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Buying Teams

*Andres Sawicki**

The Sixth Annual Berle Symposium reflects on Margaret Blair and Lynn Stout's classic article: *A Team Production Theory of Corporate Law*. Blair and Stout recast the modern law of public corporations through the lens of the team production theory of the firm. Here, I apply Blair and Stout's insights—emphasizing the value of team production, independent monitors, and intellectual property rights—to a novel corporate transaction structure: the *acqui-hire*.

In an *acqui-hire*, a publicly owned technology firm wants to add a start-up's engineers. Instead of simply hiring them, though, it buys the start-up, discards most of its assets, and retains the start-up's engineers. These transactions are puzzling because, even though the buyer is ostensibly interested only in hiring the start-up's *engineers*, some of the compensation is nonetheless diverted to the start-up's *investors*.

The only existing analysis of *acqui-hires* in the legal literature argues that cooperative norms in Silicon Valley are the primary driver of these transactions. While that analysis sheds useful light on important aspects of these deals, it underplays the importance of intellectual property, especially patents. Patents can facilitate the organization of team production in several ways, including by increasing the costs to team members of leaving the team. Large technology firms cannot acquire those patent rights by simply hiring the start-up's engineers; instead, they must buy the start-up itself. Patent law is therefore a partial driver of the choice to pursue an *acqui-hire* because it enables the buyer to obtain assets useful in team production. A preliminary investigation using a novel dataset of sixty-three *acqui-hires* during the years 2011 and 2012 supports this proposition. The investigation reveals that, contrary to the pat-

* Associate Professor, University of Miami School of Law. For extremely helpful comments, I thank the participants at the Sixth Annual Berle Symposium—Blair & Stout and Beyond, hosted by Seattle University School of Law. Many thanks also to Joshua Williams, who provided phenomenal research assistance, especially with the heavy lifting required by the underlying data.

tern for all of the start-up's other assets, existing and future patent rights typically follow the engineers to the buyer.

I. INTRODUCTION

In their landmark article, *A Team Production Theory of Corporate Law*, Margaret Blair and Lynn Stout applied the insights of the team production theory of the firm to develop a descriptive and normative theory of corporate law.¹ The team production theory takes as its starting point a production process in which several inputs are combined, the inputs make team-specific investments, and the gains from the production are nonseparable.² The scope of team production theory thus includes much of the work of American public corporations, which are the focus of *A Team Production Theory of Corporate Law*.³ But not all production processes are best understood in team production terms. Closely held organizations, for example, may be better described by the property rights theory of the firm.⁴ Scholars building on Blair and Stout's contribution should therefore begin their analyses by identifying production processes for which the team production theory offers the most useful frame.⁵

One potentially fruitful place to look for these kinds of production processes is in the fields regulated by intellectual property law.⁶ The classic vision of intellectual property is that of an individual working alone to produce expressive works or inventions—in other words, the romantic ideal of the sole author or inventor.⁷ But this vision does not accurately depict the real world of creative production. Instead, creative

1. See Margaret M. Blair & Lynn A. Stout, *A Team Production Theory of Corporate Law*, 85 VA. L. REV. 247 (1999).

2. *Id.* at 249.

3. *Id.*

4. *Id.* at 272–73.

5. See Elizabeth Pollman, *Team Production Theory and Private Company Boards*, 38 SEATTLE U. L. REV. 619 (2015) (arguing that team production theory can help explain the structure of at least some private company boards).

6. I use the phrase “intellectual property law” here to refer to copyright and patent law (and, to a lesser extent, trade secret law), in line with other scholars who focus on the laws regulating the production of expressive works and inventions. See, e.g., Christopher Buccafusco et al., *Experimental Tests of Intellectual Property Laws' Creativity Thresholds*, 92 TEX. L. REV. 1921 (2014).

7. See Mario Biagioli, *Genius Against Copyright: Revisiting Fichte's Proof of the Illegality of Reprinting*, 86 NOTRE DAME L. REV. 1847, 1847–48 (2011) (“The ‘romantic author’ or ‘romantic genius’ has been central to the history and critique of copyright for a few decades now.”); *id.* at 1847–48 nn.1–2 (citing sources supporting and critiquing the centrality of the romantic author); Christopher Cotropia, *The Individual Inventor Motif in the Age of the Patent Troll*, 12 YALE J.L. & TECH. 52, 57–61 (2009) (describing the historical influence of the individual inventor motif on patent law, particularly in the legislative and administrative branches); Mark D. Janis, *Patent Abolitionism*, 17 BERKELEY TECH. L.J. 899, 907–21 (2002) (describing genesis of heroic inventor motif and influence on early patent law).

people frequently collaborate to produce creative works,⁸ and this production is plagued by the problems described by team production theorists.⁹

In a prior work with Anthony Casey, we explored these sorts of team production problems in fields that are regulated by copyright law.¹⁰ Consider, for example, a movie. Each actor must spend time reading the script and internalizing the characters' motivations, history, and so on. Although there may be some spillover to other movies in which the actor undertakes similar roles or otherwise performs similar work, the bulk of this time is a team-specific investment—it creates much more value for this project than for any other. Each actor's investment must also be combined with the others' investments. And at the end of the project, it will be difficult to tell who is responsible for each part of the total value of the finished film. This is precisely the scenario contemplated by the team production theory of the firm. Copyright law's ownership rules (like the "work made for hire" doctrine¹¹) and scope rules (like the derivative works right¹²) therefore affect participants' ability to solve these problems using the organizational solutions proposed by team production theorists.¹³

Team production problems are also likely pervasive in the fields regulated by patent law. Consider the development of a new drug.¹⁴ Drug development requires joint contributions by people with diverse expertise, including chemists, molecular biologists, and clinicians. Each of these individuals will invest time and resources producing information that is most useful to the development of this drug, and much less useful to the

8. See Mark A. Lemley, *The Myth of the Sole Inventor*, 110 MICH. L. REV. 709 (2012).

9. See Anthony J. Casey & Andres Sawicki, *Copyright in Teams*, 80 U. CHI. L. REV. 1683 (2013) (applying the insights of team production theory to explain the effect of copyright law on the organization of the creative industries); see *id.* at 1700 (team production problems include difficulty (1) observing team members' performance, (2) verifying to outsiders team members' (non-)compliance with agreements, (3) attributing output value to particular inputs, and (4) predicting total output value).

10. See generally *id.*

11. The "work made for hire" doctrine vests ownership in the person who hired the author of a copyrighted work when either: (1) the author is an employee working within the scope of her employment, or (2) the work is within a statutorily-identified category and there is a written agreement specifying that the work is a work made for hire. See 17 U.S.C. § 101 (2010) (defining a work made for hire); Casey & Sawicki, *supra* note 9, at 1723 (explaining the work made for hire rules).

12. The "derivative works right" grants to the owner of the copyright in an original work the right to also make new works "based upon" the original. See 17 U.S.C. §§ 101 (2010), 106(2) (2002) (defining the derivative works right); Casey & Sawicki, *supra* note 9, at 1726 (describing the derivative works right).

13. Casey & Sawicki, *supra* note 9, at 1712–39.

14. See Blair & Stout, *supra* note 1, at 265–67 (explaining why drug development likely poses team production problems).

development of any other drug. The end product—a new drug—will be the result of their joint contributions, and it will be difficult to ascertain the degree to which any one individual is responsible for the joint output.

Legal academics have so far overlooked the team production theory of the firm as a source of insight into patent law's effects on the organization of innovative activity;¹⁵ the recent Silicon Valley trend of acquiring may be a catalyst for further research on these issues. An acquire-hire is a transaction in which a large technology company (the buyer)¹⁶ purchases a start-up with the primary purpose of employing the start-up's engineers; the buyer is not interested in the start-up's existing projects, customer relationships, or other corporate assets.¹⁷ The start-ups are involved in innovative activity ostensibly regulated by patent law.¹⁸ And in the course of the acquire-hire, the engineers—the core innovative employees involved in team production activities—move from a closely held firm to a large public corporation. An exploration of the acquire-hire may therefore yield useful insights into the interaction of teams, patents, and corporate law.

The motives underlying a firm's choice to pursue an acquire-hire are not immediately clear. In an acquire-hire, a portion of the purchase price is split among the start-up's equity holders. These equity holders include not only the engineers, who are the source of the buyer's interest in the transaction, but also venture capitalists, angel investors, and early non-engineer employees who have earned some form of equity compensation. The acquire-hire thus presents a puzzle: if the acquiring company simply wants to add the start-up's engineers, why does it bother purchasing the

15. For two exceptions to this general neglect, see Paul J. Heald, *A Transactions Cost Theory of Patent Law*, 66 OHIO ST. L.J. 473, 487–98 (2005) (arguing that patents can help facilitate organizational solutions to team production problems), and Robert Merges, *The Law and Economics of Employee Inventions*, 13 HARV. J.L. & TECH. 1, 20–26 (1999) (using team production theory to justify corporate ownership of employee inventions). There is a growing literature using other theories of the firm—notably the property-rights theory of the firm—to explore these and related issues. See Casey & Sawicki, *supra* note 9, at 1687 n.14 (citing sources).

16. For ease of exposition, I will use the term “buyer” to refer to the firm to which the engineers go, even in scenarios like a group hire where, strictly speaking, the firm is not “buying” anything. I will also use the term “start-up” to refer to the firm the engineers are leaving, and the term “engineers” to refer to the computer programmers that the buyer is recruiting.

17. See John F. Coyle & Gregg D. Polsky, *Acqui-hiring*, 63 DUKE L.J. 281, 283 (2013).

18. The patentability of software has not always been accepted. See Julie E. Cohen & Mark A. Lemley, *Patent Scope and Innovation in the Software Industry*, 89 CALIF. L. REV. 1, 8–11 (2001) (recounting the history of courts deciding software patentability questions). The Supreme Court has recently reaffirmed that at least some software patents claim patentable subject matter, although the proper scope of such patents remains unclear. See *Alice Corp. v. CLS Bank Int'l*, 134 S. Ct. 2347 (2014).

start-up instead of pursuing a group hire?¹⁹ In an ordinary group hire, the purchase price would be shared only among the engineers, who comprise the primary asset of interest to the buyer. If the equity holders have no claim to the asset motivating the transaction, then why are they sharing in the total price being paid by the buyer?

The only existing legal academic analysis of acqui-hires argues that Silicon Valley norms provide most of the explanatory power for the increasing prevalence of this transaction structure.²⁰ In their intriguing article, Professors Coyle and Polsky explain that the engineer-founders of the start-ups could leave as a group and join the buyer without fear of legal consequences.²¹ This is because California law severely restricts noncompete agreements and because spurned Silicon Valley investors strongly prefer not to sue the entrepreneurs they have backed.²² But the engineer-founders nonetheless agree to structure their moves as acqui-hires largely to avoid informal sanctions that their investors could impose if those investors were unhappy with the way in which the venture wound down.²³ This desire to avoid informal sanctions is buttressed by (1) the reputational benefits engineers receive from being able to say their start-up was sold; (2) Silicon Valley's cooperative legal culture; (3) the engineers' underestimation of the financial costs of the acqui-hire; and (4) tax considerations that reduce the actual financial costs of the acqui-hire to the engineers.²⁴

The role of intellectual property in the acqui-hire phenomenon, however, remains ambiguous. In a prototypical acqui-hire, the buyer does not acquire any of the start-up's assets, whether tangible (like facilities and equipment) or intangible (like customer lists and goodwill).²⁵ But the attorneys, engineers, and investors who participated in acqui-hires—and formed the basis for Coyle and Polsky's analysis—provide conflicting descriptions of what happens to the start-up's intellectual

19. Coyle & Polsky, *supra* note 17, at 301 (posing the “existential puzzle” of the acqui-hire).

20. *Id.* at 312–19. Coyle and Polsky limit the scope of their claims to Silicon Valley start-ups acquired by California firms because much of their analysis depends on norms particular to that region and the law of that state. *Id.* at 286 n.12. Because my interest lies in the possibility that legal rights—specifically, patent rights—might interact with team production value to contribute to the use of this kind of transaction, I do not so limit my analysis. Of course, many of the start-ups in the data presented here are in fact Silicon Valley start-ups acquired by California firms. It is nonetheless worth emphasizing that at least part of the reason why the story here diverges from the Coyle and Polsky story is this difference in scope.

21. *Id.* at 302–10.

22. *Id.*

23. *Id.* at 312–19.

24. *Id.* at 320–31.

25. *Id.* at 293–94.

property.²⁶ I aim to address the resulting uncertainty by answering two questions: what happens to the patents in an acqui-hire? And why?

As to the first question, patents tend to follow the engineers from the start-up to the buyer. I report here the results of a preliminary investigation of the patent rights associated with a set of acqui-hires completed by several large technology firms between 2011 and 2012.²⁷ Because the Patent and Trademark Office (PTO) maintains a publicly accessible database of patent assignments, it is possible to track the patents and applications that have been transferred from the start-ups to the buyers in these acqui-hires.²⁸ Using this information, I show that the near-universal pattern in an acqui-hire is for the start-up's patent rights to follow the engineers to the buyer. Although this data is preliminary and subject to a number of caveats, it at least suggests that patents play some nontrivial role in the acqui-hire phenomenon.

Answering the second question—why does this pattern prevail—is more difficult. It is possible, for example, that the patents can serve a defensive role for the buyer (which may be a target for vexatious litigation) that they cannot serve for the start-up (which will soon cease operations). Another hypothesis is that patents have team-specific value.²⁹ Patents may serve as a mechanism for mitigating the shirking problems endemic in team production contexts. They can do so by, among other things, raising the costs to team members who defect from the team. If patents serve this function, then it is sensible for buyers to prefer acqui-hires to group hires—the former facilitates the buyer's acquisition of team-preserving patents and the latter does not. Although the data here do not permit us to choose between these two hypotheses, they do make it unlikely that patents are irrelevant to acqui-hires.

This Article proceeds as follows: Part II describes the acqui-hire transaction and reviews the leading legal academic theory for why they occur. Part III briefly explains patent ownership rules in the start-up context, and then presents the data from this preliminary investigation into the patterns of patent assignments in acqui-hires. Part III also offers a potential explanation for that pattern. Part IV concludes with some suggestions for further research.

26. *Id.* at 293 n.38.

27. *See infra* text accompanying notes 102–15.

28. Because of confidentiality rules regarding pending patent applications and because not all patent assignments are recorded, the data presented here likely understates the role of patents in acqui-hires. *See infra* text accompanying notes 156–60.

29. *See* Heald, *supra* note 15, at 487–98; Merges, *supra* note 15, at 20–26; *infra* text accompanying notes 133–40.

II. THE CONVENTIONAL WISDOM REGARDING ACQUI-HIRES

Firms regularly acquire other firms. In an ordinary acquisition, the buyer wants to purchase the seller's assets, which can include tangible things, like factories or real property, or intangible things, like customer relationships.³⁰ In these scenarios, the buyer and seller can agree to structure the transaction in a number of ways.³¹ What these transactions have in common is that the buyer obtains all (or substantially all) of the seller's business.

In other instances, a firm is only interested in hiring some or all of another firm's at-will employees.³² When this occurs, the buyer approaches the employees whom it wishes to hire, either individually or as a group. If they are satisfied with the offered terms, the employees leave their current employer and go work for the buyer. Because the employees are at-will, the current employer does not have a say in whether the transaction occurs or not.³³ I will refer to these scenarios as group hires.

The technology industry has recently begun engaging in a third kind of transaction: the acqui-hire.³⁴ In an acqui-hire, the buyer has the same motivation as it does in a group hire—it wants to hire another firm's at-will employees.³⁵ But instead of simply hiring those employees, the buyer structures the transaction as an ordinary acquisition, purchasing all of the other firm's business and assets. Once the buyer does so, though, it discards the acquired firm's assets, and keeps only the employees in which it was interested.³⁶

In these transactions, the buyer is usually a large technology company, like Google or Facebook.³⁷ The desired at-will employees are the engineers of a start-up.³⁸ The transaction typically occurs either between

30. Coyle & Polsky, *supra* note 17, at 293.

31. The most common forms are asset purchases, stock purchases, and mergers. See John C. Coates IV, *Mergers, Acquisitions, and Restructuring*, in OXFORD HANDBOOK ON CORPORATE LAW AND GOVERNANCE (forthcoming 2014) (manuscript at 3–7), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2463251.

32. Coyle & Polsky, *supra* note 17, at 301.

33. When the employees have employment contracts with the seller firm, that transforms their employment into something other than at-will, and the seller firm will have a say in whether the employees leave to join the buyer.

34. See Coyle & Polsky, *supra* note 17, at 293–301.

35. *Id.* at 293–94.

36. *Id.* at 293–97.

37. *Id.* at 283; Miguel Heft, *For Buyers of Web Start-Ups, Quest to Corral Young Talent*, N.Y. TIMES, May 18, 2011, at A1.

38. Coyle & Polsky, *supra* note 17, at 283–84; see also Dan Bobkoff, *Employee Shopping: 'Acqui-Hire' Is the New Normal in Silicon Valley*, NPR (Sept. 24, 2012, 3:23 AM), <http://www.npr.org/blogs/alltechconsidered/2012/09/25/161573307/employee-shopping-acqui-hire-is-the-new-normal-in-silicon-valley>.

the seed funding and Series A financing rounds, or between the Series A and Series B financing rounds; this is because that is usually the point when it becomes clear that the start-up is unlikely to successfully launch a product before it runs out of financing.³⁹ Even though the engineers are at-will employees, and therefore free to leave even without their employer's consent, the buyer chooses to purchase the start-up.⁴⁰

As a result, the price the buyer pays to obtain the engineers' services is split in two.⁴¹ One part—called the compensation pool—is distributed to the newly hired engineers.⁴² A second part—called the deal consideration pool—is distributed to the start-up's shareholders.⁴³ These shareholders typically include not only the engineers (who are often granted stock options during the early stages of the firm's life), but also other early employees, angel investors, and venture capitalists.⁴⁴ Although the precise forms of the two pools vary,⁴⁵ the common thread through all acqui-hires is the existence of these two separate pools.

As mentioned above, the acqui-hire thus presents a puzzle: if the only asset of interest to the buyer is the future employment of the start-up's engineers, then why is any money being distributed to the start-up's shareholders?⁴⁶ We can start with the premise that the buyer values adding the engineers in an amount equal to the combined value of the deal consideration and the compensation pool because this is the total amount that the buyer spends to add the engineers.⁴⁷ The existence of a compensation pool is no surprise—the buyer has to pay the engineers some amount to convince the engineers to work for the buyer, and the compensation pool represents that amount. It is the existence of the deal consideration pool that is puzzling. If the buyer values the engineers in an amount equal to the compensation pool plus the deal consideration pool,

39. Coyle & Polsky, *supra* note 17, at 295.

40. *Id.* at 296–97.

41. *Id.* at 297.

42. *Id.* at 297–98.

43. *Id.*

44. *Id.* at 297.

45. *Id.* at 296–98 (describing variations in the details of acqui-hires).

46. *Id.* at 301 n.75.

47. The buyer evidently values the future employment at the total purchase price (compensation pool plus deal consideration pool), so the seller's employees should be able to negotiate for that amount. On the other hand, the seller's employees are willing to leave the seller for just the compensation pool (plus whatever percentage of the deal consideration pool they are entitled to as shareholders of the seller firm), so the buyer should be able to convince them to join the seller firm for just the compensation pool amount. As a result, we should expect the buyer and the seller's employees to negotiate some split of the deal consideration pool that is sent to the seller's shareholders in an acqui-hire.

the engineers should be able to obtain more than just the compensation pool.⁴⁸ Why is money being diverted to the start-up's shareholders?

Shareholders typically do not have rights to the assets the buyer values: the engineers' future employment services. While a firm's shareholders could have claims to the labor of its employees if the firm has fixed-term employment or noncompete agreements with the employees, start-up engineers do not ordinarily sign fixed-term employment agreements.⁴⁹ Moreover, California law refuses to enforce noncompetes.⁵⁰ Because the start-up's shareholders generally have no legal claims to the asset of interest, the buyer and the engineers could presumably agree to split the value of the deal consideration pool, rather than sharing it with the seller's shareholders.⁵¹ What, then, drives the existence and increasing popularity of this hybrid transaction structure?

According to Coyle and Polsky, several factors combine to make the acqui-hire a more attractive proposition than an ordinary acquisition or a group hire. The most important factor is a set of social norms among participants in the Silicon Valley technology industry.⁵² In the typical acqui-hire, the start-up's employees are not ordinary rank-and-file employees; instead, they are engineers who were either the company's founders or among the first employees hired by those founder-engineers.⁵³ Furthermore, the start-up's shareholders are usually some combination of angel investors, venture capitalists, and employee shareholders (who received their equity as compensation during the early stages of the firm's life).⁵⁴ The start-up's departing employees thus usually have intimate relationships with the start-up's shareholders, and it is these relationships that help explain why some start-ups prefer an acqui-hire to a group hire.

48. To be precise, the engineers do ordinarily receive some of the deal consideration pool to the extent that the engineers are also shareholders. But the point in the text remains—some significant portion of the deal consideration pool goes to people other than the engineers, and because those people do not own any assets of interest to the buyer, it seems that the engineers should receive all of that pool, or at least split it with the buyer, rather than share it with others.

49. Coyle & Polsky, *supra* note 17, at 304–05.

50. See CAL. BUS. AND PROF. CODE § 16600 (West 2014); *Edwards v. Arthur Andersen LLP*, 189 P.3d 285, 288 (Cal. 2008); Coyle & Polsky, *supra* note 17, at 303–04.

51. See Coyle & Polsky, *supra* note 17, at 301 & n.75 (analyzing how the value of the transaction would be split between the buyer and the engineers in a group hire).

52. *Id.* at 311.

53. *Id.* at 286 n.10.

54. See *id.* at 287–88 (noting that start-up capital typically comes from venture capitalists and angel investors); *id.* at 289 (stating that founders and employees usually own common stock in the start-up as part of their compensation); *id.* at 297 (explaining that the deal consideration is paid to “the start-up's outside investors and its employee shareholders”).

The relationships between the start-up's engineers and its shareholders allow unhappy shareholders to impose at least two kinds of informal sanctions that might encourage the engineers to pursue an acqui-hire rather than a group hire.⁵⁵ First, it is likely that the departing engineers will at some future date seek to start another new firm and will need financing to do so.⁵⁶ If the engineers left the start-up via a group hire, the spurned investors of the earlier venture would almost surely refuse to finance the engineers' new venture.⁵⁷ Moreover, because Silicon Valley venture capitalists seek references from the venture capitalists who funded an entrepreneur's prior firm, the spurned investors can further punish the departing engineers by providing a negative reference, or at least refusing to provide a positive one.⁵⁸ This kind of informal sanction thus makes it more difficult for departing engineers to pursue entrepreneurial projects in the future.

Second, unhappy investors may impose nonfinancial social penalties on departing engineers.⁵⁹ Because the investors and engineers are often members of the same communities, the investors can lower the engineers' social standing by doing things like refusing to invite the engineers to community events they host (ranging from birthday parties to charity balls) or telling neighbors that the engineers treated the investors badly.⁶⁰ The prospect of these social penalties—and the lowered status that comes with them—may be another factor pushing engineers towards acqui-hires and away from group hires. And even though the precise rules that engineers must follow in order to avoid these sanctions are unclear,⁶¹ Silicon Valley lawyers may inculcate in their clients a nonadversarial attitude, leading them to pursue the cooperative acqui-hire rather than the non-cooperative group hire.⁶²

In addition to the informal sanctions unhappy shareholders could impose, intrinsic motivations may also constrain engineers from pursuing group hires even when a group hire offers a larger financial payoff than an acqui-hire.⁶³ Engineers might, for example, feel a sense of loyalty to the investors who first backed the venture because those investors recog-

55. *Id.* at 314.

56. *Id.* at 314–15.

57. *Id.* at 315–17.

58. *Id.*

59. *Id.* at 319.

60. *Id.* at 319 & n.151.

61. *See id.* at 332–36 (arguing that although there is no “standard norm” regarding how much money the investors should receive, there will eventually develop a “money back for the investors” rule of thumb).

62. *Id.* at 324–26.

63. *Id.* at 317–19.

nized the value of the engineers' ideas while others did not.⁶⁴ They may also feel a desire to be viewed as acting fairly or doing the right thing.⁶⁵

Although the engineers' willingness to split the proceeds with the start-up's shareholders is the core puzzle in the *acqui-hire*, it is also worth considering why the buyer would be willing to structure the transaction in this way. After all, if the buyer and the engineers could cut out the shareholders, they could split the gains from doing so. The informal sanctions the shareholders could impose suggest a connection between the buyer's motivation for entering into an *acqui-hire* and Blair and Stout's vision of the board as a mediating hierarch. Blair and Stout argue that one role of the board is to distribute the surplus created by the team to the corporation's many stakeholders.⁶⁶ Those stakeholders may include not only the corporation's shareholders and employees, but also the corporation's customers or members of the community in which the corporation operates.⁶⁷ In an *acqui-hire*, the buyer's board is authorizing a distribution of the buyer's surplus to the start-up's investors. As Blair and Stout suggest, it is plausible to think of the start-up's investors as also being among the buyer's stakeholders. This is because the investors—the venture capital firms—play a key role in the larger Silicon Valley ecosystem that is crucial to the success of all Silicon Valley firms.⁶⁸ To be sure, not all *acqui-hires* are board-approved decisions—corporate development departments can complete some of these transactions without board input so long as the price of the acquisition is sufficiently low.⁶⁹ Still, when the board does authorize these transactions, it appears to be acting in precisely the way that Blair and Stout suggest it should.

Another possibility centers on the future relationships between the start-up's engineers and the buyer's current employees.⁷⁰ The engineers who are going to work with the buyer will often have richer compensa-

64. *Id.* at 317–18.

65. *Id.* at 318–19.

66. Blair & Stout, *supra* note 1, at 321 (justifying corporate law as “designed to protect the *corporate coalition* by allowing directors to allocate rents among various stakeholders” (emphasis added)); *id.* at 325 (arguing that the returns to stakeholders are determined in part by political considerations).

67. *See id.* at 278, 288 (including “the local community” as among the stakeholders in most public corporations); *id.* at 300–01, 307–09 (arguing that corporate law permits the board to consider the impact of corporate decisions on the community).

68. Coyle & Polsky, *supra* note 17, at 322–23. Venture capital firms provide the funding that attracts entrepreneurial engineers to Silicon Valley. *See id.* at 292–93. The resulting concentration of engineering talent helps satisfy the staffing needs of the large technology firms in the region. *See id.* at 290–91.

69. I thank Elizabeth Pollman for raising this issue.

70. Coyle & Polsky, *supra* note 17, at 323.

tion packages than employees who had been working at the buyer prior to their arrival. The difference in compensation is a source of potential friction between the engineers and other employees. By structuring and labeling the addition of those engineers as an acquisition, rather than as a group hire, the buyer can justify the difference in compensation as owing to its purchase of the engineers' start-up.⁷¹ There is again a connection to Blair and Stout's vision of the board as a mediating hierarchy: the decision to adopt the acqui-hire transaction is part of the board's effort to avoid disputes among team members (i.e., the buyer's current engineers and the start-up's engineers that will be joining the buyer's team).⁷²

Although the preceding factors are the primary drivers of the acqui-hire trend, there are some secondary drivers as well. Silicon Valley's entrepreneurial culture may hold engineers who sell their firms in higher social esteem; therefore, engineers would prefer transactions that look like sales (e.g., an acqui-hire) over those that don't (e.g., a group hire).⁷³ The engineers' perceived cost of doing an acqui-hire instead of a group hire may be lower than its actual cost because—in line with the predictions of prospect theory—the cost can be framed as a forgone gain, rather than as an out-of-pocket loss.⁷⁴ And because at least some of the compensation in an acqui-hire will take the form of a capital gain (instead of being all wage income as it would in a group hire), the engineers can reduce their tax burden by pursuing an acqui-hire rather than a group

71. *Id.* It is not clear, though, why this strategy should work for very long. The risk in a group hire is that the buyer's existing engineers will resent the richer compensation packages the buyer offers the start-up's engineers and will chafe at the notion of newcomers being paid more than they are paid to do the same work. When the buyer points to the acqui-hire as its justification, it is signaling to its existing engineers that the start-up's engineers are not being paid only to do the same work; they are also being paid for the start-up's assets. But recall that the central feature of the acqui-hire is that the buyer does not value the start-up's assets and will not in fact acquire them, leaving them instead with the start-up's investors. The buyer's existing engineers should notice that the buyer is not in fact retaining the additional assets it is pointing to as justification for offering the start-up's engineers richer compensation. So it seems that the buyer's engineers should soon see through this distraction.

72. See Blair & Stout, *supra* note 1, at 276–82.

73. Coyle & Polsky, *supra* note 17, at 320–22.

74. *Id.* at 327–28; see generally Daniel Kahneman & Amos Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, 47 *ECONOMETRICA* 263 (1979). Prospect theory holds that people are risk averse with respect to potential gains, which causes them to value potential gains below their expected value. Moreover, people are risk seeking with respect to potential losses, which causes them to value potential losses above their expected value. Finally, whether an outcome is viewed as a potential gain or a potential loss is dependent on framing effects. In the acqui-hire context, the engineers will treat the cost of an acqui-hire as less than its actual cost because they will likely view the compensation diverted to the investors as a forgone gain, for which they will act in a risk-averse manner (i.e., they will value it at less than its expected value).

hire.⁷⁵ According to Coyle and Polsky, this combination of factors largely explains the choice to pursue an acqui-hire.

III. START-UPS, TEAMS, AND PATENTS

The value of hiring a team, as opposed to an equivalent number of individual engineers, appears insufficient on its own to explain the acqui-hire trend. This is because the buyer could “recruit and hire a team of at-will employees away from another company through the normal hiring channels.”⁷⁶ That is, the buyer could add the team through a group hire. Moreover, even in an acqui-hire, “the desired employees and the buyer will have to negotiate the individual compensation packages on a person-by-person basis.”⁷⁷ In other words, there appear to be no negotiating efficiencies from adding the team via an acqui-hire rather than a group hire. Therefore, even if the team has a value larger than that of an equivalent number of individuals, the choice to structure the transaction as an acqui-hire has nothing to do with that value.

Still, there are unanswered questions about the movement of the start-up’s intellectual property in an acqui-hire that might indicate that teams do matter. The acqui-hire is distinguished from an ordinary acquisition by the fact that the buyer is not interested in the start-up’s tangible or intangible assets.⁷⁸ Instead, the assets revert to the start-up’s investors.⁷⁹ It is unclear, however, whether this pattern holds true for the start-up’s intellectual property. Intellectual property assets—which include patents, copyrights, trademarks, and trade secrets—are intangible assets of the start-up. Following the simple story of the acqui-hire, the start-up’s intellectual property should revert to the start-up’s investors.

In at least some instances, though, it appears that the buyer in an acqui-hire obtains the start-up’s patents.⁸⁰ Coyle and Polsky’s analysis is based on a series of interviews with acqui-hire participants.⁸¹ Those participants are divided on the role of patents in these transactions. Some view patents as potentially valuable assets that the buyer wishes to acquire; others suggest that patents revert to the start-up just like the start-up’s other assets; and still others indicate that the patents are kept by the

75. Coyle & Polsky, *supra* note 17, at 329–31.

76. *Id.* at 302.

77. *Id.*

78. *Id.* at 293.

79. *Id.* at 296 n.53.

80. *Id.* at 293 n.38; *see also id.* at 296 (noting that often, in larger acqui-hires, “the only assets acquired by the purchaser are whatever intellectual property rights that the startup owns; other assets . . . are left behind”).

81. *Id.* at 285.

buyer for defensive purposes (e.g., to limit the risk of an infringement suit that might arise if the patents fell into the hands of a competitor).⁸² The first task in sharpening the picture of the acqui-hire is therefore to determine what actually happens to the start-up's intellectual property when its engineers are acqui-hired.

A. What Happens to the Start-up's Intellectual Property?

The start-up's intellectual property potentially encompasses patents, copyrights, trademarks, and trade secrets. Because patents offer protection for the core technological developments produced by the start-up, and because relevant data is publicly accessible, the start-up's patents offer a window through which to begin looking at the role of intellectual property in the acqui-hire.⁸³ The pattern of patent transactions offers potential insight into the choice to structure a transaction as an acqui-hire because—assuming the buyer wants the patents—it must pursue an acqui-hire, rather than a group hire, to obtain them. This is because the start-up's investors likely have plausible legal claims to the patentable inventions produced by its engineers. Moreover, third parties could rely on those claims to the buyer's detriment if the buyer failed to obtain them, weakening the buyer's ability to rely on the reciprocal norms identified by Coyle and Polsky. The buyer accordingly needs the start-up's investors to agree to transfer those claims—which may rest on existing patents, pending patent applications, or future patent applications—to the buyer.

There are several potentially plausible sources for the investors' claims to the start-up's inventions. In the simplest scenario, the start-up's investors can have claims to existing patents. These claims will arise from inventions that have been produced by the start-up's engineers, and for which the start-up or the engineers have applied for and received a patent. Patent law requires that every patent identify a natural person as the inventor.⁸⁴ The inventor is the person who first conceives of the in-

82. *Id.* at 293 n.38.

83. Looking at patents does not offer a complete picture of the role of intellectual property in the acqui-hire because, among other things, these kinds of start-ups may rely more heavily on appropriability mechanisms other than patents. Stuart J.H. Graham, Robert P. Merges, Pam Samuelson & Ted Sichelman, *High Technology Entrepreneurs and the Patent System: Results of the 2008 Berkeley Patent Survey*, 24 *BERKELEY TECH. L.J.* 1255, 1290–93 (2009). Moreover, the publicly accessible data is likely incomplete. *Id.* at 1274. Still, because of the ease of access to data, this is an appropriate place to begin the analysis and identify avenues for future research.

84. 35 U.S.C. § 111(a)(1) (2013) (“An application for patent shall be made, or authorized to be made, by the inventor”); 8 *CHISUM ON PATENTS* § 22.01 (2012).

vention.⁸⁵ Joint invention by more than one person is possible; corporate invention, however, is not.⁸⁶

Although the patent must identify the individual inventors, patent law permits those inventors to assign their rights to others, including corporations.⁸⁷ Patents are treated as personal property,⁸⁸ and patent assignments are generally governed by state contract law.⁸⁹ California does enforce invention assignment agreements.⁹⁰ However, these agreements cannot cover an invention made by the employee on her own time and without using the employer's resources, unless the invention relates to the employer's business or results from the employee's work for the employer.⁹¹ Nearly all start-ups use these kinds of invention assignment agreements, granting the start-up the patent rights to any invention produced by its employees during the course of and within the scope of their employment.⁹² As a result, although the patents presumptively belong to the engineers, invention assignment agreements usually make the start-up the owner of the patents.⁹³ If the buyer wants both the engineers and

85. Conception is achieved when someone has in their mind all of the elements of the invention. *Burroughs Wellcome Co. v. Barr Labs.*, 40 F.3d 1223, 1227–28 (Fed. Cir. 1994) (summarizing the requirements of inventorship); *Merges*, *supra* note 15, at 47–48 (explaining that although conception is a “mental event,” it requires objective proof, and the inventor can therefore manipulate the timing of conception).

86. 35 U.S.C. § 116(a) (2012) (“When an invention is made by two or more persons jointly, they shall apply for patent jointly”); *Edwards v. Gramling Eng’g Corp.*, 588 A.2d 793, 798 (Md. 1991) (“It is generally recognized that [c]orporations . . . cannot apply as such for a patent.”).

87. 35 U.S.C. § 261 (2013) (“[P]atents . . . shall be assignable in law by an instrument in writing.”); *Bd. of Trs. of Leland Stanford Jr. Univ. v. Roche Molecular Sys., Inc.*, 131 S. Ct. 2188, 2195 (2011) (“[A]n inventor can assign his rights in an invention to a third party.”).

88. 35 U.S.C. § 261 (2013) (providing that “patents shall have the attributes of personal property”); *FilmTec Corp. v. Allied-Signal Inc.*, 939 F.2d 1568, 1572 (Fed. Cir. 1991) (“[T]he [relevant] statutes establish . . . that patents today have the attributes of personal property.”).

89. *Jim Arnold Corp. v. Hydrotech Sys.*, 109 F.3d 1567, 1578 (Fed. Cir. 1997) (holding that federal court did not have jurisdiction to decide claims arising out of breach of patent assignment agreements because such agreements are governed by state contract law).

90. CAL. LABOR CODE § 2870(a) (West 2014); *Cadence Design Sys. v. Bhandari*, No. C 07-00823 MHP, 2007 WL 3343085, at *4–5 (N.D. Cal. Nov. 8, 2007); Parker A. Howell, *Whose Invention Is It Anyway? Employee Invention-Assignment Agreements and Their Limits*, 8 WASH. J.L. TECH. & ARTS 79, 90 (2012).

91. CAL. LABOR CODE § 2870(a) (West 2014); Howell, *supra* note 90, at 90.

92. *Coyle & Polsky*, *supra* note 17, at 305 n.88 (noting prevalence of invention assignment agreements); *Merges*, *supra* note 15, at 7–10 (describing the use of invention assignment agreements, and state law limits on them).

93. *Bd. of Trs. of Leland Stanford Jr. Univ. v. Roche Molecular Sys.*, 131 S. Ct. 2188, 2195 (2011) (“Our precedents confirm the general rule that rights in an invention belong to the inventor.”); *United States v. Dubilier Condenser Corp.*, 289 U.S. 178, 187 (1933) (“The respective rights and obligations of employer and employee, touching an invention conceived by the latter, spring from the contract of employment.”).

the patents they produced while at the start-up, then the buyer will need to obtain those patents from the start-up's shareholders.

Turn now to pending patent applications. Many acqui-hires occur within the first few years of the firm's founding.⁹⁴ The patent application process, meanwhile, typically runs between two to three years.⁹⁵ These timelines suggest that any patent applications that a start-up filed may still be pending at the Patent and Trademark Office (PTO) when a potential buyer is deciding whether to do a group hire or an acqui-hire. Suppose, for example, that it took two years for the acqui-hire target to invent the patentable technology and it files for a patent as soon as it invents. If the firm is the subject of an acqui-hire one year later, the application will likely still be pending.

Like issued patents, pending applications can be assigned by contract.⁹⁶ As a result, a buyer making the choice between pursuing a group hire or an acqui-hire will find that the acqui-hire offers the opportunity to obtain potential patent rights, but the group hire does not.

Finally, the start-up's investors may have claims to future patent applications. These claims will again be based on invention assignment agreements. Invention assignment agreements are often not limited to inventions for which patent applications are filed during the course of employment; instead, they reach any inventions produced while the employee is at the firm, so long as the other requirements of the agreement are met.⁹⁷ These agreements enable the start-up to plausibly contend that any patent claiming an invention related to the technology that was being developed at the start-up and naming one of its former engineers as an inventor in fact belongs to the start-up.

As an example, imagine that a start-up is working on a new algorithm for recommending products to members of a user's social group. While at the start-up, the engineers conceive of the invention. It is not, however, ready for commercialization. In order to delay starting the clock on the patent term (which is measured from the day the application

94. Coyle & Polsky, *supra* note 17, at 295 (stating that acqui-hires usually occur between seed funding and a Series A round or between a Series A and a Series B round).

95. Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495, 1500 (2001).

96. 35 U.S.C. § 261 (2013) ("Applications for patent . . . shall be assignable in law by an instrument in writing.").

97. *See* FilmTec Corp. v. Allied-Signal Inc., 939 F.2d 1568, 1572 (Fed. Cir. 1991) (reasoning that inventor would have "had nothing to give to [the plaintiff] and his purported assignment to [the plaintiff would be] a nullity" if the inventor had been subject to a valid invention assignment agreement with his prior employer and if he had invented the subject matter of the patent in suit while he was still working for his prior employer).

is filed),⁹⁸ the start-up does not file for a patent while the team continues to refine the commercial product that will incorporate the invention. Facebook, which is working on similar projects, decides to add the start-up's team of engineers via a group hire; whatever rights the start-up's investors held in the engineers' work therefore remained with the investors. One year after Facebook hires the engineers, it is prepared to launch a commercial product incorporating the invention, and files for a patent to protect it.

Facebook's decision to pursue a group hire instead of an acqui-hire will now make this patent vulnerable. The start-up's investors, who were left in the lurch when the engineers left via a group hire, can sue to obtain ownership of the patent on the grounds that the invention falls within the terms of the invention assignment agreement the engineers had signed with the start-up.⁹⁹ Even if the investors do not sue, Facebook's ownership of the patent is still uncertain. If it seeks to sue a third party for infringement, the accused infringer can defend on the basis that Facebook does not own the patent.¹⁰⁰

Therefore, in order to ensure that it can use the start-up's future patents, Facebook must obtain from the start-up the rights stemming from the invention assignment agreements. It can do so with an acqui-hire; it cannot do so with a group hire. In sum, because investors have viable claims to existing and potential patents covering inventions produced by the team of engineers, a buyer interested in obtaining both the start-up's engineers and its patents will have to do so by pursuing an acqui-hire instead of a group hire.

This provides the basis for a hypothesis for a preliminary investigation. If buyers are interested in the patents, then we should see them consistently obtaining them when they complete acqui-hires. If buyers are indifferent to the patents, then we should see them sometimes flowing to the buyer and sometimes not. And if buyers view the patents the same way they view all of the start-up's other assets—that is, as worthless—then we should see the patents remaining with the start-up. Accordingly,

98. 35 U.S.C. § 154(a)(2) (2013) (providing that a patent term “shall be for a term . . . ending 20 years from the date on which the application for the patent was filed in the United States”).

99. *See, e.g.*, *Jim Arnold Corp. v. Hydrotech Sys.*, 109 F.3d 1567, 1579 (Fed. Cir. 1997) (remanding to state court plaintiff-inventor's claims for rescission of an invention assignment agreement).

100. *See, e.g.*, *Pandrol USA, LP v. Airboss Ry. Prods.*, 320 F.3d 1354 (Fed. Cir. 2003) (holding that defendant can contend plaintiff does not have standing to sue because it does not have valid title to the patent); *FilmTec*, 939 F.2d at 1571 (accused infringer argued that the plaintiff did not have standing to sue because it “lacks title to the patent” by virtue of an agreement to assign the invention to the government).

to get some preliminary traction on the question of whether patent rights affect the decision to pursue an acqui-hire instead of a group-hire, I examined the frequency with which existing, pending, or future patent rights changed hands in a set of transactions.

In order to identify a set of acqui-hires for analysis, an initial list of transactions was produced using the Crunchbase.com acquisition database.¹⁰¹ Crunchbase.com is a crowdsourced database compiling information about start-ups.¹⁰² The database includes, among other things, data on funding events and acquisitions. The acquisitions in the database include acquisitions of different kinds, including acqui-hires, although they are not so labeled. There are a total of 11,389 acquisitions in the database, of which 11,360 have a date listed.¹⁰³ Although the earliest acquisition dates back to 1960, over 10,000 of the 11,360 dated acquisitions occurred on or after January 1, 2007.¹⁰⁴

The analysis here is limited to acquisitions completed between January 1, 2011 and December 31, 2012. The January 1, 2011 start date was chosen because of the slowdown in venture capital activity during the 2008 through 2010 financial crisis,¹⁰⁵ and because by mid-2011, the acqui-hire trend had become sufficiently prevalent to warrant treatment in the *New York Times*, making it likely that a significant number of acqui-hires could be identified that year.¹⁰⁶ The December 31, 2012 end date was chosen because the PTO ordinarily maintains the confidentiality of patent applications for eighteen months.¹⁰⁷ As a result, many applications filed since January 1, 2013 and assignments involving them would

101. CRUNCHBASE, <http://crunchbase.com/> (last visited Sept. 30, 2014). A current version of the database can be downloaded here: <http://info.crunchbase.com/about/crunchbase-data-exports/>.

102. *About*, CRUNCHBASE, <http://info.crunchbase.com/about/> (last visited Sept. 30, 2014).

103. These numbers are as of July 31, 2014. The database from that date is on file with the author.

104. These numbers are as of July 31, 2014. The database from that date is on file with the author.

105. Press Release, Thomson Reuters & Nat'l Venture Capital Ass'n, *Venture Capital Funds Raised \$8.9 Billion During First Quarter 2014 for Strongest Fundraising Quarter Since 2007* (Apr. 14, 2014), available at http://www.nvca.org/index.php?option=com_docman&task=doc_download&gid=1049&Itemid=93 (showing decrease in number of funds and dollars raised by venture capital firms in 2008, 2009, and 2010).

106. See Miguel Helft, *For Buyers of Web Start-Ups, Quest to Corral Young Talent*, N.Y. TIMES (May 17, 2011), <http://www.nytimes.com/2011/05/18/technology/18talent.html>.

107. 35 U.S.C. § 122(a) (2013) (providing that applications will be kept confidential subject to subsection (b)); 35 U.S.C. § 122(b)(1)(A) (2013) (providing that, subject to certain exceptions, applications will be published "after the expiration of a period of 18 months"). The period can be extended if the applicant certifies to the PTO that it will not seek patents on the technology in other countries. 35 U.S.C. § 122(b)(2)(B)(i) (2013). Also, confidentiality ends the moment the patent is issued, so the period will be less than eighteen months for those patents issued more quickly than usual.

not be found in the PTO's assignment database.¹⁰⁸ There were a total of 3,106 acquisitions in the Crunchbase.com database for this time period (1,426 acquisitions in 2012, and 1,680 acquisitions in 2011).¹⁰⁹

In order to identify plausible acqui-hires, I focused on acquisitions conducted by the following large technology companies (the number in parenthesis refers to the number of acquisitions by that company in the Crunchbase.com database for the relevant time period): Amazon (8), Apple (4), Facebook (22), Google (40), Groupon (19), Microsoft (8), Twitter (12), and Yahoo! (4). A total of 117 transactions met these criteria.

Lastly, I determined whether the acquisition was an acqui-hire by researching whether major technology media outlets¹¹⁰ (1) explicitly described the transaction as an acqui-hire, or (2) described the transaction as primarily motivated by the acquisition of talent. Because the acqui-hire is defined in part by the buyer's motivations, about which only the buyer truly knows, one cannot conclusively determine whether a particular transaction was an acqui-hire. Using these criteria produced a list of 42 likely acqui-hires and 21 possible acqui-hires.¹¹¹ These 63 transactions formed the basis for analysis. The remaining 54 transactions were deemed not to be plausible acqui-hires.

In order to obtain information about patents and applications, I relied on the PTO's publicly searchable database.¹¹² The PTO also maintains a publicly searchable database of assignments.¹¹³ It includes infor-

108. Exceptions to this would include applications that were granted in less than eighteen months.

109. *CrunchBase Data Exports*, CRUNCHBASE, <http://info.crunchbase.com/about/crunchbase-data-exports/> (last visited Sept. 30, 2014).

110. Websites searched for this purpose were ALL THINGS D, <http://allthingsd.com> (last visited Oct. 21, 2014); GIGAOM, <http://gigaom.com> (last visited Oct. 21, 2014); and TECHCRUNCH, <http://techcrunch.com> (last visited Oct. 21, 2014).

111. A transaction was classified as an acqui-hire when the media reports strongly indicated that the transaction was motivated by the desire to acquire the talent. A transaction was classified as a possible acqui-hire when media reports were unclear about the motivation for the transaction, but it seemed likely that the talent was a primary, if not the only, motivation. A transaction was excluded from the analysis at this stage if the media reports demonstrated that the buyer was interested in the start-up's corporate assets.

112. To search the PTO databases, see U.S. PATENT & TRADEMARK OFFICE, <http://patft.uspto.gov/> (last visited Sept. 30, 2014). For instructions on how to use these databases, see *Important Notices*, U.S. PATENT & TRADEMARK OFFICE, <http://patft.uspto.gov/netahtml/PTO/help/notices.html> (last visited Sept. 30, 2014); *Full-Text Database Help*, U.S. PATENT & TRADEMARK OFFICE, <http://appft.uspto.gov/netahtml/PTO/help/help.html> (last visited Sept. 30, 2014). For more general information, see *Search for Patents*, U.S. PATENT & TRADEMARK OFFICE, <http://www.uspto.gov/patents/process/search/index.jsp> (last visited Sept. 30, 2014).

113. To use the PTO assignment database, see *Patent Assignment Query Menu*, UNITED STATES PATENT & TRADEMARK OFFICE, <http://assignments.uspto.gov/assignments/?db=pat> (last

mation on assignments of patents and patent applications; it does not include information on assignments of future patent rights (i.e., invention assignment agreements).¹¹⁴

	Percent of All Acqui-Hires in Which Start-Up Assigned to Buyer		
	All	Some	None
Patents	9.5% (6/63)	1.6% (1/63)	88.9% (56/63)
Applications	15.9% (10/63)	0% (0/63)	84.1% (53/63)

Table 1: All acqui-hires

Table 1 reports, for all 63 transactions, whether the start-up assigned all, some, or none of its patents or applications to the buyer. Of the 63 transactions, 6 saw the start-up assign all of its patents to the buyer; in 10, the start-up assigned all of its applications to the buyer. In 1 transaction, the start-up assigned some, but not all, of its patents to the buyer. 56 of the 63 transactions saw no patents transferred to the buyer; 53 of the 63 transactions saw no applications transferred to the buyer. In most acqui-hires, then, no existing or pending patent rights were part of the transaction.

	Percent of Acqui-Hires Involving Start-up that Owned Patents or Applications in Which Start-up Assigned to Buyer		
	All	Some	None
Patents	75% (6/8)	12.5% (1/8)	12.5% (1/8)
Applications	76.9% (10/13)	0% (0/13)	23.1% (3/13)

Table 2: Acqui-hires in which start-up had patents or applications

Table 2 reports, for transactions in which the start-up had existing patents or applications, whether the start-up assigned all, some, or none

visited Sept. 30, 2014). For guidance in using the assignment database, see *Assignments on the Web*, U.S. PATENT & TRADEMARK OFFICE, http://www.uspto.gov/products/services/Assignments_on_the_Web.jsp (last visited Sept. 30, 2014).

114. See *Patent Assignment Query Menu*, U.S. PATENT & TRADEMARK OFFICE, <http://assignments.uspto.gov/assignments/?db=pat> (last visited Sept. 30, 2014).

of its patents or applications to the buyer. Of the 63 total transactions, only 8 involved start-ups that had existing patents. Of those 8 transactions, the start-up transferred all of its patents to the buyer in 6 of them, some of its patents in 1 transaction, and none of its patents in 1 transaction. The start-up had pending applications in 13 of the 63 total transactions. In 10 transactions, the start-up assigned all of its pending applications; it assigned none of its pending applications in the remaining 3 transactions. The picture here is that when the start-up had some existing or pending patent rights, the strong tendency was to assign all of those rights to the buyer.

	Percent of Acqui-Hires Involving Start-up that Owned Patents in Which Start-up Assigned to Buyer		
	All	Some	None
Acqui-hire	66.7% (2/3)	0% (0/3)	33.3% (1/3)
Possible acqui-hire	80% (4/5)	20% (1/5)	0% (0/5)
Total	75% (6/8)	12.5% (1/8)	12.5% (1/8)

Table 3: Acqui-hires in which start-up owned existing patents

	Percent of Acqui-Hires Involving Start-up that Owned Pending Applications in Which Start-Up Assigned to Buyer		
	All	Some	None
Acqui-hire	83.3% (5/6)	0% (0/6)	16.7% (1/6)
Possible acqui-hire	71.4% (5/7)	0% (0/7)	28.6% (2/7)
Total	76.9% (10/13)	0% (0/13)	23.1% (3/13)

Table 4: Acqui-hires in which start-up had pending applications

Tables 3 and 4 separate out the data in Table 2 by acqui-hire and possible acqui-hire. They show that the picture is roughly the same whether possible acqui-hires are included or excluded from the analysis. Including possible acqui-hires increases the rate at which start-ups assign all of their existing patents from 66.7% (2/3) to 75% (6/8); doing so decreases the rate at which start-ups assign all of their existing applications from 83.3% (5/6) to 76.9% (10/13). The overall picture remains the

same: existing patents and pending applications largely follow the engineers from the start-up to the buyer.

	Assigned to Buyer	Remained with Start-Up
Patents	15	7
Applications	24	3

Table 5: Assignment by patent and application

While the prior tables report data by transaction, Table 5 reports data by patent or application. Of a total of 22 patents existing at the time of the transaction, 15 were assigned to the buyer and 7 remained with the start-up.¹¹⁵ Of a total of 27 applications existing at the time of the transaction, 24 were assigned to the buyer and 3 remained with the start-up.

To summarize, the start-up had either existing patents or pending applications in 15 of the 63 acqui-hires or possible acqui-hires.¹¹⁶ In 11 of those 15 transactions, the buyer obtained all of the seller's existing patents or pending applications. In 2 of the 15 transactions, the buyer obtained some of the seller's existing patents or pending applications. And in another 2 of the 15 transactions, the seller retained all of its existing patents or pending applications.

	Principal Listed in Later Application
Acqui-hire	33.3% (14/42)
Possible acqui-hire	42.9% (9/21)
Total	36.5% (23/63)

Table 6: Acqui-hires in which start-up's engineers were later named as inventors on buyer's patents

115. It is possible that some or all of these seven patents did not actually remain with the start-up, but were in fact transferred even though the parties did not record the assignment with the PTO. See *infra* text accompanying notes 157–60.

116. Note that in some transactions, the start-up had both existing patents and pending applications.

Table 6 describes the data regarding applications filed after the transaction. One of the start-up's engineers was listed as an inventor on a patent or application filed by the buyer after the transaction in 14 of the 42 acqui-hires and in 9 of the 21 possible acqui-hires; in 23 of the 63 transactions, one of the start-up's engineers was listed as an inventor on one of the buyer's post-transaction patents or applications. These totaled 53 patents and applications in the 42 acqui-hires, and 68 patents and applications in the 21 possible acqui-hires.

In all, in 13 of the 15 acqui-hires in which the start-up owned existing patents or applications, the buyer acquired some or all of those patents and applications. Of the 23 acqui-hires in which one of the start-up's engineers was listed as an inventor on one of the buyer's post-transaction patents or applications, 7 also involved existing patents or pending applications; in 16 acqui-hires, the start-up did not own any patents or pending applications at the time of the transaction, but one of its engineers was listed as an inventor on one of the buyer's post-transaction patents or applications. There was only one transaction in which the seller retained all of its existing patents and pending applications and none of the start-up's principals had been listed as inventors on one of the buyer's post-transaction patent applications.¹¹⁷

These findings support the proposition that it is exceedingly rare in an acqui-hire for the buyer to treat the start-up's patent rights the way it treats all of the start-up's non-intellectual property assets—buyers do not allow all of the patent rights to revert to the start-up's investors.

B. Why Do Buyers Acquire the Start-up's Patents?

While Coyle and Polsky reject the team-based rationale for the acqui-hire,¹¹⁸ their interviewees recognize the value of team hiring. The interviewees note that “one benefit of an acqui-hire is that you get a cohesive team rather than one to two individuals,” and that it “allows you to get group talent.”¹¹⁹ Similarly, they argue that the acqui-hire “builds on a sense of purpose among the engineers,” and it allows “you to get a complete team . . . that already know each other rather than assemble a team yourself.”¹²⁰ Thus, even if team value does not completely explain the choice to use an acqui-hire because group hiring is possible without it

117. One of the start-up's engineers was later named as an inventor on one of the buyer's patents in one of the two transactions in which the start-up did not transfer any of its existing patents or pending applications.

118. Coyle & Polsky, *supra* note 17, at 302.

119. *Id.* at 294 n.40 (internal quotation marks omitted).

120. *Id.* at 294 n.41 (ellipsis in original) (internal quotation marks omitted).

(and not inevitable with it), the widespread recognition of the value of team hiring reveals that participants are aware of the team production problems technology start-ups face and the need to look for solutions to them. This suggests that one possible explanation for the unique treatment accorded to patents in an acqui-hire is that patents may play a role in facilitating the buyer's acquisition and subsequent management of a team of engineers.

In this section, I will first describe the team production problems in the context of software and similar technology start-ups. I will next explain the role that patents may play in mitigating those problems. I will then conclude with some implications of the analysis for understanding the acqui-hire.

1. Team Production in Technology Start-Ups.

Recall that team production scenarios are those in which two or more inputs combine to produce joint output.¹²¹ In these scenarios, the inputs are likely to suboptimally invest in the production process to the extent that the following four problems are present. First, investment may be unobservable; it may be difficult for one team member to determine whether another team member is investing sufficient resources.¹²² Second, effort may be nonverifiable; it may be impossible to demonstrate to an outsider, like a court, whether a team member is complying with contractual commitments to exert a certain amount of effort.¹²³ Third, the output may be nonseparable; it may be difficult to determine the extent to which the total output value is attributable to each of the separate inputs.¹²⁴ Finally, the output may be uncertain *ex ante*; it may be hard to know in advance how much the team as a whole could produce if none of the team members shirked.¹²⁵

Software and other technology start-ups likely face these team production problems.¹²⁶ In these entrepreneurial firms, several programmers must combine their efforts in order to create a new product. Like other ventures that rely primarily on human intellectual effort, the production of software and similar technology is hard to observe or verify. It is unlikely that any one programmer can easily determine whether another

121. See Blair & Stout, *supra* note 1, at 249.

122. Casey & Sawicki, *supra* note 9, at 1700.

123. *Id.*

124. *Id.*

125. *Id.*

126. See Merges, *supra* note 15, at 20–22 & nn.68–71 (describing the prevalence of team production problems in research and development generally).

programmer is thinking about how to most efficiently code a particular routine (as opposed to, for example, what she will have for lunch); whether that programmer is saving brilliant algorithms for her next project and using just “good enough” algorithms for this one; or whether that programmer’s inability to complete her piece of the project is due to her own subpar efforts or to the inadequacy of another’s contribution. It seems equally unlikely that the programmers could predictably demonstrate any of these things to a court. Moreover, in part because the product will be new, it will be hard to know in advance how much it will be worth. Finally, once the project is complete, it will be hard to determine the percentage of the total output each programmer is responsible for.

The combination of these factors means that technology start-ups are susceptible to shirking, and that the shirking is difficult to control through ordinary contractual mechanisms. *Ex ante* sharing rules (e.g., each engineer is entitled to a percentage of the total profit) do not solve the problem because each engineer’s reward only partially depends on her own effort; this means that each engineer has an incentive to shirk because she retains all of the benefits of shirking while bearing only some of its costs.¹²⁷ *Ex post* distribution of the surplus will be susceptible to wasteful rent-seeking efforts as the team members haggle over a fixed pie.¹²⁸

The team production literature suggests that managers can help solve these problems in at least two ways. First, they might be monitoring experts, specializing in detecting difficult to observe investments.¹²⁹ Second, they might be enforcement specialists, ensuring that team members will be punished (or rewarded) if their joint output fails to meet (or exceeds) some threshold.¹³⁰ In order to fill these roles, managers must, among other things: (1) not contribute nonseparable inputs to the joint production process; and (2) own the residual claim to the team’s output.¹³¹

127. *Id.* at 22; Blair & Stout, *supra* note 1, at 266.

128. Merges, *supra* note 15, at 22.

129. Casey & Sawicki, *supra* note 9, at 1695–96; Armen A. Alchian & Harold Demsetz, *Production, Information Costs, and Economic Organization*, 62 AM. ECON. REV. 777, 781–85 (1971).

130. Casey & Sawicki, *supra* note 9, at 1696–99; Bengt Holmström, *Moral Hazard in Teams*, 13 BELL J. ECON. 324, 326–30 (1982). See also Raghuram G. Rajan & Luigi G. Zingales, *Power in a Theory of the Firm*, 113 Q.J. ECON. 387 (1998).

131. Casey & Sawicki, *supra* note 9, at 1706, 1712.

2. Patents as (Partial) Solutions to Team Production Problems.

Patents can help a manager supervise a team production process.¹³² By statute, patents are treated like personal property and can be assigned by contract.¹³³ An invention assignment agreement can grant the manager the patent rights to any inventions produced by the team.¹³⁴ As Professor Robert Merges explains, this mechanism makes it possible for the manager—who has not contributed to the inventive process—to obtain the residual claim to the team’s output.¹³⁵ The prerequisites of team production management are therefore in place. The precise function patents perform in a given context will vary depending on whether the team production process is organized around a manager performing a monitoring role or an enforcement and punishment role.

Managers who perform monitoring roles typically must invest significant resources in learning about the particular inputs to the production process.¹³⁶ A manager might, for example, be better able to monitor the team’s progress if she knows which programmer is a perfectionist and which excels at discovering quick and dirty solutions. The problem is that the manager will typically have to reveal at least some of this kind of information to the team members. And once the team members themselves know about their strengths and weaknesses, they could plausibly capture that value by replacing the manager.¹³⁷ In this scenario, the first manager faces the same problem that all producers of information face: the person who invests in developing information finds it difficult to capture the returns to that investment because the information it produces is nonexcludable.

Patents can encourage managers to invest in the learning process required of a team production manager because a patent grants its owner the right to prevent downstream researchers from incorporating the orig-

132. The arguments here parallel those made in the copyright context in Casey & Sawicki, *supra* note 9.

133. 35 U.S.C. § 261 (2012); *FilmTec v. Allied-Signal*, 939 F.2d 1568, 1572 (Fed. Cir. 1991); *Stanford v. Roche*, 131 S. Ct. 2188, 2195 (2011) (“[A]n inventor can assign his rights in an invention to a third party.”).

134. Merges, *supra* note 15, at 7–10.

135. These contracts are, however, imperfect because team members might be able to evade them if they leave the firm early enough. *See id.* at 46–47 (explaining how an inventor can avoid employer ownership of an invention by leaving the firm “after one arrives at the general notion of an invention, but before any of the provable milestones of invention arrive”).

136. Casey & Sawicki, *supra* note 9, at 1734–36.

137. The new manager will not have invested in developing the information about the team, while the first manager will have made that investment. All else equal, the new manager should therefore agree to manage for less than the first manager would accept.

inal invention into their improvements.¹³⁸ This right increases the costs of defection relative to a scenario in which there are no patents because leaving the patent-owning manager would leave the manager with a potential veto on the work of the defecting engineer(s) to the extent that those engineers wanted to continue working on related projects. As a result, if a team wants to produce an invention and retain the ability to create (and fully profit from) any improvements to that invention, they will most cheaply be able to do so by working with the same manager.

Managers who perform enforcement or punishment roles (as they do when their expertise lies in reducing uncertainty) need to be able to break the budget constraint—they need to be able to pay rewards out of a pot that is not limited to the value created by the team in the initial project.¹³⁹ Again, the blocking patent rule facilitates the role of the team production manager. Because the owner of a patent on an invention is in a blocking position with respect to creators of improvements to that invention, the patent owner can raise or lower the costs of participating in efforts to improve an invention. When the manager is the patent owner, she has the ability to reward teams that succeed by permitting them to participate in efforts to improve the invention, and the ability to punish teams that fail by prohibiting them from participating in efforts to improve the invention. To the extent that the value of those improvements comes from projects distinguishable from the initial project, it is the kind of value that the manager can use to elicit effort in the initial project.

In addition to these management-facilitating functions, patents may also reduce transaction costs associated with team production in ways described by Professor Paul Heald. First, when a firm uses patents to substitute for trade secrets as tools to protect information from competitors, it no longer needs to spend money on the elaborate mechanisms required to maintain trade secret protection; those mechanisms, like preventing information sharing among team members and monitoring compliance with confidentiality agreements, are particularly costly in team production contexts.¹⁴⁰ Second, patents allow managers to monitor team members by measuring their contributions to the firm's patent portfolio.¹⁴¹ Finally, patents facilitate team production across firms by clarifying the scope of the information asset over which the firms are contract-

138. See generally Robert Merges, *Intellectual Property Rights and Bargaining Breakdown: The Case of Blocking Patents*, 62 TENN. L. REV. 75 (1994) (describing how patent law's blocking patent rule enables holders of upstream patents to extract value from downstream improvers).

139. Holmström, *supra* note 130, at 327–28.

140. Heald, *supra* note 15, at 487–88.

141. *Id.* at 491–93.

ing.¹⁴² If patents are able to reduce contracting costs when firms are transacting over information produced by a team, it is also plausible that patents similarly reduce contracting costs when firms are transacting over the movement of the team members themselves.

3. Patents and Team Production in Acqui-Hires

It is therefore at least possible that patents facilitate the organization of team production. Buyers in acqui-hires are looking in part to capture the value created by this particular team of engineers, rather than an equivalent number of individual engineers. Because existing and future patents covering inventions produced by the team while at the start-up can help the buyer keep the team together, buyers will plausibly place a higher value on the start-up's patents and future patents than will others (including the start-up's investors).

Combined with the start-up's viable claims to those patents and future patents, the buyer's higher valuation provides a reason to pursue an acqui-hire rather than a group hire: the acqui-hire is a mechanism for ensuring that present and future patent rights follow the team. Of course, patents fulfill several functions, and some of them may overwhelm the value of team management. In those instances, patents may stay with the start-up or move to the buyer for other reasons. Still, in at least some situations, the team management function of patents may be sufficiently valuable that it pushes a firm towards an acqui-hire and away from a group hire.

The data also helps alleviate some tension in the Coyle and Polsky explanation of the acqui-hire. Buyers will ordinarily want to keep the engineers for as long as possible. That is why the compensation pool is usually structured to include time-vested options—they are meant to discourage the engineers from leaving.¹⁴³ Of course, there are limits on the buyers' ability to persuade engineers to join them and to stay on board; buyers presumably would not want to keep an unhappy engineer. Still, the buyers are generally interested in hiring (and retaining) talented engineers.

Yet one of the key advantages to the acqui-hire in the Coyle and Polsky story is that it increases the odds that the investors will back the engineers in a subsequent venture.¹⁴⁴ The goal of the deal consideration pool—the dollars sent by the buyer to the investors rather than to the en-

142. *Id.* at 489–91.

143. Coyle & Polsky, *supra* note 17, at 297–99.

144. *Id.* at 314–17.

gineers—“is simply to pay off the investors so the entrepreneurs can obtain . . . reputational benefits.”¹⁴⁵ While some of those reputational benefits have only intrinsic value (e.g., engineers will feel good about themselves if they demonstrate loyalty to the investors who helped them start the venture), arguably the most important reputational benefit of the acqui-hire is that the investors will be more likely to back the engineers’ subsequent ventures and recommend to other investors that the engineers are a good investment.¹⁴⁶ All else equal, structuring the transaction as an acqui-hire rather than a group hire therefore makes it more likely that the engineers will leave the buyer to found another start-up as soon as feasible. So it is at best a mixed blessing for the buyer to attract the engineers through a transaction that facilitates their eventual exit.

The data presented here helps reduce this tension. Buyers might pursue acqui-hires rather than group hires not only to appease engineers, but also because they transfer assets to the buyers—namely, existing and future patents—that make it easier for the buyers to keep the entire teams together and that make it harder for engineers to leave, even after their options vest and other inducements to stay or restrictions on leaving expire.

C. *Cautionary Notes*

Much remains to be done in understanding the intersection of intellectual property and team production. There are important reasons to be cautious in drawing conclusions about the relevance of patents to these transactions. Most critically, relatively few of the acqui-hired start-ups had any patent rights to speak of. Only about one-quarter of the start-ups (15 of 63) had either existing patent rights or pending applications.¹⁴⁷ But when future patents listing the start-up’s principals as inventors are included, nearly half of the transactions (31 of 63) could be driven in part by patent considerations.¹⁴⁸ Therefore, whether the data shows that patent rights influenced one-quarter of the transactions or one-half of them depends on whether the acqui-hire in fact affects rights to patents arising from applications filed after the acqui-hire.

There are at least two reasons why that may not be the case. First, the start-up’s investors may not have plausible claims to the patents filed by the buyers naming the start-up’s founders as inventors. Those claims would be based on invention assignment agreements that grant the start-

145. *Id.* at 332.

146. *Id.* at 312–22.

147. *See supra* text accompanying note 116.

148. *See supra* text accompanying notes 116–18.

up the rights to inventions produced by employees during the term of employment and within the scope of their work.¹⁴⁹ Such claims would not be viable if the post-transaction patents relate to technology different from the technology developed at the start-up. The work done at the start-up may also simply have been too preliminary to reach the patentable stage. And even when it appears that the inventor acted strategically in leaving the firm just before proof of conception, courts are reluctant to enforce these agreements and grant the rights to the firm; departing employee-inventors tend to win.¹⁵⁰

Second, even if there were viable claims, that would not mean that the investors would bring them. Venture capitalists are reluctant to pursue legal claims against their entrepreneurs.¹⁵¹ Even though these sorts of claims to future patents could be directly adverse to the buyers instead of the engineers, they would nonetheless still involve those engineers as witnesses and discovery targets.¹⁵²

Additional transactions between the parties may also undermine the patents' ability to play team-preserving roles. As at least some acqui-hire participants have suggested, the buyer might obtain the patents and then grant back to the investors a "nonexclusive, perpetual royalty free license to use" them.¹⁵³ This could permit engineers who do not want to join the buyer to remain at the start-up at lower cost than would be the case if the start-up could no longer use the inventions produced by the team. Still, the start-up cannot use patents to manage the team the way the buyer could because, as a nonexclusive licensee, the start-up will not have standing to sue alleged infringers¹⁵⁴ and therefore will not be able to stake out a blocking position with respect to improvements on the patented technology.¹⁵⁵ These licenses are not publicly available; accord-

149. See *supra* text accompanying notes 97–100.

150. Merges, *supra* note 15, at 48–52.

151. Coyle & Polsky, *supra* note 17, at 307–10.

152. See *id.* at 310 n.109 (reasoning that entrepreneurs may still respond negatively if the investor sues a buyer for claims arising out of the entrepreneurs' departure, even if the entrepreneurs are not named in the suit, because the entrepreneurs will still be involved as key witnesses in the litigation).

153. *Id.* at 293 n.38.

154. *Ortho Pharm. Corp. v. Genetics Inst., Inc.*, 52 F.3d 1026, 1030–35 (Fed. Cir. 1995) (holding that nonexclusive licensee did not have standing to sue third party for infringement).

155. As between the buyer (who as the owner of the patent can sue third parties for infringement) and the start-up (who as the nonexclusive licensee cannot sue third parties for infringement), only the buyer has a blocking position with respect to third parties. In other words, an engineer who wishes to work on an improvement without the buyer's consent can only work at the buyer or the start-up; an engineer who wishes to work on an improvement without the start-up's consent can work anywhere. This means that the buyer will likely still better manage the team than the start-up. However, when these licenses are in place, the buyer's relative advantage will be somewhat weak-

ingly, the data here does not reflect the extent to which the investors can still use inventions covered by the patents acquired by the buyer.

On the other hand, there are at least four reasons why this data may understate the importance of patents to the *acqui-hire*. First, the PTO may still be keeping confidential some of the pending applications. Although patents are ordinarily made public after 18 months, that period can be extended if the applicant certifies to the PTO that she will not be seeking patents covering the technology in other countries.¹⁵⁶ Software firms like the ones at issue in most *acqui-hires* may conclude that the benefits of continued secrecy outweigh other considerations. As a result, some applications may be pending beyond the standard eighteen-month period and are therefore still confidential even for transactions taking place between 2011 and 2012. If so, then the data here does not include all applications for the identified transactions.

Second, some assignments may not be recorded. There is no requirement that patent assignments be recorded in the PTO database.¹⁵⁷ Doing so avoids the possibility that the assignee will lose her claim to a subsequent *bona fide* purchaser for value,¹⁵⁸ so it would seem unlikely that sophisticated actors like the ones engaged in these transactions will fail to record their assignments. But the conventional wisdom is that many assignments are not recorded in the database, perhaps because parties to patent transactions ordinarily conduct significant due diligence and include contractual mechanisms to deter fraudulent transfers.¹⁵⁹ As a result, some of the patents designated here as not assigned may in fact have been assigned.

Third, the search for subsequent applications filed by the buyer after the transaction only looked for those naming one of the start-up's principals as the inventor; because the entire roster of a start-up's engineers is not publicly accessible, it is not possible to search for the names of all the potential inventors on patents to which the start-up's investors have plausible claims. It seems likely that other engineers that moved

ened because it can no longer preclude the engineers who prefer to stay at the start-up from working on the technology.

156. 35 U.S.C. § 122(b)(1)(A) (2012) (providing that, subject to certain exceptions, applications will be published "after the expiration of a period of 18 months"). The period can be extended if the applicant certifies to the PTO that it will not seek patents on the technology in other countries. 35 U.S.C. § 122(b)(2)(B) (2012).

157. Graham et al., *supra* note 83, at 1274 n.60.

158. 35 U.S.C. § 261 (2012) ("An assignment . . . shall be void as against any subsequent purchaser or mortgage for a valuable consideration, without notice, unless it is recorded in the Patent and Trademark Office within three months from its date or prior to the date of such subsequent purchase or mortgage.").

159. Graham et al., *supra* note 83, at 1274 n.60.

from the start-up to the buyer would contribute patentable inventions to the buyer following their move. If they did, then the buyer may have sought an acqui-hire in part to ensure that it received those patent rights.

Finally, it is possible that the start-up's engineers, who have only moved to the buyer in the last two or three years, are still working on developing technology that has not yet reached the stage at which a patent application would be viable. The buyers in this data set may later file applications arising from the transactions at issue (or have filed applications that are still within the standard eighteen-month period of confidentiality), even if they have not yet done so.

Moreover, the data may understate the importance to the acqui-hire of intellectual property generally, as opposed to patents specifically. Much of the valuable intellectual property produced by these start-ups will take the form of trade secrets. Trade secrets can include nontechnical business information (e.g., customer lists and pricing strategies) and technical information like improved programming algorithms.¹⁶⁰ Silicon Valley software start-ups appear to prefer trade secrets to patents, in large part because trade secrets are much cheaper to obtain.¹⁶¹

If the start-ups are relying on trade secrets, then that form of intellectual property may still be pushing buyers to pursue acqui-hires. Even in California, former employees are not free to use their former employer's trade secrets. While the state does not apply the inevitable disclosure doctrine to prohibit a former employee who had access to trade secrets from working for a competitor at all, it does apply ordinary trade secret misappropriation principles that may expose a former employee (and his new employer) to liability for misuse of the start-up's trade secret information.¹⁶² The start-up's investors could therefore have plausible trade secret claims to assert against the buyer if they are unhappy about the engineers' decision to leave via a group hire.¹⁶³ To the extent the relevant intellectual property takes the form of trade secrets, rather than patents, it would not be visible in this data. And there is no comparable public database of trade secret transactions as there is for patents, making it difficult to access the relevant information.

Coyle and Polsky recognize the potential viability of trade secret misappropriation claims, but downplay them on the grounds that the in-

160. UNIF. TRADE SECRETS ACT § 1(4) (1985).

161. Graham et al., *supra* note 83, at 1290–93, 1313–14.

162. See Coyle & Polsky, *supra* note 17, at 304.

163. These kinds of claims are, however, difficult to assert with much confidence. See Merges, *supra* note 15, at 47 n.159.

vestors would never pursue them.¹⁶⁴ What they overlook is the possibility that the trade secrets have team-specific value. If the buyer obtains those trade secrets, it can use them to continue to bind the team together, and the acqui-hire gives the buyer the opportunity to obtain them while a group hire does not. Unlike the investors, the buyers in these transactions—large technology firms like Google—do sue former employees for misappropriation of trade secrets.¹⁶⁵ As a result, the buyer's ability to obtain the start-up's trade secrets may also help explain the choice to structure the transaction as an acqui-hire.

IV. CONCLUSION

The acqui-hire is still a novel phenomenon, and it is possible that it will remain a relative rarity in the world of corporate transactions. One implication of the analysis here is that if the acqui-hire spreads, we should expect to see it in industries focused on technology development. Unless the desired employees are primarily developing patentable technology (or information that could be protected as a trade secret), the opportunity to obtain team-preserving intellectual property rights through an acqui-hire does not offer the buyer an incremental value over simply adding the employees via a group hire. This could therefore partially account for the absence of acqui-hiring in, for example, the legal profession, where teams of attorneys are frequently hired as a group but without an acquisition.¹⁶⁶

Furthermore, we might conclude from here that the acqui-hire is more like an ordinary corporate acquisition than the conventional wisdom suggests. While the media and the legal academy view these as talent-driven transactions for which the seller's assets are irrelevant, it may be more accurate to see these transactions as reflecting a shift from an industrial-age economy—in which the assets of interest are tangible things like factories and machines—to an information age economy—in which the assets of interest are intangible things like patent rights. To say that the assets of interest are patent rights is not the same thing as saying that the buyer is interested in the “talent,” or human capital, of the start-up. Instead, it is the relationship between that talent and particular (intangible) complementary assets that makes the purchase of the start-up

164. Coyle & Polsky, *supra* note 17, at 305–06 (recognizing that the “investors could allege that the poaching company and the defecting engineer colluded to misappropriate the startup's trade secrets”), and 307–10 (arguing that Silicon Valley lawyers' culture makes it unlikely that unhappy investors would sue their former entrepreneurs).

165. *See, e.g., id.* at 309 n.107.

166. *See id.* at 301–02 (describing prevalence of group hiring of lawyers).

attractive, in much the same way that corporate acquisitions in the industrial age may have been influenced by the relationship between the human capital of a firm's employees and the particular tangible complementary assets (e.g., machines and factories used by those employees).¹⁶⁷

Much empirical work remains to be done. The cautionary notes sounded above could be at least partially resolved by survey work.¹⁶⁸ Additional data may help confirm or reject the possibility that intellectual property rights affect the choice to use the *acqui-hire*. For example, Coyle and Polsky predict that over time, a "money back for the investors" rule of thumb will determine the allocation of dollars between the compensation pool and the deal consideration pool.¹⁶⁹ But if intellectual property is a critical asset driving buyers to *acqui-hires*, then there should not be a generic rule of thumb guiding the allocation of dollars, which will instead be determined by the idiosyncratic value of intellectual property obtained in particular cases.

Finally, I have not yet said much about the corporate law angle to this analysis. The engineers in an *acqui-hire* move from a closely-held firm to a large public corporation. It is possible that they are doing so in part because they need a mediating hierarch to facilitate their interaction with other (non-engineer) team members, and the public company's board is better positioned to fill that role than other options. If so, then patents might be viewed as facilitating the movement of employees across corporate structures. These, and surely many other issues, remain to be resolved by future research.

167. See Oliver Hart, *An Economist's Perspective on the Theory of the Firm*, 89 COLUM. L. REV. 1757, 1770-71 (1989) (explaining how firms can use ownership of physical assets to obtain some control over complementary human capital).

168. See generally Graham et al., *supra* note 83 (reporting results of a survey of technology entrepreneurs that was designed in part to fill gaps left by empirical work focusing on publicly accessible and private databases).

169. Coyle & Polsky, *supra* note 17, at 332-36.