The Zynga Clawback: Shoring up the Central Pillar of Innovation

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Thomas A. Smith

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Silicon Valley isn’t a special place for invention and for startups because of special infrastructure or special laws, but because of special ideas and special norms. Those norms don’t hold up in court, and they erode a little bit every time someone like [Zynga’s CEO Mark] Pincus only thinks about what they can get away with instead of what’s right. This reduces the perceived value of equity for everyone in the valley, makes everyone less open, less trusting, less willing to take a risk. In
the end, we all lose for that.

If I had my way, Pincus would never work in this town again. Anyone involved in this decision should be made a pariah. If we don't defend the norms that make innovation possible, we'll lose them.

—Lambent_Cactus at Hacker News

INTRODUCTION

Mark Pincus, Chief Executive of Zynga, Inc., did not offer big salaries to the talent he recruited to his popular online gaming company when it was just starting up, but he did give out a lot of stock options. For many early employees, this turned out to be a great deal. Zynga went public in December 2011, and is now a multibillion-dollar company. For other employees, the deal was less favorable. As Zynga prepared to go public, Pincus and other top executives decided some Zynga employees had gotten too many stock options. So Pincus took the controversial step of demanding that these purportedly over-valued employees give back some of their options to the company or else be fired and lose all of their options that had not already vested. I call this the Zynga clawback. According to the Wall Street Journal, Zynga executives said “they didn’t want a ‘Google chef’ situation.”

4. Id.
5. Scheck & Raice, supra note 2.
6. Id. (explaining that shortly before the company’s IPO, Zynga CEO Pincus pressured employees to surrender stock options); see also Rebecca Greenfield, Zynga Defends Its Scandalous Options System, ATLANTIC WIRE (Nov. 10, 2011), http://www.theatlanticwire.com/business/2011/11/zynga-defends-its-scandalous-options-system/44839/ (stating that Pincus defends controversial decision as a “meritocracy”); Gary Rivlin, Zynga’s IPO Gives Founder Mark Pincus a Stock Class All His Own, DAILY BEAST (Dec. 14, 2011), http://www.thedailybeast.com/articles/2011/12/14/zynga-s-ipo-gives-founder-mark-pincus-a-stock-class-all-his-own.html (“[Pincus will] have 70 votes for every supershare of Zynga he owns. . . . [T]he roughly 100 million shares . . . offered to the masses . . . [will] provide a mere one vote per share.”); Evelyn M.
The Zynga executives were referring to Charlie Ayers, a chef who went to work for Google in its early days and was paid partly in stock options. These options were reported ultimately to be worth around $26 million after Google went public. To Zynga executives, the term Google chef was a rebus for an employee who was granted a quantity of stock options that turned out to be worth far more than the employee was worth to the company. The food at Google may have been good, but for his six years of work, Google paid Ayers more than $4 million per year—surely far too much.

Or was it? When Ayers agreed to work for cash and stock options, he presumably contemplated the possibility that they might someday be worth a lot of money, perhaps even as much as $26 million. Had Google come back to him when it appeared they might be worth a princely sum and demanded some of them back, Ayers might reasonably have accused them of acting opportunistically. If a homeowner were to pay a painter for painting his house with lottery tickets that had a modest expected value, any first year law student should be able to tell you that the homeowner should not be able to get the lottery tickets back if they later turned out to be worth millions. The homeowner took that risk when he decided to pay in lottery tickets. Buyer’s remorse is not grounds for overturning a contract. Is the Zynga situation any different? Is Pincus one of those (near) billionaires who think the rules don’t apply to them?

Rusli, Zynga: Bully or Meritocracy?, NYTIES.COM DEALBOOK (Nov. 10, 2011, 6:23 PM), http://dealbook.nytimes.com/2011/11/10/zynga-bully-or-meritocracy/ (reporting that Twitter’s masses condemned Pincus’s behavior as “despicable,” “foolish,” and even “evil” after the Wall Street Journal’s article accused him of clawing back employee shares); Richard Waters, Zynga Rethinks Silicon Valley Pay Structures, FIN. TIMES (Nov. 11, 2011, 12:17 AM), http://www.ft.com/intl/cms/s/0/5997a58a-0b5-11e1-931000144feabd0.html#axzz20h78NTg (noting that Zynga has asked some executives to hand back their unvested stock as a condition of remaining at the company).

8. See Lusher, supra note 7.
9. See generally id.
Actually, the Zynga clawback is different. Under the laws of California, Zynga was within its rights to demand that (in its view) underperforming employees either give back some of their unvested stock options or be fired. The reason for this is that employees of technology startups in Silicon Valley and in other entrepreneurial hubs, who are neither founders nor C-level executives, are almost always employees at will. Under the at-will doctrine, an employer may terminate an employee at any time, for any reason or for no reason. Employees are also free to quit at any time, for any reason or no reason. Precedents in California and Delaware, as well as other states, make it reasonably clear that it is permissible under the at-will employment doctrine to fire an employee because she became too expensive given the terms of her stock option plan. Companies may fire at-will employees for any reason, and being overcompensated is as good as any other reason or no reason.

11. Zynga is incorporated in Delaware but was probably a quasi-foreign California corporation before its IPO. See generally CAL. CORP. CODE § 2115 (2010). According to this section, foreign corporations not traded on a national exchange or NASDAQ, more than fifty percent of whose shares are held by California residents and more than fifty percent of the average of whose property, payroll, and sales is allocable to California, must comply with certain requirements of California corporate law. See id.; see also Wilson v. La.-Pac. Res., Inc., 187 Cal. Rptr. 852, 854–63 (Ct. App. 1982); W. Air Lines, Inc. v. Sobieski, 12 Cal. Rptr. 719, 727–29 (Ct. App. 1961) (finding that regulations of the Commissioner of Corporations regarding quasi-foreign corporations are consistent with the internal affairs doctrine). See generally Stephen R. Ginger, Regulation of Quasi-Foreign Corporations in California: Reflections on Section 2115 After Wilson v. Louisiana-Pacific Resources, Inc., 14 SW. U. L. REV. 665, 667, 671–83 (1984).


13. CAL. LAB. CODE § 2922 (2012) (“An employment, having no specified term, may be terminated at the will of either party . . . .”); Guz v. Bechtel Nat’l, Inc., 8 P.3d 1089, 1100 & n.8 (Cal. 2000) (explaining that at-will employment may be terminated at any time, with or without cause, for any lawful reason or no reason at all, assuming that there was no violation of public policy involved); Scott v. Pac. Gas & Elec. Co., 904 P.2d 834, 839–840 (Cal. 1995) (explaining the strong Common Law presumption that an employee may be terminated at will); Singh v. Southland Stone, U.S.A., Inc., 112 Cal. Rptr. 3d 455, 471 (Ct. App. 2010) (explaining that at-will employment relationships may be terminated for any lawful reason, or no reason at all).


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Even if a good reason were required, firing an employee because she costs shareholders more in dilution than she added to the value of the corporation through her work might satisfy such a test. One could argue that a chief executive such as Zynga’s Pincus had a duty to his company’s shareholders, albeit one it would be impractical to enforce judicially, to shed employees who took more value out of the company in equity claims than they put in through labor. If a company could legally cast such an employee over the side, then over the side she should presumably go, if we suppose the job of management is to maximize the value of the company to its shareholders.17

Zynga clawbacks may be legal, but are they a good idea? The answer, legally speaking, is not necessarily. The Wall Street Journal worries that “[i]f Zynga’s demand for the return of shares . . . were . . . to catch on and spread, [it] would erode a central pillar of Silicon Valley culture.” This anxiety is justified. A central pillar of Silicon Valley business culture, as the Wall Street Journal notes, is that “start-ups with limited cash and a risk of failure dangle the possibility of stock riches in order to lure talent.” The furor caused by the Zynga clawback suggests that many Silicon Valley employees did not realize that clawbacks were possible. Perhaps they naively thought simply that if the startup they joined became improbably successful, they would become improbably rich.

17. See ROBERT CHARLES CLARK, CORPORATE LAW 678 (1986) (“[F]rom the traditional legal viewpoint, a corporation’s directors and officers have a fiduciary duty to maximize shareholder wealth, subject to numerous duties to meet specific obligations to other groups affected by the corporation.”). See generally Thomas A. Smith, The Efficient Norm for Corporate Law: A Neotraditional Interpretation of Fiduciary Duty, 98 MICH. L. REV. 214, 230 (1999).
19. Id.
20. See, e.g., Jungle Joe, Comment to Evaluating Stock Offer as Part of Compensation, ARS TECHNICA (Jun. 1, 2012, 6:25 AM) (“What is an ‘option clawback’?”); see also Semil Shah, Clawbacks and Startups Don’t Mix, TECHCRUNCH (Nov. 10, 2011), http://techcrunch.com/2011/11/10/clawbacks-startups/ (stating that “[s]tartups are supposed to be different” from other businesses, like hedge funds, where employers are fired on a whim).
The Wall Street Journal is correct to worry about Zynga clawbacks. If they become standard, they could chill the entrepreneurial ardor of potential startup employees.21 Zynga clawbacks have a perverse logic. The more successful a startup company is, the more its stock options will be worth. The more they are worth, the more likely it is that the company will regret having given so many of them to its employees. Thus the more successful a company is, the more likely it is, other things equal, that it will want to claw back some of the options it has issued to employees.22 Smart potential startup employees will foresee this possibility and their incentives to work for stock options will be reduced.

Yet from management’s point of view, clawbacks are not necessarily opportunistic at all. Journalistic accounts of Pincus’s behavior at Zynga are at least consistent with the account that he sincerely believed that the employees from whom he wanted options back were not living up to reasonable expectations. It might have been the employees, not Pincus and his company, who were behaving opportunistically. One function of at-will doctrine is to reduce opportunism by employees. An employer that hires an employee not at-will but for a term can fire the employee only for a good cause, which is notoriously difficult for employers

21. One commenter on Hacker News, the popular social news website about computer hacking and startup companies, exclaimed:
Wow this should be straight up illegal and yet:
“One lawyer said that over the past year, he has heard executives of three social-media sites discuss the possibility of clawing back equity from some employees. Another lawyer, who has handled stock-compensation issues with technology companies for decades, said he never saw a company try to take equity from employees until about two years ago, but has since seen three such cases at start-ups.”
I don’t see how this is anything other than theft. They’re saying that either you give us some of your compensation back (you may not have joined if it were not for those stock options/grants) or you’re fired and lose it all. Insane.

22. See Scheck & Raice, supra note 2.
Employees who can be fired only for cause can perform perfunctorily, just above the standard that would get them fired, and still collect the compensation due under the employment contract. Startups hire at will partly to reduce this shirking behavior. Renegotiating an employment contract with an underperforming employee for fewer stock options in the shadow of an at-will termination might merely be an instance of using the at-will doctrine exactly as it should be used.

As this Article will show, hiring startup workers as at-will employees and compensating them partly with stock options is economically complex. It is a business practice that has evolved over time and serves several important functions. Under existing law, Pincus and Zynga could indeed legally claw back options. Yet their ability to do so is worrisome and highlights a way in which existing startup employment practice could be improved, at least in some cases. After discussing the purposes served by the current practice, this Article will consider an alternative contractual arrangement that prospective startup employees could negotiate for that would restrict clawbacks and make the work-compensation exchange more efficient.

I. THE AT-WILL EMPLOYMENT DOCTRINE AND STOCK OPTION PLANS

A modern stock option plan has a fairly straightforward contract at its core, though with all its details of implementation, it is a fearsomely complicated legal beast. The complexity results mostly from having to comply with complex tax and securities laws, but it is the basic structure of the core contract that allows Zynga clawbacks to occur.

The arrangement between a startup such as Zynga and a nonfounder employee is best thought of as having two parts. The first part is the employment agreement itself. For most of the talent that a startup hires, the employment relationship is at will. The at-will employment relationship allows either the hiring company or the employee to terminate the relationship at any time, whether for a good cause, a bad cause, or no cause at all. Professors of employment law have harshly criticized this doctrine, but American courts still enforce it. The second part of the startup-employee relationship is the stock option plan itself.

Ideally, soon after it is founded, or at least before it starts to grant stock options, a startup will establish a stock option plan. This plan is the overall structure that sets forth the specific terms of the stock options that the company will grant to some of its employees. Part of this arrangement will be a stock option agreement, which is the contract between a particular employee and the company that grants the options, subject to the terms of the stock option plan. The stock option agreement is styled as a grant of options to the employee, but the options are nothing like gifts or gratuities. Instead, courts generally recognize that the options are granted in exchange for the employee working for

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27. See Ronald J. Gilson, The Legal Infrastructure of High Technology Industrial Districts: Silicon Valley, Route 128, and Covenants Not to Compete, 74 N.Y.U. L. REV. 575, 590 (1999) (highlighting that Silicon Valley engineers shifted between firms so frequently that it became the norm, indicating an at-will relationship between the employees and employers).


31. See id.
the company—that is, the employee working for the company serves as consideration for the stock option agreement. Because the stock option agreement is supported by consideration, it is legally enforceable, and efforts to attack these agreements as lacking consideration typically have failed.

The 2007 Zynga Equity Incentive Plan recites a purpose that is typical for stock option plans. The purpose of the plan, it says, is:

[T]o provide incentives to attract, retain and motivate eligible persons whose present and potential contributions are important to the success of the Company, its Parent and Subsidiaries by offering eligible persons an opportunity to participate in the Company’s future performance through awards of Options, Restricted Stock, and Restricted Stock Units.

To accomplish this, the overall structure of the plan is that of a unilateral contract. The plan offers the award of stock options to the employee in return for her continuing to work for the company, which is her acceptance of the offer. Put another way, the performance invited and induced by this offer is the forbearance by the employee from exercising the right she has as an at-will employee to terminate the employment relationship at any time for any reason. This unilateral structure means that the contract is formed continuously, as it were, as the employee continues working for the company.

34. Bodie, supra note 30, at 548.
36. See Chinn v. China Nat’l Aviation Corp., 291 P.2d 91, 92 (Cal. Ct. App. 1955) (“Of late years the attitude of the courts (as well as of employers in general) is to consider regulations of this type which offer additional advantages to employees as being in effect offers of a unilateral contract which offer is accepted if the employee continues in the employment, and not as being mere offers of gifts.”); see also Newberger v. Rifkind, 104 Cal. Rptr. 663, 667 (Cal. Ct. App. 1972) (discussing an implied unilateral contract for stock option agreement); Hunter v. Sparling, 197 P.2d 807, 813–14 (Cal. Ct. App. 1948) (inferring an enforceable promise to pay pension benefits from employer’s personnel policies).
The plan creates the incentive for the employee to keep working for the company through an option-vesting schedule. The option-vesting schedule is the timetable by which the employee may actually exercise her stock options to buy company stock. When the company first grants the employee options, they are typically not exercisable immediately to buy stock. First they have to vest. Under the Zynga 2007 Equity Incentive Plan, which is typical of Silicon Valley plans in this respect, twenty-five percent of the total option grant vests (the vesting cliff) one year after the vesting clock starts running on the day the employee is hired, which is when the options are granted. The remaining seventy-five percent vests in thirty-six equal parts each month over the succeeding three years. Thus if the employee quits within one year of the day she is hired (and the day she gets her option grant), she loses the right to buy any stock. She has to work for the company for a full year to be able to exercise twenty-five percent of her options, and for four years to be able to exercise all of the options the company granted her when she was hired. In this way, the vesting schedule likely gives the employee an incentive to continue working for the company, at least for four years. The longer she stays at the company, up to four years, the more of her options she will be able to exercise to buy company stock.

Well-drafted stock option plans are careful to provide that nothing about the stock option arrangement changes the at-will relationship between the employee and the company.

37. 2007 Zynga Plan, supra note 25, § 2.1.
38. See id. (indicating that the vesting start date will be set forth in the agreement).
40. See id. In order to insure compliance with section 409A of the Internal Revenue Code, the best conservative practice is actually for the Board to grant options to all employees who have started with the Company since the last board meeting, instead of authorizing the CEO to make new-hire grants on the date of hire, which was the traditional practice. Vesting can still begin on the hire date if the conservative practice is followed. Patrick J. Rondeau & Kimberly B. Wethly, Best Practices for Option Grants by Venture-Backed Companies, in ADVANCED VENTURE CAPITAL 2008, at 45, 48 (PLI Corp. Law & Practice, Course Handbook Series No. 1666, 2008).
41. See BAGLEY & DAUCHY, supra note 39, at 99.
42. Id.
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The 2007 Zynga Plan, under which the clawed back options were issued, is no exception. “Nothing in the Plan or this Agreement” it states, “shall confer on Participant any right to continue in the employ of, or other relationship with, the Company . . . or limit in any way the right of the Company . . . to terminate Participant’s employment or other relationship at any time, with or without Cause.” This critical term made the Zynga clawback legally possible. Nothing in the stock option plan changes the fact that the company and the employee have an at-will relationship with each other. The company can still terminate the employee for good cause, bad cause, or no cause. That is reportedly what Zynga threatened to do to some employees if they did not give back some of their options to the company.

The mechanics of how termination affects options under a stock option plan are worth reviewing. The 2007 Zynga Plan divides terminations into three classes: termination because of death or disability, termination for cause, and termination for any other reason. In the last case, a not-for-cause termination, the terminated employee would apparently be able to exercise as many of her options as had already vested by her termination date, as long as she did so before three months after her termination or the expiration date of the options, whichever was earlier. The impact of a for-cause termination appears to be harsher than without-cause termination for the employee. The Zynga agreement states that “[i]f the Participant is terminated for Cause, Participant’s Options expire immediately upon such Termination.” This must mean at a minimum that the employee’s unvested options expire immediately and so cannot ever be exercised. The agreement is somewhat murky as to what is to become of vested but unexercised options, but they are probably meant to expire as well. Options do not exercise themselves. An employee ordinarily must present an
executed form to the company, along with a check or other permitted form of payment for the exercise price, in order to exercise vested options. Thus, a terminated employee might have vested options but not yet have exercised them. Conventional investing wisdom is that, consistent with option pricing theory, employees should hold options as long as possible before exercising them. The Zynga agreement, though not clearly drafted, then, appears to have the harsh result of punishing employees for following conventional investment strategies by terminating both unvested and vested but unexercised options the terminated employee may have. In other words, Zynga employees terminated without cause would lose all of their unvested options, and Zynga employees terminated with cause would lose all of their unvested options, and possibly all of the unexercised options (whether vested or not).

The two parts of the employment arrangement between the startup company and the employee, the at-will relationship and the stock options, thus work together. The employment relationship itself is at will. One may call this relationship a contract, but if it is, it’s an illusory one because neither the employee nor the employer is under any obligation to continue the relationship. The stock option plan, on the other hand, is part of a bona fide unilateral contract. It is a standing offer that the company will recognize the options as vesting according to the schedule and will be obliged to issue stock upon the exercise of the vested options as long as the employee continues to work for the employer and fulfills any other obligations that may be in the plan (such as a nondisclosure covenant, for example). The employee’s continued work at the company is the acceptance

48. Id. at §§ 4.1, 4.3.
49. See How to Handle Employee Stock Options, supra note 26.
51. California law provides that “[i]n cases involving employee benefits, such as pension plans and stock options, the rule has developed that the offer of such bonuses constitutes an offer for a unilateral contract, which is accepted if the employee continues in employment after the offer.” DiGiacinto v. Ameriko–Omserv Corp., 69 Cal. Rptr. 2d 300, 303 (Ct. App. 1997) (emphasis added). “Consideration is inherent where stock options are granted to employees and the employee continues employment knowing of the options . . . .” Id. at 303–04 (quoting Newberger v. Rifkind, 104 Cal. Rptr. 663, 665 (Ct. App. 1972)).
by performance of the unilateral contract offer made to the employee by company in its stock option plan.\textsuperscript{52}

The company's obligation to perform arises only if the employee actually remains in the employ of the company for the time periods contemplated by the vesting schedule.\textsuperscript{53} If the company terminates the employee, options that have not yet vested will not vest because the employee will not be performing in the manner required by the stock option plan offer. Perhaps counter-intuitively to the nonlawyer, it does not matter that the employee is not working for the company because the company terminated her. The stock option plan makes this clear, providing for it expressly.\textsuperscript{54} If an employee no longer works for the company, regardless of the reason, her options that have not already vested will not do so and her vested, unexercised options may even expire immediately if the company terminates her for cause. It is this consequence of termination that allows the company to bargain with an employee by making the following threat: either give back some of your unvested options or we will take all of them back by terminating you.

The peculiar pairing of an illusory, at-will contract and a unilateral stock option plan contract may seem odd. Why do startup firms structure most of their employment relationships in this way? The basic economics of contract theory sheds light on this question. This structure creates some problems, but it is far from irrational.

II. AGENCY THEORY AND THE ENTREPRENEURIAL FIRM

Startups face the usual agency problems that other firms face, but often in aggravated form. Startups must select employees suited to the particular challenges of entrepreneurial firms, which means choosing employees who are willing and able to be entrepreneurial themselves. Startup compensation, with its emphasis on risky stock options, helps address agency problems, but also brings with it problems of its own.\textsuperscript{55} Highly risky and potentially

\textsuperscript{52} Id.
\textsuperscript{53} See 2007 Zynga Plan, supra note 25, § 2.
\textsuperscript{54} Id. at §§ 3.1–3.3.
\textsuperscript{55} Joseph Bankman, The Structure of Silicon Valley Start-Ups, 42 UCLA L.
remunerative options present special opportunities and risks to both employees and firms. 56 This section discusses startups and stock option compensation from the perspective of agency theory and incomplete contracts theory and then discusses some interesting and potentially problematic features of option packages that can turn out to be extremely valuable.

A. Agency Theory

One approach economists and economics-oriented legal scholars have taken to explain employment relationships is agency theory. 57 From this perspective, standard employment contracts address fundamental agency problems that arise in employment relationships. 58 The startup hiring an employee faces the same agency cost problems as do other firms, sometimes arguably in aggravated form. These problems are traditionally divided into two categories: moral hazards and adverse selection problems. 59 Adverse selection is closely related to moral hazard. An example of the latter is the problem that the absence of sufficient monitoring may actually induce the employee shirking behavior the firm hopes to avoid, while an example of the former is that persons inclined to shirk will seek out a job where their performance will be difficult to monitor. 60

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56. See Scheck & Raice, supra note 2.
58. See Goetz & Scott, supra note 57, at 1090.
1. The Moral Hazard Problem

Moral hazard arises from the misalignment of employer and employee incentives. An assembly line worker is hired to do work that is boring and unpleasant, and the worker will do as little as he must to get paid a contractually agreed amount. To her employer, labor is a costly, productive factor. The firm will pay as little for labor as it can given market conditions and wants to get as much work as possible for each dollar of wages paid. The incentives of employer and employee are thus significantly, though not entirely, opposed.

The employer must engage in costly monitoring to incentivize performance on the labor contract and this monitoring is unlikely to eliminate shirking entirely. The costliness or impossibility of monitoring employee productivity incentivizes overselling by employees (whether deliberate or inadvertent) during the hiring process and shirking afterwards.

Startups may face these common problems in aggravated form. More established companies have defined roles and established routines for employees to follow and to measure employee performance. An established firm might want an employee to perform certain coding functions or to operate a particular machine, for example. Startups on the other hand are typically searching for early employees who not only have

selection, as Smith and King usefully put it, is often seen as an information problem, while moral hazard is often seen as an incentive problem. Smith & King, supra note 57, at 14. Adverse selection is best dealt with through ex ante measures and moral hazard through ex post incentive alignment. Id. In fact, both are both information and incentive problems, but some are better addressed ex ante and some ex post.

62. See generally Mirrlees, supra note 61, at 3.
63. Michael Z. Green, Unpaid Furloughs and Four Day Workweeks: Employer Sympathy or a Call to Action, 42 Conn. L. Rev. 1139, 1166 (2010).
particular technical skills, but also have the ability to solve creatively the sort of difficult-to-anticipate problems new businesses regularly encounter. The contributions that a particular employee makes to the firm are usually not easily measurable. The company will pay the employee under the employment contract, however, even if she contributes less to the firm than it anticipated, because her underperformance will not be known.

In order to help align the incentives of employees with those of the startup, startups grant employees stock options. Stock options will become valuable (perhaps very valuable) if the startup reaches a liquidity event, normally an initial public offering (IPO) or a sale of the startup to an established company (buyout). If stock options work as intended, the startup employee will do everything within her power to help the startup reach the liquidity event because that is what will make her stock options valuable, just as it will the stock of founders and investors, who control the firm. The incentives of employees, founders, and investors are thus brought more into alignment with one another.

Stock options do not work perfectly for this purpose. Even in a small startup with only a few dozen or hundred employees, a particular employee may realize that her individual efforts are unlikely to have a material effect on whether the firm succeeds in attaining a liquidity event. The liquidity event is a binary occurrence—it happens or it does not. An employee’s efforts beyond what is necessary to get the firm to the event are wasted if she considers the matter self-interestedly. If other workers are doing their jobs, a given worker’s marginal contribution toward getting to the liquidity event may be nominal. If this is the case, the perfunctory employee will work hard enough to avoid termination under the at-will doctrine, but no harder.

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68. See Scheck & Raice, supra note 2.
From the firm’s point of view, stock options granted to an employee in this position are wasted since this employee’s efforts, beyond those required to avoid termination, are by hypothesis not necessary to reach a liquidity event. This employee need not be incentivized by stock options in order for the firm to get to the liquidity event. Indeed, as the startup history unfolds, the particular employee may discover that she is not so incentivized once she realizes that her efforts are not that important to the company and, accordingly, reduces her efforts to the perfunctory level. After all, she would get the benefit of the liquidity event whether she performs perfunctorily or consummately, and if a liquidity event never occurs, she has not wasted her efforts. Monitoring by the firm may or may not discover what the employee is doing, but if the firm does discover it, it will want to renegotiate the employee’s compensation. Zynga clawbacks address this situation.

If the firm could not renegotiate the compensation arrangement, the firm would be faced with two options: either it could terminate the perfunctorily performing employee and avoid the dilution from her stock options vesting, or it could refrain from terminating her and allow her stock options to vest. If renegotiation were possible, the firm would have a third option—not terminating the employee, but reducing or eliminating her stock option participation and its consequent dilution. Suppose the startup firm’s preference ordering is

\[
\text{Renegotiate} > \text{Terminate} > \text{Maintain}
\]

where \text{Renegotiate} means renegotiating the stock option plan with the employee so that she gets fewer stock options going forward, or even perhaps also sells back some of her already vested options to the company, but is not terminated; where \text{Terminate} means terminating the employee under the at-will doctrine, causing all of her unvested options to disappear; and where \text{Maintain} means simply allowing the employee to remain in her current arrangement, under which her stock

\begin{footnotes}
70. Scheck & Raice, supra note 2
71. Id.
72. See id.
\end{footnotes}
options will continue to vest over time. Suppose, on the other hand, the employee’s preference ordering is

Maintain > Renegotiate > Terminate.

We may view the employer and employee as playing a simple two-move game in which the employer moves first, offering Renegotiate to the employee. The employee may accept the offer and continue to work on the new terms, or reject it and be terminated. Assuming the firm can credibly signal that it prefers Terminate over Maintain, the rational employee will accept renegotiation since she prefers that to termination (as does her employer). If the legal rule prohibited this renegotiation, the firm would simply terminate the employee, since it prefers Terminate to Maintain. Thus, a Zynga clawback may be seen as reaching a Pareto-superior outcome that could not be reached if renegotiations were prohibited. It allows the firm to address the employee moral hazard problem ex post.73

2. Adverse Selection

The startup firm also faces an adverse selection problem in choosing employees.74 Prospective employees may realize that their performance will be hard to monitor in the startup firm. Routines will be fluid, the workplace atmosphere informal, and much business done on a sort of honor system.75 The startup wants to attract a particular sort of


What Zynga did here was take a few employees that it felt weren’t achieving up to expectations and, rather just fire them—in which case they would have received none of their unvested options—try to find another role for them in the company. That other role, however, would be somewhat lower on the totem pole, and thus, would be entitled to fewer stock options. Yes, it’s basically a demotion, but for some people perhaps that’s preferable to an outright firing. Id. (emphasis omitted).

74. See Smith & King, supra note 57, at 14, for an overview of the adverse selection problem.

75. Heffernan, supra note 66.
entrepreneurial employee, which I discuss in more detail in Part III.A below. But just as in biological systems where parasites can sometimes invade a host by disguising themselves as something other than what they really are, free riders may present themselves as entrepreneurial employees when they are really just looking for a setting in which their underperformance will not be readily detected.  

Stock options not only incentivize performance but also help identify the sort of employees the startup most wants to hire. The willingness of a startup employee to accept stock options in lieu of greater cash compensation sends a powerful signal to the employer that the prospective employee shares the founders’ entrepreneurial perception regarding the startup’s significant opportunity for success, and that the candidate is willing to join her economic fate to that of the new company. In this way, startups can efficiently exploit their resources by paying stock options to those prospective employees who value them most. This high valuation is also a serviceable proxy for an employee’s commitment and enthusiasm for the startup project—traits startups value highly in employees. Thus, offering stock options conserves cash at the same time that it selects those employees who put the highest value on the potential of the company.

In the best case, acceptance of startup options rather than cash operates as a kind of specialized test to screen for entrepreneurial acumen among prospective employees. A new business faces many challenges that require a special sort of judgment to overcome. A person may be more likely to have this sort of judgment if she can see that the stock options make a particular startup a better job opportunity than another firm that pays more.

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76. This is an instance of adverse selection by bad workers. See J. Hoult Verkerke, An Empirical Perspective on Indefinite Term Employment Contracts: Resolving the Just Cause Debate, 1995 Wis. L. Rev. 837, 902–05.


78. Id. at 275.
B. Incomplete Contract Theory

The employer's power to renegotiate the employment contract also gives the employer the ability to behave opportunistically.79 At the heart of this problem is the costliness of objectively measuring the value of the contribution a particular employee makes to the firm. This measurement difficulty opens the door to both employee and employer opportunism.80 It makes all but extreme shirking by the employee difficult to catch while it is going on and perhaps even afterwards. But it also makes it difficult to disprove false accusations by the employer of employee shirking. The absence of objective measures of employee performance is a large part of what makes at-will employment the default arrangement, but also what opens the door to opportunism.81

This measurement difficulty also helps explain the boundaries of the firm, a traditional preoccupation of theorists of the firm since Coase.82 Where milestones are readily identifiable, the startup will often hire independent contractors to do a job.83 Independent contractors can be awarded cash and stock options in exchange for the achievement of specific milestones, about which the question

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79. A commenter at Hacker News opined regarding the Zynga clawback: I would argue it is a breach of the initial options agreement (at least in spirit). Those shares were negotiated under a set of conditions—the stock was very risky, and as a result worth very little. Now that everything has turned out well, you can't go back and say, "Wait, I didn't think it would be worth this much—give it back.". Pincus wouldn't be going back after a failed venture and forking over huge amounts of cash to compensate for worthless stock, now, would he? The option price and amount was set previously, and should be honored as long as the employee is performing their duties reasonably.


81. Id. at 469.


83. See generally Christine Lagorio, How to Manage an Independent Contractor, INC.COM (Feb. 15, 2010), http://www.inc.com/guides/managing-independent-contractors.html (discussing the necessity of setting clear goals to guide an independent contractor's work).
‘was the job satisfactorily completed?’ can be answered with a yes or no. 84 Not all jobs can be readily defined in this way, however. Rather than contracting with someone outside the firm, at-will employment within the firm combined with vesting stock options is designed to produce incentivized workers who can nevertheless be let go quickly if imperfect monitoring suggests their performance is inadequate.

The ongoing employment of a worker in a startup subject to the at-will doctrine causes stock options to vest but also creates human capital that is specific to the startup and not easily removed to another employer should the employee be terminated. If a firm terminates an employee before she earns her stock option grant, she loses this firm-specific capital. 85 Exposure to this penalty acts as a bond against shirking, though at-will employment does not always act as a bonding device because plenty of at-will employees, such as those performing merely routine functions, are not accumulating firm-specific human capital while they work. 86 But for those employees who do, the risk that they could be terminated at will and lose their firm-specific capital acts as a deterrent against shirking and other forms of opportunism. 87

1. Holdup Problems

The combination of the at-will doctrine and a stock option plan as an employment regime is problematic because it leaves the final decision of whether an employee is shirking in the hands of the employer. Because the arrangement is at will, the employee need not really be shirking or otherwise inadequate in order for the firm to terminate her. 88 For example, a firm may lead an employee to believe, but not contractually promise, that if she performs adequately and the firm prospers, the firm will retain her long enough for her stock options to vest. In reality, however, she could make her

84. Id.
85. See 2007 Zynga Plan, supra note 25, § 3.3.
87. Id.
88. See Porter, supra note 29, at 63 (stating that employers can terminate for no reason at all).
most important contribution during her first eleven months at the firm, and there would be nothing to stop her employer from terminating her before any of her stock options vest.\textsuperscript{89} In fact, her employer may have an incentive to do so. The employer might reason that however great her contribution was during those eleven months, it is now irremovable from the firm, and the firm can save significant dilution by firing her before her stock options vest.\textsuperscript{90} Short of this, the employer could also behave opportunistically by threatening to terminate her, perhaps citing nonexistent shirking as a negotiation tactic, and demand a contract renegotiation. The firm sees the opportunity to avoid paying the employee what it had informally (and not enforceably) agreed to pay her for a contribution that she has already made to the firm and cannot get back. This is the holdup problem emphasized by incomplete contract theorists.\textsuperscript{91}

\begin{footnotesize}
\begin{enumerate}
\item \textsuperscript{89} See 2007 Zynga Plan, supra note 25, § 3.3.
\item \textsuperscript{90} A commenter at Hacker News observed: “I’ve seen people get cheated out of compensation this way, in some cases where they took greatly reduced salaries, in exchange for shares, but the shares vested, and after creating the major innovation the company wanted, they were fired without cause before the first vesting cliff.” nirvana, Comment to Zynga Chief Seeks to Claw Back Stock, HACKER NEWS (Nov. 10, 2011), http://news.ycombinator.com/item?id=3218774.

Where agency theory focuses on fitting compensation to particular outcomes, incomplete contract theory focuses on decisionmaking procedures and institutional design. This shift in focus is necessitated by the assumption that all contracts are incomplete in the sense that they do not specify the obligations of the contracting parties for all potential outcomes. The source of incompleteness is “bounded rationality,” a somewhat malleable term that includes an inability to negotiate future plans because parties “have to find a common language to describe states of the world and actions with respect to which prior experience may not provide much of a guide.” Thus, bounded rationality might include an inability to write contracts in such a way that they can be enforced by a third party.
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The classic illustration of the holdup problem involves a supplier and a producer who could reach a Pareto-efficient arrangement but do not because of the risk of strategic behavior by one or both of the parties. So, for example, imagine a firm, Widgetron, which makes widgets for sale and needs to buy some specialized widget-making machines. Widget Machine Suppliers (WMS) could make these machines for Widgetron, but to do so, it would have to invest in the specialized equipment needed to make them. If WMS did that, however, Widgetron would have increased bargaining power. There are no other firms that want to buy widget-making machines. WMS might invest in building widget-making machines only to have Widgetron demand to renegotiate the contract for buying the machines at a lower price. Widgetron and WMS may not contract at all, or they may have to engage in costly arrangements to make sure one does not cheat the other. Widgetron may decide to acquire the WMS firm or build its own division to do this work rather than expose itself to holdups. What makes holdups possible is asset specificity. If WMS commits itself to specific assets (by buying widget-machine-making machines for example), it exposes itself to holdup. A startup employee is in the same

Smith & King, supra note 57, at 17 (footnotes omitted).


93. Cf. id. Klein tells the canonical but possibly apocryphal story of GM’s acquisition of Fisher, the auto body manufacturer, to avoid holdup problems. See id.

94. See id. at 117–18.

95. See id.

96. A nice example of the holdup problem I have witnessed involves what I gather is a common practice among the burro drovers who assist climbers and trekkers in the Andes. The burro drovers often negotiate one price at the trailhead to move gear up into the mountains, but once the gear has been packed on the animals and carried to a remote area, which is still a distance from its ultimate destination, the drovers will demand a higher price. If no new agreement is reached, the drovers will abandon the gear far from where alternative drovers may be found, forcing the clients to carry the heavy gear themselves and possibly to abandon their climb. The usual result is contract renegotiation. Climbers can also attempt to renegotiate the contract once gear has been delivered to its final destination and thus turn the tables of opportunism. If climbers were to buy burros to carry gear into the high passes instead of contracting for them, this would be an instance of vertical integration. Klein, supra not 92, at 116–18.

97. See id. at 108.
position if her contribution to the value of the firm is specific and not spread evenly over the period during which her stock options vest.

Holdup opportunities might be more of a problem for startup firms than for other firms. Startups are entrepreneurial ventures that operate under conditions of pervasive uncertainty.\textsuperscript{98} The standard four-year vesting period is just a rough guess of how long an employee should stay at a startup in order for the firm to get the most value out of the employee. In a rapidly evolving market, an employee might make any critical contributions she is going to make in a matter of months or within a couple of years of being hired. Pervasive uncertainty makes it impossible to predict accurately. Once early employees have made whatever firm-specific contributions they are going to make and can be replaced by employees who can perform more routine work, the early employees are vulnerable to opportunistic termination or renegotiation.\textsuperscript{99} Whether renegotiation is actually opportunistic or not depends upon the understandings on which the employee relied in accepting the employment arrangement in the first place. If employees make firm-specific contributions with the reasonable expectation of being employed long enough for all or some specific portion of their stock options to vest but are terminated before that, as soon as their firm-specific contributions are committed, the firm is later acting opportunistically if it terminates the employees before their options vest.

2. A Final Period Problem

Startups might be more likely to hold up employees because startup firms are often founded with the purpose of achieving a major liquidity event.\textsuperscript{100} Established firms

\textsuperscript{98} See generally Meghan Casserly, Understanding Employee Equity: Every Startup’s Secret Weapon, FORBES.COM (Mar. 8, 2013, 5:30 PM) http://www.forbes.com/sites/meghancasserly/2013/03/08/understanding-employee-equity-bill-harrissxsw/ (discussing the importance of using stock options as part of a compensation package to conserve limited financial resources).

\textsuperscript{99} Id.

operate according to routines that include repeat employment transactions that they expect to conduct into the foreseeable future.\textsuperscript{101} Startups, by contrast, hope they operate for a relatively short period before an IPO or buyout is realized.\textsuperscript{102} This leads to what economists call a \textit{final period problem}.\textsuperscript{103} A final period problem occurs when a repeated process comes to an end.\textsuperscript{104} Incentives that may lead to cooperative behavior tend to break down in a final period.\textsuperscript{105} Repeat transactions are important because they make possible the enforcement and generation of norms.\textsuperscript{106} Norms play an important role in constraining opportunistic behavior in employment. Labor economists report that it is uncommon, even in settings where the at-will doctrine prevails, for employers to terminate employees without cause.\textsuperscript{107} The existence of these norms would seem mutually beneficial to both firms and employees, and it is not surprising that they have evolved.\textsuperscript{108} These norms allow employees to rely on the incentives created by stock option

\begin{thebibliography}{99}
\item 101. Id. at 1101.
\item 102. Id. at 994.
\item 103. See Mark Hirschey, \textit{Mangerial Economics} 559–60 (12th ed. 2009).
\item 104. Id.
\item 105. See id. at 560.
\item 108. See id. at 1919.
\end{thebibliography}
plans and to make greater efforts for the benefit of the firm than they would if they thought there was a substantial chance that the firm would behave opportunistically. Firms benefit from these efforts, but maintaining the option of firing employees at will allows them greater flexibility to terminate employees who do not live up to realistic expectations without running the gauntlet of expensive wrongful termination litigation.  

Depending on whether they respect these norms, firms develop reputations as good or bad employers. The enforcement mechanism for these employment norms is not so much legal as economic. A firm that repeatedly fired employees before their options vested, even when their performance was apparently satisfactory, would get a reputation for being an opportunist employer. In a labor market that is highly competitive for the best talent, as Silicon Valley and similar hubs are, this is a reputation firms wish to avoid. If a firm plans to continue its operations into the foreseeable future, a reputation as a reliable, nonopportunistic employer is a critical asset to cultivate and protect.

Norms arising out of reputational markets have limitations though. The initial public offering (IPO) or an acquisition by another entity (buyout) of a successful startup potentially presents a different situation. An IPO or buyout of a startup is the much hoped for liquidity event that allows

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110. See Rock & Wachter, supra note 107, at 1919.
111. One commenter at Hacker News probably spoke for many when he opined:

Silicon Valley isn't a special place for invention and for startups because of special infrastructure or special laws, but because of special ideas and special norms. Those norms don't hold up in court, and they erode a little bit every time someone like Pincus only thinks about what they can get away with instead of what's right. This reduces the perceived value of equity for everyone in the valley, makes everyone less open, less trusting, less willing to take a risk. In the end, we all lose for that.

If I had my way, Pincus would never work in this town again. Anyone involved in this decision should be made a pariah. If we don't defend the norms that make innovation possible, we'll lose them.

Cactus, supra note 1.
112. See generally id.
founders and early investors to realize potentially large gains on their early investments of entrepreneurial effort and capital.\textsuperscript{113} By their nature, these liquidity events are uncommon, even though many startups are founded in hopes of attaining them.\textsuperscript{114} Startup founders and early investors can become rich as a result of a successful IPO or buyout.

These exits are singular enough that few founders probably think in terms of repeat company-founding transactions,\textsuperscript{115} although rarely some founder–entrepreneurs will have a series of successful exits with big liquidity events.\textsuperscript{116} Because clawbacks can materially increase the value of founder stock in an IPO or buyout by reducing dilution,\textsuperscript{117} for most founder–entrepreneurs the benefit to be gained from clawing back options from employees on the verge of a liquidity event will outweigh any reputational effect to be gained from complying with employment norms.\textsuperscript{118} Founder–entrepreneurs therefore have powerful financial incentives to engage in clawbacks. These incentives are such that approaching IPOs and buyouts can produce final period

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\item[113.] See Fried & Ganor, supra note 100, at 994.
\item[114.] See generally id.
\item[115.] An important exception is venture capital firms, which are purpose-built to invest serially with these exit scenarios in mind. See generally Ronald J. Gilson, Engineering a Venture Capital Market: Lessons from the American Experience, 55 STAN. L. REV. 1067, 1070–76 (2003).
\item[116.] For descriptions of serial entrepreneurs, see Paul Gompers, Anna Kovner, Josh Lerner & David Scharfstein, Performance Persistence in Entrepreneurship, 96 J. FIN. ECON. 18 (2010).
\item[118.] A commenter at Hacker News opined, “Founders only need to exit once. There is surprisingly little incentive for a founder to avoid screwing over employees.” ootachi, Comment to Zynga Chief Seeks to Claw Back Stock, HACKER NEWS (Nov. 10, 2011), http://news.ycombinator.com/item?id=3220173. But another commenter replied:

Spoken like a true non-founder... Reputation is everything. If a founder ever wants to start a company again, screwing over employees will haunt him in the long term much worse than any legal repercussion that can be fixed with money. So I wager there is a lot preventing founders from screwing employees, specially [sic] in startups, where people are hyper connected.

Id.
\end{enumerate}
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problems. These problems include opportunism toward employees with significant unvested stock options. Employees may anticipate this opportunism and reduce their effort accordingly, or take a different job.

The risk of employer-side opportunism will likely be greater where founder-entrepreneurs who do not anticipate being repeat players are in control of the startup. This was the case with Pincus and Zynga. Venture capital firms, which are repeat players, are probably more motivated than founder-entrepreneurs to conserve their reputations with prospective startup employees. Venture capital firms are in the business of funding and often managing startups, and hiring the most talented employees they can find is a critical part of building a successful startup. This suggests that startups controlled by their founders, as Zynga was, rather than by venture capitalists, are more likely to engage in

120. See generally id. at 216.
121. See COOTER & ULEN, supra note 119, at 216–17 (discussing tit-for-tat opportunism with employers and employees as their relationship comes to an end).
122. Pincus’s ownership position before the IPO is described in the IPO prospectus as follows:

The total number of shares of our Class A, Class B and Class C common stock reflected in the discussion and tables above is based on no shares of our Class A common stock, 562,466,698 shares of our Class B common stock (including preferred stock on an as converted basis) and 20,517,472 shares of our Class C common stock outstanding, as of March 31, 2011 . . .

From our inception in October 2007 to date, Mr. Pincus, our Chief Executive Officer, Chief Product Officer and the Chairman of our Board of Directors, has purchased an aggregate of 149,197,328 shares of our common stock. To date, Mr. Pincus has sold an aggregate of 43,629,310 shares of our common stock at prices ranging from $0.42 to $13.96. In addition to sales by Mr. Pincus, our other current and former executive officers and employees have sold an aggregate of 51,192,501 shares of our capital stock at prices ranging from $0.25 to $17.09 per share, including, 6,717,161 shares we repurchased from our other executive officers and employees. These sales include two tender offers in 2010 by third parties in which 383 employees were eligible to participate and 298 employees decided to participate and sell shares.

123. See Gilson, supra note 115, at 1068.
apparently opportunistic clawbacks.

The seriousness of the threat of employer opportunism in startups, where employees must create firm-specific capital as quickly as possible if they are to succeed, helps explain the existence of venture capital firms. Venture capital firms are not just investment firms, but also management firms. Venture capital firms are relatively undiversified and specialized repeat players in the niche market of new technology-intensive startups, and they take active roles in the management of their portfolio firms. This peculiar arrangement allows venture capital firms to develop reputations not only for their investment acumen but also for their management styles. Venture capital firms can leverage their reputation for actively managing portfolio firms in the short- and long-term to serve as a bond against opportunistic employment practices by the startups in which the venture capital firm invests. These firms may exist partly because they can serve as a reliable protector of the interests of employees against the opportunism of founder-entrepreneurs. Venture capitalists have more skin in the long game.

Bonding devices such as venture-capitalist reputation may provide some reassurance to prospective employees who may otherwise be inclined to discount heavily option-based startup employment offers because of the risk of employer opportunism. Incomplete contract theory suggests bonding

124. See id. at 1072.
125. See id.
126. Venture capital firms might be considered reputational intermediaries as described in Ronald J. Gilson & Reinier H. Kraakman, The Mechanisms of Market Efficiency, 70 VA. L. REV. 549 (1984). Investment banks are reputational intermediaries who vouch for the issuers who sell securities with the help of the bank’s intermediation. Venture capital firms take an active part in startup firm management, but they do play something like a reputational intermediary role in the labor market. The venture capital firm’s role in management acts to underwrite the reputation of the startup as employer, or possibly for some venture capital firms, to undermine it. Id.
127. See William L. Megginson & Kathleen A. Weiss, Venture Capitalist Certification in Initial Public Offerings, 46 J. FIN. 879, 880 (1991) (arguing that venture capitalists play a certification role in initial public offerings). I suggest here they provide a kind of employer certification. Established companies (Google, IBM, etc.) have a reputation that acts as a bond against opportunistic termination, to a degree. Startups rent, one could say, the venture capital firm’s reputation for the same purpose.
mechanisms will evolve to address holdup problems.\textsuperscript{128} Agency theory suggests incentive devices such as stock options will be used to align the interests of employees, entrepreneur-founders, and investors.\textsuperscript{129} Startup stock options go beyond stock options in established companies, which also align incentives, by having a popular and not undeserved reputation for potentially being a source of great riches. We turn now to look at how this special aspect of this compensatory device may help address contracting problems.

III. COMPENSATING ENTREPRENEURIAL EMPLOYEES

Frank Knight observed that an important aspect of entrepreneurial judgment is the ability to judge the capabilities of others,\textsuperscript{130} and this is especially apt for startups. Startup founders must make entrepreneurial judgments when they hire employees, and the imponderability\textsuperscript{131} of the traits they are looking for increases the risk of moral hazard and adverse selection. To manage this risk, some successful startups, such as Google, invest heavily in screening new hires, to a degree that appeared extraordinary to more established industries.\textsuperscript{132} This approach makes sense if one considers that firms exploring new product and market spaces are likely to require unusual degrees of intelligence, adaptivity, and creativity from their employees, and that the lack of these skills may prove especially costly in entrepreneurial firms.

\textsuperscript{129} See supra Part II.A.
\textsuperscript{130} See FRANK H. KNIGHT, RISK, UNCERTAINTY AND PROFIT 241–42 (1921).

Knight writes:

Men differ in their capacity by perception and inference to form correct judgments as to the future course of events in the environment. This capacity, furthermore, is far from homogeneous, some persons excelling in foresight in one kind of problem situations, others in other kinds, in almost endless variety. Of especial importance is the variation in the power of reading human nature, of forecasting the conduct of other men, as contrasted with scientific judgment in regard to natural phenomena.

\textit{Id.}

\textsuperscript{131} Or unobservability.
\textsuperscript{132} See LÉVY, supra note 7, passim (discussing Google’s recruiting strategies).
Startups compensate employees by combining lower salaries than they could get at more established companies with substantial stock option grants. These stock options must be valuable to employees because they accept them as reasons to turn down larger cash offers. What are we to make of this?

A startup stock option package is in some ways like a lottery ticket in that it gives the holder a chance of a large financial windfall. Calculating the value of a stock option, however, is much more complex than calculating the value of a lottery ticket. In the case of a hypothetical lottery ticket, one can simply multiply the inverse of the number of tickets outstanding by the promised prize to get the expected value of the ticket. So if a million tickets will be sold in a fair lottery for a $1 million prize, each ticket has an expected value of $1/1,000,000 times $1 million, or $1.

Calculating the value of an option requires a more complex formula. Under the Black-Scholes option-pricing model, a number of factors determine the value of a call option. According to this formula, the greater the positive change in the price of the underlying share, the more the right to buy it at a fixed price—the stock option—will be worth. The stock option granted to the employee by the startup has a positive-speculation value when it is granted, even before it vests, because there is a nonzero probability that the underlying stock will attain a value greater than the exercise price of the option before it expires. So a hypothetical call option on startup stock with an exercise price of $1 has speculative value if there is a possibility that the stock will attain some value greater than $1 before the option expires. Intuitively, the reason a stock option has value when granted is because there is value to be had even in the small probability of a valuable outcome. In this sense, stock options are like lottery tickets—they have value before the drawing because they represent a probabilistic expectation of future value.

133. Bankman, supra note 55, at 1750.
135. See id. at 640–45.
Some of the present value of unvested stock options comes from the possibility that the price of the underlying stock will reach improbably high levels, as they might after a very successful IPO.136 In terms of present value, however, this amount is likely to be modest because the probability of a successful IPO, let alone a spectacular one, is small in absolute terms.137 It seems likely that the modest expected value of stock options when granted is not a large part of what prospective startup employees are bargaining for when they choose to work for an entrepreneurial startup rather than an established firm. Even with the present value of startup stock option packages included, established companies probably offer higher salaries than startups.138 Startups must therefore offer something more to their employees that is not captured by the modest present values of their stock option packages combined with cash salaries.

This something more is not well captured by conventional microeconomic models, which assume individuals are risk-averse utility maximizers.139 State lottery authorities exploit this deviation of actual human behavior from conventional microeconomics to raise billions of dollars for state treasuries each year.140 A lottery ticket might have an expected value of less than the $1 it sells for because it represents, say, a one in more-than-one-million chance to win $1 million. A rational, risk-neutral, or risk-averse person should not be willing to pay $1 for such a ticket. Yet millions of people are more than willing to buy chances of this kind.141 Why they do this is something of a puzzle for economists.142 A plausible explanation is that lottery tickets are different from other negative-expected-value investments because they represent the real, if remote possibility for buyers of attaining great

136. See generally id.
141. See generally id. at 75–80.
142. See id.
wealth, while risking only what the lottery ticket buyer believes he can afford to lose.

This phenomenon has a parallel in the startup world. Some prospective employees probably agree to work for startups for a combination of salary and stock options, the combined present value of which is less than they could get at established companies, for reasons similar to why people buy lottery tickets—because of the possibility, even if remote, that the stock options will make them wealthy. In this view, it is precisely the possibility of becoming a Google chef that entices entrepreneurially minded workers to work for startup ventures that have a small but real possibility of making them rich. By saying they wanted to avoid a Google chef situation, Zynga’s managers were getting things backwards. In the startup world, one could say, almost everybody wants to be, if not a Google founder, at least a Google chef.

A. Who Are Entrepreneurial Employees?

There is an important difference between the entrepreneurial startup worker and the lottery ticket buyer, however. The lottery ticket buyer is just gambling. He is hoping that a random number generator will come up with the number he just happens to have chosen or had assigned to him. Choosing a startup to work for is by contrast a game of skill, at least in part. When a prospective employee decides to accept a job offer from a particular startup, she is making an entrepreneurial judgment. One standard method of decision making would have the prospective employee compare these two offers and choose the one with the greater present value. Yet faced with this choice, the prospective employee chooses the startup. Why? A prospective employee who chooses to work for a startup that offers an employment package with a lower expected value, but with a subjectively more attractive stock option package than she would get at an established company, may have either or a combination of two motives. The first I call an “entrepreneurial motive” and the second a “gambling motive.”

In most instances, the entrepreneurial motive is probably more important. When a prospective employee, \( E \), decides to take the lower paying job with a startup, she is making an entrepreneurial investment or bet in the startup company
with a portion of her total human capital. Intuitively, her total human capital may be seen as the present value of the maximum income stream she could produce with her human capital, by working for an established company. Suppose that the present expected value of the most $E$ could earn over the next four years is $400,000, and that this would, by hypothesis, come from working for an established company at about $100,000 per year to be paid to her in a cash salary. Alternatively, if $E$ decided to work instead for four years for a startup for nothing but stock options, she could be said to be making an investment of her $400,000 in human capital in the startup in exchange for the options. If $E$ decides, as is more typical, to work for a startup for a cash salary lower than she could get from an established company, then her investment is equal to the opportunity cost of her decision. The opportunity cost is the difference between the present value of her total compensation at the startup and the present value of what her total compensation would have been at the her best available alternative, here an established company.

It may be that the prospective employee makes a judgment that the stock option package offered by the startup is actually more valuable than it would be judged to be worth by a more objective observer, such as an appraisal firm or a bank, applying a standard valuation methodology. The prospective employee may make a higher valuation judgment for a number of reasons. She may have information that the capital market at large does not have because of her specialized technical background. She may have tried the startup's product personally and developed a conviction that it is going to be a disruptive force in its market. The prospective employee may appreciate the talent of team members already working for the startup, or developments that she believes are likely to be coming in the relevant market, more than does the capital market generally. In short, she knows better than the market.143 Startup founders

frequently take care to keep information about their products, technology, and market plans private, revealing such information only to prospective employees and investors, and then only subject to nondisclosure agreements. This information may lead the prospective employee to decide that despite what other—arguably more objective, but less informed, or less perceptive—evaluators may think, the total compensation package from the startup has a higher present value than the compensation package offered by the established company. The investment of her labor in the startup is entrepreneurial in the sense that she perceives an opportunity where others do not.

B. Gambling Employees

Part of the reason some employees choose to work for startups, when they could earn a bigger salary working for an established firm, may be that they enjoy taking risks. Many people gamble for fun. Gambling is different from entrepreneurship. Invoking Israel Kirzner’s conception, one may see entrepreneurship as perceiving (or thinking one perceives) an opportunity that the market generally does not (because if the market had already incorporated the opportunity, it would no longer exist). An entrepreneur may perceive that railroad cars may double as shipping containers on properly designed ships, reducing shipping costs, and creating profit opportunities. Or that packages may be shipped more efficiently through central...
The entrepreneur perceives an opportunity and enters the market to realize the opportunity. Gambling, strictly speaking, is different. In roulette, for example, there is no better chance that a red number will come up than a black number. A gambler engages in pure speculation, merely hoping he has guessed right that the next spin will produce the sort of number he has chosen. There is no pretense here of perceiving more accurately than anyone else where the ball will stop. Many people find betting on these guesses entertaining, and taking stock options in lieu of cash from a startup may appeal to some simply as an opportunity to play the odds. Taking pay in stock options can also mix entrepreneurial investment and gambling in an interesting way.

C. Mixed Games and Leveraged Rewards

Some games test both a player’s superior powers of opportunity perception and his luck. Business entrepreneurship is surely one of these. Most successful entrepreneurs will concede that luck played a significant role in their success, though some are more willing than others to give Fortuna her due. Entrepreneurs must bear the risk not only that they are wrong about the existence of a profitable opportunity but also the risk that however good their idea may be, something unforeseen may go wrong, or that in order for the business to prosper, something


unforeseen must go right. How much of a business success should be attributed to entrepreneurial genius and how much to luck, however, is rarely clear.

This ambiguity creates the opportunity for the lucky person to leverage his luck into the appearance of genius. He may wish to do this because entrepreneurial geniuses have more prestige than the merely lucky. One may envy lottery winners, but one both envies and admires entrepreneurial geniuses. This leveraging opportunity is another enticement of working for a startup that may attract some prospective employees. This ambiguity has a value that is part of what the high risk startup can offer prospective employees. The prospective employee may in truth have no idea whether the venture will succeed or not. But if it does, and he becomes rich, those who attribute his fortune purely to luck will merely appear envious. Thus a startup presents, to some, the opportunity to play a kind of lottery where the winner gets to claim, not his luck, but his judgment was rewarded. Furthermore, it takes courage to bet on one’s judgments. The winner of a startup lottery gets credit for being both smart and brave as measured in units that are legal tender for every visible signal of success. These bragging rights might seem a trivial benefit, but one must consider that in the high technology startup realm the employees firms seek out tend to come from ferociously competitive disciplines and fields of study. Elite mathematicians, scientists, and engineers are notorious for loving competitions in which they pit their brainpower against one another. The opportunity of a great financial windfall would be less appealing to them if it did not also represent a way, if not to prove, then to at least plausibly claim superior intellect as well.

D. Big Prizes

The appeal of big prizes scarcely needs to be explained. If prizes are big enough, they hold out the prospect of being life transforming.151 Startup stock option packages offer the

151. “The gargantuan [prizes] and lilliputian [odds of winning] of lotto games make apparent what they are fundamentally about—the consumer is sacrificing the probability of winning for the possibility of an enormous payoff.” Lloyd R. Cohen, The Lure of the Lottery, 36 WAKE FOREST L. REV. 705, 714 (2001). “The lottery ticket is an input into the dream of wealth. A dream of wealth will only
prospect of such big prizes. If a startup achieves a spectacular IPO or buyout, employee stock options can turn into significant personal fortunes, the kind that can finance a life that eschews ordinary work and delves into the further reaches of personal fulfillment and indulgence. Google chef Ayers realized his dream and opened his own restaurant. Other beneficiaries of successful startups have bought houses, jets, yachts, sport teams, elaborate world tours, and the list goes on and on. Former startup employees often strike out on their own entrepreneurial ventures or turn to personal scientific, philanthropic or other rewarding if not remunerative pursuits. The prospect of wealth on this life-changing scale has a special appeal that goes beyond the modest present expected value of the chance to get it. Startups know this and entice employees with the prospect of wealth beyond anything they could earn working for a company whose growth has already plateaued.

IV. CAN STARTUP EMPLOYMENT ARRANGEMENTS BE IMPROVED?

The combination of at-will employment and stock options is well established among startups as the preferred mode for employing nonfounder, non-C-level employees. Can it be improved? Does it need to be? Is there an approach that be liberating to the extent that one believes that it will fundamentally transform one’s life.” Id. at 730.


would overall be better for both employees and startups? If Zynga clawbacks become more common and startups encounter more difficulty hiring the employees they want, then the answers might all be yes. On the other hand, the Zynga clawback might be an outlier unlikely to be repeated, the product of a particularly aggressive founder, especially disappointing employees within a company that was approaching a highly anticipated IPO, or both. Or it may be that the Zynga clawback is symptomatic of a deeper problem that will threaten to emerge whenever a founder-entrepreneur-controlled firm approaches a large payoff.

In this section, I propose a modification to the standard arrangement that employees and startups could adopt that would alleviate some of the problems revealed by the Zynga clawback. The basic idea of the proposal is that, at the time of hiring, the employee and the startup firm negotiate a buyback right that would give the firm the right to buy back prior to a liquidity event all (or some) of the employee's unvested (or unexercised) stock options at a price agreed on when the employee is hired. The firm would be able to exercise this right during some set period of time before an IPO or buyout, such as six or twelve months. During this same period, however, the firm would be contractually bound not to terminate the employee without cause, unless it exercised its option to buy back the options at the agreed

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Pincus is a deeply controversial figure, and internal documents reveal that he's not just the subject of griping among his workers. A confidential memo produced for the venture-capital firm Kleiner Perkins Caufield & Byers, a major early Zynga investor, expressed reservations about Pincus' management style. “Mark needs strong lieutenants to keep him from micromanaging,” stated the document, which was obtained by SF Weekly.

The former senior employee who says he was present for Pincus’ “No Innovation” speech jokingly sums up Zynga's corporate ethos as an inversion of Google's famous “Don't Be Evil” motto. “Zynga’s motto is ‘Do Evil,’” he says. “I would venture to say it is one of the most evil places I've run into, from a culture perspective and in its business approach. I've tried my best to make sure that friends don't let friends work at Zynga.”

Id.
price. The provision could also allow the firm to buy back the options without terminating the employee. The buyback price, it is envisioned, would represent an *ex ante* estimate of how much the stock options would be worth if they vested before a liquidity event that represented a reasonably successful exit for the investors, but not a spectacular success.

This proposal is motivated partly by the belief that the Zynga clawback is not some freakish anomaly but is more likely the result of predictable biases in human behavior. Empirical studies (as well as common experience) suggest that people tend to overestimate the value of their own contributions to joint projects.\(^{157}\) Similarly, it seems likely that founder-entrepreneurs will tend to underestimate the value of employees’ contributions to firm value given that the larger the estimate the founder makes of an employee’s value, the less the founder will himself be getting from an IPO or buyout. For the reasons discussed above, entrepreneurial founders, as well as employees, especially prize large payoffs. This aggravates what is essentially a pie-division problem.\(^{158}\)

The current structure of startup compensation invites renegotiation of how the pie is to be divided just as a large payoff looms on the horizon. These are the very circumstances likely to lead to feelings of aggrievement by employees if their options are clawed back, and by founders if they are not. That employees and founders should reach an agreement under these circumstances that leaves all parties feeling they have received what they are entitled to seems almost a psychological impossibility.

### A. Contract as a Reference Point

A better approach might be available. One way to look at the problem is suggested by the recent work of economists

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Hart and Moore on contracts as reference points. Their intuition, crudely summarized, is that if parties get at time one what they already agreed they would get when they made their contract at time zero, then they will not feel aggrieved. This will enable them to go forward in their contractual relationship without shading. Shading is what Hart and Moore call the merely perfunctory performance one would expect out of an aggrieved employee who feels her employer has treated her badly. Hart and Moore assume perfunctory performance would comply with the contract strictly speaking, and so give rise to no legal remedy, but would be less than the consummate performance the employer hopes for.

A simple analogy may help here. Imagine your neighbor is getting his house painted. It turns out you like the color he has chosen, and the painters inadvertently bought too much paint for that job. You realize the cost to them of painting your house, given that they already have the paint (which cannot be resold because it has already been mixed to its particular hue) would be only $1000. Normally, you would have to pay $5000 to get your house painted, and that is also the value to you of the job. You and the painters agree that they should paint your house, and you put off agreeing on the price until they are finished, or nearly so. When it comes time to settle up, however, the entirely predictable happens—the parties disagree on the fair price.

The homeowner declares that $1000 is the fair price. This covers the cost of the labor (let us assume there was no opportunity cost for the job; the painters would otherwise have been idle) and the paint had already been paid for and would have been wasted had it not been used on your house. The painters declare with equal justice that the price should be $5000. This is the fair market value of the work done, and what the homeowner would have had to pay if he had gone to another crew.

159. See generally Hart & Moore, supra note 24, passim.
160. Id. at 5–6.
161. See id. at 9.
162. See id. at 3, 6.
Contract law scholars may want to argue here over whether a court should award the painters on the basis of their reliance cost ($1000) or under restitution ($5000), but that is not the point here. Both parties sensibly realize that litigation costs would eat up any gain they are likely to get by insisting on their way. The parties agree to settle on a price between $1000 and $5000, say, $2500. But here is the point: even though the parties agree on this settlement, they both feel aggrieved by the result. This means the ongoing relationship of the parties will not be optimal. Paint jobs are often not really over when the painters leave the site—missed spots will be noticed, equipment may be left behind, and usually there are understandings that painters will return to take care of these problems—but that is not the case here because the painters are aggrieved. The homeowner will pay, but only at the last moment, and will not offer a good reference and may even put it about that the painters should be avoided. Hart and Moore provide a mathematical model of these costs, and show that the costs of aggrievement are deadweight losses and prevent parties from attaining the maximum benefit of their exchange.

Parties can avoid aggrievement costs by using the contract to set a reference point from the outset, as Hart and Moore explain. Take an alternative scenario: the homeowner and the painters agree *ex ante* on a price of $2500. When the job is finished, the homeowner pays promptly. The painters leave, but come back to touch up and collect items left behind. The homeowner provides a positive reference. The value of the exchange is maximized.

The at-will-plus-stock-options employment arrangement used by startups has problems similar to those of other employment contracts where the price paid for services is negotiated (or renegotiated) after the services have been rendered. In the startup setting, the problem may arise if the liquidity event is unexpectedly large. The founder-entrepreneur may have anticipated a more normal liquidity

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165. See id. at 2.
166. See id. at passim.
event and calculated the expected cost of various employees in those terms. A larger than expected liquidity event, however, changes the implicit cost (in absolute terms) of employees. Google founders may have realized, for example, that they had inadvertently agreed to pay their chef more than $4 million per year. Especially when they realized some of this money was coming from them personally, the founders might have felt aggrieved, especially if they estimated, as human bias makes likely, that the cook’s contribution was less valuable than what his options turned out to be worth. Google founders did not attempt (as far as I know) to renegotiate Ayers’s option package, but they probably could have had they chosen to. Zynga did renegotiate option packages, and other startups may do the same as they approach big liquidity events. Even where firms do not renegotiate option packages, this may cloak feelings of aggrievement among firms that feel they have overcompensated employees, and lead to shading by firms. Using the employment contract as a reference point would ameliorate these problems.

We may use an alternative history of the Google chef to illustrate. If Ayers had worked for Google and had some of his options clawed back, he might have continued to work for the company afterwards, but he might have felt aggrieved and his cooking may have suffered. On the other hand, if the firm had not clawed back any of his options, Page, Brin, and other controlling shareholders might have been unable to enjoy his fare as they calculated in their heads how many thousands of dollars each meal was costing them and felt aggrieved about it. This sour dilemma arises when the actual compensation a startup employee gets is not really negotiated in advance because the clawback door is left unlocked and most likely won’t be opened until a big liquidity event is looming.

Suppose instead the buyback option proposed here was written into Ayers’s stock option plan and Ayers’s stock options were subject to a buyback right at a total price of, say, $8 million. This would be the amount Ayers agreed to when he accepted his job at the company. As a spectacular IPO approached, the firm would buy back his options for $8 million, much less than he would have gotten without the
buyback, but a big windfall nonetheless, enough for Ayers to start his own restaurant. The Google chef would have no reason to feel aggrieved and neither would his employer. If $8 million did not seem like a big enough prize to be worth the cut in pay the chef would take to work at the startup, he could bargain for more *ex ante*.

This proposal suggests a buyback term that would be in effect for one year prior to defined liquidity events, such as IPOs and buyouts. To be effective, this term would need to have flip-in rights that would be triggered after the fact, in the event an employee was terminated and then within one year after the startup had an IPO or buyout.167 This would obviously and significantly limit the power of the firm to terminate employees without cause in the period before a liquidity event. In the event of an unanticipated transaction, such as an unexpected buyout from an acquirer that appeared suddenly on the scene, the rights of terminated employees would resurface and have the effect of diluting the equity of existing shareholders.

Hiring an employee with the sort of protective buyback provision proposed here would obviously be more expensive to the firm than hiring without it. Whether this cost would be justified would depend on whether the firm anticipated that

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167. By flip-in rights, I mean rights to sell unvested options back to the issuing firm at a set price that would be triggered by a liquidity event that occurred within six or twelve months (or some other period, as negotiated) after the termination date of the employee. Suzanne S. Dawson et al., *Poison Pill Defensive Measures*, 42 BUS. LAW. 423, 424 (1987). Thus certain rights pertaining to the stock options would have to survive termination. The stock option plan would have to be drafted to provide for this, but this presents no insuperable drafting issues. The proposal may be overbroad in that it would cover employees who were terminated nonopportunistically pre-IPO or buyout, but this could be mitigated by allowing for the for-cause termination not triggering the rights of employees, as in these cases an employee was actually failing to perform to reasonable expectations. What would seem difficult or perhaps impossible would be to have an employment arrangement that both enabled, as under current law, an employer to terminate without cause before a liquidity event, without having to take any steps to substantiate inadequate performance, and at the same time, substantial limits to the scope of possible employer opportunism. Essentially, curtailing the freedom that an employer enjoys under at-will doctrine to some degree seems necessary if one wants to reduce the scope of possible employer opportunism before liquidity events. Whether this cost to the employer is justified depends on how valuable this term would be to a potential employee and how this value would be shared between employer and employee.
the benefits of assuring prospective employees against employer opportunism would be greater. No doubt some prospective employees would not have the bargaining power to insist on such a protective provision and would accept options subject to a clawback provision. C-level employees, such as star CEOs that startups sometimes hire, often negotiate severance packages that guarantee them certain benefits, including stock options, should they be terminated before a certain term.\footnote{Jonathan M. Ocker & Gregory C. Scheck, Employment Agreements for New Economy Chief Executives, L.A. LAW., Oct. 2000, at 21, 22 (2000).} The proposal here is envisioned as a middle-ground level of protection that would be more than non-C-level employees currently get but less than what star C-level employees frequently negotiate.

My proposal deserves consideration because there is no clear reason why the best and brightest prospective startup employees should not be worried about Zynga clawbacks. The fact is that however attractive the stock option packages that startups dangle before them may be, as the law stands now, startups can attempt to renegotiate them in anticipation of a particularly successful IPO or buyout. Employees then will be left in the unenviable position of either accepting a diminished option package or getting fired. They can sue, but the law is not on their side. At-will employment, although unloved by law professors, is still the law in California and most other states.\footnote{CAL. LAB. CODE § 2922 (2012).} Such employment relationships allow an employer to fire an employee without reason, and a without-cause termination will render worthless any unvested stock the employee may have. While repeat-player venture capitalists have good reason to avoid the reputational hit that opportunistic-seeming option renegotiations might inflict on their reputations as fair-minded managers of portfolio companies, founder-entrepreneurs who are about to become billionaires do not have the same incentives. For them, option renegotiations take place in something much more like a final period, and the options they claw back will go to make less diluted their stake and those of other founders and early investors. Doing this will have a cost for the firm in terms of aggrieved employees, but the founders may figure that the
most creative phase of those employees who will be aggrieved is past anyway. Founders deciding whether to claw back options inevitably will be making biased judgments, comparing the value of their own contributions to those of employees to whom they wish they had given less. All of this is foreseeable, and the best and brightest of prospective startup employees are smart enough to foresee it, especially with the Zynga clawback having served as a precedent. They may want some protection against this contingency.

The buyback commitment has some disadvantages for the firm. Terminating employees could not so easily replenish option pools. Accounting rules would probably require that options of terminated employees be treated as outstanding for the period during which they could still flip-in in the event a liquidity event occurred. Rational employers would want to invest more in screening techniques before they hired any employees who would not be so easily terminated.

But there would be benefits for the firm as well. Especially prized prospects might be more likely to accept offers from firms that offered option buyback protection. On the other hand, even just offering the option of buyback protection would give the prospective hire the opportunity to reject the offer and thereby signal that she was so confident that she would be of ongoing value to the firm that she did not want to trade the possibility of an especially spectacular windfall for protection against opportunism. It is also the case that buybacks might operate to the firm’s benefit by taking advantage of the difficulty most people have in calculating the utility to them of large sums of money. So how likely is it that an employee about to be hired for an annual salary of $90,000 per year would much distinguish between two otherwise equal jobs, one of which was subject to a $50 million option buyback provision, and the other, to a $100 million provision? Most people in that position would

probably find it difficult to imagine that their lives would be much different with the extra $50 million, the first $50 million having provided enough to leapfrog out of the usual trials of working for a living.\textsuperscript{172} Yet this $50 million in stock that the company did not have to issue to an employee could make a material difference for the founders and investors of a startup firm on the eve of a spectacular IPO, especially when one considers that the equity positions of a number of employees could be similarly capped.

Whether an option buyback term would act as a reference point depends on there being a substantial psychological difference to both employer and employee between options getting clawed back and options being bought back according to the terms on an earlier agreement. It seems likely the psychological difference between these two financially equivalent events would be substantial, even if we assume that an employee in the first case should know that her options could be clawed back under threat of termination. Clawbacks would always be discretionary unless a firm announced in advance that it intended to clawback all options in the event of a big enough IPO, which would lead to widespread employee dissatisfaction. Few employees will be so dispassionate that they will acknowledge the justice of being selected as one of the few whose options are being clawed back. To the contrary, these employees are likely to feel aggrieved. If employees know in advance that the value of their options is capped, however, while they may wish they had not agreed to those terms, they are unlikely to feel cheated by the enforcement of terms they agreed to. Similarly, employers may wish they had not agreed to a provision like the one proposed here, which makes it impossible to clawback options before an IPO or buyback. The firm might wish it had set a lower cap or thought to terminate the perfunctory employee enough in advance of the liquidity event to avoid even the capped dilution the employee will cause. But the firm is unlikely to feel aggrieved. The costly suboptimal performance expected of aggrieved parties

\textsuperscript{172} See generally \textsc{Reuven Brenner \& Gabrielle A. Brenner, Gambling and Speculation: A Theory, a History, and a Future of Some Human Decisions} 19–48 (1990) (speculating that people gamble in order to leapfrog).
is unlikely to follow.

B. More Disclosure

This Article has proceeded under the realistic assumption that if startup employees did not realize that firms could claw back their unvested stock options, they do now, given the notoriety of the Zynga clawback within the technology industries. Another more basic problem would exist, however, if employees did not realize this. Even if employees now realize in a general way that firms may claw back unvested stock options, they do not have any authoritative statement of this possibility, beyond what they have read about Zynga on industry-focused websites. This problem can, and probably should, be addressed under the disclosure requirements of the federal securities laws.

Private companies that use stock options to compensate their employees typically rely on Rule 701 issued under Section 3(b) of the Securities Act of 1933.\textsuperscript{173} Rule 701 provides a clearer exemption from registration under the 1933 Act than was available under the previously used Sections 4(1) and 4(2).\textsuperscript{174} As private companies grow, it can happen (and indeed did to Google and Facebook) that they approach or crossover the boundary of a private company: they have assets of more than $10 million and have at least 500 holders of any class of securities.\textsuperscript{175} When this happens, they are subject to the reporting requirements of section 12(g) of the 1934 Exchange Act.\textsuperscript{176} However, the SEC made exceptions for companies that crossed this boundary because they had issued stock options to many employees, and in 2007 it promulgated Rule 12h-1, which reflects the conditions it had set out in various no-action letters, exempting compensatory stock options, under certain conditions, from

\begin{itemize}
\item \textsuperscript{174} For a good introduction to the structure of the Securities Act of 1933, see Thomas Lee Hazen, The Structure of the Securities Act of 1933, SR043 ALI-ABA 41 (May 13–14, 2010).
\item \textsuperscript{175} 17 C.F.R. § 240.12g-4(a)(2) (2012).
\item \textsuperscript{176} 17 C.F.R. § 240.12g-4.
\end{itemize}
Section 12(g). One of these conditions, relevant to us, is that the company disclose to the option holder the risks associated with the investment.

The principal focus of this risk disclosure is the financial condition of the company. However, it should certainly count as a risk factor that an unvested stock option, though granted, may be clawed back. Indeed, companies doubtless disclose to employees far more remote risks associated with their option than that it may simply be taken away under various circumstances. If the SEC is going to require that compensatory stock options be accompanied by risk disclosures (at least in the case of a company relying on the Rule 12h-1 exemption), then consistency requires that the risk of a clawback be disclosed along with other less direct risks.

One could argue that employees already know, and receive adequate disclosure already, that they are at-will employees and that their options remain unvested until they remain in the employ of the company for certain periods of time. They should know, one could argue, that if they perform inadequately they will be terminated and lose their unvested options, or that they may be demoted, and have to accept a smaller stock option package. This common sense understanding does not cover the equally likely case that while the employee performed adequately or well—by all accounts, after all, Google chef Ayers was a fine cook—the company may decide that in light of how valuable the company has become, it believes it simply granted too many options to the employee and wants some back. It is hard to imagine a risk factor that would be more material than that. Once company lawyers have developed standard language disclosing this risk, the cost of including it in disclosures would be low.

180. Levy, supra note 7, at 133.
CONCLUSION

When Zynga clawed back unvested stock options before its IPO, it arguably violated an informal but legally unenforceable norm of Silicon Valley startup culture. At least some of the commentary found on industry websites and in the press suggested so.182 The combination of at-will employment and generous stock option plans gives startups extraordinary flexibility in both hiring and firing employees. Firms can fire employees without cause and employees’ unvested options are evaporated, but employees can also move freely among firms, looking for the one most likely to achieve a big liquidity event. This flexibility for employers inevitably opens the door to employer opportunism. Startups can terminate employees without cause after they have irrevocably made valuable contributions, thus reducing dilution of founders and investors but violating informal understandings they had with employees for fair compensation.

Any steps to curtail the possibility of opportunism, unfortunately, must also involve reducing employer flexibility. Whether the benefits of reducing opportunism exceed the costs of less employer flexibility is best sorted out by negotiation between talented potential employees and the startups that want to hire them. In some cases, prospective employees may wish to negotiate buyout rights that protect them against opportunistic termination before a liquidity event. This would make sense especially for prospective employees who expect to make valuable contributions to a startup’s value early in their term of employment, exposing them to holdup.

Time will tell whether the Zynga clawback was an outlier event conceived by a hyperaggressive CEO or a harbinger of things to come in Silicon Valley. Cultural norms can be delicate things, however, and what seem established understandings can quickly transform or dissipate, especially in dynamic industries. Silicon Valley employment practices for most workers currently seem characterized by a great

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legal flexibility for employers, where informal norms regarding good employer behavior contain and regulate employment relationships. Venture capital firms as repeat players may play a crucial role in maintaining these norms. Individual entrepreneurs, if they are rich and powerful enough, may not be subject to these norms in the same way. If fair employment compensation norms in technology hubs do deteriorate (in the sense of permitting more opportunistic behavior by startup firms), legally enforceable contractual provisions constraining opportunism against employees may be expected—or hoped—to take their place.