

INNOVATION INC.

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ABSTRACT

Innovation is key to economic and social progress. Most innovation happens in companies, and most innovation scholars assume that market forces will lead companies to provide appropriate incentives—in the form of money and other perks—to their employees to encourage them to innovate at optimal levels.

But this assumption about company behavior is almost certainly wrong. The truth is that different companies treat their employees very differently. Google offers free massages, while Amazon allegedly punishes people for taking sick leave. Genentech develops “cultural initiatives” that emphasize employees’ shared goals, while Intermex fires people for uninstalling software that tracks their physical location 24/7.

If we assume that not all approaches to employee motivation are created equal when it comes to generating innovation, we can conclude that at least some, and perhaps many, companies are innovating at sub-optimal levels. This is costly for society.

It is therefore critical from an innovation policy perspective to figure out what works and what doesn’t. What kinds of environments, incentives, and managerial behaviors promote workplace creativity and innovation? And if we know what works, how can we make sure that companies are adopting effective approaches?

This Article tackles these questions. Drawing on empirical findings from psychology and organizational behavior, it identifies general principles that work to promote creativity in the workplace. The fact that many financially successful companies have failed to adopt these principles points to market failure, not market success, a conclusion bolstered by my finding that several predicates of market failure exist in the employee creativity context.

Having undercut the conventional wisdom about private ordering, the Article goes on to explore what can be done to correct the market failure in employee innovation and ensure that more employees receive the right incentives. Here, behavioral law and economics offers a solution: debiasing. Debiasing uses interventions to overcome cognitive biases—in this case, on the part of company decision-makers. Changes to intellectual property and employment law and the implementation of signaling mechanisms like metrics and certification will debias company decision-makers and address the weaknesses of private ordering while maintaining its benefits. This will ensure that employees—the primary drivers of innovation today—receive the incentives they need to innovate at optimal levels.

I. INTRODUCTION

Innovation drives economic and social progress. And today, companies drive most innovation.¹ But how do companies incentivize their employees to create? How should they? If our goal is to maximize innovation, these are critical questions. Yet law and innovation scholars have paid scant attention to them.

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¹ E.g., Jeanne C. Fromer, *Expressive Incentives in Intellectual Property*, 98 VA. L. REV. 1745, 1779–81 (2012).

The conventional wisdom is that private ordering will provide the answers.² Companies will try varying combinations of financial and non-financial incentives to encourage their employees to innovate. If a particular company's incentive package produces sub-optimal levels of employee creativity, the company will fail. If, on the other hand, a company properly calibrates incentives to create, innovation will surge and the company will flourish. In this way, the market will push toward optimal incentives.

The fact that equally successful companies often adopt wildly divergent approaches to promoting employee creativity is not necessarily a problem for those who subscribe to this conventional wisdom. It simply suggests that not every employee is spurred to creativity in the same way. An employee will choose to work for the company that motivates her, as an individual, to be her most creative. If a particular company does not satisfy this criterion for enough employees, it won't be able to attract and retain talent, and will fail. By promising success to companies that provide optimal innovation incentives and failure to those that don't, the market ensures that employees get what they need to achieve optimal creativity.

This account seems to be bolstered by the tale of two of the most successful companies of our day: Amazon and Google. Though both companies drive innovation, they take dramatically different approaches to motivating creativity. While Amazon uses hard-line tactics, Google focuses instead on employee well-being.

In their New York Times expose, Jodi Kantor and David Streitfeld describe the work environment at Amazon:³

At Amazon, workers are encouraged to tear apart one another's ideas in meetings, toil long and late (emails arrive past midnight, followed by text messages asking why they were not answered), and are held to standards that the company boasts are "unreasonably high." The internal phone directory instructs colleagues on how to send secret feedback to one another's bosses. Employees say it is frequently used to sabotage others. . . . Some workers who suffered from cancer, miscarriages, and other personal crises said they had been evaluated unfairly or edged out, rather than given time to recover.⁴

Amazon supporters maintain that its approach, though harsh, is critical for promoting innovation. As Amazon recruiter Susan Harker put it, "[Amazon] is a company that strives to do really big, innovative, groundbreaking things, and those things aren't easy. When you're shooting for the moon, the nature of the work is really challenging. For some people it doesn't work."⁵ A new Amazon recruit similarly expressed his belief that "[c]onflict brings about innovation."⁶

Technology mammoth Google takes a completely different approach. Voted for six consecutive years as Fortune's number one company to work for,⁷ Google offers a range of perks "designed to . . . keep [employees] healthy . . . physically, emotionally, financially [and] socially."⁸ Google offers its employees extended paid parental leave, reimbursement for continuing education, and opportunities for extended unpaid leave with continuing health benefits to participate in nonprofit or community-

² See, e.g., Robert P. Merges, *The Law and Economics of Employee Inventions*, 13 HARV. J. L. TECH. 1, 38–40 (1999).

³ Jodi Kantor & David Streitfeld, *Inside Amazon: Wrestling Big Ideas in a Bruising Workplace*, N.Y. TIMES, Aug. 15, 2015.

⁴ *Id.*

⁵ *Id.*

⁶ *Id.*

⁷ Fortune.com, 100 Best Companies to Work for, <http://fortune.com/best-companies/> (last visited Jul. 27, 2016).

⁸ Google.com, Benefits, www.google.com/about/careers/lifeatgoogle/benefits (last visited Jul. 27, 2016).

based projects.⁹ And those are just the basic benefits. Quirkier offerings include subsidized massages, free yoga and Pilates classes, complimentary stress-management and health consultations, and even author appearances.¹⁰

Google supporters also firmly believe that theirs is the correct approach to fostering innovation. As spokesman Jordan Newman explained, Google’s goal is to “create the happiest, most productive workplace in the world,” and its incentive structure is a means to that end.¹¹ According to engineering director Craig Nevill-Manning, everything down to the design of Google’s workspaces is “geared toward [promoting] innovation and collaboration.”¹²

The fact that Amazon and Google have adopted such divergent approaches to promoting innovation and yet are both so successful is in line with the private ordering model the conventional wisdom endorses. Employees who expect to be more creative in an Amazonian environment will choose to work for Amazon, while those who expect to be more creative in a Googly environment will choose to work for Google. Everyone wins: employees, companies, and society.

But what if, despite Amazon’s and Google’s respective successes, this account is incorrect? What if Amazon’s and Google’s divergence is not the result of catering to creative idiosyncrasies, but the product of an as-yet-undetected market failure that prevents companies from adopting generally applicable principles of innovation? That is, what if, contrary to the conventional wisdom, some companies like Amazon are successful not *because* they have adopted optimal innovation incentives, but *in spite* of the fact that they have not?

These are important questions, but they have received little attention in the law and innovation literature. That is a mistake with significant individual and societal consequences. This Article seeks to correct that mistake by exploring whether markets generate optimal innovation incentives for employees, as is typically assumed, or whether market failures prevent this from happening. Moving beyond the conventional faith in markets, the Article draws on previously overlooked insights from psychology and organizational behavior that suggest that there *are* empirically tested principles and best practices that, if implemented, promise to promote creativity and innovation among employees.

Unfortunately, the market has failed to enshrine these principles. Two common features of market failure—bounded rationality, arising from cognitive limitations of company decision-makers and leading to suboptimal behaviors, and information asymmetries arising from companies having better information than potential employees—are likely at work here. These features help explain why at least some (and perhaps many) otherwise successful companies are getting employee creativity incentives wrong at least some (and perhaps much) of the time, leading to sub-optimal levels of innovation.

In light of this previously undetected market failure, what is to be done? Those who value the conventional wisdom will appreciate that the answer is not to abandon private ordering entirely. Yet there are legal and policy interventions that can correct the market and ensure that more companies adopt more innovation-friendly incentives more often. These corrective interventions derive from the behavioral law and economics concept of debiasing: the process of correcting for cognitive biases and thereby helping corporate decision-makers adopt more innovation-friendly behaviors.

⁹ See *id.*; Jillian D’Onfro & Kevin Smith, *Google Employees Reveal Their Favorite Perks about Working for the Company*, BUSINESS INSIDER, JUL. 1, 2014, <http://www.businessinsider.com/google-employees-favorite-perks-2014-7> (last visited Feb.17, 2017).

¹⁰ James B. Stewart, *Looking for a Lesson in Google’s Perks*, N.Y. TIMES, Mar. 15, 2013.

¹¹ *Id.*

¹² *Id.*

The rest of the Article proceeds as follows. Part I examines the case for private ordering as the best way to provide employees with creativity incentives. Despite the apparent strength of this case, Parts II and III challenge the conventional wisdom that private ordering is currently working as it should to optimize innovation incentives.

This challenge proceeds on two fronts. First, Part II deploys insights from psychology and organizational behavior to demonstrate that there are several empirically-tested general principles that, when endorsed by companies, help promote creativity across subjects in the workplace. This Part contributes to the legal literature by establishing a framework by which law and innovation scholars may judge corporate policies and practices for their expected effects on innovation. But beyond this, and especially important for purposes of this Article, it demonstrates that there is likely a market failure in this context. To the extent that companies like Amazon do not align themselves with these principles, they are innovating at sub-optimal levels.

Part III takes a closer look at why this failure might be occurring, with the goal of developing an appropriate policy response. Relying on the body of thought that informs the conventional wisdom—law and economics—this Part argues that several common but previously unrecognized circumstances that may undercut the effectiveness of markets are likely at play in the employee innovation context. In particular, this Part identifies bounded rationality, counterproductive social norms, information asymmetries, and distributional problems that may be leading to market failure.

Having argued that private ordering has failed to provide employees with optimal innovation incentives, Parts IV and V investigate what should be done. Part IV revisits the case for private ordering and asks whether it is still the best approach in light of the analysis in Parts II and III. This Part also introduces novel insights from psychology and organizational behavior to conclude that despite private ordering’s weaknesses, it is the best approach—at least with certain corrective interventions. Part V considers what these interventions should look like. This Part proposes a debiasing tack, based in the behavioral law and economics tradition, as the best way to preserve the benefits of private ordering while tackling its failures. Debiasing in this case can be achieved by modifications to existing intellectual property and employment law regimes and the implementation of formalized metrics and certification programs. These interventions should nudge companies in the direction of practices more conducive to creativity and innovation, benefitting employees, business, and society alike.

II. PROMOTING EMPLOYEE CREATIVITY: THE CONVENTIONAL WISDOM OF PRIVATE ORDERING

For innovation policy scholars, a fundamental task is determining how to best promote creativity and innovation. In undertaking this task, there are a number of policy levers at policymakers’ disposal. The lever that has received the most attention is, unsurprisingly, intellectual property (IP), whose very purpose is to provide innovation incentives to individual creators.¹³

But when speaking about creativity incentives, many IP scholars tend to overlook two crucial interrelated facts. The first is that most innovation today is not accomplished by independent individuals responding to IP incentives, but by employees of companies and other organizations.¹⁴

¹³ See U.S. CONST. art. I, § 8, cl. 8 (empowering Congress to grant intellectual property rights in order to “promote the Progress of Science and useful Arts.”).

¹⁴ Fromer, *supra* note **Error! Bookmark not defined.**, at 1779–81; Jay Dratler, *Fixing our Broken Patent System*, 14 MARQ. INTEL. PROP. L. REV. 47, 50 (2010); Stephanie Plamondon Bair, *The Psychology of Patent Protection*, 48 CONN. L. REV. 297, 330 (2015); Eric E. Johnson, *Intellectual Property and the Incentive Fallacy*, 39 FLA. ST. U. L. REV. 623, 661 (2012). The U.S.

Second, under current intellectual property doctrines, these employees most likely will never hold a valid claim to exclusive rights in their work.¹⁵

Because IP offers little in the way of creativity incentives to employees, innovation scholars who have addressed the issue commonly assume that private ordering—which leaves companies to craft their own employee incentive policies according to existing norms, market forces, and firm needs—will lead companies to provide optimal innovation incentives to their employees, primarily in the form of financial bonuses.¹⁶ But as I explain in subsequent Parts, not much has been done to critically evaluate whether the private ordering model is working as expected in practice.

This Part examines the case for allowing companies to craft employee creativity incentives through private ordering. In this context, private ordering refers to behaviors governed by extra-legal considerations such as social norms, market forces, or party needs.¹⁷ Private ordering stands in contrast to public ordering, which involves centralized rule-making by the state.¹⁸ Both public and private ordering schemes are attempts to achieve some desired public goal, like efficiency or rights protection,¹⁹ but they employ different means to achieve these ends.²⁰ Here, the goal of private (or public) ordering would be to achieve optimal innovation incentives for creative employees working in companies.

A. PRIVATE ORDERING AS DEFAULT

Others have written about the conditions that might lead us to favor either a private or public ordering regime in specific circumstances.²¹ In the corporate law context, Robert Thompson and others have argued that private ordering is generally superior to public ordering, and should be the first mover for constraining human behavior.²² Under this view, private ordering should be our default choice, and the law should step in only when certain conditions require it, or when law otherwise has an identifiable advantage over norms in regulating behavior.²³

Following this logic, a primary consideration in deciding whether private ordering is the best course of action is whether we can expect to achieve the desired outcome without government

Patent and Trademark Office's records indicate that about 14% of all patented inventions originate from independent inventors. Compare U.S. Patent and Trademark Office, Patent Counts by Class by Year—Independent Inventors, January 1977–December 2014 (2015), http://www.uspto.gov/web/offices/ac/ido/oeip/taf/cbcby_in.htm (listing 1,225,614 utility patents that were unassigned or assigned to an individual), with U.S. Patent and Trademark Office, Patent Counts by Class by Year, January 1977–December 2014 (2015), <http://www.uspto.gov/web/offices/ac/ido/oeip/taf/cbcby.htm> (listing 9,020,420 total utility patents in the same time period).

¹⁵ Dratler, *supra* note 14, at 50.

¹⁶ See, e.g., Merges, *supra* note 2, at 38–40.

¹⁷ For this and other definitions of “private ordering,” see, e.g., Niva Elkin-Koren, *Private Ordering in Cyberspace—Rights Without Laws?*, 73 CHI-KENT L. REV. 1155, 1160–61 (1998).

¹⁸ *Id.*

¹⁹ See, e.g., Michael Birnhack, *Principles of Private Ordering*, (Israeli Internet Association, Haifa, Isr.), Feb. 2004, at 3.

²⁰ Joseph Miller, *Taking Civil Rights Seriously: Toward a New Understanding of Section 1983*, 2 GEO. MASON U. CIV. RTS. L. J. 101, 102–103 (1991).

²¹ See, e.g., Jonathan R. Macey, *Public and Private ordering and the Production of Legitimate and Illegitimate Legal Rules*, 82 CORNELL L. REV. 1123 (1997) (arguing for a default preference for private ordering because private ordering can be expected to lead to legitimate rules, while public ordering may lead to either legitimate or illegitimate rules); Avery Katz, *Taking Private ordering Seriously*, 144 U. PENN. L. REV. 1745, 1749 (1996) (arguing that public ordering may be necessary because the social norms that drive private ordering are not fully efficient).

²² Robert B. Thompson, *Corporate Law Criteria: Law's Relation to Private Ordering*, 2 BERKELEY BUS. L. J. 95, 98–99 (2005); see also Macey, *supra* note 21.

²³ Thompson, *supra* note 22, at 98–99.

intervention.²⁴ This could arise, for example, because market forces or drive behaviors in beneficial ways.²⁵

Here, we should in fact expect employers to provide optimal innovation incentives to employees without government intervention. The reason for this expectation is simple: providing these incentives is good for companies' bottom line. It is almost a truism that innovation is related to, and necessary for, financial business success.²⁶ To the extent that employers provide effective innovation incentives to their employees, the employees will be more innovative, and, consequently, the companies will be more successful. Since few companies go into business with the goal of failing, they have every reason to adopt these incentives of their own accord.

B. PRIVATE ORDERING'S DESIRABILITY OVER IP

In the innovation context, an additional case for private ordering in governing employee creativity incentives comes from contrasting it with the primary alternative—IP rights, often considered the chief means of efficiently incentivizing innovation.²⁷ Under the traditional, utilitarian account of IP, exclusive rights are granted to creators to encourage them to create things that, for various reasons arising from the public-goods nature of intellectual products, rational actors would not create otherwise.²⁸

But when it comes to incentivizing creators who are also employees, scholars have made the economic argument that intellectual property entitlements most efficiently reside with the creating company rather than with individual creators within the firm.²⁹ In essence, the argument goes, granting rights to the company, rather than fracturing rights among employees, allows for efficient coordination of effort and prevents individual employees from holding up the company, which in turn would lead to sub-optimal levels of corporate investment in innovation.³⁰ Consistent with this reasoning, IP doctrines, with some exceptions, generally assign rights to creating companies rather than to creative employees.³¹ An employee whose creative work leads to a patent, for example, cannot expect to receive any direct financial gain³² from her invention. The supracompetitive returns

²⁴ See Elkin-Koren, *supra* note 17, at 1160–61.

²⁵ *Id.*

²⁶ See, e.g., Brian Tracy, *THE 100 ABSOLUTELY UNBREAKABLE LAWS OF BUSINESS SUCCESS* 94–95 (Berrett-Koehler 2000).

²⁷ See, e.g., Michael Kremer & Heidi Williams, *Incentivizing Innovation: Adding to the Toolkit*, 10 INNOVATION POLY & THE ECON. 1, 1 (2010) (arguing that intellectual property rights are a primary means of promoting innovation); Jonathan M. Barnett, *Is Intellectual Property Trivial?*, 157 U. PA. L. REV. 1691, 1699 (2009) (stating that it is a “conventional proposition” that intellectual property rights result in innovation gains); Benjamin N. Roin, *Intellectual Property Versus Prizes: Reframing the Debate*, 81 U. CHI. L. REV. 999, 1001 (2014) (stating that “[t]he intellectual property system is a central [though controversial] component of innovation policy.”).

²⁸ See Mark A. Lemley, *Ex Ante Versus Ex Post Justifications for Intellectual Property*, 71 U. CHI. L. REV. 129, 129–30 (2004); William Fisher, *Theories of Intellectual Property*, in *NEW ESSAYS IN THE LEGAL AND POLITICAL THEORY OF PROPERTY* 168, 173–74 (Stephen R. Munzer ed., 2001).

²⁹ E.g., Merges, *supra* note 2, at 12–31.

³⁰ *Id.*

³¹ *Id.* at 5–10.

³² Though she may stand to gain indirectly by enhancing the firm's financial position, which may lead to a bonus or pay raise. See Merges, *supra* note 2, at 37–44.

that may accrue if the patent is successful will go to the company, not the inventor,³³ and there is no law requiring firms to share these profits with employee-creators.³⁴

Because innovative efficiency counsels that IP rights go to employers, some scholars have argued that private ordering is the best alternative for providing creativity incentives to employees.³⁵ Supporting this argument, for instance, Rob Merges details a variety of company-initiated programs that reward employees in various ways for creative endeavors.³⁶ He argues that these programs should be successful in spurring employees to creativity.³⁷

C. FLEXIBILITY AND FAMILIARITY

Those in favor of a private ordering scheme for providing employees with creativity incentives have also emphasized the interrelated advantages of familiarity and flexibility this approach offers.

In contrast to a government entity, a company enjoys the relative advantage of familiarity with the technological space in which it operates, the company itself, and its employees.³⁸ It therefore presumably has superior knowledge about what programs and policies will be most effective and best fit the needs of the firm and its creative personnel.

Related to this is the advantage of flexibility.³⁹ Choosing a private ordering rather than an intellectual property or regulatory regime gives firms the space to experiment with policies and practices that work with their unique circumstances.⁴⁰ If the market is functioning as expected, we need not fear that a company's particular practices are sub-optimal from an innovation perspective. According to the logic described above, if this is the case, the market will weed it out: the company will innovate at sub-optimal levels and will suffer economically as a result. This will either drive the company out of business or compel it to move its practices in a more innovation-friendly direction.

In this way, private ordering also allows companies the space to accommodate idiosyncratic needs of employees. The expected result of private ordering is, in contrast to a one-size-fits-all public approach, a range of companies offering unique incentive packages. This situation enables potential employees to choose the company with the package that works best for their particular creative needs. Again, we need not worry about companies offering sub-optimal incentive packages. If they do, employees will simply engage in Tiebout sorting: they will “vote with their feet,”⁴¹ leaving the companies that offer sub-optimal packages and moving to those that offer better packages, from

³³ Dratler, *supra* note 14, at 50.

³⁴ See Merges, *supra* note 2, at 5–10. Any direct financial benefit the employee may enjoy for her efforts will thus depend entirely on the firm's internal incentive structure. Many firms do, in fact, offer some form of financial reward to inventors. But this is entirely within the firm's discretion. *Id.* at 37–44.

³⁵ Not all IP scholars feel this way. Several have argued that IP doctrines be altered in such a way as to give employees greater rights in their creations. See, e.g., Shlomit Yanisky Ravid, *Rethinking Innovation and Productivity Within the Workplace Amidst Economic Uncertainty*, 24 FORDHAM INTELL. PROP. MEDIA & ENT. L. J. 143, 190–191 (2013); Orly Lobel, *The New Cognitive Property: Human Capital Law and the Reach of Intellectual Property*, 93 TEX. L. REV. 789, 842–849 (2015); Ann Bartow, *Inventors of the World, Unite! A Call for Collective Action by Employee Inventors*, 37 SANTA CLARA L. REV. 673, 675–77; Neal Orkin, *Rewarding Employee Invention: Time for a Change*, HARV. BUS. REV., Jan.–Feb. 1984, at 56; William P. Hovell, Note, *Patent Ownership: An Employer's Rights to His Employee's Invention*, 58 NOTRE DAME L. REV. 863, 875–80 (1983); Henrik D. Parker, Note, *Reform for Rights of Employed Inventors*, 57 S. CAL. L. REV. 603, 605 (1984).

³⁶ Merges, *supra* note 2, at 37–42.

³⁷ *Id.*

³⁸ *Id.* at 45.

³⁹ *Id.*

⁴⁰ See *id.*

⁴¹ See Charles M. Tiebout, *A Pure Theory of Local Expenditures*, 64 J. POL. ECON. 416, 418 (1956).

their individual perspectives. Companies will therefore be compelled to offer optimal innovation incentives so they can retain the best talent and continue to innovate.

III. A CRITICAL LOOK AT THE CONVENTIONAL WISDOM: INSIGHTS FROM PSYCHOLOGY THAT POINT TO MARKET FAILURE

The case for private ordering as the best way to provide employees with innovation incentives makes a lot of intuitive sense. Perhaps that is why not much effort has been made to critically examine it.

Adding to this scholarly lacuna is the fact that these assumptions are difficult, in practice, to test. When we look at companies in the real world with different employee-incentive models, how can we know whether one model leads to more innovation than another? We could, of course, select a proxy for innovation (such as issued patents or new products on the market) and, controlling for myriad potential confounding factors, conduct an empirical study trying to get at this. It is much easier, however, to let the market, which we assume is working as anticipated, do the sorting for us.

But despite the appeal of private ordering, there are good reasons to ask whether market failures might be keeping it from functioning as expected in practice. First, we might question the main premise underlying this approach: if a firm is not innovative, it will either not survive, or, at the very least, underperform economically.

Though innovation is generally thought to contribute to a company's success,⁴² it is by no means the *only* way to be successful. A particular company might have a business model that does not depend on ongoing innovation at all. The firm might instead prefer to put its resources into supporting the continued success of a few signature products, for example, or may specialize in rebranding the non-exclusively owned ideas and products of others. Companies may also be driven by "short-termism," preferring to maximize shareholder value in the short term rather than invest in innovative research and development projects that may not pay off economically for many years.⁴³ Bolstering the short-termism concern, many U.S. companies have significantly decreased their research and development spending in recent years.⁴⁴ Clearly, these companies seem to think that there are other ways besides innovation to achieve economic success. And though these are perfectly rational business decisions, they do not bode well for innovation, and belie the assumption that the market will push companies to provide optimal innovation incentives to their employees.

⁴² See, e.g., Tracy, *supra* note 26, at 94–95.

⁴³ See, e.g., Linette, Lopez, *The Price of Profits*, BUSINESS INSIDER, Jun. 14, 2016, <http://www.businessinsider.com/american-companies-and-short-termism-2016-6> (arguing that short-termism causes companies to neglect R&D); Roger L. Martin, *Yes, Short-Termism Really is a Problem*, HARV. BUS. REV. Oct. 9, 2015, <https://hbr.org/2015/10/yes-short-termism-really-is-a-problem> (arguing that though R&D spending has increased recently, it may be because "corporations are careful to classify as much as possible as 'R&D' to avoid accusations of short-termism when they lower their overall investment."). *But see* James Surowiecki, *The Short-Termism Myth*, THE NEW YORKER, Aug. 24, 2015, <http://www.newyorker.com/magazine/2015/08/24/the-short-termism-myth> (arguing that short-termism is not as big a problem as commonly believed, and pointing out that overall R&D spending has increased in the last year).

⁴⁴ See, e.g., State Science & Technology Institute, *The Changing Nature of U.S. Basic Research: Trends in Federal Spending*, May 21, 2015, <http://ssti.org/blog/changing-nature-us-basic-research-trends-federal-spending> ("evidence suggests that American corporations are walking away from basic science"); John LaMattina, *Pharma R&D Cuts Hurting U.S. Competitive Standing*, FORBES, Jan 3, 2014, <http://www.forbes.com/sites/johnlamattina/2014/01/03/pharma-rd-cuts-hurting-u-s-competitive-standing/#6c1f5fe2101f> (reporting a "\$12.9 billion reduction in [the pharmaceutical] industry's investment in R&D" from 2007 to 2012); Martin, *supra* note 43 (arguing that though R&D spending has increased recently, it may be because "corporations are careful to classify as much as possible as 'R&D' to avoid accusations of short-termism when they lower their overall investment.").

Similarly, the idea that employees will engage in Tiebout exit, leaving employers with sub-optimal creativity incentive packages for other jobs, though possibly correct, may simply be irrelevant to how some companies operate in practice. A given company might not be overly concerned about high employee turnover, especially if it is confident in its ability to recruit new talent. Indeed, there is evidence that this is the model Amazon adopts.⁴⁵ If this is the case, an employee—or even several employees—leaving because of sub-optimal innovation incentives will likely have little effect on a company’s decision to adopt different or better incentives.

These observations begin to hint at the notion that all may not be sunshine and rainbows in the world of employee innovation incentives. But, again, how can we test this? How do we know what works, and whether companies are adopting what works?

The next two Parts tackle these questions on two fronts. First, this Part introduces insights from the psychology and organizational behavior literatures. The results of this work tell us that there are in fact general principles, empirically tested, that on the whole promise to promote employee creativity. To shed light on what employers optimally should be doing, this Part examines some of these principles and how they relate to specific workplace policies here.

The fact that these principles do exist, and that the people who have helped uncover them often lament the degree to which their recommendations are ignored in real-world corporate decision-making,⁴⁶ supports the hypothesis of market failure in the realm of employee innovation incentives.

A. PRINCIPLES OF EMPLOYEE CREATIVITY

Psychologists and organizational behavioralists have been working for years to identify the dynamics that influence employee creativity. Drawing from this work, the Article identifies several broad principles found to be beneficial for creativity in the workplace. Although the results I discuss are based on population data (meaning that there will be some individual variation), they suggest that, on the whole, some things work better than others when it comes to promoting employee creativity. In particular, this Part explains how promoting social exchanges; supporting creator autonomy, competence, and relatedness; and providing opportunities for variety and balance are all effective drivers of corporate innovation.⁴⁷

1. *Social versus Economic Exchanges*

Organizational behaviorists have discovered that employees are more creative when they define their relationships with employers as social, rather than economic, exchanges.⁴⁸ While an economic exchange depends on a formal and highly specified *quid pro quo* relationship, a social exchange is much less formal. Social exchange relationships are defined by feelings of trust. The details of every

⁴⁵ According to the New York Times piece, the median employee tenure at Amazon is one year, and only 15% of Amazon employees have been with the company for more than five years. Kantor & Streitfeld, *supra* note **Error! Bookmark not defined.** In the non-innovative industries, an example of this business model can be seen in the world of Biglaw, whose firms go to great lengths (through high salaries, summer recruiting programs, etc.) to recruit more new talent than can ultimately be retained.

⁴⁶ Kimberly D. Elsbach & Andrew B. Hargadon, *Enhancing Creativity Through “Mindless” Work: A Framework of Workplace Design*, 17 ORG. SCI. 470, 470 (2006); *see also* Theresa M. Amabile, *How to Kill Creativity*, HARV. BUS. REV. 77–78 Sept-Oct. 1998.

⁴⁷ For a different but related take on the social science literature in the law and innovation context, *see* Elizabeth Rosenblatt, *Belonging as Intellectual Creation*, 81 MO. L. REV. ___ (forthcoming 2016) (arguing, on the basis of the literature, that it is often a desire for a sense of belonging, rather than legal exclusivity, that drives individuals to be creative).

⁴⁸ *E.g.*, Jüing-Lih Fahr, Phillip M. Podsakoff & Dennis W. Organ, *Accounting for Organizational Citizenship Behavior: Leader Fairness and Task Scope versus Satisfaction*, 16 J. MGMT. 705, 705 (1990); Dennis W. Organ & Robert H. Moorman, *Fairness and Organizational Citizenship Behavior: What are the Connections?*, 6 SOC. JUST. RES. 5, 5 (1993).

transaction in this kind of relationship need not be spelled out in advance because each party trusts that its contributions will be reciprocated over the long run.⁴⁹

The contrast between social and economic exchange regimes can be illustrated by a typical interaction between close friends.⁵⁰ John may babysit for Shirley (social exchange) without worrying about getting paid, but he knows that when he next needs a ride to the airport, Shirley will oblige. On the other hand, if Shirley hired a stranger to babysit for her (economic exchange), she would be expected to pre-specify the terms of the arrangement, including dollars paid per hour, whether the sitter could eat the food in her refrigerator, and whether she would provide the sitter with a ride home. She would also be expected, absent some formal arrangement to the contrary, to pay the babysitter at the time services are rendered.

Just as Shirley and John's relationship allows them to give and take favors without a formal accounting or economic transaction, organizational studies suggests that certain managerial behaviors engender the kind of interpersonal trust between employer and employee necessary for social exchange. When this trust is present, employees feel comfortable going above and beyond with increased creativity and innovative behavior, knowing that they will eventually be rewarded in some way for their efforts.⁵¹ Shirley, for instance, may be more willing to devote time and mental energy to complete a big project at her civil engineering firm if, during the previous week, her manager allowed her to leave early to see her daughter's recital. She may even be more creative in undertaking this project.

Although Shirley is a fictional character, her workplace behavior is not purely hypothetical. Research suggests that employees operating within work environments that operate as social exchanges feel more motivation and engage in more innovation and idea generation than those working in economic exchange environments.⁵² Moreover, the quality of motivation experienced in these environments—so-called intrinsic motivation—may lead to objectively more creative output.⁵³ In contrast, work environments that operate more like economic exchanges may lead employees to perceive innovation as stressful, because innovative behavior is demanding and employees operating in economic exchange environments may not feel adequately compensated for the additional efforts innovation requires.⁵⁴ Economic exchange environments thus tend to reduce employee motivation for innovative work.⁵⁵

⁴⁹ Onne Janssen, *Job Demands, Perceptions of Effort-Reward Fairness and Innovative Work Behavior*, 73 J. OCCUPATIONAL & ORG. PSYCHOL. 273, 273 (2000).

⁵⁰ See Eric E. Johnson, *The Economics and Sociality of Sharing Intellectual Property Rights*, 94 B.U. L. REV. 1935, 1954–55 (2014) (discussing similar examples in his treatment of “crisp” and “fuzzy” transactions. To relate the two, transactions taking place in a social exchange would tend to be “fuzzy,” while those taking place in an economic exchange would tend to be “crisp”).

⁵¹ Janssen, *supra* note 49, at 289–290.

⁵² E.g., Robert H. Moorman, *Relationship between Organizational Justice and Organizational Citizenship Behaviors: Do Fairness Perceptions Influence Employee Citizenship?*, 76 J. APPLIED PSYCHOL. 845, 845 (1991); Organ & Moorman, *supra* note 48; Janssen, *supra* note 49.

⁵³ Cindy P. Zapata-Phelan, Jason A. Colquitt, Brent A. Scott & Beth Livingston, *Procedural Justice, Interactional Justice, and Task Performance: The Mediating Role of Intrinsic Motivation*, 108 ORG. BEHAV. & DECISION PROCESSES 93, 93 (2009); Theresa Amabile, *The Motivation to be Creative*, in *FRONTIERS OF CREATIVITY RESEARCH: BEYOND THE BASICS* 223–254 (Bearly Ltd. 1987).

⁵⁴ Onne Janssen, *How Fairness Perceptions Make Innovative Behavior More or Less Stressful*, 25 J. ORG. BEHAV. 201, 202–03 (2004).

⁵⁵ *Id.* at 201 (concluding that employee perceptions of unfairness are related to higher stress in the workplace. As explained *infra* note 26 and accompanying text, perceived fairness plays an important role in establishing a social exchange environment); see generally *STRESS AND HUMAN PERFORMANCE* (James E. Driskell & Eduardo Salas, eds., 2013).

In addition to these creative benefits, social exchanges may also lead to more efficient workplaces due to reduced transaction costs. In general, social exchanges tend to lower transaction costs because every detail of the working relationship need not be formalized.⁵⁶ In the hypothetical situation just discussed, for instance, Shirley and her manager need not negotiate a formal agreement whereby Shirley works overtime hours in exchange for an afternoon off. Nor need they keep even an informal accounting of quid and quo. Instead, the give and take is a natural consequence of the type of relationship Shirley and her employer enjoy.

Consistent with the nature of the employer–employee relationship—a social relationship, built on trust—that characterizes a social exchange, the rewards employees expect and that contribute to the positive cycle of trust and motivation are not necessarily economic.⁵⁷ One of the main contributors to the creation of a social exchange at work is employees’ perception that the workplace is a fair environment.⁵⁸ Employers and managers can contribute to the perceived fairness of a work environment by allowing employees to participate in decision-making,⁵⁹ giving employees recognition and credit for their accomplishments,⁶⁰ making efforts to accommodate individual employees’ needs and interests,⁶¹ and generally treating employees with respect and dignity.⁶²

This is not to say that economic compensation may not contribute for better or worse to employee conceptions of workplace fairness. But it is clear that money is not a primary motivator of creative work, and can, if given too large a role, detract from employee motivation.⁶³ Further, when it comes to financial compensation, both employee and employer perceptions of what is “fair” do not follow a linear relationship between productivity and compensation. Instead, people tend to consider a compensation system fair when it provides “at least some minimal returns to every individual and does not result in outrageous variance across persons and identifiable groups.”⁶⁴

This latter finding belies many scholars’ assumption that greater economic rewards lead, in a linear fashion, to greater incentives to innovate.⁶⁵ The work described here suggests that, at least insofar that it is social exchange relationships that are motivating people to engage in innovative activity in the workplace, a reward system that compensates people in a linear pay-for-performance way may actually undermine motivation to engage in creative work within an organization.

⁵⁶ See Johnson, *supra* note 50, at 1954–55; Yochai Benkler, *Sharing Nicely: On Shareable Goods and the Emergence of Sharing as a Modality of Economic Production*, 114 YALE L. J. 273, 311 (2004).

⁵⁷ The next two paragraphs are based substantially on Bair, *supra* note 14, at 338–39. I also discuss the fairness literature and its implications for copyright law in Stephanie Plamondon Bair, *Rational Faith: The Fairness of Utility in Copyright*, __ B.U. L. REV. __ (forthcoming 2016).

⁵⁸ E.g., Fahr, Podsakoff & Organ, *supra* note 48; Organ & Moorman, *supra* note 48.

⁵⁹ Organ & Moorman, *supra* note 48, at 14; Moorman, *supra* note 52. See generally E. ALLEN LIND & TOM R. TYLER, *THE SOCIAL PSYCHOLOGY OF PROCEDURAL JUSTICE* (Plenum Press 1988).

⁶⁰ Janssen, *supra* note 49, at 291–92.

⁶¹ Organ & Moorman, *supra* note 48, at 7.

⁶² Organ & Moorman, *supra* note 48, at 14; Moorman, *supra* note 52.

⁶³ E.g., JEROEN P.J. DE JONG, *THE DECISION TO INNOVATE: LITERATURE AND PROPOSITIONS* 29 (2006); Amabile, *supra* note 46, at 77–78.

⁶⁴ Organ & Moorman, *supra* note 48, at 14–15; Philip Brickman, Robert Folger, Erica Goode & Yaachov Schul, *Microjustice and Macrojustice*, in *THE JUSTICE MOTIVE IN SOCIAL BEHAVIOR* 173–202 (Plenum Press 1981).

⁶⁵ This assumption is most often made in the intellectual property context, see Diane Leenheer Zimmerman, *Copyrights as Incentives: Did We Just Imagine That?*, 12 THEORETICAL INQUIRIES L. 29, 32–33 (2011), but has also been implied in legal scholarship discussing employee incentives in the workplace, see, e.g., Merges, *supra* note 2, at 39–41.

2. *Autonomy, Relatedness, and Competence*

Psychologists have long known the critical role that autonomy, relatedness, and competence play in promoting personal feelings of well-being and mental health.⁶⁶ Additional empirical work suggests that these principles also contribute to motivation and creativity in the workplace.

a) *Autonomy*

Autonomy is the ability to choose one's goals and actions according to personal inclinations and interests.⁶⁷ People care deeply about the ability to exercise autonomy in their daily lives.⁶⁸ When we have occasion for autonomous thought and action, we feel happier⁶⁹ and enjoy higher quality relationships.⁷⁰ Opportunities for autonomous thought and action throughout our lifetimes help us to develop into psychologically healthy and productive members of society.⁷¹

Attending to the human need for autonomy also has positive effects on innovation in the workplace. Even when tasks are regulated, as workplace activities often are,⁷² to the extent that an employee can experience autonomy when undertaking a task, she will feel more motivated in her work.⁷³ Further, this creative impulse will exhibit the characteristics of high-quality intrinsic motivation,⁷⁴ a type of drive shown to lead to objectively more creative thinking (as measured by various experimental protocols) and better performance outcomes.⁷⁵

It might seem counterintuitive that someone can feel autonomous when doing something that is externally prescribed, as is often the case when employees undertake creative projects at the direction and for the benefit of their employers. But, psychologists have discovered that, in the right environment, people will internalize externally regulated tasks.⁷⁶ This internalization leads employees to make a task, and the values it represents, their own, which in turn increases feelings of autonomy and creativity-enhancing intrinsic motivation.⁷⁷

⁶⁶ See cited references and accompanying text *infra* notes 67–71.

⁶⁷ Kennon M. Sheldon, Richard Ryan & Harry T. Reis, *What Makes for a Good Day? Competence and Autonomy in the Day and in the Person*, 22 PERSONALITY & SOC. PSYCHOL. BULL. 1270, 1271 (1996).

⁶⁸ *Id.*

⁶⁹ Harry T. Reis et al., *Daily Well-Being: The Role of Autonomy, Competence, and Relatedness*, 26 SOC. PSYCHOL. BULL. 1575, 1580 (2000); Edward L. Deci & Richard M. Ryan, *The "What" and "Why" of Goal Pursuits: Human Needs and the Self-Determination of Behavior*, 11 PSYCHOL. INQUIRY 227, 227 (2000); Richard M. Ryan & Edward L. Deci, *On Happiness and Human Potentials: A Review of Research on Hedonic and Eudaimonic Well-Being*, 52 ANN. REV. PSYCHOL. 141, 141 (2001).

⁷⁰ Marc R. Blais et al., *Toward a Motivational Model of Couple Happiness*, 59 J. PERSONALITY & SOC. PSYCHOL. 1021–31 (1990); C. Raymond Knee, et al., *Self-Determination and Conflict in Romantic Relationships*, 89 J. PERSONALITY & SOC. PSYCHOL. 997 (2005); Richard M. Ryan et al., *On the Interpersonal Regulation of Emotions: Emotional Reliance Across Gender, Relationships, and Cultures*, 12 PERS. REL. 145, 149 (2005).

⁷¹ See Reed W. Larson, *Toward a Positive Psychology of Positive Youth Development*, 55 AM. PSYCHOL. 170, 170 (2000); Richard M. Ryan, et al., *The Significance of Autonomy and Autonomy Support in Psychological Development and Psychopathology*, in DEVELOPMENTAL PSYCHOPATHOLOGY: THEORY AND METHOD 795, 802 (Dante Cicchetti & Donald J. Cohen eds., 2006).

⁷² See Richard M. Ryan & Edward L. Deci, *Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being*, 55 AM. PSYCHOLOGIST 68, 71 (2000).

⁷³ *Id.* at 71–73.

⁷⁴ *Id.*

⁷⁵ *Id.*; Amabile, *supra* note 53, at 223–254; see also Theresa Amabile, *The Social Psychology of Creativity: A Componential Conceptualization*, 45 J. PERSONALITY & SOC. PSYCHOL. 357, 364 (1983) (finding that the positive effects of autonomy on motivation are strengthened when the task is a creative one); Marylene Gagne & Edward L. Deci, *Self-Determination Theory and Work Motivation*, 26 J. ORG. BEHAV. 331, 331 (2005) (finding that job motivation and performance are positively related to autonomy support by managers); Johnson, *supra* note 50, at 1960 (discussing some of Ryan and Deci's work).

⁷⁶ Ryan & Deci, *supra* note 72, at 71–73.

⁷⁷ *Id.*

b) Relatedness

Humans are social animals who thrive in environments that allow them to form relationships with others. Social relationships help people live happier,⁷⁸ healthier,⁷⁹ and even longer⁸⁰ lives. Moreover, these relationships need not be particularly intimate to reap the rewards of sociality; even loose social affiliations that do not provide emotional support—such as those that might form among acquaintances in the workplace—can be beneficial.⁸¹

Providing opportunities for relatedness in organizations also enhances motivation, productivity, and creativity.⁸² When the need for relatedness is satisfied, people feel intrinsic motivation to engage in behaviors that are valued by others in the organization.⁸³ This motivation, in turn, leads to more creative thinking and outputs.⁸⁴ In the workplace setting, employees who enjoy a sense of relatedness perform better in their jobs than those who do not.⁸⁵

c) Competence

People need to feel like they are good at something.⁸⁶ When we feel like we can accomplish something meaningful and challenging, and accomplish it well,⁸⁷ we feel happier⁸⁸ and enjoy better mental health.⁸⁹

When people feel competent at what they do, they also experience enhanced intrinsic motivation and perform more competently.⁹⁰ It also leads them to exhibit more creativity in their work.⁹¹

⁷⁸ See, e.g., Ellen Berscheid & Harry T. Reis, *Interpersonal Attraction and Close Relationships*, in HANDBOOK OF SOCIAL PSYCHOLOGY (Susan T. Fiske, Daniel T. Gilbert, Gardner Lindzey & Elliott Aronson eds., 1998) for a review of the relevant literature; see also Angus Campbell, Philip E. Converse & Willard F. Rogers, *THE QUALITY OF AMERICAN LIFE: PERCEPTIONS, EVALUATIONS, AND SATISFACTIONS* (1976); Reed W. Larson & Mihaly Csikszentmihalyi, *The Experience Sampling Method*, 15 NEW DIRECTIONS METHODOLOGY SOC. & BEHAV. SCI. 41, 41 (1983); Reis et al., *supra* note 69; Wolfgang Stroebe & Margaret Stroebe, *The Social Psychology of Social Support*, in SOCIAL PSYCHOLOGY: HANDBOOK OF BASIC PRINCIPLES 597 (E. Tory Higgins & Arie W. Kruglanski eds., 1996).

⁷⁹ E.g., Sheldon Cohen et al., *Social Ties and Susceptibility to the Common Cold*, 277 JAMA 1940, 1940 (1997).

⁸⁰ See Berscheid & Reis, *supra* note 78 (reviewing the relevant literature); Theresa E. Speeman, *Social Ties and Health: The Benefits of Social Integration*, 6 ANNALS EPIDEMIOLOGY 442, 442 (1996); David P. Spiegel, et al., *Effects of Psychosocial Treatment in Prolonging Cancer Survival May be Mediated by Neuroimmune Pathways*, 840 ANNALS N.Y. ACAD. SCI. 647, 647 (1998).

⁸¹ Stroebe & Stroebe, *supra* note 78.

⁸² Richard M. Ryan & James P. Connell, *Perceived Locus of Causality and Internalization*, 57 J. PERSONALITY & SOC. PSYCHOL. 749, 749 (1989); see also Richard M. Ryan, Jerome Stiller & John H. Lynch, *Representations of Relationships to Teachers, Parents, and Friends as Predictors of Academic Motivation and Self-Esteem*, 14 J. EARLY ADOLESCENCE 226, 226 (1994) (finding that children who had better connections with their parents and teachers more fully internalized the regulated behaviors of school).

⁸³ Ryan & Deci, *supra* note 72, at 73.

⁸⁴ See references cited, *supra* note 75.

⁸⁵ Paul P. Baard, Edward L. Deci & Richard M. Ryan, *Intrinsic Need Satisfaction: A Motivational Basis of Performance and Well-Being in Work Settings*, 34 J. APPLIED SOC. PSYCH. 2045, 2046 (2004).

⁸⁶ Robert W. White, *Motivation Reconsidered: The Concept of Competence*, 66 PSYCHOL. REV. 297, 297 (1959).

⁸⁷ Ryan & Deci, *supra* note 72, at 73; Baard, Deci & Ryan, *supra* note 85, at 2046. See generally ELLEN A. SKINNER, *PERCEIVED CONTROL, MOTIVATION, AND COPING* (Sage 1995).

⁸⁸ Tim Kasser & Richard M. Ryan, *A Dark Side of the American Dream: Correlates of Financial Success as a Central Life Aspiration*, 65 J. PERSONALITY & SOC. PSYCHOL. 410, 410 (1993); Tim Kasser & Richard M. Ryan, *Further Examining the American Dream: Differential Correlates of Intrinsic and Extrinsic Goals*, 22 PERSONALITY & SOC. PSYCHOL. BULL. 208, 208 (1996); Kennon M. Sheldon & Tim Kasser, *Coherence and Congruence: Two Aspects of Personality Integration*, 68 J. PERSONALITY & SOC. PSYCHOL. 531, 531 (1995).

⁸⁹ Ryan et al., *supra* note 71, at 832; see also Martin E.P. Seligman, Tayyab Rashid & Acacia C. Parks, *Positive Psychotherapy*, 61 AM. PSYCHOLOGIST 774, 776–77 (2006) (finding that interventions designed to increase feelings of competence reduced the severity of self-critical depression).

3. Variety and Balance

Given the fact that humans have a diversity of psychological, emotional, and physical needs, some of which I have described here, it is perhaps not surprising that balance and variety also have roles to play in welfare and innovation.

a) Balance

When people achieve an appropriate balance between work time and personal time, they feel happier.⁹² This is particularly true if their personal time is used to satisfy personal needs like those for sociality and self-determination.⁹³ On the other hand, poor work-life balance is associated with lower satisfaction⁹⁴ and more physical health problems.⁹⁵

Though the claim that employees who have better work-life balance also contribute more to organizational efficiency is perhaps counterintuitive—after all, these employees likely spend less time working than their less-balanced colleagues—the proposition is supported by a growing body of empirical data. These data suggest that work-life balance policies not only contribute to individual productivity,⁹⁶ but also lead to a range of other organizational benefits, including improved recruitment and retention, reduced absenteeism and sick leave, increases in employee satisfaction and loyalty, and improved corporate image.⁹⁷ Although the direct link between work-life balance and creativity has been less well-studied, the evidence supporting the converse proposition—that a lack

⁹⁰ Gaëtan F. Losier, & Robert J. Vallerand, *The Temporal Relationship Between Perceived Competence and Self-Determined Motivation*, 134 J. SOC. PSYCHOL. 801 (1994); Ryan & Deci, *supra* note 72, at 71, 73–74; Baard, Deci & Ryan, *supra* note 85, at 2061–62; *see also* Hyunshim Jang, et al., *Can Self-Determination Theory Explain What Underlies the Productive, Satisfying Learning Experiences of Collectivistically Oriented Korean Students*, 101 J. EDUC. PSYCHOL. 644, 644 (2009) (finding that feelings of competence are related to higher academic achievement in students).

⁹¹ *See* references cited, *supra* note 75.

⁹² *E.g.*, Kenneth M. Sheldon, Robert Cummins & Shanmukh Kamble, *Life Balance and Well-Being: Testing a Novel and Conceptual Measurement Approach*, 78 J. PERSONALITY 1093 (2010); Peter Gröpel & Julius Kuhl, *Work-Life Balance and Subjective Well-Being: The Mediating Role of Need Fulfillment*, 100 BRIT. J. PSYCHOL. 365, 365 (2009); *see also* Shobitha Poulouse & Sudarsan N, *Work-Life Balance: A Conceptual Review*, 2 INT’L J. ADVANCES MGMT & ECON. 1, 1 (2014) (reviewing some of the relevant literature). As the study by Sheldon and colleagues suggests, beneficial work-life “balance” can be defined either by an objective (“objectively equitable time use across multiple domains”) or a subjective (“low subjective discrepancy between actual and ideal time-use profiles”) standard.

⁹³ Sheldon, Cummins & Kamble, *supra* note 92, at 103.

⁹⁴ Tim Kasser & Kennon M. Sheldon, *Time Affluence as a Path Toward Personal Happiness and Ethical Business Practice: Empirical Evidence from Four Studies*, 84 J. BUS. ETHICS 243, 243 (2009); Tim Kasser & Kirk Warren Brown, *On Time, Happiness, and Ecological Footprints*, in TAKE BACK YOUR TIME: FIGHTING OVERWORK AND TIME POVERTY IN AMERICA 107 (Berrett-Koehler 2003).

⁹⁵ Thorsten Lunau et al., *A Balancing Act? Work-Life Balance, Health and Well-Being in European Welfare States*, 24 EUR. J. PUB. HEALTH 422, 422 (2014).

⁹⁶ SUSAN LEWIS & CARY L. COOPER, WORK-LIFE INTEGRATION: CASE STUDIES OF ORGANISATIONAL CHANGE xiv (John Wiley & Sons 2005). For literature reviews, *see* Philippa Yasbek, LABOUR MARKET POLICY GROUP, NEW ZEALAND DEP’T OF LABOUR, THE BUSINESS CASE FOR FIRM-LEVEL WORK-LIFE BALANCE POLICIES (2004); BOSTON COLLEGE CENTER FOR WORK AND FAMILY, BUILDING THE CASE FOR WORK-LIFE PROGRAMS (2009). In a similar vein, a study sponsored by the World Economic Forum found that employees who rated their firms highly in terms of work-life balance policies also rated their firms as being more productive and more creative and innovative. These employees also reported feeling more engaged at work. WORLD ECONOMIC FORUM, THE WELLNESS IMPERATIVE: CREATING MORE EFFECTIVE ORGANIZATIONS (2010). *But see* Nick Bloom & John Van Reenan, *Management Practices, Work-Life Balance, and Productivity: A Review of some Recent Evidence*, 22 OXFORD REV. ECON. POL’Y 457, 457 (2006) (finding a significant positive relationship between productivity and work-life balance policies, but concluding that this disappears when good management practices—which are positively correlated with both work-life balance initiatives and productivity—are taken into account).

⁹⁷ Yasbek, *supra* note 96.

of balance leading to high workload pressure and overwork detracts from creativity—is robust.⁹⁸ Preliminary evidence also suggests that employees who rank their firms more highly for work-life balance also rank them highly for creativity and innovation.⁹⁹ Additionally, there are well-established correlations between work-life balance initiatives and higher employee engagement on the one hand and lower employee stress on the other,¹⁰⁰ two factors that have been demonstrated in other contexts to contribute to creativity.¹⁰¹

b) Variety

Empirical work also supports the old cliché that variety is the spice of life. Individuals who incorporate a variety of positive activities into their lives report greater improvements in well-being than those who introduce a less varied set of positive activities into their daily routines.¹⁰² And positive interventions such as exercise programs are more likely to contribute to sustained feelings of well-being if they consist of more varied experiences.¹⁰³

Variety is thought to contribute to happiness because it has the power to combat the emotional adaptation that occurs when an activity or event—even an extremely pleasurable one—is experienced repeatedly.¹⁰⁴ You might love eating steak, for example, and experience a temporary boost in well-being while enjoying a steak dinner. But if you were to eat the same steak dinner for fifty nights consecutively, it is unlikely that you would get the same emotional boost from the dinner on night fifty that you experienced on night one. Variety helps remedy this particular situation by introducing a range of additional dinner options to enjoy on nights two through forty-nine. When you have steak again after forty-eight nights without it, you will likely experience the same degree of pleasure you experienced the first time.

Just as variety in life experience can contribute to feelings of well-being, so too might variety at work contribute to increased satisfaction and creativity. First, well-being itself is positively correlated with the generation of more creative ideas.¹⁰⁵ Second, individual task variety is associated with more active learning behaviors in the workplace.¹⁰⁶ And at least one study has found that professionals

⁹⁸ See Elsbach & Hargadon, *supra* note 46, at 471–473 (reviewing the literature); Roberta Rosenthal Kwall, *Remember the Sabbath Day and Enhance Your Creativity!*, 10 ST. THOMAS L. REV. 820, 820 (2013) (reviewing social science literature suggesting that a “break period,” such as a day of rest, can be beneficial for creativity).

⁹⁹ WORLD ECONOMIC FORUM, *supra* note 96.

¹⁰⁰ LEWIS & COOPER, *supra* note 96, at xiv; WORLD ECONOMIC FORUM, *supra* note 96; BOSTON COLLEGE CENTER FOR WORK AND FAMILY, *supra* note 96; Yasbek, *supra* note 96.

¹⁰¹ For information on the relationship between stress and creativity, see generally STRESS AND HUMAN PERFORMANCE (James E. Driskell & Eduardo Salas, eds., 2013). For information on the relationship between engagement and creativity, see generally Amabile, *supra* note 53.

¹⁰² E.g., Kennon M. Sheldon, Julia Boehm & Sonja Lyubomirsky, *Variety is the Spice of Happiness*, in OXFORD HANDBOOK OF HAPPINESS 901 (Oxford University Press 2012).

¹⁰³ E.g., Martyn Standage et al., *Perceived Variety, Psychological Needs Satisfaction and Exercise Related Well-Being*, 29 PSYCHOL. & HEALTH 1044, 1044 (2014); Sonja Lyubomirsky & Kristin Layous, *How do Simple Positive Activities Increase Well-Being?*, 22 CURRENT DIRECTIONS PSYCHOL. SCI. 57, 58–59 (2013); see also Sonja Lyubomirsky, *Hedonic Adaptation to Positive and Negative Experiences*, in OXFORD HANDBOOK OF STRESS 200 (Oxford University Press 2011) (reviewing the relevant literature).

¹⁰⁴ Sheldon, Boehm & Lyubomirsky, *supra* note 102, at 901.

¹⁰⁵ Sonja Lyubomirsky, Laura King & Ed Diener, *The Benefits of Frequent Positive Affect: Does Happiness Lead to Success?*, 131 PSYCHOL. BULL. 803, 803 (2005); see also Elsbach & Hargadon, *supra* note 46, at 473, 475–76 (discussing some of the relevant literature).

¹⁰⁶ Heleen van Mierlo et al., *A Multi-level Meditation Model of the Relationships Between Team Autonomy, Individual Task Design, and Psychological Well-Being*, 80 J. OCCUPATIONAL & ORG. PSYCHOL. 647, 647 (2007).

whose jobs require mastery of a variety of tasks exhibit more creative behaviors (such as idea generation) than those whose jobs involve less variety.¹⁰⁷

B. MARKET FAILURE

The broad principles this Article identifies—social exchange; autonomy, competence, and relatedness; and variety and balance—can help us evaluate how different companies are doing when it comes to providing their employees with appropriate incentives to innovate. Returning to the example of Amazon discussed in the Introduction, for instance, we can ask whether the company is correct that requiring long hours from its employees will reap productivity and innovation benefits. The answer, most likely, is no. On the other hand, programs like Google’s that allow for more flexibility and time off are probably good for innovation.

Amazon is by no means the only company out there that hasn’t gotten the proverbial memo about what actually motivates employees to be creative. Yahoo announced in 2013 that it was eliminating its remote work program, despite the fact that remote work is consistent with many of the creativity-enhancing principles just discussed. And company monitoring of employees (including their physical and virtual activities) is becoming more widespread,¹⁰⁸ despite the practice also being suspect in light of creativity researchers’ findings. This Section examines how these common company practices are at odds with the empirical literature, suggesting that the market is not adequately moving these companies in welfare-promoting directions.

1. Amazonian work expectations

One of the more divisive questions relating to employee innovation is whether it is more effective to encourage long working hours, extended work weeks, and minimal time off (as Amazon does),¹⁰⁹ or to emphasize flexibility and work-life balance (as Google does).¹¹⁰ Many companies share Amazon’s view that 70–80 hours work weeks are necessary for optimal productivity.¹¹¹

It appears, however, that Amazon is taking the wrong approach, at least from an employee creativity perspective. Specifically, its tack is contrary to the creativity-enhancing principles of

¹⁰⁷ Luc W. Dorenbosch, Marloes L. Van Engen & Marinus Verhagen, *On-the-Job Innovation: The Impact of Job Design and Human Resource Management through Production Ownership*, 14 CREATIVITY & INNOVATION MGMT 129, 129 (2005); see also Elsbach & Hargadon, *supra* note 46, at 480 (describing additional studies that also suggest a link between task variety and creativity).

¹⁰⁸ See, e.g., Complaint for Damages, *Arias v. Intermex Wire Transfer, LLC*, No. 1:15-cv-01101 (Kern County Super. Ct. filed May 5, 2015); see also David Kravets, *Worker Fired for Disabling GPS App that Tracked her 24 Hours a Day*, Ars Technica, May 11, 2015, <http://arstechnica.com/tech-policy/2015/05/worker-fired-for-disabling-gps-app-that-tracked-her-24-hours-a-day/>.

¹⁰⁹ Kantor & Streitfeld, *supra* note **Error! Bookmark not defined.** [This is an online article without pagination] (“Even many Amazonians who have worked on Wall Street and at start-ups say the workloads . . . can be extreme: marathon conference calls on Easter Sunday and Thanksgiving, criticism from bosses for spotty Internet access on vacation, and hours spent working at home most nights or weekends.”).

¹¹⁰ Stewart, *supra* note 10 [This is an online article without pagination] (quoting a Google employee who explained that she “came [to Google] from the New York agency model, where you work constantly, 24/7. [In contrast, at Google], you don’t have to show you’re working, or act like you’re working. The culture here is to shut down on weekends. People have a life.”).

¹¹¹ See Sara Robinson, *Bring Back the 40-Hour Work Week*, Salon, MAR. 14, 2012 (describing a currently widespread “churn’em and burn’em” corporate ethic that grew from the Silicon Valley culture in the 1980s).

autonomy, competence, social exchange, and balance. It has also been shown to hurt productivity more generally.¹¹²

a) Autonomy and Competence

As explained, employees are more motivated, and also more creative, when they feel autonomous and competent at work.¹¹³ According to empirical work in this area, feelings of autonomy on the job are promoted by environments that emphasize a sense of choice, are free from excessive control, and do not pressure employees to think or act in particular ways.¹¹⁴ Employees feel competent in the workplace when they receive helpful, non-controlling feedback,¹¹⁵ the work environment is supportive rather than controlling,¹¹⁶ and they feel that they can plan for success and have a reasonable degree of control over outcomes.¹¹⁷

Amazon's hard-line approach to worker productivity is at odds with these findings. It is difficult to feel the sense of choice and freedom from excessive control characteristic of autonomy when late-night emails not immediately acknowledged are "followed by text messages asking why they were not answered."¹¹⁸ And it is difficult to feel competent when these controlling behaviors send the message that one cannot be trusted to take care of things in a timely and effective manner. These practices, though done in the name of promoting innovation,¹¹⁹ are likely counterproductive to that end.

b) Social Exchange

Social exchange relationships in the workplace are promoted when managers give employees a say in decision-making,¹²⁰ try to accommodate individual employees' needs and interests,¹²¹ and treat employees with respect and dignity.¹²² Amazon's insistence on long hours, to the extent of pushing out employees with cancer or other personal issues,¹²³ shows an unwillingness to accommodate individual needs and is inconsistent with this creativity-promoting principle as well.

¹¹² See, e.g., Sarah Green Carmichael, *The Research is Clear: Long Hours Backfire for People and for Companies*, HARV. BUS. REV. Aug. 19, 2015 (summarizing the relevant literature); Robinson, *supra* note 111 [This is an online article without pagination] (same).

¹¹³ Ryan & Deci, *supra* note 72, at 71–73; Amabile, *supra* note 53, at 223–54.

¹¹⁴ Ryan & Deci, *supra* note 72, at 73–74; Julius Kuhl & Arno Fuhrmann, *Decomposing Self-Regulation and Self Control, in MOTIVATION AND SELF-REGULATION ACROSS THE LIFE-SPAN* 1549 (Cambridge University Press 1998); Edward L. Deci, Haleh Eghrari, Brian C. Patrick & Dean R. Leone, *Facilitating Internalization: The Self-Determination Theory Perspective*, 62 J. PERSONALITY 119 (1994).

¹¹⁵ E.g., Frédéric Guay, Ann K. Boggiano & Robert J. Vallerand, *Autonomy Support, Intrinsic Motivation, and Perceived Competence: Conceptual and Empirical Linkages*, 27 PERSONALITY & SOC. PSYCHOL. BULL. 643, 645 (2001); see also Johnmarshall Reeve and Edward L. Deci, *Elements of the Competitive Situation that Affect Intrinsic Motivation*, 22 PERSONALITY & SOC. PSYCHOL. BULL. 24, 24 (1996) (finding that competition can increase perceived competence and also intrinsic motivation in part because of the competence feedback it provides).

¹¹⁶ Ryan & Deci, *supra* note 72, at 74.

¹¹⁷ See Ellen Skinner & Theresa Greene, *Perceived Control: Engagement, Coping, and Development, in 21ST CENTURY EDUCATION: A REFERENCE HANDBOOK* (Sage 2008).

¹¹⁸ Kantor & Streitfeld, *supra* note **Error! Bookmark not defined.** [This is an online article without pagination]

¹¹⁹ *Id.*

¹²⁰ Organ & Moorman, *supra* note 48, at 14; Moorman, *supra* note 52, at 845 .

¹²¹ Organ & Moorman, *supra* note 48, at 7.

¹²² *Id.* at 14; Moorman, *supra* note 52, at 845 .

¹²³ Kantor & Streitfeld, *supra* note **Error! Bookmark not defined.** [This is an online article without pagination]

c) Balance

Perhaps the most obvious way in which Amazon's long-hours policy runs up against effective creativity incentives is in the domain of balance. When workers are unable to attend to fundamental personal and emotional needs for fear of losing status within the company or even their jobs,¹²⁴ they cannot achieve an appropriate, work-life balance, and their creativity can be expected to suffer.

d) Conclusion

Contrary to current common practice in the creative industries, the idea that companies will be more innovative when employees are encouraged to spend much of their personal time working is incorrect. Private ordering is not addressing this misconception by changing company practices, as we would expect it to if the market were functioning correctly.

2. *Remote Work*

With the rise of technologies making remote work more feasible, many firms have moved towards greater flexibility in allowing for these arrangements.¹²⁵ There are some notable exceptions, however, including the case of technology company Yahoo. When Marissa Mayer became the new CEO of the company in 2013, she issued a memorandum stating that employees would no longer be allowed to work remotely.¹²⁶ Mayer expressed her belief in the memo that communication and collaboration are enhanced when employees work "side-by-side" in the literal, physical sense.¹²⁷ She also opined that "speed and quality are often sacrificed when [employees] work from home."¹²⁸

Like Mayer, many companies reject remote working arrangements over concerns about worker productivity.¹²⁹ These firms worry that if they allow workers to set their own hours or to work from home, employees will work fewer hours, shirk their responsibilities, and generally be less productive.¹³⁰

An examination of the empirically-identified principles of creativity, however, belies the worries of companies that require face time in an effort to avoid shirking.

¹²⁴ *Id.*

¹²⁵ See Scott Berkun, *Why Isn't Remote Work More Popular?*, YEAR WITHOUT PANTS, Jan. 5, 2015, <http://scottberkun.com/2015/why-isnt-remote-work-more-popular/> (citing data from the U.S. Census Bureau showing a 71% increase in number of employees working remotely in the computer, engineering, and science fields between 2000 and 2010, a 42% increase in the management, business, and financial sectors, and a 43% increase in the education, legal, community service, arts, and media fields). Berkun also cites data from the Survey of Income and Program Participation suggesting that 13.4 million out of 142 million employees across all sectors worked remotely some or all of the time in 2010, versus 9.2 million out of 132 million in 1997.

¹²⁶ Jenna Goudreau, *Back to the Stone Age? New Yahoo CEO Bans Working from Home*, FORBES, Feb. 25, 2013, <http://www.forbes.com/sites/jennagoudreau/2013/02/25/back-to-the-stone-age-new-yahoo-ceo-marissa-mayer-bans-working-from-home/>. Best Buy has also backed away from a previous attempt to create more flexible work arrangements. Ann Bednarz, *Best Buy Cancels Telework Program*, NETWORK WORLD, Mar. 5 2013, <http://www.networkworld.com/article/2164133/infrastructure-management/best-buy-cancels-telework-program.html>.

¹²⁷ Goudreau, *supra* note 126.

¹²⁸ *Id.*

¹²⁹ See Edward E. Lawler III, *Remote Working: Who's Right?* FORBES, May 15, 2013, <http://www.forbes.com/sites/edwardlawler/2013/05/15/remote-working-whos-right/> ("The simple fact of the matter is that often a major reason or the major reason for bringing an individual to a work location with a supervisor present is to control their performance.").

¹³⁰ See *id.*; David Sturt & Todd Nordstrom, *Working Remotely: Does the Research Prove It Won't Work For You?*, FORBES, May 14, 2014, <http://www.forbes.com/sites/davidsturt/2014/05/14/working-remotely-does-the-research-prove-it-wont-work-for-you/> (arguing that "people who want to work remotely simply because they don't like being micromanaged probably aren't the best candidates" for remote work, because they are more likely to shirk).

a) Autonomy, Competence, and Relatedness

Consistent with the principles of autonomy and competence, allowing workers to choose when and how they will get their work done gives them a sense of control and choice, not only over their work, but over their lives as a whole. Remote work policies also send a clear and positive competence message to employees: we trust your judgment, professionalism, and ability to finish your work in the manner and location you see fit.

Further, the intuition of Marissa Mayer and others that remote work arrangements will lead to shirking may be largely unfounded. Consistent with the above analysis, preliminary empirical evidence looking specifically at the effect of remote work policies on productivity suggests that these policies may help employees to be *more* productive. One study of Chinese employees found that remote work led to a 13% increase in productivity.¹³¹ And a Gallup poll found that remote workers report longer hours and more engagement than their non-remote counterparts.¹³²

The idea is that employees who have a sense of control over their work lives work because they want to, not because they are forced to—and they end up working more, and more productively. As the New York Times piece on Google, a company which encourages flexible and remote work arrangements, explains, it's hardly necessary [for Google] to require employees to be at the office. "People want to come in," Ms. Mooney [an employee] said. On average, she estimates she spends nine hours a day there, five days a week. She mentioned that she recently took a day off—and ended up at the office.¹³³

On the other hand, there may be something to Mayer's instinct that "side-by-side" work is good for creativity. Her idea touches on the creativity-enhancing principle of relatedness—the sense of connectedness and shared purpose employees feel with their co-workers.¹³⁴ Intuitively, we might assume that it is more difficult for employees to experience relatedness when neither they nor their co-workers are in the office much.¹³⁵

But though feelings of relatedness may be more difficult to cultivate in firms that have liberal remote work policies, it is not necessarily an insurmountable task. Feelings of relatedness grow when employees experience mutual respect and reliance¹³⁶ and understand that they are working together

¹³¹ Nicholas Bloom et al., *Does Working from Home Work? Evidence from a Chinese Experiment*, 130 Q. J. ECON. 165 (2014). The increase was partly attributable to more time worked and partly attributable to more productivity during the time worked, due to reduced distractions.

¹³² *Remote Workers Log More Hours and are Slightly More Engaged*, GALLUP, July 12, 2013, <http://www.gallup.com/opinion/gallup/170669/remote-workers-log-hours-slightly-engaged.aspx#!mn-us>. Of course, one can find anecdotal counterexamples. See, e.g., Lisa Rein, *Patent Office Filters Out Worst Telework Abuses in Report to Its Watchdog*, WASH. POST Aug. 10, 2014 (detailing allegations of widespread abuse of the remote work program by U.S. patent office workers, including employees logging hours that were not actually worked and rushing to complete work by a deadline rather than maintaining a semi-consistent schedule). The lesson to be learned from these anecdotes is not necessarily that remote work is bad for productivity, but instead that remote work programs should be administered in a sensible way that gives workers flexibility but maintains engagement and at least a minimal accountability. The Washington Post story, for example, quotes a report concluding that "[c]ontrols [on remote work] are almost non-existent" at the patent office and that [e]xaminers can work inconsistently throughout the year, and even fail to be present at work, with little or no consequences."

¹³³ Stewart, *supra* note 1.

¹³⁴ Ryan & Deci, *supra* note 72, at 73.

¹³⁵ See Lawler III, *supra* note 129 (arguing that "[c]reativity and the sharing of information is often lost when people work independently because they are not stimulated and informed by social interaction.")

¹³⁶ Baard, Deci & Ryan, *supra* note 85; Roy F. Baumeister & Mark R. Leary, *The Need to Belong: Desire for Interpersonal Attachments as a Fundamental Human Motivation*, 117 PSYCHOL. BULL. 497 (1995).

toward the same meaningful goals.¹³⁷ Though it might take more thought on the part of employers, it is certainly possible to promote these conditions even in environments where employees are often away from the office.¹³⁸ Conversely, relatedness is not necessarily promoted simply by requiring employees to be in the office at certain times. It is possible, then, to develop remote work protocols that promote relatedness—for example, arrangements where employees have flexible schedules overall but meet as teams periodically to develop relationships and discuss common goals—just as it is possible to have face-time-centered work arrangements that do not emphasize employee relationships and therefore do not promote relatedness

b) Social Exchange

Remote arrangements also contribute to work environments that function as social exchanges. Remote arrangements give employees a say in where their work is accomplished and conveys the message that the employer cares about and wishes to accommodate employees' particular needs. The trust implied by remote work policies also contributes to a sense of respect and dignity¹³⁹ among workers.

c) Variety and Balance

Employees who are given the option of remote work are better able to achieve balanced work lives, leading to higher creativity. When a firm approaches work-life issues in a way that suggests concord between “work” and “life” rather than an either-or relationship, creativity benefits.¹⁴⁰ Remote work policies convey the message that a firm cares about work-life harmony, and actively make it easier for employees to achieve this balance.

Variety in workload, including time spent on “mindless” tasks, also contributes to creativity, and may be more easily achieved in the context of remote and flexible work arrangements.¹⁴¹ Employees can self-regulate in this respect by taking time away from high-cognitive-load tasks for either less cognitively challenging responsibilities or even activities, like general reading, that offer no immediately foreseeable contribution to the task at hand. While employees might feel uncomfortable self-regulating their cognitive loads by breaking up cognitively challenging work with mindless and non-goal directed tasks in the office setting, it may be easier for them to do so while working remotely, where there is less worry about being monitored.¹⁴²

Remote work arrangements can also naturally inject needed variety. An employee who works nine hours total on a challenging project, but breaks up his day with trips to pick up children or

¹³⁷ Amabile, *supra* note 46, at 82–83.

¹³⁸ Technologies like Skype and Jabber that allow for remote videoconferencing might be helpful in this respect. *See* Goudreau, *supra* note 126 (arguing that “[w]ith increasingly effective mobile and video conferencing technology there’s less and less need to be present in the physical workplace.”).

¹³⁹ Organ & Moorman, *supra* note 48, at 14; Moorman, *supra* note 52, at 845 (discussing how respect and dignity are crucial to the formation of social exchanges).

¹⁴⁰ He Lu Calvin Ong & Senthu Jeyaraj, *Work-Life interventions: Differences Between Work-Life Balance and Work-Life Harmony and its Impact on Creativity at Work*, SAGE OPEN 1, 1 July–September 2014.

¹⁴¹ Elsbach & Hargadon, *supra* note 46, at 471–73, 76–77.

¹⁴² Ironically, many firms balk at remote and flexible work arrangements precisely because they allow employees to engage in this type of self-regulation. *See, e.g.*, Lawler III, *supra* note 129 (noting that one of the potential drawbacks of remote work is the lessened ability to control employees’ performance); Nicole Fallon, *Does Working from Home Make Teams More Innovative?*, BUSINESS NEWS DAILY (Nov. 7, 2014) <http://www.businessnewsdaily.com/7427-remote-work-innovation.html> (suggesting that a major reason why more firms do not allow their employees to work remotely is lack of trust). These firms improperly view this type of behavior as shirking and do not understand that it benefits productivity and creativity.

attend to other personal needs, may be less prone to creativity-killing burn-out than the employee who attempts to finish the project in a single nine-hour sitting in the office.

The variety in and control over *physical* work environment that remote work policies encourage is likely also beneficial. Empirical work shows that employees who have greater control over their physical work environments report greater job satisfaction and demonstrate higher productivity.¹⁴³ Changing one's physical environment periodically is also associated with greater creativity.¹⁴⁴

d) Conclusion

The analysis above suggests that remote work implicates issues of autonomy, competence, social exchange, and balance in ways that enhance creativity. Conversely, we can expect that limiting opportunities for remote work will limit opportunities for creativity accordingly. To the extent the market is failing to overcome companies' misconceptions about remote work, it is also failing in providing optimal creativity incentives.

3. *The Stealthy Rise of Employee Monitoring*

Technological advances make it easy and potentially desirable for employers to track both the physical locations and virtual activities of their employees. Though it is hard to find any particular company that will own up to monitoring its employees, anecdotal evidence, as well as the success of companies who offer monitoring software products, suggest that monitoring is becoming the norm rather than the exception in many professional industries.¹⁴⁵

Akin to the instinct of firms that oppose remote work, a big reason many companies and managers support employee tracking is the perception that it will enhance productivity and prevent shirking. A business-oriented blog, for instance, offers "8 Compelling Reasons Why Businesses Should Track their Employees' Time."¹⁴⁶ The reasons listed include "help[ing] employees avoid

¹⁴³ So Young Lee & J. L. Brand, *Effects of Control over Office Workspace on Perceptions of the Work Environment and Work Outcomes*, 25 J. ENVTL. PSYCHOL. 323, 323 (2005); Kimberly D. Elsbach & Michael G. Pratt, *The Physical Environment in Organizations*, 4 ACAD. MGMT. ANNS. 181, 195–96 (2007). Elsbach and Pratt also describe potential downsides to employee control over physical work environment. A relevant risk is that offering this control might lead to increased feelings of pressure to perform, which in turn, decreases actual performance. One way to address this risk is for firms to treat flexible and remote work arrangements as commonplace and not as a "special privilege" that employees must earn.

¹⁴⁴ Elsbach & Pratt, *supra* note 143, at 203–04; see also *We're Not taking Enough Lunch Breaks. Why That's Bad for Business*, NPR (Mar. 5, 2015) <http://www.npr.org/sections/thesalt/2015/03/05/390726886/were-not-taking-enough-lunch-breaks-why-thats-bad-for-business>. Natural work environments may also have their drawbacks. In particular, a nature poster hung in an area where employees were engaged in a stressful task increased depression. This may be because it emphasized the contrast between the positive feelings associated with nature and the stressful nature of the task. Elsbach & Pratt, *supra* note 143, at 204–05.

¹⁴⁵ See, e.g., Parmy Olson, *More Bosses Expected to Track their Staff Through Wearables in the Next 5 Years*, FORBES (Jun. 1, 2015) <http://www.forbes.com/sites/parmyolson/2015/06/01/wearables-employee-tracking/>; Duane Lawrence, *Companies are Tracking Employees to Nab Traitors*, BLOOMBERG BUSINESSWEEK (March 12, 2015) <http://www.bloomberg.com/news/articles/2015-03-12/companies-are-tracking-employees-to-nab-traitors>; Kevin Dugan, *Wall Street Banks are Tracking Everything Employees Do*, NEW YORK POST (Sept. 27, 2015) <http://nypost.com/2015/09/27/wall-street-banks-are-tracking-everything-employees-do/>; *Companies Tracking Employees' Every Move*, ABC NEWS (JAN. 4, 2015) <http://abcnews.go.com/WNT/story?id=131333&page=1>; Andrea Peterson, *Some Companies are Tracking Workers with Smartphone Apps. What Could Possibly Go Wrong?*, WASH. POST (May 14, 2015), <https://www.washingtonpost.com/news/the-switch/wp/2015/05/14/some-companies-are-tracking-workers-with-smartphone-apps-what-could-possibly-go-wrong/>

¹⁴⁶ Jimmy Rodela, *8 Compelling Reasons Why Businesses Should Track their Employees' Time*, BUSINESS2COMMUNITY.COM (Jun. 26, 2015) <http://www.business2community.com/human-resources/8-compelling-reasons-why-businesses-should-track-their-employees-time-01260595>.

interruptions” and “[i]mprov[ing] your employees’ productivity.”¹⁴⁷ As one company that offers tracking software puts it,

[i]n today’s economy, efficiency and productivity are more important than ever. What employer wouldn’t want to know exactly where their employees are during the workday? If your employees have smartphones, [our product] allows you to monitor their whereabouts at all times. This certainly makes supervising a lot easier, improves time management, and enhances productivity.¹⁴⁸

Tracking may indeed make “supervising a lot easier,” but it is not clear that monitoring employees is beneficial from an innovation perspective. Indeed, monitoring runs up against many of the creativity-enhancing principles this Article identifies.

a) Autonomy and Competence

Employee perceptions of autonomy may suffer from tracking policies that seek to monitor and perhaps control either the time employees spend on specific tasks or their physical locations. Tracking employees in these ways does little to encourage a sense among workers that they are autonomous beings that can make choices and are free from undue governance. Instead, it sends a message of tight control, almost akin to servitude. Myrna Arias, a woman who was fired for disabling an employer-mandated geographic tracking application from her phone, for instance, compared the software to a “prisoner’s ankle bracelet.”¹⁴⁹

Monitoring policies also have the potential to erode employee feelings of competence. Employee tracking is a highly controlling move on the part of employers, and controlling environments are bad for perceived competence.¹⁵⁰ Tracking not only sends a strong message to employees about who is in charge, but also conveys a negative performance feedback signal. If an employer needs to monitor an employee’s every action, it suggests the employer does not have much faith in the employee’s ability to accomplish his duties independently. The implied performance message sent by tracking is clear: the boss believes an employee is not sufficiently competent or trustworthy to complete his duties without constant oversight.

b) Social Exchange

The chance for an employee to develop an innovation-promoting social exchange relationship with her employer is also affected by employee tracking. Tracking policies, through their real or implied exertion of control, may take away employees’ voice.¹⁵¹ Because tracking policies imply that there is a single correct way to get work done, they fail to accommodate individual work styles.¹⁵² For example, one employee may be most productive when working in short spurts, perhaps taking periodic breaks to read materials not directly related to her task list. If the employee is aware of tracking software that measures how long she is actively using word processing, analytic, or other

¹⁴⁷ *Id.*

¹⁴⁸ Trackster, www.phonetrackingemployees.com (last visited Jul. 31, 2016).

¹⁴⁹ Complaint for Damages, *Arias v. Intermex Wire Transfer, LLC*, *supra* note 108, at 3. .

¹⁵⁰ Ryan & Deci, *supra* note 72, at 74.

¹⁵¹ *See supra* note 102 and accompanying text (explaining that giving employees a say in decision-making promotes social exchange).

¹⁵² *See supra* note 59 and accompanying text (explaining that accommodating individual employee needs and interests promotes social exchange).

task-related applications, she might artificially change her working style to satisfy the overt or implied expectations of her employers. Tracking policies likely also have a detrimental effect on employees' sense of respect and dignity¹⁵³ as employees might rightly feel that they cannot be trusted to be productive and successfully accomplish their duties without monitoring.

c) Variety and Balance

Balance and variety are also prone to adverse effects from employee tracking policies. As described, one advantage of a remote work arrangement is the opportunity it gives employees to achieve balance in ways that work for them as individuals.¹⁵⁴ An employee with a young child, for instance, might choose to do the bulk of his work in the early morning and late evening hours in order to achieve a satisfactory work-life balance. He may at times need to be away from his work station during typical work hours, for example, to pick his child up from daycare or take the child to a doctor's appointment. If an employer is tracking the employee's physical location during the day, however, the employee might feel uncomfortable being in non-work locations and may unnecessarily modify his otherwise productive behavior in ways detrimental to motivation and creativity.¹⁵⁵

As also discussed in the context of remote work, workload variety and time spent on mindless tasks can be good for creativity.¹⁵⁶ Though self-regulation via the insertion of breaks, mindless tasks, and general reading is likely beneficial for creativity,¹⁵⁷ an employee whose every action is being tracked might feel uncomfortable engaging in these types of behaviors. The fact that she is being monitored might give her the impression (real or imagined) that her employer frowns on mindless or non-goal-directed activities.

C. CONCLUSIONS

Despite the weight of the research and attempts to disseminate these findings in popular and business journals, many creative companies still adopt, like Amazon, a socially costly "long hours" model; like Yahoo, a "no remote work" policy; or, like unnumbered unnamed companies, an employee monitoring policy. This suggests that private ordering is failing to achieve its desired end of optimizing company-provided innovation incentives in many cases.

IV. A CRITICAL LOOK AT THE CONVENTIONAL WISDOM: EXPLANATIONS FOR MARKET FAILURE

As examined in detail in the previous Part, there are empirically-tested principles that promise to enhance creativity in the workplace. The fact that many companies do not adhere to these principles¹⁵⁸ suggests that there is a market failure when it comes to companies providing appropriate innovation incentives to their employees.

This Part takes a closer look at why this failure might be occurring. Drawing from the law and economics literature, this Part identifies relevant circumstances where private ordering may not work

¹⁵³ See *supra* note 61 and accompanying text (explaining that treating employees with respect and dignity promotes social exchange).

¹⁵⁴ See *supra* Part II.A.2.

¹⁵⁵ See Ong & Jeyaraj, *supra* note 140 at 1.

¹⁵⁶ Elsbach & Hargadon, *supra* note 46, at 471–73, 76–77.

¹⁵⁷ See *supra* notes 63–64 and accompanying text.

¹⁵⁸ See Elsbach & Hargadon, *supra* note 46, at 470; see also Amabile, *supra* note 46, at 77–78.

as expected, and analyzes how these circumstances apply in the employee creativity context. In particular, a primary cause of private ordering failure is the circumstance where parties (here, companies) do not bear the costs of their actions. Bounded rationality, counterproductive social norms, and information asymmetries, when they exist, can also lead to undesirable results. Private ordering is similarly notoriously bad at addressing distributive concerns, which in this context might also be harmful for innovation. This exercise should help us craft an appropriate policy response, a problem this Part alludes to and subsequent Parts tackle in more detail.

A. EXTERNALIZING CONSEQUENCES

According to Robert Thompson, “[p]rivate ordering is least likely to be effective when the private actors do not bear the costs of their own acts.”¹⁵⁹ In these cases, legal intervention may be necessary to prevent companies from externalizing the costs of their behavior to society, since the firm has everything to gain and nothing to lose by doing so.¹⁶⁰ A classic example of cost externalization is the company that dumps its waste into an adjacent river.¹⁶¹ Environmental law prevents this externalization by requiring the company to shoulder the costs of appropriate waste disposal.¹⁶²

Cost externalization should not, at least in theory, be a concern when it comes to providing innovation incentives to employees. If a firm fails to provide these incentives, the company itself stands to suffer in a number of ways. Most obvious are the financial losses accruing from decreased performance and innovation within the firm.¹⁶³ Because the psychological factors that promote creativity are also closely tied to a range of health and well-being measures, the firm also stands to lose financially from issues such as increased sick leave, retention, and absenteeism.¹⁶⁴ There may be additional, reputational costs if it becomes well-known that a firm’s employees are dissatisfied, unmotivated and uncreative.¹⁶⁵

But because creativity and innovation are difficult to measure, and because many firms are unaware of, or simply may not believe, the findings from the psychology literature discussed here, a firm might not know that it is incurring costs through its decision to provide sub-optimal innovation incentives to its employees. This could help explain why many companies have not done better in this respect.

This does not necessarily mean that regulation is in order, however. The reason we normally impose regulation in this circumstance is because the company’s and the public’s interests are at odds, and we wish to prevent the company from foisting the costs of its selfish behavior on the larger society.¹⁶⁶ But in this case, the firm’s and society’s interests are aligned. Each stands to benefit if the company chooses to provide optimal innovation incentives to its employees: the firm through financial and reputational benefits, and society through the gains that accrue from increased innovation.¹⁶⁷ Rather than regulation, then, measures meant to overcome companies’ biases and

¹⁵⁹ Thompson, *supra* note 22, at 99.

¹⁶⁰ *Id.*

¹⁶¹ *See id.*

¹⁶² *Id.*

¹⁶³ *See infra* Part V.B.

¹⁶⁴ *Id.*

¹⁶⁵ *See supra* Part V.C.

¹⁶⁶ Thompson, *supra* note 22, at 99.

¹⁶⁷ *E.g.*, Benjamin Roin, *The Case for Tailoring Patent Awards Based on Time-to-Market*, 61 UCLA L. REV. 672, 690 & n.73 (2014) (arguing that innovation enhances social welfare). Some have questioned the proposition that increased innovation is necessarily good for society. *See generally* Estelle Derclaye, *Eudemonic Intellectual Property: Patents and Related*

misconceptions should help companies take the actions that are in their own interests.¹⁶⁸ The next Part describes what these measures might look like.

B. BOUNDED RATIONALITY AND COUNTERPRODUCTIVE SOCIAL NORMS

1. *Bounded Rationality*

A second situation described by economic scholars that may justify legal intervention is one where bounded rationality¹⁶⁹ prevents parties from making efficient choices in the absence of public ordering.¹⁷⁰ Bounded rationality conveys the idea that real people are limited in their cognitive abilities, and that these cognitive limitations can lead to suboptimal decision-making.¹⁷¹

Bounded rationality is in fact an issue for companies, and the ways in which it manifests itself in the organizational context have been well documented.¹⁷² Some irrational organizational behaviors that may prevent firms from adopting innovation-enhancing policies include the status quo bias, which may lead organizations to prefer current circumstances and practices, and the conformity bias, which may lead organizations to prefer policies and views consistent with those of their reference group.¹⁷³ Organizations, like people, are also limited in the amount of information they can process, and tend to use heuristics, or shortcuts, to make decisions.¹⁷⁴

The status quo and conformity biases help explain the widespread non-adoption of company behaviors and policies known to promote innovation. An irrational preference for the status quo may lead organizations to continue with the same policies they have always had, even if these policies and behaviors are counterproductive. This is particularly likely to happen, if, as is likely the case here, the costs of maintaining these policies are not readily apparent or are difficult to measure. And because many companies have not yet adopted innovation-friendly policies, the conformity bias may exacerbate this preference, as organizations balk at adopting an approach that is radically different from that of their peers.¹⁷⁵

Rights as Engines of Happiness, Peace, and Sustainability, 14 VAND. J. ENT. TECH. L. 495 (2012); Ofer M. Tur-Sinai, *Technological Progress and Well-Being*, (Apr. 5, 2015), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2590038.

¹⁶⁸ See Gavin Clarkson, *Avoiding Suboptimal Behavior in Intellectual Asset Transactions: Economic and Organizational Perspectives on the Sale of Knowledge*, 14 HARV. J. L. & TECH. 711, 730 (2001) (arguing on the basis of organizational behavior theory that if information is available that would optimize an organizational behavior, “[i]f the marketplace could be made aware of the information and given the metrics to utilize it, it is likely that [the behavior] would become more efficient[.]” As Clarkson goes on to explain and as I describe in the next sub-Part, however, informational measures alone might be insufficient to encourage this behavior because of bounded rationality. In Part V.A.1, I explain how organizational metrics could help solve this problem.

¹⁶⁹ For a general introduction to the concept of bounded rationality, see Owen D. Jones, *Time-Shifted Rationality and the Law of Law’s Leverage: Behavioral Economics Meets Behavioral Biology*, 95 NW. U. L. REV. 1141, 1145–51 (2001).

¹⁷⁰ Thompson, *supra* note 22, at 99–100.

¹⁷¹ See, e.g., Christine Jolls, Cass R. Sunstein & Richard Thaler, *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471, 1473 (1998).

¹⁷² See, e.g., Edward L. Rubin, *Images of Organizations and Consequences of Regulation*, 6 THEORETICAL INQUIRIES L. 347, 354–57 (2005); MAX BAZERMAN, *JUDGMENT IN MANAGERIAL DECISION MAKING* 11–77 (4th ed. 1998); H. Landis Gabel & Bernard Sinclair-Desgagne, *The Firm, Its Routines and the Environment*, in THE EARTHSCAN READER IN BUSINESS AND SUSTAINABLE DEVELOPMENT 96–99 (Richard Starkey & Richard Welford eds., 2001); Chip Heath et al., *Cognitive Repairs: How Organizational Practices Can Compensate for Individual Shortcomings*, 20 RES. IN ORG. BEHAV. 1, 6–22; Donald C. Langevoort, *Organized Illusions: A Behavioral Theory of Why Corporations Mislead Stock Market Investors (And Cause Other Social Harms)*, 146 U. PA. L. REV. 101, 130–56 (1997).

¹⁷³ Sharon Hannes, *Images of Organizations and Interfirm Externalities: A Comment on Prof. Rubin*, 6 THEORETICAL INQUIRIES L. 391, 399 (2005).

¹⁷⁴ See Clarkson, *supra* note 168, at 728.

¹⁷⁵ See *id.*

Even if an organization wishes to adopt policies and encourage behaviors that are more conducive to the creativity of its employees, information-processing limitations may keep it from doing so. As discussed, there is an abundance of psychology and organizational behavior literature studying the types of environments and policies that contribute to or detract from employee creativity. But this very abundance might prove overwhelming and make it difficult for an organization, with limited information-processing skills, to draw meaningful conclusions and make decisions about what changes to make.¹⁷⁶

2. *Counterproductive Social Norms*

Counterproductive social norms may exacerbate the problems arising from bounded rationality. Private ordering depends largely on social norms that encourage actors to engage in desired behaviors for its success. But what if social norms are such that they do not encourage, or even discourage, the behaviors we hope to promote?

This is not just a hypothetical concern for organizational creativity. As explained in the previous Part, many companies, due to bounded rationality, incorrect information, or simple ignorance, behave in ways that are counterproductive to the creativity of their employees. And a sufficient number of firms act in these ways that social norms may work to the detriment, rather than the benefit, of innovation.

The practice of group brainstorming offers a simple example of how misguided information may entrench counterproductive social norms. The concept of brainstorming is attributed to Alex Faickney Osborn, who claimed in 1953 that the practice could lead to more idea generation and creativity.¹⁷⁷ Since that time, brainstorming has become widespread in organizations as a means of creative problem solving.¹⁷⁸

But empirical research questioning the effectiveness of brainstorming has been in circulation for over two decades.¹⁷⁹ Today, many organizational behaviorists have concluded that group brainstorming is generally ineffective as a means of boosting creativity within firms.¹⁸⁰ Yet because of social norms that have firmly entrenched brainstorming as a legitimate creative problem-solving tool, working in tandem with simple ignorance about the value of the practice and other issues of bounded rationality (the status quo and conformity biases, for instance), the practice persists.

3. *Addressing Bounded Rationality and Counterproductive Social Norms*

Because bounded rationality and counterproductive social norms are concerns for organizations that negatively affect their ability to adopt innovation-promoting policies, we might think, consistent with the reasoning of law and economics scholars, that regulation is justified. But when we consider the specific biases at work here, it becomes apparent that ongoing regulation is not needed. In fact, if companies can somehow be persuaded to make positive changes, these biases may actually reinforce progressive behavior.

¹⁷⁶ See *id.* at 730; Reza Dibadj, *Reconceiving the Firm*, 26 CARDOZO L. REV. 1459, 1534 (2005).

¹⁷⁷ ALEX F. OSBORN, *APPLIED IMAGINATION* (1953).

¹⁷⁸ Fred C. Lunenburg, *Decision Making in Organizations*, 15 INT'L J. MGMT., BUS. & ADMIN., 1, 3 (2011); see also Scott G. Isaakson, *A Review of Brainstorming Research: Six Critical Issues for Inquiry*, Creative Problem Solving Group Monograph # 302 (June 1998).

¹⁷⁹ E.g., Michael Diehl & Wolfgang Stroebe, *Productivity Loss in Brainstorming Groups: Towards the Solution of a Riddle*, 53 J. PERSONALITY & SOC. PSYCH. 497, 497 (1987) (reviewing 22 empirical brainstorming studies and finding overall that group brainstorming leads to the generation of fewer ideas than individuals working alone).

¹⁸⁰ See, e.g., Elsbach & Hargadon, *supra* note 46, at 473; see also Brian Mullen, Craig Johnson & Eduardo Salas, *Productivity Loss in Brainstorming Groups: A Meta-Analytic Integration*, 12 BASIC APPL. PSYCH. 2, 2 (1991).

Consider the status quo bias. For organizations that have not yet adopted innovation-enhancing policies, the bias works against change. Yet once changes are made, the status quo bias will help entrench these advances. And if a sufficient number of companies adopt similar policies, the conformity bias may help encourage laggards to follow suit.

The question then becomes, how do we persuade firms to make positive changes in the first place? This might be a particularly challenging task given companies' information-processing limitations.

A potential answer lies in metrics. Just as individuals use heuristics, or decision-making shortcuts, to overcome information-processing limitations in daily life, metrics provide a simple way for companies to digest the findings from the organizational behavioral literature and measure their progress in achieving creativity-facilitating environments.¹⁸¹ Publicly-available and standardized metrics also allow outsiders—including potential employees and investors—to judge how an organization is doing in this respect. This latter characteristic of metrics may help provide any additional pressure a firm might need to overcome status quo and conformity biases and implement changes that will benefit both itself and society. The next Part considers this proposal in more detail.

C. INFORMATION ASYMMETRIES

According to economic theories, private ordering schemes are most successful when all interested parties have access to full information.¹⁸² When information asymmetries exist, markets tend to be less efficient.¹⁸³ This is the classic “market for lemons” problem, dubbed for its application to the used car market. Sellers are aware when the used car they are selling is a “lemon,” but buyers are not. Due to the possibility that a prospective purchase might be a lemon, buyers are willing to pay less for any given used car than they would if they knew the car was good. But at this discounted price, sellers are unwilling to sell the cars they know are good and offer only lemons for sale. This increases the probability that a buyer will encounter a lemon, and leads to further discounting and an eventual collapse of the market.¹⁸⁴

Just like in the used car market, information asymmetries between employers and employees may prevent firms from adopting optimal innovation incentives for their workers. As the Article later explains, employees report greater satisfaction and well-being when they work for firms that adopt innovation-promoting policies.¹⁸⁵ If information were perfect in this space, we would expect employee preferences to nudge firms toward these types of policies. All other things (like financial compensation) being equal, workers would likely prefer to work for firms that provide greater

¹⁸¹ See Clarkson, *supra* note 168, at 731 (discussing how metrics can overcome information-processing limitations in organizations in the context of intellectual asset transactions); Dibadj, *supra* note 176, at 1534 (describing how standardized rules can help organizations digest and implement complex information).

¹⁸² See R.H. Coase, *The Problem of Social Cost*, 3 J. L. & ECON. 1 (1960); Ian Ayres & J.M. Balkin, *Legal Entitlements as Auctions: Property Rules, Liability Rules, and Beyond*, 106 YALE L. J. 703, 706 (1996) (“Coase argued that regardless of the initial allocation of entitlements efficient deals would be struck under ideal bargaining conditions, which include full information.”).

¹⁸³ E.g., Bernard S. Black, *Information Asymmetry, the Internet, and Its Securities Offerings*, 2 J. SMALL & EMERGING BUS. L. 91 (1998) (arguing that information asymmetries harm the efficiency of stock markets).

¹⁸⁴ See ANDREU MAS-COLELL, MICHAEL D. WHINSTON & JERRY R. GREEN, *MICROECONOMIC THEORY* 450-72 (1995); HAL R. VARIAN, *MICROECONOMIC ANALYSIS* 468-70 (3d ed. 1992); Catherine L. Fisk, *Credit Where It's Due: The Law and Norms of Attribution*, 95 GEO. L. J. 49, 106-08 (2006) (discussing the market for lemons in the context of professional attribution).

¹⁸⁵ *Infra* Part V.B.

satisfaction and well-being.¹⁸⁶ They would, as Charles Tiebout suggested, vote with their feet,¹⁸⁷ making it difficult for firms that did not provide for these needs to attract and retain top talent.¹⁸⁸

But just as it is very difficult, before you purchase a used car, to discern whether or not it is a lemon, so too is it difficult to know, before you accept a job and invest significant time with a company, whether it provides a culture conducive to well-being and innovation. Employees may thus choose to work for companies that they would not choose to work for if they had full information. As a result, employee preferences are not conveyed to employers, who are not given appropriate incentives to overcome the bounded rationality problems that may be keeping them from adopting innovation-promoting policies in the first place.

The market for lemons problem can be ameliorated by measures that address the underlying information asymmetries. In the context of used cars, the problem is solved with a signal that honestly communicates the quality of the car, such as an enforceable warranty or “certified pre-owned” status.¹⁸⁹

One can think of signals that could do analogous work in the employer-employee context. Just as certified pre-owned status conveys a signal that a used car meets certain pre-defined standards, a certification program for companies conveys to potential employees that an organization has undertaken specific measures to enhance employee well-being and satisfaction (measures that also, for purposes of this Article, stand to promote innovative behaviors). The next Part describes in more detail how such signaling mechanisms could be implemented.

D. DISTRIBUTIVE CONCERNS

A final, common criticism of private ordering schemes is that they do not sufficiently account for distributive concerns.¹⁹⁰ When initial allocations of wealth or power among actors are unjust, it is unlikely that private ordering will correct them.¹⁹¹

In the organizational context, the power disparities that exist between employer and employee have been well studied.¹⁹² This power dynamic, generally understood to favor employers, may result in employers providing sub-optimal work environments to their employees.

¹⁸⁶ *Id.* There is even evidence that employees are willing to forego compensation in order to work in environments that satisfy their psychological needs in ways that are innovation promoting. In one study, researchers found that biology PhDs were willing to accept a 25% decrease in pay from industry employers who supported their autonomy by allowing them to engage in independent research and publishing. Scott Stern, *Do Scientists Pay to be Scientists?* 50 MGMT. SCI. 835 (2004); see also Bair, *supra* note 14, at 330 (discussing this finding).

¹⁸⁷ See Tiebout, *supra* note 41, at 418.

¹⁸⁸ *Id.*

¹⁸⁹ Fisk, *supra* note 184, at 107.

¹⁹⁰ Macey, *supra* note 21, at 1141; see also ROBERT C. ELICKSON, ORDER WITHOUT LAW: HOW NEIGHBORS SETTLE DISPUTES 283–84 (1991).

¹⁹¹ Macey, *supra* note 21, at 1141.

¹⁹² See, e.g., Aditi Bagchi, *The Myth of Equality in the Employment Relation*, 2009 MICH. ST. L. REV. 579, 580 (2009); Samuel R. Bagenstos, *Employment Law and Social Equality*, 112 MICH. L. REV. 225, 227 (2013); Martin H. Malin, *The Distributive and Corrective Justice Concerns in the Debate Over Employment At-Will: Some Preliminary Thoughts*, 68 CHI.-KENT L. REV. 117, 145–46 (1992); Guy Davidov, *The Principle of Proportionality in Labor Law and Its Impact on Precarious Workers*, 34 COMP. LAB. L. & POL'Y J. 63, 67 (2012); Bert-Jaap Koops, *Law, Technology, and Shifting Power Relations*, 25 BERKELEY TECH. L. J. 973, 996–1006 (discussing how technological advancements affect the power relations between employers and employees); James M. Duncan, Comment, *Agreements Not To Compete*, 33 LA. L. REV. 94, 96 (1972) (discussing the power disparities among employers and employees in the context of non-compete agreements). *But see* Richard A. Epstein, *In Defense of the Contract At Will*, 51 U. CHI. L. REV. 947, 974–77 (1984) (arguing that the balance of power between employees and employers may be more evenly divided than commonly believed).

To see why this is so, consider the employee who is dissatisfied with her work environment. In the ideal private ordering situation, where Tiebout sorting is in effect, this employee would simply leave and go work for a firm that better meets her needs. In the aggregate, the movement of dissatisfied employees to organizations that better provide for employee needs would push all firms that cared about recruitment and retention to do better in this respect.

Moving from the ideal to the real, however, there are many reasons why this scenario might not play out as anticipated. Even if the employee had perfect information about other firms so that she knew for certain that her new job would provide a more satisfying work environment, power dynamics in her firm might still prevent her from making the move. For example, the employee might be dependent on a favorable reference from her current employer to procure a new job, something that the employer could withhold for any reason or no reason at all.¹⁹³ Because most employment contracts are at-will, a search for a new job, if discovered, might put the employee's current job at risk. And strict non-compete agreements, entered into under conditions of unequal bargaining power, might prevent her from finding a job in the same field.¹⁹⁴

In many cases, including here, the distributive concerns implicated by private ordering are deontological—in this case, we care that private ordering does not address the power disparities between employers and employees, which contributes to the unjust result of employees being stuck in jobs detrimental to their happiness and well-being. But here, because the values that contribute to employee well-being also contribute to creativity and innovation,¹⁹⁵ the concern is also one of efficiency. Unequal power distributions, for the reasons described above, might result in employees staying in jobs in which they are less creative. And if employees do not leave when creativity suffers, firms are not given appropriate incentives to adopt more innovation-friendly and efficiency-promoting policies.¹⁹⁶

One potential way to counter this problem is through laws that make it more difficult for firms to procure strict non-compete agreements from their employees. To the extent that we can limit this barrier to employee mobility, employee preferences for innovation-promoting firms can be more freely revealed, which will lead, in turn, to wider organizational adoption of innovation-enhancing policies. The next Part discusses this potential solution in more detail.

V. PRIVATE ORDERING REVISITED: ADVANTAGES OF PRIVATE ORDERING

Previous Parts argued that private ordering might not be working as expected in the employee innovation context and identified potential reasons for this failure. The obvious next question is what we should do about it. Should we abandon private ordering and take a different approach, or are there good reasons why we should maintain a basically private regime?

This Part revisits the case for private ordering in light of the analysis in the previous Parts. It argues that despite the apparent market failure, private ordering still maintains significant advantages. In particular, this Part introduces novel insights from the psychology literature indicating that the financial gains to be had from offering these incentives are greater than previously expected. The empirical literature also suggests that employees who are more creative are also more happy at work, and should therefore prefer to work for companies that offer these incentives. Finally, the

¹⁹³ See Fisk, *supra* note 184, at 71 & n.75.

¹⁹⁴ Orly Lobel, *The New Cognitive Property: Human Capital Law and the Reach of Intellectual Property*, 93 TEX. L. REV. 789, 791 (2015).

¹⁹⁵ *Infra* Part V.B.

¹⁹⁶ *Id.*

types of incentives Part II identified should lead to strong reputational gains for companies that adopt them. These previously unrecognized benefits provide a compelling reason for companies to invest in innovation incentives without government intervention. The next Part suggests that rather than strong regulatory action, we can implement policies that debias company decision-makers and encourage desirable behaviors. Once implemented, the companies should recognize the benefits that flow from these behaviors and continue them of their own accord.

A. INNOVATION INCENTIVES ARE (STILL) GOOD FOR BUSINESS

Though the Article has pointed out that there are business models and practices that do not depend on innovation for financial success,¹⁹⁷ the fact still remains that innovative companies will tend to benefit economically, in the long term, from their innovation.¹⁹⁸ Apart from the obvious money to be made from innovative new products, however, insights from psychology suggest that employees who receive effective innovation incentives, in addition to being more creative, are also more loyal (which reduces expensive turnover),¹⁹⁹ more productive,²⁰⁰ show reduced absenteeism,²⁰¹ and take fewer sick days.²⁰² All of these behaviors translate into financial gains for their employers.

These pecuniary benefits are made even more attractive by the fact that when we look at what actually causes employees to be more creative, as examined in Part II, we see that, in contrast to potentially expensive financial bonus programs (the traditional model for encouraging creativity), the costs of providing these incentives can be relatively low. Creating a culture of respect and dignity, for instance, may require an initial outlay to train managers or to correct a toxic environment,²⁰³ but once achieved should require very little financial investment to maintain.²⁰⁴ Policies that promote balance, like providing opportunities for remote work, can also be implemented at low cost, and in fact might save companies additional money by lowering overhead and facility spending.²⁰⁵ Although not every conceivable innovation-promotion policy is costless or low-cost (helping employees achieve a better work-life balance through providing free child care, for instance, could be quite expensive), many companies still have room to make major improvements in these areas without necessarily spending a lot of money. One team at the biotech firm Genentech, for example, realized great gains in creativity by adopting a number of relatively low-cost tactics, including setting team goals, instituting a non-financial rewards and recognition program, and encouraging managers to incorporate innovating-promoting concepts into their management styles.²⁰⁶

¹⁹⁷ Part II, *infra*.

¹⁹⁸ See, e.g., Tracy, *supra* note 26, at 94–95.

¹⁹⁹ E.g. Yasbek, *supra* note 96.

²⁰⁰ E.g., Bloom et al., *supra* note 131, at 165.

²⁰¹ E.g., Yasbek, *supra* note 96.

²⁰² *Id.*

²⁰³ See Jennifer Chatham, *Culture Change at Genentech: Accelerating Strategic and Financial Accomplishments*, 56 CAL. MGMT. REV. 113, 114 (2014) (describing in detail how such a culture change was achieved at Biotech company Genentech Berkeley); Haas School of Business, Haas Now, *Culture Change at Genentech Featured Case Study in California Management Review* (Feb. 23, 2014) [hereinafter Haas Now] (same).

²⁰⁴ See Chatham, *supra* note 203 (describing various low-cost cultural initiatives, including informing new hires through printed materials of the cultural expectations, and providing employees with non-economic rewards and recognition).

²⁰⁵ Mark Feldman, *Why Remote Work is Booming*, TECH.CO, Aug. 9, 2014, <http://tech.co/remote-work-trend-booming-2014-08>.

²⁰⁶ See Jennifer Chatham, *Culture Change at Genentech: Accelerating Strategic and Financial Accomplishments*, 56 CAL. MGMT. REV. 113, 114–28 (2014) (describing in detail how such a culture change was achieved at biotech company Genentech).

B. INNOVATION INCENTIVES ENHANCE EMPLOYEE SATISFACTION

Relatedly, insights from psychology indicate that employees whose employers offer effective innovation incentives are not only more creative, but are also more satisfied and happy both inside and outside the workplace.²⁰⁷ All else (like salary) being equal, and correcting for information asymmetries and power disparities that might affect employee mobility,²⁰⁸ employees should prefer to work for companies that offer these incentives, not just because they expect to be more creative, but, more powerfully, because they expect to be happier. Though some companies may be impervious to employee turnover,²⁰⁹ many companies do need to retain talent in order to achieve financial success. The need to recruit and retain the best employees provides companies with a good reason to offer innovation incentives consistent with the principles discussed here.

C. INNOVATION INCENTIVES ARE GOOD PRESS

There is an additional reason why companies should, after correcting for market failures, want to optimize innovation incentives without outside intervention. This reason becomes clear when we look at the types of principles and policies that promote innovation. Principles like supporting worker autonomy and competence,²¹⁰ treating employees with respect,²¹¹ and giving employees the opportunity to enjoy full and meaningful lives within and outside of work.²¹² Quite simply, these strategies make for good press.

Take, for example, Google, a company that has adopted many policies that, under the analysis presented here, should be good for innovation.²¹³ The press loves to report on these incentives, and the tone of the reports is almost uniformly positive.²¹⁴ In contrast, Amazon recently learned the hard

²⁰⁷ See, e.g., Yasbek, *supra* note 96 (finding that work-life balance policies are associated with greater employee satisfaction); Kasser & Sheldon, *supra* note 94, at 243 (finding that employees with lower work-life balance exhibit lower life satisfaction); Kasser & Brown, *supra* note 94 (same); Lee & Brand, *supra* note 143, at 343 (finding that employees with greater control over their physical work environments report greater job satisfaction); Elsbach & Pratt, *supra* note 143, at 195–96 (same); Berscheid & Reis, *supra* note 103 (finding that people who experience greater relatedness are also happier); Sheldon, Cummins & Kamble, *supra* note 92, at 103 (finding that employees with greater work-life balance are also happier); Reis et al., *supra* note 69, at 1580 (finding that people who have greater opportunities for autonomous thought and action are also happier); Sheldon, Boehm & Lyubomirsky, *supra* note 102 (finding that people who engage in a greater variety of positive activities report greater well-being).

²⁰⁸ Parts IV.C & D. One important issue beyond the scope of this Article is how to provide well-being-enhancing work conditions for non-creative employees. The suggestions proposed here will probably not be effective in these cases, since they rely on the promise of economic benefits (mediated by increased innovation) to nudge companies to adopt these incentives. Since the same financial benefits do not follow for non-creative personnel, companies may not have any incentives to provide favorable working conditions for these people. Yet, there are moral reasons why we might want companies to provide them. Though I do not propose to address this problem here, I do want to acknowledge that most innovative products depend on contributions from countless non-creative (and perhaps poorly-treated) personnel. Too often these employees are drawn from vulnerable populations. See, e.g., Kenneth Goldsmith, *The Artful Accidents of Google Books*, N.Y. TIMES Dec. 4, 2013 (discussing the “army of invisible laborers” who scan books for the Google book project and noting the “sharp divisions” between these personnel and professional employees on Google’s campus).

²⁰⁹ Part II, *infra*.

²¹⁰ See *supra* Part II.A.2

²¹¹ See references cited *supra* note 62 and accompanying text.

²¹² See *supra* Part II.A.3

²¹³ For example, Google emphasizes work-life balance for its employees. See Stewart, *supra* note 10. It also promotes variety of experience and autonomy by allowing employees to take extended time off to pursue personal, community-based projects. See references cited *supra* note 9 and accompanying text.

²¹⁴ See, e.g., D’Onfro & Smith, *supra* note 9; Stewart, *supra* note 10; Luke Strangel, *Google’s 10 Best Perks: cars, Sleep Pods – You Name It*, SILICON VALLEY BUS. J. (Apr. 15, 2013) <http://www.bizjournals.com/sanjose/news/2013/04/12/googles-10-best-employee-perks.html>, Ramona Emerson, *Google’s Best Benefits: The Top 7 Perks Google Offers Employees*, THE HUFFINGTON POST (Jan. 1 2012) <http://www.huffingtonpost.com/2012/01/30/google-benefits-employee->

way²¹⁵ that policies that likely do little to promote innovation—including policies that de-emphasize work-life balance²¹⁶ and employee autonomy²¹⁷—do not play well in the popular media.²¹⁸

Because companies can expect to gain positive reputational benefits²¹⁹ by providing innovation-enhancing incentives (and, conversely, may be harmed reputationally by failing to provide these incentives) they have a rational reason to offer these incentives without government or legal intervention.

D. FLEXIBILITY IS (STILL) IMPORTANT

Part I discusses flexibility as a traditionally-cited advantage of private ordering regimes.²²⁰ Though Part II identifies several general creativity-enhancing principles, and gives some specific examples of policies that might be at odds with these principles, in practice, there are myriad ways to provide incentives consistent with these principles. Indeed, the opportunities are limited only by the innovative spirit of the organizations implementing them. And this is a good thing. The market failure this Article identifies arises not from the fact that companies are adopting approaches, according to their needs and the needs of their employees, that differ from each other. This, in fact, remains one of the primary advantages of private ordering. Instead, it's that many companies are taking approaches that are completely inconsistent with the principles discussed here, to the detriment of innovation, and ultimately, society. The task, then, is not to make every company identical to every other company, as might happen with strong government intervention, but to nudge companies in innovation-promoting directions, the ultimate outcome of which might look very different for company A than company B.

VI. DEBIASING COMPANY DECISION-MAKING TO PROMOTE INNOVATION

Despite the apparent flaws of a private ordering scheme in providing optimal innovation incentives to employees, it remains fundamentally viable as the best way to accomplish this goal. If we are to rely on private ordering, however, it is imperative that we correct the market failures that are keeping it from working as intended.

perks_n_1242707.html; CBSNews.com, *Inside Google Workplaces, from Perks to Nap Pods*, <http://www.cbsnews.com/news/inside-google-workplaces-from-perks-to-nap-pods/> (last visited Jul. 31, 2016). *But see* Josh Kovensky, *Chief Happiness Officer is the Latest, Creepiest Job in Corporate America*, THE NEW REPUBLIC, July 22, 2014 (arguing that Google's preoccupation with employee happiness represents an unwarranted "intrusion into [employees'] emotional lives.").

²¹⁵ Kantor & Streitfeld, *supra* note **Error! Bookmark not defined.** (presenting a highly critical view of Amazon's policies). According to Amazon, the company cooperated with the Times in part because Kantor assured their vice president of public relations that the piece would be positive. Jay Carney, *What the New York Times Didn't Tell You*, MEDIUM.COM (Oct 19, 2015) <https://medium.com/@jaycarney/what-the-new-york-times-didn-t-tell-you-a1128aa78931#.hra1ryfda>.

²¹⁶ *Supra* note 109.

²¹⁷ *See* Kantor & Streitfeld, *supra* note **Error! Bookmark not defined.** ("If you're a good Amazonian, you become an Amabot," said one employee, using a term that means you have become at one with the system.").

²¹⁸ I do not mean to suggest that every Amazon policy is anathema to innovation. Amazon seems to be very good at stimulating relatedness in particular among its employees, a value that can be promoted by emphasizing the shared goals of employees. *See* Kantor & Streitfeld, *supra* note **Error! Bookmark not defined.** (describing how the company uses the word "mission" to describe its goal of providing "lightning-quick" delivery of consumer products).

²¹⁹ *See, e.g.*, Scott Malone, *Google has Best Reputation in U.S., Airlines Fall*, Reuters, Jun 23, 2008 (reporting the results of a survey finding that Google had the best corporate reputation in America, and attributing these results to Google's employee perks).

²²⁰ Part I.C, *infra*.

This Part examines various ways in which regulation and other initiatives could supplement the basic private ordering scheme to combat these flaws. Some of these solutions draw from the tradition of behavioral law and economics. Scholars from this discipline seek to promote socially beneficial behaviors by correcting for cognitive biases and other bounded rationality problems. In the language of behavioral law and economics, the goal is to ‘debias’ decision-makers and ‘nudge’ them in welfare-enhancing directions by changing incentives in ways that take advantage of behavioral insights.²²¹ This approach maintains the significant advantages of private ordering because it is designed to help companies make welfare-enhancing choices of their own volition rather than mandating specific choices.²²² This Part proposes several policy interventions, meant not to replace private ordering, but instead to nudge companies to act in innovation-promoting ways. The list is not meant to be exhaustive. Instead, it is a starting point, designed to begin a conversation about the types of initiatives that could be helpful in encouraging more companies to adopt innovation-promoting policies. I propose possible roles for metrics and certification initiatives, intellectual property law, and employment law, particularly as it bears on employee mobility.

A. THE ROLE OF METRICS AND CERTIFICATION

One major challenge to private ordering manifests itself when private actors—here, companies—have access to the information they need to act in efficient ways, but bounded rationality causes them to behave inefficiently.²²³ Information asymmetries and distributive concerns may exacerbate these tendencies because employees, who have less information and bargaining power than firms, are unable to reveal their preferences in ways that will push firms towards efficient behaviors.²²⁴ Formalized metrics and certification programs can help overcome these bounded rationality problems.

1. Metrics

Before a company can be expected to implement innovation-promoting policies, it needs to know what works. Fortunately, this information is accessible to those who have a desire to find it. The primary research synthesized in this Article has been reported in scientific and other academic journals. And others have written books, blog posts, and popular press articles for a corporate audience in an attempt to educate company decision-makers about these principles.

But, as the reality of common company practices demonstrates, simply having the information out there is often not enough. Content with the status quo or the fact that they’re doing what other similarly situated companies are doing, companies might not be compelled, of their own accord, to seek out the information. If they do, they might not have the skills to correctly interpret the information, finding the incremental and sometimes conflicting nature of academic research to be confusing and unhelpful. Due to information-processing limitations, they might not be able to translate the information into beneficial action.²²⁵ And due to faulty intuitions about hard work and shirking, they might simply fail to believe some of the principles. The fact that giving employees more freedom and personal time will actually result in more creativity and productivity, for instance, might seem implausible to a manager steeped in very different views about productivity.

²²¹ See, e.g., Christine Jolls & Cass Sunstein, *Debiasing Through Law*, 35 J. LEGAL STUD. 199, 199–203 (2006); Cass R. Sunstein & Richard H. Thaler, *Libertarian Paternalism is not an Oxymoron*, 70 U. CHI. L. REV. 1159, 1163–67 (2003).

²²² See Sunstein & Thaler, *supra* note 221, at 1163–67.

²²³ *Supra* Part III.B.

²²⁴ *Supra* Part III.C & D.

²²⁵ *Supra* Part III.B.

This is where performance metrics can help. A metric is a quantifiable indicator of company performance; in this case, the metrics would be designed to measure how well companies are adhering to the principles of employee creativity discussed in this Article. Metrics help overcome information-processing limitations because they provide easily understandable guideposts, letting companies know how they are doing and what they can do better to promote innovation.²²⁶ If the metrics are publicly available, they also allow outsiders, including other firms, investors, and potential employees, to make these same judgments.

The public availability feature of metrics may be particularly useful in helping firms overcome status quo and conformity biases. If a company knows that it will be judged in ways that have an easily-identifiable effect on its bottom line,²²⁷ this understanding may provide the impetus it needs to overcome any inertial preference for the status quo. And as more companies adopt policies that conform to these metrics, the conformity bias may act to persuade other firms, which have access to these metrics (just as they know that other companies have access to theirs), to overcome their own status quo biases.

An anecdotal example of how publicizing company practices and policies can push companies in the direction of innovation-promotion can be seen in Amazon's case. A few months after the critical New York Times piece was published, Amazon announced several changes to its employee policies, including new extended family leave and flexible work policies.²²⁸ Consistent with the principles discussed in Part II, these new policies should promote innovation. Of course, we can't expect the New York Times to publish a high-profile piece documenting the practices of every company in the United States. Metrics offer a more systematic and far-reaching way to achieve a similar result.²²⁹

What might innovation-focused performance metrics look like? Although a comprehensive proposal is beyond the scope of this Article, ideally, these metrics would focus on concrete and measurable steps companies can take to promote the values described earlier in this Article—values of fairness, autonomy, relatedness, competence, and variety and balance. A degree of standardization would be key to successful performance metrics, so that outside observers could have some confidence in what the metrics communicate. At the same time, however, to preserve the benefits of flexibility and familiarity with a company's unique situation that private ordering provides, the metrics should be sensitive to the fact that there are a variety of ways to promote innovation-enhancing values.

To illustrate, consider a performance metric that measures whether a company offers a standardized training program aimed at teaching managers how to create social exchange relationships with their employees. This metric provides a concrete step that firms can take to enhance innovation (offering a training program) and does so in a standardized way (the training is the same for all firms). Yet it still allows for flexibility because individual managers within firms will implement their training in ways that make sense for their particular industries and employees. A

²²⁶ See Clarkson, *supra* note 168, at 731 (discussing how metrics can overcome information-processing limitations in organizations in the context of intellectual asset transactions); Dibadj, *supra* note 176, at 1534 (describing how standardized rules can help organizations digest and implement complex information).

²²⁷ *Supra* Part V.A.

²²⁸ David Streitfeld, *Amazon adds New Perks for Workers and Opens a Bookstore*, N.Y. TIMES (Nov. 2, 2015)

²²⁹ Existing online company-evaluation platforms like GlassDoor may also be helpful in this regard. But because they rely on volunteered information from employees they suffer from the flaws of inconsistent standards and inconsistent availability of information. Metrics offer a more reliable and systematic way to provide relevant information to the public.

publically- or privately-administered metrics system could dictate the details of the training and keep published records of firms that require their managers to take the training.

2. Certification

A natural outgrowth of a metrics system is a certification program. Certification provides a simple way for firms to communicate to investors, potential employees, and other firms that they have met certain minimum metrics-based standards.

The signaling work done by certification helps combat the efficiency issues raised by information asymmetries in the workplace.²³⁰ In the used car market, a “certified pre-owned” car solves the market for lemons problem because it communicates to the buyer that the car meets certain quality standards.²³¹ Similarly, a certification program for firms indicates to interested parties that the company has taken specific steps to create an innovation-conducive environment. This helps solve the information asymmetry problem between employers and employees, and helps potential employees choose workplaces that are both satisfaction- and innovation- enhancing.²³² Because, all else being equal, employees will presumably prefer these workplaces, it also provides appropriate market incentives to companies to achieve certification.²³³

Metrics and certification could be either privately or publically administered, with concomitant advantages and disadvantages to each. A public system, similar to the bar or other professional certification programs (but at the company, rather than the individual, level) would be more costly to administer, but would likely achieve more buy-in, even if voluntary. Conversely, a privately initiated and administered program might be less costly and more responsive to changing information, but would require support and participation from well-respected industry players to ensure widespread acceptance. Whether publically or privately administered, distinct programs for broad categories of industries—technology, pharmaceuticals, etc.—would likely be beneficial. In addition to helping garner acceptance, having distinct programs for different fields would improve the programs’ ability to reflect industry-specific concerns.

One disadvantage of metrics and certification programs is the potential for a “race to the bottom,” as is sometimes seen in regulatory regimes.²³⁴ Companies might treat certification as a “ceiling,” performing the minimum necessary to achieve certification and its concomitant reputational and financial benefits, but no more.²³⁵ Further, while metrics are meant to provide useful heuristic shortcuts to help companies gauge how they are doing in providing innovation-enhancing environments, there is a danger that they will treat the metrics as ends in themselves and miss opportunities for more meaningful reform.²³⁶

Despite these challenges, however, the potential benefits of metrics and certification programs are still substantial. If these programs will encourage companies that would otherwise do nothing to undertake innovation-promoting reform, they have performed their function. And hopefully the educational experience a metrics and certification program ideally provides will convince companies

²³⁰ See *supra* Part III.C.

²³¹ *Id.*

²³² See *id.*; Part V.A.

²³³ See Part III.C.

²³⁴ See, e.g., Richard L. Revesz, *Rehabilitating Interstate Competition: Rethinking the “Race-to-the –Bottom” Rationale for Federal Environmental Regulation*, 67 N.Y.U. L. Rev. 1210, 1213–16 (1992).

²³⁵ See, e.g., Inara Scott, *Antitrust and Socially responsible Collaboration: A Chilling Combination?*, 53 AM BUS. L. J. 97, 107 (2016) (describing this and other criticisms of certification programs).

²³⁶ See Clarkson, *supra* note 252 [168?], at 17–19.

that it is in their financial interest to do all they can to promote innovation within their organizations.

B. THE ROLE OF EMPLOYMENT LAW

An additional major drawback of private ordering schemes is that they do not account for distributive concerns.²³⁷ Within organizations, unequal power distributions between employers and employees might prevent employees who are dissatisfied with their work environments from seeking employment elsewhere.²³⁸ This dynamic, in turn, may fail to provide firms with appropriate incentives to adopt innovation-friendly policies.²³⁹

A solution to this challenge lies in employment law. Specifically, in laws and policies that address these power disparities and make it easier for employees to leave firms that do not promote creativity and employee well-being. When employee preferences for innovation-promoting firms are more easily acted upon, we can expect broader company adoption of innovation-enhancing policies.²⁴⁰

Need for action in this area may be particularly urgent, since it appears that current laws and policies are making it harder, rather than easier, for employees to find and accept new jobs.²⁴¹ Orly Lobel has comprehensively documented this trend, which includes the rise of restrictive contractual non-compete agreements;²⁴² the widespread adoption of post-employment restrictions in employment agreements, including non-solicitation, non-poaching and non-dealing clauses;²⁴³ and the emergence of so-called “cognitive cartels,” or agreements among firms not to solicit or hire other firms’ employees.²⁴⁴

One approach to this challenge is simply to prohibit the enforcement of non-compete agreements, as California does and as Massachusetts is considering doing.²⁴⁵ It is often argued (though the argument is not uncontroversial) that California’s approach has led to enhanced innovation within the state.²⁴⁶ An even stronger step states could take is a broader ban prohibiting enforcement of all post-employment restriction clauses—clauses that prevent employees from soliciting or dealing with former clients or recruiting former employees, and that have similar detrimental effects on employee mobility as traditional non-compete agreements.²⁴⁷ Additionally, aggressive antitrust prosecution could help thwart informal non-poaching agreements among firms.²⁴⁸

²³⁷ Macey, *supra* note 21 at 1141.

²³⁸ *Supra* Part III.D.

²³⁹ *Id.*

²⁴⁰ *See supra* Part V.B.

²⁴¹ Lobel, *supra* note 194, at 825–29.

²⁴² *Id.* at 825–28.

²⁴³ *Id.* at 828–31.

²⁴⁴ *Id.* at 831–35.

²⁴⁵ *See id.* at 828.

²⁴⁶ *See, e.g.,* 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 (1999); Matt Marx, Deborah Strumsky & Lee Fleming, *Mobility, Skills, and the Michigan Non-Compete Experiment*, 55 MGMT. SCI. 875 (2009); Bruce Fallick, Charles A. Fleischman & James B. Rebitzer, *Job Hopping in Silicon Valley: Some Evidence Concerning the Micro-Foundations of a High Technology Cluster*, 88 REV. ECON. & STAT. 472 (2006).

²⁴⁷ Lobel, *supra* note 194 at 828–29.

²⁴⁸ *See id.* at 831–35. *See also generally* ORLY LOBEL, TALENT WANTS TO BE FREE: WHY WE SHOULD LEARN TO LOVE LEAKS, RAIDS, AND FREE-RIDING (2013) (arguing that employee mobility is good for innovation).

Of course, non-compete contracts, post-employment restrictions, and non-poaching arrangements are not the only power-disparity-related reasons for which employees may remain in a suboptimal creative environment.²⁴⁹ But efforts to remove these significant barriers to employee mobility are at least a step in the right direction, and may prod companies towards adopting policies that are better for both employees and innovation.

C. THE ROLE OF INTELLECTUAL PROPERTY

The collection of statutory, administrative, and judicially-created rules known as intellectual property law is the primary vehicle for promoting innovation in the United States.²⁵⁰ Is there, then, a role for intellectual property law in promoting innovation among organizational employees? Here, the Article argues that intellectual property law has the potential—not yet realized—to play an ongoing role in providing creativity incentives to employees. Namely, intellectual property can help establish a social norm of providing attribution to creators, whether their innovative behavior occurs in or out of the firm.²⁵¹

In general, legal rules can play a role in establishing social norms.²⁵² These social norms, in turn, may influence private ordering behavior in situations where the law does not directly apply.²⁵³ Given intellectual property's status as the primary legal vehicle for promoting innovation, any other regime designed to promote innovation, whether public or private, will likely take its cue from the norms and values espoused by the intellectual property system. If the intellectual property system operates in a way that generally promotes innovation-enhancing values, it can help establish social norms that make similar actions by private firms more likely. Conversely, if the intellectual property system ignores the psychological needs of creators, it may be that much more unrealistic to expect private companies to address these needs.

One straightforward area where intellectual property could better meet creator needs that promote innovation is the area of attribution. Attribution for creative work promotes perceptions of competence and facilitates social exchange.²⁵⁴ Catherine Fisk has pointed out that attribution plays a

²⁴⁹ For example, as discussed earlier, an employer might arbitrarily withhold a crucial favorable reference, or an employee might be limited in his ability to search for a new job without risking his current source of income.

²⁵⁰ See generally James A. Lewis, *Intellectual Property Protection: Promoting Innovation in a Global Innovation Economy*, Center for Strategic & International Studies, Jan. 2008. But see, e.g. Lisa Larrimore Ouellette, *Patentable Subject Matter and Non-Patent Innovation Incentives*, 5 U.C. IRVINE L. REV. ___ (forthcoming 2015), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2499204 (discussing alternatives to patent protection that are used to promote innovation in the U.S., including regulatory incentives, government grants, and tax incentives).

²⁵¹ In a related vein, Anthony Casey and Andres Sawicki discuss how informal norms contribute to collaborative creative endeavors and the implications of their model for various copyright doctrines. See Anthony J. Casey & Andres Sawicki, *Copyright in Teams*, 80 U. CHI. L. REV. 1683 [I want to cite the whole article here] (2013). See also Paul J. Heald, *A Transaction Cost Theory of Patent Law*, 66 OHIO ST. L. J. 473 (2005) (analyzing how patent law can facilitate team production); Dan L. Burk & Brett H. McDonnell, *The Goldilocks Hypothesis: Balancing Intellectual Property Rights at the Boundary of the Firm*, 2 U. ILL. L. REV. 575 (2007) (expanding on Paul Heald's hypothesis and proposing that IP rights need to be properly calibrated to optimally promote team production).

²⁵² Graeme B. Dinwoodie, *Private Ordering and the Creation of International Copyright Norms*, 1 J. INST'L & THEORETICAL ECON. 160, 163 (2004).

²⁵³ *Id.* For instance, private ordering schemes constantly face the threat of increased public oversight if the outcomes they provide are not politically and socially acceptable. This threat likely influences how private ordering plays out. *Id.*; see also Erickson, *supra* note 190 (explaining that ranchers in Shasta County, California settle disputes primarily through social norms but describing how the presence of legal rules interacts with and influences these norms); Robert H. Mnookin & Lewis Kornhauser, *Bargaining in the Shadow of the Law; the Case of Divorce*, 88 YALE L. J. 950 (1979) (describing how the presence of legal rules influences personal negotiations in the divorce context).

²⁵⁴ Bair, *supra* note 14, at 349; see also *supra* Part II.A & B.

critical role in career development,²⁵⁵ which implicates autonomy and other creativity-enhancing values.²⁵⁶ Myriad studies have highlighted how attribution motivates individuals to engage in creative work.²⁵⁷ Given the benefits of attribution for creativity, companies should provide this benefit to their creative employees.²⁵⁸

Intellectual property can help with this. A system that grants meaningful attribution to individual creators (and not just their corporate assigns),²⁵⁹ could contribute to a social norm of giving creators credit for their work.²⁶⁰ This social norm, in turn, could generate an expectation among employee-creators that they will receive meaningful attribution for their contributions in the employment context. It could also make companies more amenable to granting this attribution, as they come to understand that this is simply the way things are done.

To make this contribution, the IP system needs to provide for creator attribution in a more meaningful way than it does currently. Others have discussed how this might be achieved.²⁶¹ For example, as a first small step, copyright law could be reformed so that actual authors are named in registration statements for works made for hire.²⁶² This would help establish a social norm for attribution and would send the message to companies that regardless of who owns the intellectual property, creators should be recognized for their work. And though current patent doctrine requires inventors to be named on the patent regardless of patent ownership (a form of attribution), scholars have written about how attribution for patent owners could be made more robust as well.²⁶³ This more robust attribution right could be given to creators independent of the right to exclude, which under current practice, and for efficiency reasons, generally resides with employers.²⁶⁴

²⁵⁵ Fisk, *supra* note 184, at 62–65.

²⁵⁶ See *supra* Part II.A. Having a degree of control over your career trajectory not only implicates autonomy, it also may indirectly affect other creativity-enhancing values like variety and balance. The control afforded by appropriate attribution provides employees with more options, better allowing them to choose career paths that meet their creativity-based needs.

²⁵⁷ See, e.g., Bair, *supra* note 14 (describing some of these studies).

²⁵⁸ Fisk, *supra* note 184.

²⁵⁹ By granting attribution rights to creators through intellectual property, we not only indirectly promote innovation by establishing social norms that hopefully will be adopted by firms in relation to their employees, we also directly promote innovation by enhancing feelings of competence and fairness in inventors who do not work for companies and own the intellectual property rights in their creations. See Fromer, *supra* note 14, at 1790–98 (discussing how a stronger attribution right in intellectual property could act as an “expressive incentive” for inventors); Bair, *supra* note 14, at 349 (discussing how attribution in intellectual property could enhance creator motivation and creativity). This is not the current norm for intellectual property regimes in the United States. In copyright, there is no general entitlement to attribution for creators. And when a work is considered a “work for hire” the copyright registration lists the employer, rather than the actual author, as the creator. Fromer, *supra* note 14, at 1796. Patent law requires that the actual inventors be listed on a patent regardless of who owns the intellectual property, but given that only those who look at the patent (rather than the wider audience of those who might use the technology the patent embodies) will see this information, the value of this attribution as a creativity-motivating tool is questionable. Fromer, *supra* note 14, at 1792–95; see also Bair, *supra* note 14, at 350.

²⁶⁰ See *supra* notes 252–253 and accompanying text (describing how legal entitlements can influence social norms).

²⁶¹ See, e.g., Fromer, *supra* note 14, at 1790–98; Christopher Jon Sprigman et al., *What’s a Name Worth?: Experimental Tests of the Value of Attribution in Intellectual Property*, 93 B.U. L. REV. 1389, 1415–16 (2013), Bair, *supra* note 14, at 349–50; JESSICA SILBEY, *THE EUREKA MYTH: CREATORS, INNOVATORS, AND EVERYDAY INTELLECTUAL PROPERTY*, 159–67 (2015); Colleen V. Chien, *Beyond Eureka: what Creators Want (Freedom, Credit, and Audiences) And How Intellectual Property Can Better Give it To Them (by Supporting Sharing, Licensing, and Attribution)*, __ MICH. L. REV. __, (forthcoming 2016) 126 –27 (reviewing THE EUREKA MYTH).

²⁶² See Fromer, *supra* note 14, at 1794–98.

²⁶³ See, e.g., Fromer, *supra* note 14, at 1810–1817; Bair, *supra* note 14, at 349–50.

²⁶⁴ Fromer, *supra* note 14, at 1794–98.

In attempting to nudge companies towards more attribution for its creative employees, IP will face certain obstacles. Companies may be reluctant to publically advertise the successes of their star employees, for fear that they will be poached by competitors. And there could be technical challenges in deciding who deserves attribution when the work has been accomplished, as it often is in companies, by teams rather than a single individual. Many companies have succeeded in overcoming these challenges, however, devising innovative, and creativity-enhancing, means of providing attribution to their employees.²⁶⁵

And even if IP, through this indirect norm-promoting function, does not completely succeed in pushing all companies towards more robust attribution for the reasons just mentioned, it still promises to *directly* benefit creators and help overcome some of the problems encountered by employees of companies that have not yet adopted innovation-friendly policies.²⁶⁶ For instance, through an IP-based system of attribution, employee-creators could achieve reputational benefits beyond their firms, enhancing innovation-promoting feelings of autonomy and competence. This could also lessen employees' reliance on employers for favorable references and increase their mobility,²⁶⁷ thereby allowing employees to more freely express their preferences for firms that promote, rather than stifle, the creative impulses of their employees.

VII. CONCLUSION

Most innovation today results from the creative work of company employees. Despite this well-known reality, innovation scholars have largely overlooked the critical question of whether employees are receiving optimal innovation incentives, trusting, without analysis, that private ordering will sort things out.

This Article challenges that assumption. Turning to the psychology and organizational behavior literature, I identify several principles known to promote employee creativity. The fact that many successful companies have adopted policies that run counter to these principles suggests that the market is not doing its job in getting the right incentives to employees. The Article further supports this conclusion by identifying common circumstances from law and economics theory, present here, that make market failure more likely.

The Article uses these explanations for market failure from law and economics theory, including problems with bounded rationality, distributional concerns, and information asymmetries, to craft an appropriate legal and policy response. Due to the benefits of private ordering, the best response is one that addresses these specific problems while maintaining private ordering's advantages. A debiasing approach, in the behavioral law and economics tradition, is best suited to this task, and can be achieved through metrics and certifications programs, along with adjustments to employment and intellectual property law. The ultimate goal of these interventions is better company decision-making for a world with less employee dissatisfaction and wasted talent, and more socially-beneficial innovation.

²⁶⁵ See, e.g., Silbey, *supra* note 261, at 159–67; Fisk, *supra* note 184, at 67–98. See also Anthony J. Casey & Andres Sawicki, *The Problem of Creative Collaboration*, 58 WM & MARY L. REV. ___ (forthcoming 2016), 46–47 (proposing a model by which credit can be appropriately allocated in a team situation).

²⁶⁶ *Supra* note 259.

²⁶⁷ See Fisk, *supra* note 184, at 111–15 (discussing credit and attribution's crucial role in career development. Rather than an intellectual-property-based right to attribution, Fisk argues that a right to attribution should be an implied term of employment agreements).