on-launching-a-tech-startup-when-youre-not-a-white-man> [<https://perma.cc/WNQ2-4HPD>] (discussing different strategies for obtaining non-traditional investor backing when entrepreneurs come from non-traditional backgrounds).

72. For an overview of some of this case law as it relates to search engines, see Urs Gasser, *Regulating Search Engines: Taking Stock and Looking Ahead*, 8 YALE J.L. & TECH. 201 (2006).

73. MARSHALL A. LEAFFER, UNDERSTANDING COPYRIGHT LAW 495 (6th ed. 2014) (indicating that fair use is "by far the most important defense to an action for copyright infringement.").

74. *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 580–81 (1994) (suggesting that a parody of Roy Orbison's song, "Pretty Woman," constitutes a fair use).

those innovative uses to be fair largely because they do not harm the copyrighted works' market.⁷⁵

The fair use doctrine is also one of the focal points of Gibson's analysis. In his article, he argues that the licensing behaviors of risk-averse parties may heavily influence courts' assessments of factor four of the fair use inquiry. This factor, traditionally one of the most important components of the fair use test, looks to a use's impact on the copyrighted work's market.⁷⁶ Gibson argues that risk-averse parties regularly taking unnecessary licenses means that, over time, factor four will more frequently weigh in favor of copyright owners. Hence, the scope of fair use will gradually shrink because the licensing behavior of risk-averse parties means that courts will view the failure to take a license as negatively impacting copyright owners' markets.

Yet despite this prediction, early-stage companies have regularly defended their innovative uses of copyrighted materials as fair uses—and in some cases won—thereby helping push fair use into new territory. One clear example relates to the early history of the Internet search engine industry. Start-up search engine companies faced an early crisis when copyright owners claimed that those search engines, by copying and displaying portions of their copyrighted works in response to search queries, infringed their copyright rights.⁷⁷ Several important innovators in the search space, including a younger Google, thus faced the possibility of significant liability by pursuing their innovative activities. The risks were immense, but the rewards were too.

Hence, rather than caving to the copyright owners' demands, early search engine companies fought back. One of these, Arriba Soft Corporation, defended its product in response to a commercial photographer suing it for copyright infringement, claiming that its uses of the copyrighted materials as part of search results constituted a fair use of them.⁷⁸ The district court sided with Arriba, finding that both the company's display of thumbnail versions of the photos and its in-line and

75. *Sony Corp. v. Universal City Studios, Inc.*, 464 U.S. 417 (1984) (finding time-shifting copyrighted works using VCRs to constitute a fair use).

76. *See, e.g.,* Barton Beebe, *An Empirical Study of U.S. Copyright Fair Use Opinions, 1978–2005*, 156 U. PA. L. REV. 549 (2008) (finding that factor four outcomes strongly correlate with overall fair use outcomes, though noting that factor four seems to largely function as a space where courts summarize their discussions of the other factors).

77. For some background on these cases and their outcomes, see Robin Jeweler & Brian Yeh, *Internet Search Engines: Copyright's "Fair Use" in Reproduction and Public Display Rights*, CONG. RES. SERV. (Jan 28, 2008), https://www.everycrsreport.com/files/20080128_RL33810_96be5282f0051cf8635f644cb7df46880c65b571.pdf [<https://perma.cc/KWS3-4HVG>].

78. *Kelly v. Arriba Soft Corp.*, 336 F.3d 811, 816 (9th Cir. 2003).

framing links to the full-sized versions constituted fair use.⁷⁹ The photographer appealed to the U.S. Court of Appeals for the Ninth Circuit (Ninth Circuit), which also sided with Arriba on the thumbnail issue.⁸⁰ On the in-line linking and framing of the full-sized photos issue, the Ninth Circuit reversed the district court, finding that the court should not have decided the issue because the parties had not adequately raised it.⁸¹ Hence, though outstanding issues remained, Arriba's risky pushback against the claims of copyright owners helped begin to shape the fair use doctrine's application to an increasingly important technological field.

Soon thereafter, the activities of another early-stage Internet search company, Google, would help resolve some of these outstanding questions. Based upon an early iteration of its search engine service, Google began receiving cease and desist letters from copyright owners as early as 2001, well before the company went public in 2004.⁸² Again, copyright owners claimed that Google's search results infringed their copyright rights in a number of ways. But like Arriba, Google took on the associated intellectual property risks by fighting back against these claims.

In one case, filed months before Google went public, the copyright holder claimed that by making available "cached" copies of his copyrighted works, Google's search service infringed upon his reproduction and distribution rights.⁸³ But the court found, among other things, that Google's uses were fair, in large part because its search engine served different and socially important purposes that failed to harm the copyright owner economically.⁸⁴

In another case involving Google around the same time period, the Ninth Circuit revisited some of the issues that had come up during the earlier *Arriba* case. Specifically, the plaintiff in *Perfect 10 v. Amazon.com* argued that Google's use of thumbnail versions of its copyrighted works, as well as its linking to and framing of full-sized versions of the works, infringed upon the copyright owner's public display and distribution rights.⁸⁵ At the district court level, Google lost on the thumbnail issue.⁸⁶ But Google appealed its loss to the Ninth Circuit. As in Arriba's case, the Ninth Circuit ultimately deemed that the company's display of thumbnail

79. *Id.* at 816–17.

80. *Id.* at 817–22.

81. Jeweler & Yeh, *supra* note 77, at 2.

82. *Perfect 10, Inc. v. Amazon.com, Inc.*, 508 F.3d 1146, 1157 (9th Cir. 2007).

83. *Field v. Google Inc.*, 412 F. Supp. 2d 1106 (D. Nev. 2006).

84. *Id.* at 1118–22.

85. *Perfect 10, Inc. v. Amazon.com, Inc.*, 508 F.3d 1146, 1159 (9th Cir. 2007).

86. *Id.* at 1587.

versions of copyrighted images in response to search queries constituted fair use.⁸⁷ The Court also found that Google's in-line linking and framing of the full-sized photos did not infringe upon any of the copyright holder's rights.⁸⁸ Thus, Google's risky bets not only ultimately paid off in the billions of dollars,⁸⁹ but also significantly helped shape copyright's fair use doctrine as applied to developing technological environments.⁹⁰

Early-stage gaming companies have also helped shape the boundaries of the fair use defense through their risk-taking activities. In the late 1980s and early 1990s, for instance, Accolade, an early-stage game developer, wished to make its games available for use on the Sega gaming console.⁹¹ But Sega required third-party game developers to sign a restrictive licensing agreement to do so.⁹² Instead of signing that agreement, Accolade reverse-engineered Sega's technology to discover how to make its games compatible with Sega's console.⁹³ In so doing, the company necessarily copied the Sega console's software, and Sega sued Accolade for copyright infringement.⁹⁴ On the copyright infringement issue, Accolade lost at the district court level.⁹⁵ But instead of caving in and signing the licensing requirement, the company appealed its loss.⁹⁶ The Ninth Circuit ultimately found that Accolade's use of Sega's software constituted fair use, in an opinion that some have lauded as important foundational fair use case law.⁹⁷

In the late 1990s and early 2000s, another gaming start-up, Connectix, similarly took on significant intellectual property risks in pursuing its innovative activities.⁹⁸ The company developed emulation software that enabled Mac users to play Sony PlayStation games on their

87. *Id.* at 1163–68.

88. *Id.* at 1161.

89. Jillian D'Onfro, *Here's How Much You Would Have Made If You'd Invested in Google at Its IPO*, BUS. INSIDER (Aug. 19, 2016), <https://www.businessinsider.com/google-ipo-how-much-would-you-have-made-2016-8> [<https://perma.cc/5BDB-SBGP>] (discussing the rise of Google's value).

90. For more about fair use as applied to technological environments, see Edward Lee, *Technological Fair Use*, 83 S. CAL. L. REV. 797 (2010).

91. *Sega Enter. Ltd. v. Accolade, Inc.*, 977 F.2d 1510, 514 (9th Cir. 1992).

92. *Id.*

93. *Id.* at 1514–15.

94. *Id.* at 1516.

95. *Id.* at 1517.

96. *Sega Enter. Ltd. v. Accolade, Inc.*, 977 F.2d 1510 (9th Cir. 1992).

97. Peter S. Menell, *Rise of the API Copyright Dead?: An Updated Epitaph for Copyright Protection of Network and Functional Features of Computer Software*, 31 HARV. J.L. & TECH. 305, 333–34 (2018).

98. *Sony Comput. Enter., Inc. v. Connectix Corp.*, 203 F.3d 596 (9th Cir. 2000).

Mac hardware devices.⁹⁹ In creating this emulation software, though, Connectix necessarily copied the PlayStation's firmware in order to study and replicate its functionality.¹⁰⁰ Sony ultimately sued and won at the district court level.¹⁰¹ The district court sided with Sony largely because it viewed Connectix's emulation software as an economic substitute for Sony's gaming console.¹⁰² But like *Accolade*, Connectix pressed on, appealing the decision.¹⁰³ Again, the Ninth Circuit ultimately sided with Connectix, finding that its use of the copyrighted software constituted fair use.¹⁰⁴ Among other bases for this decision, the court found that the emulation software was transformative and thus did not simply substitute for Sony's products, even if it was commercially competitive with them.¹⁰⁵

Similar to *Accolade*, Connectix's risk-taking activities thus resulted in a precedential fair use decision that helped adapt the fair use doctrine to an evolving technological landscape. And the company's efforts undoubtedly helped shape the law beyond what a more risk-averse approach would have yielded. Indeed, rather than excessive contraction, some now worry that these types of decisions have rendered the fair use defense overly expansive.¹⁰⁶

The innovative, risk-taking efforts of early-stage companies have helped courts answer other important copyright-related questions as well. And unquestioningly, those risky exploits have pushed the boundaries of copyright laws beyond what pervasive risk-averse behavior would have. For instance, before Google acquired it, YouTube was another example of an early-stage company facing significant intellectual property related risk because of its video-sharing website. The site in its early days was notorious for hosting copyrighted content without explicit permission from copyright owners.¹⁰⁷ The founders even seemed to encourage users

99. *Id.* at 599.

100. *Id.* at 601.

101. *Id.* at 601–02.

102. *Sony Comput. Enter. Inc. v. Connectix Corp.*, 48 F. Supp. 2d 1212, 1220 (N.D. Ca. 1999).

103. *Sony Computer Enter., Inc.*, 203 F.3d at 602.

104. *Id.* at 602–08.

105. *Id.* at 606–07.

106. See Rebecca Cusey, *Oracle v. Google: Expansive Fair Use Harms Creators*, CPIP (Feb. 23, 2017), <https://cpip.gmu.edu/2017/02/23/oracle-v-google-expansive-fair-use-harms-creators/> [<https://perma.cc/P6PM-B265>] (arguing that fair use has expanded far beyond its purpose).

107. Jeff Atwood, *YouTube: The Big Copyright Lie*, CODING HORROR (Oct. 7, 2007), <https://blog.codinghorror.com/youtube-the-big-copyright-lie/> [<https://perma.cc/D5MB-UPPP>].

to upload copyrighted content, in some cases posting such content to the site themselves.¹⁰⁸

The company's saving grace turned out to be a provision in the Digital Millennium Copyright Act (DMCA) that shielded website owners from liability if the site's users, rather than the owners of the site itself, posted infringing content to the site.¹⁰⁹ Of course, the DMCA's safe harbor only applied so long as the site owners satisfied certain conditions, including lacking actual and so-called *red-flag* knowledge about infringing content on the site.¹¹⁰ At the time the YouTube founders took on these intellectual property risks, the meaning of these parts of the DMCA were still unclear, as courts had not yet interpreted them much.¹¹¹ Hence, YouTube could have been on the hook for significant liabilities, including remedies under both the DMCA and copyright law, if courts interpreted the DMCA and copyright law in a way unfavorable to them. Yet the possibility of winning big seems to have motivated the company to push forward in spite of those significant risks. And ultimately, their risk-taking proved lucrative—to the tune of billions of dollars—as courts interpreted the DMCA in the company's favor.¹¹² That risk-taking also helped shape the relevant copyright law and DMCA provisions in expansive ways.¹¹³

Of course, the risks involved may have been one of the primary reasons behind why YouTube chose to sell itself to Google.¹¹⁴ Google had

108. Ryan Lawler, *Viacom: Google, YouTube Founders Willfully Ignored Infringement*, GIGAOM (Mar. 18, 2010), <https://gigaom.com/2010/03/18/viacom-google-youtube-founders-willfully-ignored-infringement/> [<https://perma.cc/NBL9-JV7E>] (discussing these issues).

109. For some discussion of the DMCA's safe harbors and how they work, see Jeremy Malcolm, *Time to Rethink Copyright Safe Harbors? 2017 in Review*, ELEC. FRONTIER FOUND. (Dec. 30, 2017), <https://www.eff.org/deeplinks/2017/12/time-rethink-copyright-safe-harbors-2017-review> [<https://perma.cc/T57L-4PJA>].

110. See Mitchell Zimmerman, *Safe Harbors Questions Answered DMCA*, FENWICK & WEST (2017), <https://www.fenwick.com/FenwickDocuments/DMCA-QA.pdf> [<https://perma.cc/B8MX-YJVH>] (providing an overview of the DMCA's safe harbors).

111. See, e.g., Mary E. Rasenberger, *Viacom v. YouTube/Google: How Red Must a Red Flag Be?*, CDAS (Dec. 22, 2011), <https://cdas.com/viacom-v-youtubegoogle-how-red-must-a-red-flag-be/> [<https://perma.cc/PD6T-9EFJ>] (discussing the DMCA's red flag provisions as an area of unsettled law as of 2011, well after YouTube had launched its video hosting service).

112. *YouTube Wins Case Against Viacom (Again)*, YOUTUBE BLOG (Apr. 18, 2013), <https://youtube.googleblog.com/2013/04/youtube-wins-case-against-viacom-again.html> [<https://perma.cc/7FLN-2M62>] (detailing YouTube's legal victories).

113. Meaghan H. Kent & Martin L. Saad, *DMCA Safe Harbor Upheld for YouTube Once Again in Viacom v. YouTube*, VENABLE LLC (Apr. 25, 2013), <https://www.venable.com/insights/publications/2013/04/dmca-safe-harbor-upheld-for-youtube-once-again-in> [<https://perma.cc/4HLB-DN67>].

114. Victor Luckerson, *A Decade Ago, Google Bought YouTube – And It Was the Best Tech Deal Ever*, THE RINGER (Oct. 10, 2016), <https://www.theringer.com/2016/10/10/16042354/google->

the resources to defend the site in court, whereas YouTube, on its own, would face greater obstacles on that front. Nonetheless, YouTube took on those risks, whether rationally, irrationally, or ignorantly, without any guarantee of Google arriving as its knight in shining armor. And in doing so, it set the stage for important case law relating to the DMCA's meaning.

Other entrepreneurial activity has helped expand the boundaries of copyright law's first-sale doctrine. This doctrine exempts parties from copyright liability when they distribute copies of copyrighted materials that they own.¹¹⁵ For instance, the doctrine allows book owners to give away their copies of the books to others without infringing a copyright owner's distribution right, and it allows used bookstores to further distribute copies of works they've lawfully obtained without liability. In a recent Supreme Court case, the Court found that the first-sale doctrine has no geographical limitations—once an authorized sale of a copy of a work is made anywhere in the world, the copyright owner no longer has an ability to stop further distributions of that particular copy.¹¹⁶

This ruling's genesis owes to the entrepreneurial activities of a California PhD student who decided to help fund his studies through economic arbitrage.¹¹⁷ The student, Supap Kirtsaeng, had his family and friends in Thailand purchase books there, where the books were priced relatively cheaply, and then ship them to him in California.¹¹⁸ Kirtsaeng then sold those books in the U.S. at the much higher U.S. prices, thereby making profits based on the price differences between the Thailand and U.S. versions of the books.¹¹⁹ In ruling that his purchase of the books in Thailand exhausted the copyright owner's distribution rights, the Court not only validated Kirtsaeng's risky venture, but also helped clarify the boundaries of copyright's first-sale doctrine in a way that more risk-averse behavior would have never occasioned.

Outside of copyright, early-stage companies have also pushed the boundaries of trademark law in pursuing their innovative activities. Similar to its effects on copyright, risk-averse licensing behavior can result in trademark entitlements expanding over time. For instance, one

youtube-acquisition-10-years-tech-deals-69fdbelc8a06 [https://perma.cc/J5UG-UH8L] (noting that some at the time of the acquisition believed Google was "crazy" to take on YouTube's legal liabilities).

115. For an overview of the doctrine, see Guy A. Rub, *Rebalancing Copyright Exhaustion*, 64 EMORY L.J. 741 (2015).

116. Clark D. Asay, *Kirtsaeng and the First-Sale Doctrine's Digital Problem*, 66 STAN. L. REV. 17 (2013) (discussing the case).

117. *Id.*

118. *Kirtsaeng v. John Wiley & Sons, Inc.*, 568 U.S. 519, 527 (2013).

119. *Id.*

important form of trademark infringement occurs when consumers are confused that a third party's use of a mark suggests that the trademark owner sponsors or approves of the use.¹²⁰ In order to avoid a finding of infringement, risk-averse users frequently preemptively obtain licenses for their uses (or stop the use altogether), even when the law wouldn't actually require them to do so if they were to fully litigate the issue.¹²¹ Ultimately, as ever more parties seek out such licenses or stop using third-party marks, consumers grow savvy to licensing practices and come to believe that licenses are the norm and even required.¹²² Hence, when an unlicensed use occurs, consumers are likely to believe that the use is, in fact, sponsored and licensed, resulting in consumer confusion.¹²³ Widespread, risk-averse licensing and lack of use therefore means that trademark rights have effectively grown.

Despite these possibilities and even some evidence of this type of behavior occurring, other evidence also shows early-stage companies frequently taking on trademark-related risks in pursuit of technological innovation. Early search engines, discussed above in the copyright context, are also a good example of early-stage companies taking on significant trademark-related risks in helping shape certain trademark doctrines as applied to new technologies. Trademark owners brought claims against early search engines on a number of bases, including the search engines' use of trademarks in generating advertising.¹²⁴ But early search engine companies fought back, and largely prevailed in the courts, despite an increasing number of lawsuits as the industry exploded.¹²⁵ Hence, rather than caving to trademark-related risks, early search engine companies took those risks on. And in doing so, they helped shape important trademark doctrines as applied in new technological environments.

Of course, not all risk-taking start-up companies are as fortunate as the ones discussed above. At the turn of the century, Napster and other peer-to-peer file sharing networks crashed and burned in several high-

120. *About Trademark Infringement*, U.S. PATENT & TRADEMARK OFFICE, <https://www.uspto.gov/page/about-trademark-infringement> [https://perma.cc/QPL4-BFUJ] (discussing the basics of trademark infringement).

121. See also Jessica M. Kiser, *To Bully or Not to Bully: Understanding the Role of Uncertainty in Trademark Enforcement Decisions*, 37 COLUM. J.L. & ARTS 211 (2014) (discussing "trademark bullies," who use the high costs of litigation as one means by which to force third parties to stop using their trademarks).

122. Gibson, *supra* note 5.

123. *Id.*

124. Gasser, *supra* note 72, at 210.

125. *Id.* (reviewing this early history and the lawsuits during that period).

profile copyright litigations.¹²⁶ More recently, ReDigi, which sought to introduce an online marketplace for second-hand digital music, lost its bid to have copyright law's first-sale doctrine apply in the digital space.¹²⁷ And in 2014, the Supreme Court found that Aereo, a start-up company that sought to allow its users to view over-the-air television programs on Internet-connected devices, impermissibly infringed on copyright owners' public performance rights.¹²⁸ These are only some of the many situations in which early-stage companies failed to overcome intellectual property related hurdles.¹²⁹

Yet despite their court losses, these early-stage companies provide further evidence of start-ups being willing to take on significant risks in pursuit of greater economic returns. It just so happens that unlike their more fortunate peers, they ended up losing their bid. But the point remains that start-up companies are not only important actors in helping push technological progress forward, but also in helping shape intellectual property doctrines as they take on risks that ultimately help determine the contours of those doctrines. Their risk-taking behavior thus helps push back against the more risk-averse, in some sense rational, behavior of many parties in response to intellectual property-related risks.

Of course, it is impossible to say to what extent early-stage companies' risky exploits balance intellectual property law doctrines. It may be the case that, overall, intellectual property entitlements continue to grow, in part due to the risk-averting behavior of other actors in the marketplace.¹³⁰ Furthermore, as mentioned above, the evidence that I have highlighted is certainly anecdotal; it remains difficult to say how frequently early-stage companies embrace rather than shun risk.

126. For background on these cases, see generally Bryan H. Choi, *The Grokster Dead-End*, 19 HARV. J.L. & TECH. 393 (2006).

127. Porter Wells, *Capitol Records, Virgin Records Win Copyright Spat with ReDigi (1)*, BLOOMBERG L. (Dec. 12, 2018), <https://news.bloomberglaw.com/ip-law/capitol-records-virgin-records-win-copyright-spat-with-redigi-1> [<https://perma.cc/EJ8M-K56F>].

128. For a summary, see Adam Liptak & Emily Steel, *Aereo Loses at Supreme Court, in Victory for TV Broadcasters*, N.Y. TIMES (June 25, 2014), <https://www.nytimes.com/2014/06/26/business/media/supreme-court-rules-against-aereo-in-broadcasters-challenge.html> [<https://perma.cc/GRX9-7E29>].

129. See, e.g., Charles Duhigg & Steve Lohr, *The Patent, Used as a Sword*, N.Y. TIMES (Oct. 7, 2012), <https://www.nytimes.com/2012/10/08/technology/patent-wars-among-tech-giants-can-stifle-competition.html> [<https://perma.cc/62M4-AQD3>] (discussing how increasing patent litigation may stifle many startup companies' ability to compete and innovate).

130. See, e.g., Ann Bartow, *Likelihood of Confusion*, 41 SAN DIEGO L. REV. 721, 723–24 (2004) (arguing that “trademarks [are] normatively stronger, broader, and ever easier to ‘protect’ for mark holders.”); See, e.g., Jessica Litman, *Breakfast with Batman: The Public Interest in the Advertising Age*, 108 YALE L.J. 1717, 1721–25 (1999) (describing increases in actionable confusion within trademark law).

Nonetheless, the examples discussed above provide some evidence that the risk-taking behaviors of many early-stage companies provide an important check on intellectual property rights accretion. And if we believe that achieving balance in our intellectual property doctrines is an important goal, it seems prudent to ensure an environment that promotes the formation of early-stage companies willing to take on risks in pursuit of commercial opportunities. Part IV below provides some initial thoughts on how that might best be achieved.

C. *Late-Stage Companies*

Early-stage companies are not the only parties that take on intellectual property risks in the marketplace. Large incumbents may also seek out intellectual property risks in pursuit of greater economic returns. Consequently, they also help shape intellectual property laws and counterbalance the effects on intellectual property doctrines of more risk-averse actors' behavior. While large companies may not seek out such risks as frequently as early stage companies,¹³¹ situations do arise when they deem that the risks are worth taking.

Large companies may be more prone to risk-aversion than early-stage companies for a number of reasons. A primary reason is bureaucracy. As companies grow larger, they tend to add more teams (and mid-level managers to lead those teams) to address a host of issues, including marketing, legal, and regulatory questions.¹³² As one commentator put it, bureaucracy is the "necessary outcome of complex businesses operating in complex international and regulatory environments."¹³³

But the resulting bureaucracy often makes building a consensus on decisions increasingly difficult.¹³⁴ Quite often, the result is safe decisions

131. See Brian K. Krumm, *University Technology Transfer – Profits Centers or Black Holes: Moving Toward a More Productive University Innovation Ecosystem Policy*, 14 NW. J. TECH. & INTELL. PROP. 171, 177 (2016) (discussing studies claiming that larger companies are typically more risk-averse and less innovative than smaller companies).

132. Gary Hanel & Michele Zanini, *The End of Bureaucracy*, HARV. BUS. R. (Nov.–Dec. 2018), <https://hbr.org/2018/11/the-end-of-bureaucracy> [<https://perma.cc/E4X9-T9V3>].

133. *Id.*

134. For a discussion of how building consensus can slow innovation, see Maxwell Wessel, *The Most Innovative Companies Don't Worry About Consensus*, HARV. BUS. REV. (Oct. 3, 2014), <https://hbr.org/2014/10/the-most-innovative-companies-dont-worry-about-consensus> [<https://perma.cc/Y6AN-U472>].

rather than bold, innovative ones.¹³⁵ Hence, a form of excessive rationality often takes hold in large companies, meaning that daring forays into the unknown are frequently out of the question. Indeed, often a company's bureaucracy grows up around an incumbent's already proven products, and that bureaucracy focuses on squeezing as many profits as possible from those products, not pursuing bold new directions.¹³⁶ Therefore, getting new ideas through the formal bureaucracy at a large corporation can often prove difficult, if not impossible.¹³⁷

Thus, in large companies, irrational, ignorant, or even rational risk-taking is often less likely than in early-stage enterprises. Teams of lawyers and others work to identify and warn of risks, and multi-layered decision-making processes ensure that large companies avoid the biases and other forms of irrationality (and even some forms of rationality) that may often propel early-stage companies to take on such risks.¹³⁸ Of course, other types of biases often come into play—as discussed above, frequently those bureaucratic biases favor the status quo.¹³⁹ And often the collective wisdom of a large company turns into its own form of irrationality, because even economically rational bets are shelved in favor of the calm waters of the current state of affairs.¹⁴⁰

Historically, commentators have often pointed to Microsoft as a prime example of this type of bureaucratic risk-aversion.¹⁴¹ The company has developed a number of innovative ideas and products over the years,

135. Andrew Lark, *How Bureaucracy Kills Creativity and Innovation at Big Companies*, BUS. INSIDER (Jan. 5, 2015), <https://www.businessinsider.com.au/how-bureaucracy-kills-creativity-and-innovation-at-big-companies-2015-1> [<https://perma.cc/5TRQ-ER57>].

136. Tendayi Viki, *Why Large Companies Continue to Struggle With Innovation*, FORBES (Nov. 4, 2018), <https://www.forbes.com/sites/tendayiviki/2018/11/04/why-large-companies-continue-to-struggle-with-innovation/#3357a1a967b4> [<https://perma.cc/B8AV-GJBU>].

137. Morten T. Hansen & Julian Birkinshaw, *The Innovation Value Chain*, HARV. BUS. REV. (June 2007), <https://kfsk.se/digilitt/wp-content/uploads/sites/41/2018/03/Innovation-value-chain.pdf> [<https://perma.cc/JK2L-MLPA>] (citing one executive as saying that “If I want to get a new idea to market quickly, I take personal control of it, and I steer it through the system. If I want to kill an idea, I send it through the formal process.”).

138. Gary Hamel & Michele Zanini, *What We Learned About Bureaucracy From 7,000 HBR Readers*, HARV. BUS. R. (Aug. 10, 2017), <https://hbr.org/2017/08/what-we-learned-about-bureaucracy-from-7000-hbr-readers> [<https://perma.cc/RM4T-4CN7>].

139. *Id.*

140. *Id.*

141. Michael Clarke, *The Risks of Risk Aversion*, THE SCHOLARLY KITCHEN (Mar. 28, 2012), <https://scholarlykitchen.sspnet.org/2012/03/28/the-risks-of-risk-aversion/> [<https://perma.cc/B8EY-TC83>] (discussing Microsoft as an example of a company that has squandered many economic opportunities due to risk aversion).

only to frequently shelf those ideas in favor of sticking to its bread-and-butter: operating system software and the tools associated with it.¹⁴²

Large companies' risk-averse tendencies can also be viewed in other ways. For example, large incumbents sometimes buy innovative start-ups mostly in order to thwart the competitive threat that they represent.¹⁴³ Hence, rather than taking the start-up companies' ideas and building on them, the acquisition may often simply result in the termination of the start-up company's product roadmap.¹⁴⁴ And even in cases where large incumbents wish to utilize the acquired start-up's products in their own innovative efforts, in many cases the incumbent's bureaucracy and preexisting product roadmap end up stymying any additional development of the acquired technologies.¹⁴⁵ The ultimate result is often less intellectual property risk taking as the incumbent firm sticks to its tried-and-tested product roadmap.

Overall, this risk-averse behavior of large companies is often associated with less innovative capacity.¹⁴⁶ For instance, large companies often face greater difficulty in responding to changing market conditions or reacting as quickly as necessary to take advantage of a significant market opportunity.¹⁴⁷ And they often overemphasize conservative financial concepts in making research and development decisions that tend to favor incremental innovations rather than groundbreaking, riskier ones.¹⁴⁸ Indeed, in certain respects, large companies face greater intellectual property risks than smaller entities when they pursue new paths of innovation because of their vast resources. Large companies with significant revenues, after all, are often some of the more popular targets

142. Kurt Eichenwald, *Microsoft's Lost Decade*, VANITY FAIR (Aug. 2012), <https://www.vanityfair.com/news/business/2012/08/microsoft-lost-mojo-steve-ballmer> [<https://perma.cc/N77Z-P54V>] (discussing Microsoft's failure to innovate).

143. *American Tech Giants Are Making Life Tough for Startups*, ECONOMIST (June 2, 2018), <https://www.economist.com/business/2018/06/02/american-tech-giants-are-making-life-tough-for-startups> [<https://perma.cc/VJ7C-N2JS>].

144. *Id.*

145. Tony Greenberg, *Save the Entrepreneur: Big Business Keeps Buying Startups, and Killing 'Em*, TONY GREENBERG, <https://www.tonygreenberg.com/save-entrepreneur-big-business-keeps-buying-startups-killing-em-2/> [<https://perma.cc/JK7K-KV6Q>].

146. Richard Cuthbertson et al., *Kodak and Xerox: How High Risk Aversion Kills Companies*, in *INNOVATING IN A SERVICE-DRIVEN ECONOMY* 166–179 (2015).

147. See Martin Reeves & Mike Deimler, *Adaptability: The New Competitive Advantage*, HARV. BUS. REV. (July–Aug. 2011), <https://hbr.org/2011/07/adaptability-the-new-competitive-advantage> [<https://perma.cc/RU65-UHBH>].

148. Robert G. Cooper, *Where Are All the Breakthrough New Products?: Using Portfolio Management to Boost Innovation*, in 56 RESEARCH-TECHNOLOGY MANAGEMENT 25 (2013).

for intellectual property lawsuits.¹⁴⁹ Because of this risk, large companies often focus their efforts on incremental changes to their existing product lines rather than bold new initiatives.

Because risk aversion tends to inhibit innovation, many large companies have sought to push back against their tendency to become increasingly risk-averse.¹⁵⁰ For instance, many large companies have sought to structure themselves and their subsidiaries so as to enhance risk-taking by avoiding the pitfalls of bureaucratic bloat.¹⁵¹ In some cases, large firms that have acquired smaller companies try to retain the smaller companies' nimbleness by granting them significant autonomy in their operations.¹⁵² In other cases, firms build from the ground up semi-autonomous units in an attempt to replicate a start-up company's flexibility.¹⁵³ Large companies also often bring in entrepreneurs and consultants to help them assess how the company can avoid its innovation-killing ways.¹⁵⁴ Yet even in these types of scenarios, ultimately the large, bureaucratic mothership has significant say in what happens in the semi-autonomous units. And often that say has the same effect it has more generally—slowing down the company in its capacity to respond to every-changing market conditions, including its ability and willingness to take on significant intellectual property-related risks.

D. Late-Stage Companies' Effects on IP Law

Despite these challenges to risk-taking, large companies do sometimes take on significant intellectual property-related risks. They appear to do so when they deem that the potential benefits outweigh the costs of the activity. Hence, large companies very rarely take on risks irrationally or ignorantly in the same way that early-stage companies sometimes do; the multiple checks in place at a large company simply

149. Richard Lloyd, *The Biggest US Patent Litigation Targets See a Big Drop Off in Cases in 2016*, IAM (Jan. 13, 2017), <https://www.iam-media.com/litigation/biggest-us-patent-litigation-targets-see-big-drop-cases-2016> [<https://perma.cc/8337-3BS5>] (noting a drop-in patent litigation against large companies, while indicating that such companies are “typically among the most popular targets for licensing efforts”).

150. For a recent book on how large firms can best become innovative, see GARY PISANO, *CREATIVE CONSTRUCTION: THE DNA OF SUSTAINED INNOVATION* (2019) (arguing that large companies must approach innovation differently than startup companies).

151. Peter Lee, *Innovation and the Firm: A New Synthesis*, 70 STAN. L. REV. 1431, 1453–55 (2018).

152. *Id.*

153. *Id.*

154. Beth Altringer, *A New Model for Innovation in Big Companies*, HARV. BUS. REV. (Nov. 13, 2013), <https://hbr.org/2013/11/a-new-model-for-innovation-in-big-companies> [<https://perma.cc/HFL4-ZQ8U>].

make such irrationality or ignorance less likely. Instead, their risk-taking is typically based on a rational cost-benefit analysis. Admittedly, winning the cost-benefit argument in favor of a risky proposition at a large company can be an uphill battle, for all the reasons discussed above. But it can and does happen.

Again, Google presents a number of examples. The company officially left its early-stage phase in 2004, when it went public.¹⁵⁵ Shortly thereafter in 2005, it made the risky decision to incorporate Sun Microsystems's Java application programming interface (API) into its recently acquired Android operating system.¹⁵⁶ Prior to that decision, it had negotiated with Sun about the possibility of using the API, but the two parties never successfully completed those negotiations.¹⁵⁷ Google decided to use the API anyway, seemingly with the tacit approval of Sun's executive leadership at the time.¹⁵⁸ Despite this approval, internal documents at the time show that high-ranking Google employees believed that the company needed to license the API from Sun in order to legally use it.¹⁵⁹

Later, when Oracle acquired Sun, it also acquired rights to the Java API.¹⁶⁰ It subsequently sued Google for its use of the API in 2010, and that litigation is ongoing at the time of this writing,¹⁶¹ with the Supreme Court recently announcing that it will hear the case.¹⁶² Nonetheless, Google is poised to lose the case unless the Supreme Court decides in its

155. Lucinda Shen, *If You Bought Google at Its IPO Price, Here's How Much Richer You'd Be*, FORTUNE (Aug. 18, 2017), <https://fortune.com/2017/08/18/google-ipo-price-investment/> [https://perma.cc/56ZJ-JVMF].

156. Stephen Shankland, *Android, Java, and the Tech Behind Oracle v. Google (FAQ)*, CNET (Apr. 20, 2012), <https://www.cnet.com/news/android-java-and-the-tech-behind-oracle-v-google-faq/> [https://perma.cc/5MPF-ESKF].

157. *Id.*

158. Jon Brodtkin, *Sun Wanted Up to \$50 Million From Google for Java License, Schmidt Says*, ARS TECHNICA (Apr. 24, 2012), <https://arstechnica.com/tech-policy/2012/04/sun-wanted-up-to-50-million-from-google-for-java-license-schmidt-says/> [https://perma.cc/2A8L-Y9HL].

159. Charles Arthur, *Oracle Trial: Google Engineer Says Key Licensing Email Not About License*, THE GUARDIAN (Apr. 20, 2012), <https://www.theguardian.com/technology/2012/apr/20/oracle-google-trial-engineer-email> [https://perma.cc/85MG-8YDP].

160. Aaron Ward, *Google v. Oracle: Silicon Valley Braces for "Lawsuit of the Decade" as Google Petitions for Cert to Decide API Copyrightability*, JOLT DIGEST (Mar. 13, 2019), <http://jolt.law.harvard.edu/digest/google-v-oracle-silicon-valley-braces-for-lawsuit-of-the-decade-as-google-petitions-for-cert-to-decide-api-> [https://perma.cc/W76A-SFGJ].

161. *Id.*

162. Adam Liptak, *Supreme Court to Hear Google and Oracle Copyright Case*, N.Y. TIMES (Nov. 15, 2019), <https://www.nytimes.com/2019/11/15/us/supreme-court-google-oracle.html> [https://perma.cc/5HQQ-9C8P].

favor.¹⁶³ And losing the case may result in billions of dollars in damages.¹⁶⁴

Why would Google, in 2005 already a successful, growing company, choose to take on this intellectual property risk? Common narratives would not necessarily predict this outcome given Google's size in 2005; by then, it already had nearly 6,000 employees and was set to expand even more in the years to come.¹⁶⁵ Risk aversion arguably should have led the company to avoid the path it chose. Particularly because, according to Google executives at the time, paying a license fee for access to the Java API was well within the company's ability.¹⁶⁶

But apparently the company believed that the benefits of its decision outweighed whatever risks it faced. One of the primary benefits was that programmers would not have to recreate the wheel in developing mobile applications for Google's Android ecosystem.¹⁶⁷ This was because programmers were accustomed to using the Java API in programming mobile applications.¹⁶⁸ Google's incorporation of the API into its Android operating system thus meant that programmers wishing to create mobile apps for Android would not have to learn a new set of APIs for creating those apps; they could rely on preexisting knowledge and use of the Java API in making their apps available through Google's app store.¹⁶⁹ Another benefit of declining a license was simply greater technological flexibility; at the time of license negotiations, Sun had requested of Google things that the company simply did not wish to do from a technological perspective.¹⁷⁰ Hence, rather than take the conservative licensing approach, the company took on significant intellectual property risks in charting its own path. And in so doing, Google has set the stage for what some are calling the "lawsuit of the decade."¹⁷¹ Time will tell whether the case ends up limiting or expanding copyright entitlements.

Google's Books project provides another example of the company taking on significant intellectual property risks in pursuit of innovative

163. *Id.*

164. *Id.*

165. *Google Facts and Figures (Massive Infographic)*, SOLARWINDS PINGDOM (Feb. 24, 2010), <https://royal.pingdom.com/google-facts-and-figures-massive-infographic/> [<https://perma.cc/C5HG-P29T>].

166. Brodtkin, *supra* note 158.

167. Liam Tung, *Google: Oracle Java Win Will Kill Software Development, So Supreme Court Must Rule*, ZDNET (Jan. 25, 2019), <https://www.zdnet.com/article/google-oracle-java-win-will-kill-software-development-so-supreme-court-must-rule/> [<https://perma.cc/6EQH-3G2R>].

168. *Id.*

169. *Id.*

170. Brodtkin, *supra* note 158.

171. Ward, *supra* note 160.

new products. Among other things, as part of the project Google copied tens of millions of books and uploaded those digital copies into a large database that users can access through searches.¹⁷² While in most cases the Google Books product does not provide users with access to full-length books, it does provide users with snippets of the copied books.¹⁷³ And aside from what users can do with the database, the fact remains that Google copied tens of millions of books without authorization from the relevant copyright owners, thereby committing copyright infringement on a massive scale unless some copyright limitation excused the company's behavior.¹⁷⁴

Unsurprisingly, copyright holders soon came after Google for copyright infringement.¹⁷⁵ Initially, the company sought to structure a settlement with as many impacted copyright owners as possible.¹⁷⁶ This settlement would have allowed Google to proceed with the project while compensating some copyright holders.¹⁷⁷ Because the settlement represented Google taking a license rather than fighting it out in court, it might be viewed as the kind of risk aversion, or at least prudent decision-making, we typically associate with larger companies (and the type of behavior that may ultimately expand copyright entitlements). In fact, Professor Gibson points to this early settlement activity in support of his central thesis.¹⁷⁸

But ultimately, the relevant courts rejected the settlement agreements that Google and many of the impacted copyright owners had proposed.¹⁷⁹ Despite this rejection, Google pressed forward with its Google Books project, under the belief that its uses of the copyrighted works constituted a fair use of them.¹⁸⁰ As discussed above, however, accurately predicting

172. Tim Wu, *What Ever Happened to Google Books?*, NEW YORKER (Sept. 11, 2015), <https://www.newyorker.com/business/currency/what-ever-happened-to-google-books> [<https://perma.cc/9FVW-DHQ3>].

173. *Id.*

174. David Kravets, *Fair Use Prevails as Supreme Court Rejects Google Books Copyright Case*, ARS TECHNICA (Apr. 18, 2016), <https://arstechnica.com/tech-policy/2016/04/fair-use-prevails-as-supreme-court-rejects-google-books-copyright-case/> [<https://perma.cc/U9DC-Y8QD>].

175. Wu, *supra* note 172.

176. Andrew Albanese & Jim Milliot, *Google Settlement Is Rejected*, PUBLISHERS WEEKLY (Mar. 22, 2011), <https://www.publishersweekly.com/pw/by-topic/digital/content-and-e-books/article/46571-google-settlement-is-rejected.html> [<https://perma.cc/G2Y7-GZW9>].

177. *Id.*

178. See James Gibson, *Accidental Rights*, 116 YALE L.J. POCKET PART 348 (2007) (discussing the Google Books project in the context of his thesis).

179. Albanese & Milliot, *supra* note 176.

180. Devin Coldewey, *Supreme Court Affirms Google Books Scans of Copyrighted Works Are Fair Use*, TECHCRUNCH (Apr. 18, 2016), <https://techcrunch.com/2016/04/18/supreme-court-affirms-google-books-scans-of-copyrighted-works-are-fair-use/> [<https://perma.cc/FW56-TNR3>].

a fair use outcome can be challenging. Google thus faced significant risks that the copyright owners would win. Indeed, in some respects, the case did not look good for Google; the company had, after all, copied millions of books in their entirety without permission. Damages could and would be massive if they lost the case.¹⁸¹ But the company willingly took on the associated risks, presumably believing that the possible benefits of the project were worth the risks involved. And Google ultimately triumphed, with courts finding that the company's copying of those millions of books and making snippets of them available via search requests constituted fair use.¹⁸²

Another important, early example of a relatively mature company taking on significant intellectual property risks occurred when Borland International decided to copy a competitor's menu command hierarchy into its own software products.¹⁸³ Lotus, the entrenched incumbent, was an early pioneer and leader in the spreadsheet software market.¹⁸⁴ Its user base was vast and familiar with how to execute commands on its products.¹⁸⁵ Borland wished to challenge Lotus's product with its own offering.¹⁸⁶ But the company realized that users may be reluctant to switch over to its product if they had to relearn a new method of interacting with a spreadsheet program.¹⁸⁷ It would entail the same types of switching costs that word processing users would experience if they were to switch from Microsoft Word to some competitive product; those costs are often enough to dissuade users from switching at all.¹⁸⁸ Knowing this, Borland replicated components of Lotus's command hierarchy so that users wishing to adopt their competitive program would not face so many switching hurdles.¹⁸⁹

Lotus sued for copyright infringement, but Borland defended its action, arguing, among other things, that the menu hierarchy was not

181. Alison Flood, *US Authors Seek Damages in Google Books Copyright Row*, THE GUARDIAN (Aug. 7, 2012), <https://www.theguardian.com/books/2012/aug/07/authors-damages-google-book-copyright> [<https://perma.cc/9RLV-PKV9>].

182. Coldewey, *supra* note 180.

183. Lotus Dev. Corp. v. Borland Int'l, Inc., 49 F.3d 807 (1st Cir. 1995); Glynn S. Lunney, Jr., Lotus v. Borland: *Copyright and Computer Programs*, 70 TUL. L. REV. 2397 (1996).

184. *Id.*

185. *Id.*

186. *Id.*

187. *Id.*

188. Nabila Amarsy, *Switching Costs: 6 Ways to Lock Customers Into Your Ecosystem*, STRATEGYZER (July 27, 2015), <https://www.strategyzer.com/blog/posts/2015/7/27/switching-costs-6-strategies-to-lock-customers-in-your-ecosystem> [<https://perma.cc/9SPW-CS5L>].

189. See authorities cited *supra* note 183.

copyrightable.¹⁹⁰ Despite an initial setback at the district court, the U.S. Court of Appeals for the First Circuit ultimately agreed with Borland, holding that the menu hierarchy was an uncopyrightable method of operation excluded from protection under the Copyright Act.¹⁹¹ Borland, which was already a successful, public company at the time of the lawsuit,¹⁹² thus set significant intellectual property risks to the side in pursuing its innovative path, presumably because it deemed that the market opportunity was worth the risk. And in so doing, it helped establish important copyright standards as to the scope of copyright protection.¹⁹³

A final example of a large, bureaucratic company taking on significant intellectual property risks in pursuit of innovation is Amazon's 2011 decision to launch a music storage and streaming service without first securing the rights to do so.¹⁹⁴ In 2011, Amazon, Apple, and Google were in a race to provide cloud-based music storage and streaming services to their customers.¹⁹⁵ With its iTunes service, Apple had been the leader in online music consumption for some time.¹⁹⁶ And at the time that Amazon launched its service, rumors swirled that Apple would soon introduce a cloud-based music storage and streaming service.¹⁹⁷ Amazon aspired to challenge Apple's dominant position, and one obvious way to do so was to beat it to the punch. Amazon thus made the somewhat risky

190. *Id.*

191. *Id.*

192. *Borland International, Inc. History*, FUNDINGUNIVERSE, <http://www.fundinguniverse.com/company-histories/borland-international-inc-history/> [https://perma.cc/S4W2-SV55].

193. Lunney, *supra* note 182.

194. Larry Dignan, *Amazon Debuts Cloud Drive, Music Industry Whines: The Screen That Will End Up in Court*, ZDNET (Mar. 30, 2011), <https://www.zdnet.com/article/amazon-debuts-cloud-drive-music-industry-whines-the-screen-that-will-end-up-in-court/> [https://perma.cc/V6R8-DP7T] (indicating that the music industry protested in response to Amazon's launch of their cloud storage and streaming service because Amazon had failed to secure the rights to provide such a service); Miguel Helft, *Apple Unveils 'Cloud' Music and Storage Service*, N.Y. TIMES (June 6, 2011), <https://www.nytimes.com/2011/06/07/technology/07apple.html> [https://perma.cc/4UF2-EL8H] (indicating that Amazon and Google's failure to secure licenses for their cloud streaming services meant that those companies could not offer as much functionality as Apple, which had secured licenses from the music copyright holders).

195. Chris Gayomali, *Apple Beats Google in the Race to the Music Cloud*, TIME (Apr. 22, 2011), <http://techland.time.com/2011/04/22/apple-beats-google-in-the-race-to-the-music-cloud/> [https://perma.cc/92CA-TDHU].

196. Kirk McElhearn, *15 Years of iTunes: A Look at Apple's Media App and Its Influence on an Industry*, MACWORLD (Jan. 9, 2016), <https://www.macworld.com/article/3019878/15-years-of-itunes-a-look-at-apples-media-app-and-its-influence-on-an-industry.html> [https://perma.cc/XN7Q-C6F2].

197. Federico Viticci, *Apple's Cloud Music Service Almost Ready to Launch?*, MACSTORIES (Apr. 21, 2011), <https://www.macstories.net/news/apples-cloud-music-service-almost-ready-to-launch/> [https://perma.cc/5JLJ-ABKJ].

decision to launch its cloud storage and streaming service before it had negotiated those rights with the large music copyright holders.¹⁹⁸ That decision upset those copyright holders, but apparently Amazon thought the benefits to be worth whatever risks it faced.¹⁹⁹

This last example shows several things. First, in some cases, large companies are in a better position to take on intellectual property risks than smaller, more nimble companies.²⁰⁰ In the case of Amazon, for instance, copyright holders are dependent on the company as a significant distribution mechanism for their copyrighted works; without Amazon, they will simply sell fewer copies of their works.²⁰¹ Consequently, the company is better positioned to flout intellectual property risks because the rights holders will be loath to sue them for fear of upsetting the otherwise mutually beneficial relationship. Apple and Google are in a similar position to take on risks because their roles as primary distributors of copyrighted works provides them with significant leverage in their relationships with copyright owners.²⁰² In cases of such mutual dependence, then, large companies may be particularly willing to take on intellectual property related risks simply because the parties' relationships mean the risks are in some respects less severe.

Second and related, despite large companies' initial willingness to take on such risks, often they ultimately cave to licensing demands. A large company such as Amazon may be able to brazenly launch a service without first securing the rights contractually. But chances are that if they were to continue down that path without a license, rights owners would eventually pursue legal claims against them, in part because the unlicensed rights represent such a huge economic reward for them. Rather than risking a huge award against them, large companies like Amazon will instead often eventually secure contractual rights that cement the mutually

198. Gayomali, *supra* note 195.

199. *Id.*

200. Clark D. Asay, *Copyright's Technological Interdependencies*, 18 STAN. TECH. L. REV. 189 (2015) (arguing that large tech companies have significant leverage vis-à-vis copyright holders, which leverage can result in such companies extracting from copyright holders' rights that neither courts nor legislatures have been willing to provide).

201. David Streitfeld, *What Happens After Amazon's Domination Is Complete? Its Bookstore Offers Clues*, N.Y. TIMES (June 23, 2019), <https://www.nytimes.com/2019/06/23/technology/amazon-domination-bookstore-books.html> [<https://perma.cc/SN4L-8EAQ>].

202. Chaim Gartenberg, *How Apple Makes Billions of Dollars Selling Services*, THE VERGE (Mar. 20, 2019, 9:00), <https://www.theverge.com/2019/3/20/18273179/apple-icloud-itunes-app-store-music-services-businesses> [<https://perma.cc/74QF-ABQ2>] (detailing some of Apple's success in licensing third-party copyrighted content to consumers through a suite of services).

beneficial relationship between the two sides.²⁰³ For instance, in the Amazon example described above, the company never went to court over the rights that its service potentially implicated. Instead, the company ultimately entered into contracts to formally secure the rights necessary for its service.²⁰⁴

Importantly, the ultimate caving to licensing requirements can shape intellectual property doctrines in the worrisome ways that Professor Gibson has highlighted. Hence, though large companies are often willing to take on intellectual property risks initially, their propensity to ultimately succumb to licensing requirements represents the type of risk-averse behavior that can and does result in intellectual property rights accretion.

In sum, large companies, too, are sometimes willing risk takers. While a number of factors often push against large companies frequently taking on significant intellectual property risks, including a bureaucratic penchant for sticking to well-traveled roads, at times large companies do rationally pursue relatively risky initiatives in pursuit of significant economic returns. Indeed, in some cases a large company's market power may make it more likely that the company will take on intellectual property risks because that power means that the risks are effectively negligible, at least initially. However, even in cases where large companies initially take on intellectual property risks, risk-aversion often ultimately wins out because the licensing route is simply the prudent thing to do. And when large companies reverse course in this way, that behavior undermines the very benefits that their risk-taking would have otherwise generated.

IV. IMPLICATIONS

In the previous Part, I explored a number of scenarios where parties seek out risk rather than avoid it. In particular, early-stage companies and even later-stage companies are sometimes willing to take on significant intellectual property risks in pursuit of commercial opportunities. Early-

203. For one prominent illustration of this dynamic at play, compare a young YouTube's business model, which did little to nothing to monitor and ferret out copyright infringement on the site, with a more mature YouTube, which has implemented an extensive Content ID system to help copyright owners identify and take down infringing content. See Jonathan Bailey, *YouTube's Copyright Insanity*, PLAGIARISMTODAY (Jan. 10, 2019), <https://www.plagiarismtoday.com/2019/01/10/youtubes-copyright-insanity/> [<https://perma.cc/MB5G-WEUS>].

204. Anna Nicolaou & Leslie Hook, *Amazon Nears Launch for Music Streaming Service*, FINANCIAL TIMES (Aug. 28, 2016), <https://www.ft.com/content/bc735108-6bc8-11e6-ae5b-a7cc5dd5a28c> [<https://perma.cc/CDX5-SSZH>] (indicating that Amazon was set to enter into deals with record labels to launch its latest music streaming service).

stage companies may take risks on ignorantly, irrationally, or rationally, while later-stage companies typically only take on risks after careful and informed cost-benefit analyses. Collectively, their risk-taking activities help shape intellectual property law doctrines in ways that at least sometimes may counterbalance whatever pernicious effects on intellectual property law doctrines the risk-averse behavior of others entails. Overall, risk-taking seems to be a vital part of ensuring that our intellectual property doctrines develop in a balanced manner.

Yet it may not always be the case that economic actors remain willing to take on intellectual property risks in pursuit of commercial opportunities. In general, ineffective government policies and other exogenous factors can make pursuing business opportunities simply too risky.²⁰⁵ More specifically, corporate structures and culture seem to play a significant role in influencing to what extent parties are willing to take on intellectual property risks.²⁰⁶ Indeed, while large incumbents such as Google may sometimes be willing to take on significant risks, to some extent that willingness owes to the company's carefully groomed start-up identity as developed during its early days.²⁰⁷

Furthermore, as briefly discussed above, large companies often ultimately capitulate to licensing requirements, even when they initially take on intellectual property risks. The Amazon music streaming service scenario discussed above is just one recent example. Such capitulations are certainly understandable from a large corporation's point-of-view; in many cases, the costs of a court battle are simply more than what it would cost the company to negotiate a contract with the copyright holders. Furthermore, that contractual relationship can lead to additional permissions that the company finds useful in building out its businesses. Indeed, in many cases where large companies do initially take on intellectual property risks, the plan all along may be to ultimately enter into contractual arrangements with the copyright holders to obtain the necessary rights.

In contrast, early-stage companies often critically depend on a favorable court ruling for the viability of their business models. A young

205. Sophie Perryer, *Top 5 Economic Risk Factors*, WORLD FINANCE (May 1, 2019), <https://www.worldfinance.com/markets/top-5-economic-risk-factors> [<https://perma.cc/BS2L-U3EP>].

206. Ian Waxman, *Corporate Culture and its Impact on Risk Management*, NAVIGATE (Nov. 4, 2019), <https://www.navigatecorp.com/corporate-culture-and-its-impact-on-risk-management/> [<https://perma.cc/U6CZ-NUMT>].

207. Dan Schawbel, *How Big Companies Are Becoming Entrepreneurial*, TECHCRUNCH (July 29, 2012), <https://techcrunch.com/2012/07/29/how-big-companies-are-becoming-entrepreneurial/> [<https://perma.cc/V3QS-TL7S>] (discussing Google and others' extensive efforts to maintain entrepreneurship within the company).

YouTube, for instance, simply lacked the resources to pay copyright holders to provide for the type of access and functionality that its service enabled; the company's only chance was to risk things in court, and it took that chance with aplomb. A more mature YouTube, on the other hand, has dispensed with its youthful indiscretions, instead entering into detailed contractual relationships with large copyright owners to ensure the ongoing legitimacy and growth of its services.²⁰⁸ And while that decision may represent a mature YouTube's most prudent course of action, it also deprives the courts of opportunities to address important intellectual property doctrines, in ways that help balance intellectual property protections overall.

Hence, in this Part I suggest that ensuring a vibrant U.S. start-up sector is a key to encouraging the type of risk-taking that is most likely to help positively balance intellectual property doctrines. Of course, how to best promote the development and growth of early-stage companies is an enormous area of study.²⁰⁹ This Part cannot possibly answer that question, nor does it seek to. Instead, it briefly highlights a few intellectual property-related questions that may fit into the larger puzzle.

A. *Facilitating Industry Disaggregation*

As industries become increasingly concentrated, that concentration can prevent early-stage companies from thriving.²¹⁰ In the artificial intelligence industry, for instance, heavy consolidation has meant that start-up companies rarely, if ever, make it past their initial stages.²¹¹ Instead, large incumbents frequently swoop in at very early stages of the companies' development to gobble up their product roadmap and

208. See Saba Hamedy, *YouTube Has Paid \$2 Billion to Rights Holders Through Content ID*, MASHABLE (July 13, 2016), <https://mashable.com/2016/07/13/youtube-content-id-piracy-update/> [<https://perma.cc/VDF7-QU6S>] (discussing how the relationship between copyright owners and YouTube has changed over the years into an alliance); Ben Sisario, *Music World Bands Together Against YouTube, Seeking Change to Law*, N.Y. TIMES (July 13, 2016), <https://www.nytimes.com/2016/06/01/business/media/music-world-bands-together-against-youtube-seeking-change-to-law.html> [<https://perma.cc/D6CW-BKT9>] (discussing the music world banding together in part to renegotiate their licensing contracts due to concerns over unfair royalty rates).

209. For a review of some of the relevant literature on this topic, see Mike W. Peng, *How Entrepreneurs Create Wealth in Transition Economies*, 15 ACADEMY OF MANAGEMENT PERSPECTIVE 1 (2001); Maria Minniti, *The Role of Government Policy on Entrepreneurial Activity: Productive, Unproductive, or Destructive*, 32 ENTREPRENEURSHIP THEORY & PRACTICE 1 (2008).

210. See Noah Smith, *Big Tech Sets Up a 'Kill Zone' for Industry Upstarts*, BLOOMBERG (Nov. 7, 2018), <https://www.bloomberg.com/opinion/articles/2018-11-07/big-tech-sets-up-a-kill-zone-for-industry-upstarts> [<https://perma.cc/V5C4-98QV>] (describing how industry concentration can make it difficult for early-stage companies to succeed).

211. See Clark D. Asay, *Artificial Stupidity*, 61 WM. & MARY L. REV. 1187 (2020).

engineering talent.²¹² And while that gobbling may enrich start-up founders, it may often prevent the type of risk-taking that is beneficial to the development of intellectual property doctrines and, ultimately, innovation.

For instance, because large incumbents acquire AI start-ups so early in their lifecycles, often those start-ups have yet to fully develop or launch their own commercial products.²¹³ This means that early-stage AI companies often avoid confronting significant intellectual property risks in court because those court battles typically arise around the commercial launch of a product or service. Industry consolidation can thus prevent early-stage companies from helping define key intellectual property doctrines in the courts.

Furthermore, once large incumbents consume start-ups, the start-ups' product roadmaps are often subsumed within that of the larger company. And as discussed above, when that happens the riskier venture is often abandoned in favor of the safer, tried-and-true product roadmap of the larger company. Or even if the larger incumbent initially takes on significant intellectual property risks in pursuing the acquired company's product roadmap, often it ultimately succumbs to a more risk-averse licensing path, for the reasons discussed above.

Some scholars have argued that adequate intellectual property protections can help facilitate industry disaggregation, thereby helping smaller entities thrive. For instance, Professors Robert Merges and Ashish Arora argue that strong patent protections can help start-ups survive in the marketplace by enabling them to better protect their technological investments; that is, larger incumbents have greater difficulty appropriating the value of those technological achievements when adequate property rights are in place.²¹⁴ The result may often be a more disaggregated supply chain for different technological products and services.²¹⁵ Professor Jonathan Barnett has similarly argued that intellectual property protections can facilitate disaggregated supply chains, thereby aiding smaller entities in surviving the constant threat of larger incumbents swallowing them up.²¹⁶

212. *Id.*

213. *Id.*

214. Ashish Arora & Robert P. Merges, *Property Rights, Firm Boundaries, and R&D Inputs* 5 (2001), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=255869&rec=1&srcabs=1309262&pos=2 [<https://perma.cc/6FJK-6D9J>].

215. *Id.*

216. Jonathan M. Barnett, *Intellectual Property as a Law of Organization*, 84 S. CAL. L. REV. 785 (2011).

Hence, one possible key to avoiding the type of market concentration that makes pursuing entrepreneurial opportunities—and, by extension, intellectual property risks—difficult may be, somewhat ironically, adequate intellectual property protections for entrepreneurs. This premise may seem somewhat counterintuitive because the risk-taking discussed above focuses primarily on situations where courts contracted rather than expanded intellectual property rights. Thus, it may seem somewhat inconsistent to say that ensuring adequate intellectual property protections is important to ensuring that start-up companies continue to take on intellectual property risks in ways that ultimately contract those rights.

There are at least two responses to this. First, it is important to note that most scholars that have argued that adequate intellectual property protections are helpful to facilitating market disaggregation focus on patent rights.²¹⁷ On the other hand, Gibson's worry about negative feedback loops mostly focuses on copyright and trademark rights.²¹⁸ It is thus important to properly distinguish between the different types of intellectual property rights—and the different roles each type plays—in analyzing these questions.

Second and importantly, intellectual property risk taking that results in a better balance of intellectual property rights is perfectly consistent with the notion of adequate intellectual property rights. Arguably, the intellectual property balancing that risk-taking facilitates should not be aimed at doing away with intellectual property rights altogether, or even weakening them to such an extent that they are ineffective. Instead, the risk-taking activities of entrepreneurs provide courts with opportunities to address and develop important intellectual property questions in ways that risk-averse behavior will not occasion. In other words, part of the reason that the risk-taking activities of entrepreneurs are desirable is because they often result in opportunities for courts to address important intellectual property doctrines. In a risk-averse world, those opportunities simply won't arise. Hence, ensuring adequate intellectual property protections for early-stage companies can certainly coexist with early-stage companies taking on significant intellectual property risks. Proper balances in intellectual property law, after all, are perhaps the most adequate form of intellectual property law.

In sum, one possible key to avoiding excessive industry consolidation is to ensure adequate intellectual property protections. Of

217. For an examination of copyright and its role in influencing the structure of copyright industries, see Jonathan M. Barnett, *Copyright Without Creators*, 9 REV. L. & ECON. 389 (2013).

218. Gibson, *supra* note 5.

course, there are many other, perhaps more important determinants of industry consolidation than intellectual property protections, so the above should not be construed to suggest that intellectual property rights are the sole, or even primary, key to the industry consolidation question. But as others have discussed, those protections can help early-stage companies thrive, leading to product development and commercial launches rather than premature acquisitions and demises. And in so doing, they can also help early-stage companies take on intellectual property risks, thereby giving courts more opportunities to develop key intellectual property doctrines.

B. Technological Consciousness

In addressing intellectual property questions, courts often take into account how their decisions may affect technological innovation.²¹⁹ In the context of copyright law's fair use doctrine, for instance, courts are often particularly concerned with how their decisions intersect with the new technologies at play.²²⁰ Yet courts are not consistent in considering the technological ramifications of their decisions.²²¹ Becoming more consistent—and being explicit that technological ramifications are an important part of the intellectual property rights calculus—would arguably embolden more start-ups to take on risks and thereby aid in the development of key intellectual property doctrines.²²²

Consistency in this way would embolden more start-ups to take on intellectual property risks for a number of reasons. For instance, many start-ups' business models focus on developing new technologies that make innovative uses of works subject to intellectual property protections. Many of the examples discussed above, including the VCR, YouTube, search engines, and others, fit this model. In many of these cases, the courts clearly took into account their decisions' possible effects on the underlying technologies. Knowing that courts will at least consider the technological ramifications would likely boost entrepreneurs' confidence that the court system will at least give them a fair shake. And knowing they'll get that shake, more entrepreneurs are likely to take on intellectual property risks.

219. *Fortnightly Corp. v. United Artists Television Inc.*, 392 U.S. 390, 402 (1968).

220. *See generally* Lee, *supra* note 90.

221. For an example where the majority and dissent failed to see eye-to-eye on technological ramifications of the decision, see *American Broadcast Corporation, Inc. v. Aereo, Inc.*, 573 U.S. 431 (2014).

222. For a specific proposal along these lines, see Clark D. Asay, *Intellectual Property Law Hybridization*, 87 U. COLO. L. REV. 65 (2016).

Yet other courts are not as explicit in their concern for the technological impacts, instead sticking to what they consider to be the task at hand: interpreting and applying intellectual property doctrines, without attention to what the technological ramifications may be. In a recent Ninth Circuit decision, for instance, former Judge Alex Kozinski appeared to take this approach. In that case, a woman had agreed to take part in a film.²²³ But when the film was released, its topic strayed widely from what she had been led to believe.²²⁴ She received death threats for her involvement and sought to have the film removed from YouTube and other online venues on the basis of a copyright interest she claimed in her five-second performance within the film.²²⁵ In an opinion that was eventually overturned en banc, Kozinski countenanced her copyright claim, interpreting copyright broadly in a way that ignored the possible technological (and other) impacts of the decision.²²⁶ That approach may be simpler in some respects, but arguably it is inconsistent with both Supreme Court case law and the constitutional clause authorizing Congress to enact patent and copyright laws.

Indeed, the Supreme Court has explicitly addressed technological concerns when interpreting key intellectual property doctrines.²²⁷ The idea in at least some of those cases seems to be that, when possible, courts should interpret intellectual property doctrines in a way that avoids impeding technological progress.²²⁸ Hence, though copyright may not be solely focused on promoting technological progress, that is at least one of its goals. When applying intellectual property doctrines, lower courts should thus be conscious of how their decisions may impact technological progress, even if that progress is not the only thing they should consider.

The U.S. Constitution bolsters this argument. The Constitution's IP Clause empowers Congress to enact both patent and copyright laws to the end of "promoting the progress of science and the useful arts."²²⁹ Traditionally, scholars have identified the progress of science with copyright, and the progress of the useful arts with patent laws.²³⁰ Yet

223. Clark D. Asay, *Ex Post Incentives and IP in Garcia v. Google and Beyond*, 67 STAN. L. REV. 37 (2014).

224. *Id.* (summarizing the case).

225. *Id.*

226. *Id.*

227. *See, e.g.,* Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd., 545 U.S. 913, 929 (2005) (acknowledging "concern that imposing liability, not only on infringers but on distributors of software based on its potential for unlawful use, could limit further development of beneficial technologies.").

228. Asay, *supra* note 211, at 88.

229. U.S. CONST. art. I, § 8.

230. Dotan Oliar, *The (Constitutional) Convention on IP: A New Reading*, 57 UCLA L. REV. 421 (2009).

scholars have recently argued that such a clean separation of the two is not necessarily justified.²³¹ Instead, the Constitution's IP Clause justifies copyrights and patents on the basis of a broad, somewhat open-ended notion of progress in technological and creative fields.²³²

Accordingly, when interpreting important intellectual property doctrines, courts should hark back to the Constitutional purpose behind many of these laws. And when they do so, how their decisions may affect technological developments is not only relevant, but, in many cases, arguably constitutionally required.

V. CONCLUSION

Risk aversion in the marketplace is pervasive. And it can result in all sorts of negative effects, including behavior that ultimately morphs intellectual property doctrines beyond their intended bounds. In short, pervasive risk-aversion can cause deleterious imbalances in our intellectual property regimes.

But that is only part of the story. Risk taking can also be pervasive, and that risk-taking often helps shape key intellectual property doctrines. As discussed throughout this Article, frequently early-stage companies, and at times even later-stage incumbents, decide to throw caution to the wind in pursuit of commercial opportunities. When they do so, they help counterbalance at least some of the negative intellectual property law effects that more risk-averse actors perpetuate.

Hence, encouraging early-stage companies in particular to take on intellectual property risks is important to helping ensure that our intellectual property system provides the benefits and balances that it is meant to achieve. In this Article, I have briefly explored some intellectual property-related means by which to help encourage early-stage companies to take on intellectual property risks.

231. *Id.*

232. *Id.*