NOTE

THE CASE FOR A UNIFORM INVENTION ASSIGNMENT AGREEMENT ACT (UIAAA)

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INTRODUCTION

An invention is broadly defined as "anything that is created or devised."¹ As the Supreme Court once remarked, "the word cannot be defined in such manner as to afford any substantial aid in determining whether a particular device involves an exercise of the inventive faculty or not."² Today,

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¹ Invention, BLACK'S LAW DICTIONARY (11th ed. 2019).

² McClain v. Ortmayer, 141 U.S. 419, 427 (1891). Despite the difficulty in defining an "invention," it is worth noting that an "invention" is broader than that which is "patentable." *See* Parker A. Howell, *Whose Invention Is It Anyway? Employee Invention-Assignment Agreements and Their Limits*, 8 WASH. J.L. TECH. & ARTS 79, 84–85, 89 (2012).

most "inventors" are employees of a corporate enterprise and work in teams, but this was not always the case.³ Individual "hero-inventors"—such as Eli Whitney with his famous cotton gin—once typified inventorship.⁴

With the rise of employee-inventing has come a rise in "preinvention assignment agreements" governing the ownership of employee inventions.⁵ Preinvention assignment agreements are employment contracts signed before employment commences that require the employee to assign any inventions made during employment—and sometimes for a set period after employment ends—to the employer.⁶ Preinvention assignment agreements can be extremely broad and can even cover inventions made on the individual's own time and using their own resources.⁷

⁴ Steven Cherensky, *A Penny for Their Thoughts: Employee-Inventors, Preinvention Assignment Agreements, Property, and Personhood,* 81 CALIF. L. REV. 595, 605 (1993). According to Cherensky, Whitney's invention "in many ways typifies late-eighteenth-century invention[,]" which was characterized by "the ad hoc problem-solving of the individual, generalist 'hero-inventor." Id. at 607– 08. Whitney was staying as a guest at a South Carolina plantation when he was persuaded by local plantation owners to try to make a machine that would clean cotton. Id. at 607. Apparently, Whitney had never even seen a cotton boll before, but nonetheless was struck by an idea and built a protype out of materials "readily available on the plantation." Id. This lack of direction and resources is at odds with modern inventorship at private companies. Rather than working with a team on a corporate-assigned project, Whitney was struck by what we might call a "eureka" moment. See Catherine L. Fisk, Removing the 'Fuel of Interest' from the 'Fire of Genius': Law and the Employee-Inventor, 1830–1930, 65 U. CHI. L. REV. 1127, 1160 (1998).

⁵ See, e.g., Peter L. Brewer, Addressing Ownership Claims of Employees and Contractors: Who Owns the Invention?, 42 TENN. BAR J. 22, 26 (2006) (noting that "[t]he prudent employer will consider having even non-technical employees sign agreements governing the ownership of inventions"); Cherensky, *supra* note 4, at 617 (stating that "most employers make preinvention assignment agreements a condition of employment"); Robert P. Merges, *The Law and Economics of Employee Inventions*, 13 HARV. J. LAW & TECH. 1, 7 (1999) (explaining that employers' choice to have non-inventive employees sign assignment agreements "makes sense in light of trends toward participatory manufacturing, employee empowerment, and developments designed to reduce hierarchy and capture the knowledge of front-line workers").

⁶ Evelyn D. Pisegna-Cook, *Ownership Rights of Employee Inventions: The Role of Preinvention Assignment Agreements and State Statutes*, 2 U. BALT. INTELL. PROP. L.J. 163, 171–72 (1994). Clauses that require invention assignment after employment ends are called "holdover clauses" or "trailer clauses."

⁷ *Id.* at 172. Note that assignment agreements fall under state law, not federal patent law, meaning there is great variability in the law across jurisdictions. *Id.* at 173. Some states forbid the assignment of inventions made on the employee's own time and with the employee's own resources if the inventions are unrelated to the employer's business and do not result from the employee's work. *See infra* Part III.

³ Joshua L. Simmons, *Inventions Made for Hire*, 2 N.Y.U. J. INTELL. PROP. & ENT. L. 1, 42–44 (2012).

As many scholars have noted, assignment agreements present bargaining issues for employee-inventors, who have not yet created their inventions and do not know what they are giving up.⁸ Employee-inventors may also be ignorant about the legal implications of an assignment agreement and about what the common law rules would be in the absence of an assignment agreement.⁹ Additionally, overly broad holdover provisions assigning inventions to a former employer after employment has ended may disincentivize innovation, which can create negative effects for the marketplace and society at large.¹⁰ Notably, disincentivizing innovation contravenes what patent law was intended to do.¹¹

Yet, despite all these policy issues, assignment agreements are regularly upheld by the courts.¹² This is likely because assignment agreements are "firmly grounded in the principles of contract law that allow parties to freely structure their transactions and obtain the benefit of any bargains reached."¹³ However, as this Note will argue, reasonable limitations that balance the interests of the employer and the employee are both warranted and feasible.

This Note proposes a Uniform Invention Assignment Agreement Act ("UIAAA") modeled in part after the Uniform Restrictive Employment Agreement Act ("UREAA"). The Note

¹⁰ See infra Part V, Section B. See generally, Knuppel, supra note 9.

¹¹ Patent law is meant to incentivize inventors to innovate, thereby promoting economic growth. Emily A. Sample, *Assigned All My Rights Away: The Overuse of Assignment Provisions in Contracts for Patent Rights*, 104 Iowa L. REV. 447, 451–52 (2018). The U.S. Constitution explicitly states that Congress shall have the power to issue patents "[t]o promote the Progress of Science." U.S. CONST. art. 1, § 8, cl. 8.

¹² Mary LaFrance, *Nevada's Employee Inventions Statute: Novel, Nonobvious, and Patently Wrong, 3 Nev. L.J.* 88, 89 (2002); Rob P. Saka, Note, *Confidential Ideas and Independent Contractors: Trade Secret Ownership in the Age of the Hired Gun, 10 Hastings Bus. L.J.* 245, 252–53 (2014).

¹³ Banks v. Unisys Corp., 228 F.3d 1357, 1359 (Fed. Cir. 2000). More teambased inventing and greater corporate investment in research and development likely also played a role. *See infra* Part II. According to Fisk, perceptions gradually shifted from viewing an assignment dispute as "a dispute between two individuals, with the employer as a person trying to take an idea that was not his" to viewing an assignment dispute as "a dispute between an organization, to which the employee had belonged, and the employee-inventor who was trying to take for himself an idea that was one of the organization's valuable assets." Fisk, *supra* note 4, at 1163.

⁸ See, e.g., Pisegna-Cook, supra note 6, at 164.

⁹ See Elizabeth Knuppel, Note, "A Mortgage on a Man's Brain": The Unconscionability of Overly Broad Intellectual Property Assignment Clauses in Employment Contracts, 100 Tex. L. Rev. 971, 983 (2022) (arguing that even though engineers and scientists have advanced degrees, they are not likely to understand the implications of an assignment agreement without a legal degree).

proceeds in five parts. Part I provides background information on UREAA. Part II provides a brief history of employee invention law. Part III provides the modern rules and statutes pertaining to employee invention law. Part IV explains why UIAAA is needed. Part V explains what should be included in UIAAA. A proposed draft of UIAAA is included in the Appendix of this Note and could be helpful to the Uniform Law Commission ("ULC") if it agrees with the conclusion of this Note that UIAAA is needed.

Ι

THE UNIFORM RESTRICTIVE EMPLOYMENT AGREEMENT ACT (UREAA)

In July of 2021, the Uniform Law Commission ("ULC") approved the Uniform Restrictive Employment Agreement Act ("UREAA") and recommended its enactment in all states.¹⁴ The ULC "provides states with non-partisan, well-conceived and well-drafted legislation that brings clarity and stability to critical areas of state statutory law."¹⁵ UREAA is a groundbreaking uniform act that regulates the following restrictive employment agreements: noncompete agreements, nonsolicitation agreements, no-business agreements, no-recruit agreements, and training repayment agreements.¹⁶

Surprisingly, UREAA does not regulate assignment agreements, despite the fact that they are restrictive employment agreements that legally are treated similarly to noncompete agreements.¹⁷ In the comment following the section regarding the scope of UREAA, the ULC explains that, "The web of patent, copyright, and other relevant law is predominantly federal rather than state, is complex, and raises issues distinct from the goals of this act of promoting competition by workers while protecting employers' legitimate business interests."¹⁸ However,

¹⁴ UREAA (Unif. L. Comm'n 2021).

¹⁵ About Us, UNIFORM LAW COMMISSION, https://www.uniformlaws.org/aboutulc/overview [https://perma.cc/ZGY3-WZFB] (last visited June 28, 2024).

 $^{^{16}}$ See UREAA §§ 8-14 (Unif. L. Comm'n 2021); see also UREAA § 2 (Unif. L. Comm'n 2021) (giving definitions for the types of restrictive employment agreements).

¹⁷ See UREAA § 3 (Unif. L. Comm'n 2021); Howell, *supra* note 2, at 87. In fact, the test applied to see if a holdover provision is reasonable is nearly identical to that used for noncompete agreements. *See* Ingersoll-Rand Co. v. Ciavatta, 542 A.2d 879, 887–88 (N.J. 1988); *see also infra* Part V, Section B.

¹⁸ UREAA § 3 Comment (Unif. L. Comm'n 2021). While federal patent law questions undoubtedly are *related to* the law on the enforceability of assignment agreements, assignment agreements themselves fall under state law, not federal patent law, since they are interpreted using normal contract law principles.

in a letter to the Committee working on UREAA, the Committee Chair stated that the issue of holdover clauses "arises too late to be properly resolved by our Drafting Committee."¹⁹ The Chair noted that UREAA "could easily be read to include" holdover clauses and thus recommended that the Committee "add a sentence" to UREAA removing assignment agreements and holdover clauses from the scope of the Act.²⁰

A Uniform Invention Assignment Agreement Act ("UIAAA") could fix the hole in UREAA by imposing reasonable limitations on assignment agreements that would balance the interests of employers and employees. This Note proposes a UIAAA modeled after UREAA, so a summary of some of the key provisions in UREAA may be helpful and instructive.

Each restrictive employment agreement has its own rules under UREAA.²¹ However, some of the more general changes that UREAA made to the common law on restrictive employment agreements include prohibiting certain restrictive agreements for low-wage workers,²² requiring advance notice of restrictive employment agreements,²³ and requiring

¹⁹ Memorandum from Rich Cassidy, Comm. Chair, to Members, Observers, and Liaisons to the Covenants Not to Compete Act Drafting Committee (Tentative new name: Uniform Restrictive Employment Agreement Act) (May 26, 2021), [https://perma.cc/96WH-FKXU].

²⁰ Id.

²² Restrictive employment agreements other than confidentiality agreements and training-repayment agreements are prohibited and unenforceable for workers making less than the state's annual mean wage. *See* UREAA § 5 (Unif. L. Comm'n 2021).

 23 Employers must provide copies of proposed restrictive employment agreements at least fourteen days before a prospective worker accepts work or starts work (whichever is earlier), at least fourteen days before a current worker gets a material increase in compensation or changes job status or responsibilities (whichever is earlier), and at least fourteen days before a departing worker is required to sign. *See* UREAA § 4(a)(1) (Unif. L. Comm'n 2021). Employers are also required to provide a notice prescribed by the State Department of Labor that will

Pisegna-Cook, *supra* note 6, at 173. Additionally, much of this Note refutes the notion that assignment agreements, especially those with holdover provisions, do not raise the same concerns about restricting what an employee can do after his or her employment ends. *See infra* Part V; *see also* Marc B. Hershovitz, Note, *Unhitching the Trailer Clause: The Rights of Inventive Employees and Their Employers*, 3 J. INTELL. PROP. L. 187, 198 (1995) (noting that both noncompetes and holdover clauses "operate to restrict the former employee's ability to work in the profession in which he is trained" and explaining that holdover clauses just do it through a "circuitous route"). *But see* William Lynch Schaller, *Jumping Ship: Legal Issues Relating to Employee Mobility in High Technology Industries*, 17 THE LABOR LAW. 25, 72 (2001) ("The limited nature of trailer clause restrictions tends to make courts somewhat more receptive to them than outright non-compete agreements, for the obvious reason that affected employees can remain in the industry under trailer clauses.").

²¹ See UREAA §§ 8-14 (Unif. L. Comm'n 2021).

additional consideration for current workers and departing workers who are asked to sign restrictive employment agreements.²⁴ Unless a restrictive employment agreement is "reasonable," it is unenforceable under UREAA.²⁵ UREAA includes penalties for unenforceable restrictive employment agreements.²⁶

In Section 8, UREAA includes detailed "reasonableness" requirements for covenants not to compete.²⁷ Similar to common law rules, the noncompete must protect a legitimate business interest of the employer, and the agreement must be "narrowly tailored in duration, geographical area, and scope of actual competition" to protect that legitimate business interest.²⁸ However, unlike the common law, UREAA defines precisely what constitutes a legitimate business interest, places a firm cap on the duration of the noncompete, and provides that noncompetes are only enforceable if the employer's legitimate business interest cannot be adequately protected by a less restrictive type of employment agreement.²⁹

Not all the restrictions that are in UREAA are suggested for adoption in UIAAA, and some restrictions not in UREAA are suggested for adoption in UIAAA. UREAA provides a foundation and a model, but suggestions for UIAAA are based on independent research.

²⁶ See UREAA § 16(e) (Unif. L. Comm'n 2021).

²⁷ UREAA § 8 (Unif. L. Comm'n 2021). These are important because, as noted above, holdover provisions have generally been subject to the same common law test as covenants not to compete. *See supra* note 17 and accompanying text; *see also infra* Part V, Section B.

²⁸ UREAA § 8 (Unif. L. Comm'n 2021).

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inform the worker of their rights under UREAA. *See* UREAA § 4(a)(2), (d) (Unif. L. Comm'n 2021).

²⁴ See UREAA § 4(a)(1)(B)–(C) (Unif. L. Comm'n 2021). Specifically, a current worker must be given a "material increase in compensation" and a departing worker must be given "consideration in addition to anything of value to which the worker already is entitled." *Id.*

 $^{^{25}}$ See UREAA § 7 (Unif. L. Comm'n 2021). Detailed requirements for the "reasonableness" of each kind of restrictive employment agreement are enumerated in their respective sections. See UREAA §§ 8-14 (Unif. L. Comm'n 2021).

²⁹ *Id.* The legitimate business interests that qualify are: "(A) the sale of a business of which the worker is a substantial owner and consents to the sale; (B) the creation of a business in which the worker is a substantial owner; (C) a trade secret; or (D) an ongoing client or customer relationship of the employer." *Id.* The interests under (A) and (B) are capped in duration at five years, and the interests under (C) and (D) are capped in duration at one year. *Id.*

A BRIEF HISTORY OF EMPLOYEE INVENTION LAW

Employee invention law sprung from two conflicting areas of law: patent law, which revered and encouraged the inventor's brilliance, and master-servant law, which did not look favorably upon an inventor's rights.³⁰ Surprisingly, employee-inventors were more likely to win invention ownership disputes in court in the nineteenth century than the twentieth century, by which point master-servant law had become increasingly dominant due to the shift caused by industrialization.³¹ The shift occurred gradually, first through the creation of the modern doctrine known as "shop-right," and second through an ever-increasing reliance on contract law to interpret the dimensions of the employment relationship.³² In 1933, the Supreme Court firmly entrenched the burgeoning reliance on contract law to interpret who owned an employee-created invention by declaring that "[t] he respective rights and obligations of employer and employee, touching an invention conceived by the latter, spring from the contract of employment."33

At the heart of early employee invention law was the theory that an invention was the product of a single individual's brilliance.³⁴ Recognition of the inventor's ownership rights was therefore not only fair and just, but was seen as likely to incentivize future innovation, which would promote economic growth.³⁵ Whether an inventor was an employee was of little interest to judges in the early nineteenth century, who instead applied an equitable principle that voluntarily allowing someone (often the employer) to use an invention prevented a later assertion that there was no right to use it.³⁶ Thus, in *McClurg v. Kingsland*, an employee was "estopped" from protesting his employer's use of his invention that the employee had developed while at work and then voluntarily let the employer use.³⁷ The fact that the inventor was an employee and had

- ³⁴ Cherensky, *supra* note 4, at 605.
- ³⁵ See Fisk, supra note 4, at 1132–34, 1138.
- ³⁶ *Id.* at 1138–39, 1142–43.

 37 42 U.S. 202, 207–08 (1843). The case actually involved the employee's assignee, but since the assignee stood in the shoes of the employee, this made no difference. *Id.* at 206.

³⁰ See Fisk, supra note 4, at 1128–29.

³¹ *Id.* at 1129–30.

³² Id. at 1130.

³³ United States v. Dubilier Condenser Corp., 289 U.S. 178, 187 (1933).

developed the invention while at work were not essential to the court's reasoning.³⁸

As time went on, however, courts began shifting away from the equitable estoppel rationale and towards a focus on whether the employee developed an invention while at work and while using the employer's resources.³⁹ This was the origin of the modern "shop-right" doctrine, which is grounded in the notion that an employer is entitled to use an invention created with the employer's resources.⁴⁰ In *Dempsey v. Dobson*, a very early shop-right case,⁴¹ the court explained that an employer could keep the original copies of carpet varn dye recipe books and yarn sample books that the employee had created because employees "are employed, and their wages adjusted, with reference to their skill and experience in the department of work to which they are assigned"42 and the employee developed the books while at work and receiving the wage reflective of his skill.⁴³ Even though the employee could keep copies of the recipes, the employer was entitled to keep the original creation since it was "the results of the labor" that the employer paid for.⁴⁴ The modern shop-right rule similarly states that an employer is entitled to a non-exclusive, non-assignable license (a "shop-right") to use an employee's invention when the employee creates the invention using the employer's time

- ⁴² Dempsey v. Dobson, 174 Pa. 122, 130–31 (1896).
- ⁴³ Dempsey v. Dobson, 184 Pa. 588, 593 (1898).

 $^{^{38}}$ *Id.* at 207–08; *see also* Fisk, *supra* note 4, at 1145 (pointing to the cases the court in *McClurg* cited for the equitable estoppel rule and noting that none of the cases involved an employment relationship).

³⁹ Fisk, *supra* note 4, at 1150–51. This may have been because the court reporter of the *McClurg* case incorrectly suggested in the headnote of the case that the Court's reasoning was based on the fact that the employee had devised the invention while on the job. *Id.* at 1147–48.

⁴⁰ Fisk argues that the court's rationale changed from "a fairness notion based on the employee's free choice" (equitable estoppel rule) to "an entitlement notion based on the employer's ownership of the raw material and labor used in developing the invention" (shop-right doctrine). *Id.* at 1151. C. Robert Morris. Jr. explains that courts "desire to compensate the employer who has contributed a laboratory for the invention's development." C. Robert Morris. Jr., *Patent Rights in an Employee's Invention: The American Shop Right Rule and the English View*, 39 Tex. L. Rev. 41, 54 (1960). However, Morris argues that this is "overcompensation" if the employer's reasonable expectations under an estoppel rationale would not have resulted in a shop-right. *Id.*

⁴¹ Although the case did not involve a patentable invention, the court approached the case as a shop-rights case, and it nicely illustrates the general shift in the underlying rationale for finding an employer may use an employee's invention. *See* Fisk, *supra* note 4, at 1156, n.102.

⁴⁴ Id.

or resources, though the employee retains actual ownership of the intellectual property. $^{\rm 45}$

By the end of the nineteenth century, the employer's investment had become the dominant reason for awarding a "shop-right," and the old equitable estoppel rule was all but forgotten.⁴⁶ Employers were seen as entitled to use their employee's inventions both because of their investment and because employer use of the inventions was deemed necessary for efficient production and the resulting benefits to the economy.⁴⁷ Master-servant law became more prevalent.⁴⁸ Additionally, as America became more industrialized, inventions were increasingly likely to be the product of the work of many people, sponsored by well-funded corporate research and development laboratories, rather than the work of a single "genius," which made courts more reluctant to award full ownership to an employee.⁴⁹

Another doctrine that emerged as America became increasingly industrialized was the "hired to invent" doctrine, which gave employers outright ownership of inventions created by employees whose primary job was to "solve a specific technical

⁴⁶ Fisk, *supra* note 4, at 1158.

⁴⁷ An important economic rationale for the shop-right doctrine is that providing the employer with a shop-right helps avoid employee holdups, which encourages investment in research and development and allows the employer to invest in production and marketing sooner. *See* Merges, *supra* note 5, at 15, 17.

⁴⁸ Fisk, *supra* note 4, at 1163–64.

⁴⁵ LaFrance, *supra* note 12, at 89. While a shop-right might also allow the employer to manufacture or sell the invention, courts more often limit a shop-right to use of the invention only. Pisegna-Cook, *supra* note 6, at 169–70. Note that while a shop-right is generally non-transferable, exceptions exist for legal successors and purchasers. *See* William P. Hovell, Note, *Patent Ownership: An Employer's Rights to His Employee's Invention*, 58 Norree DAME L. Rev. 863, 875 (1983); John A. Thomas, *Who Owns the Invention?: The Rights of Employers, Employees, and Contractors*, 62 Tex. BAR J. 996, 1002 (1999).

Cherensky, supra note 4, at 605-06; Fisk, supra note 4, at 1133. 49 Corresponding with increasing industrialization, the percent of patents issued to corporations increased from 12% in 1885 to over 75% in 1950. Fisk, supra note 4, at 1139, n.35. Because of increasing industrialization, judges were more likely to see an invention "as an asset of the firm rather than of the employee" and to decline to give full ownership to an employee because this would be "too great an interference with the employer's interest in controlling the business." Id. at 1163. Further, judges might have been concerned about "depriving the public of the benefit of competition" if the employer were not given at least a limited right to use the invention. Id. Corporate research and development laboratories were not the only places that began to "commercialize" inventions as America raced to become more productive; universities began to commercialize inventions created by faculty members and often received funding and support from "industry" to do so. See Pat K. Chew, Faculty-Generated Inventions: Who Owns the Golden Egg?, 1992 Wis. L. Rev. 259, 260-61 (1992).

problem."⁵⁰ Courts at first were reluctant to find that employees were hired to invent.⁵¹ In *Hapgood v. Hewitt*, for example, the Supreme Court affirmed the lower court's determination that Hewitt, an employee who invented a new plow for his employer, was hired for his "experience in the manufacture and sale of plows," rather than to invent plows.⁵² Whereas early courts rather unpredictably chose to rely on either the character and abilities of the employee, the nature of the employment, or the employment relationship, courts eventually came to rely upon the employment contract itself to determine whether an employee was hired to invent.⁵³ This change, in combination with better lawyering by corporate attorneys who learned to portray the employee's duties as "experimental work" sponsored by a corporate enterprise, led to more courts finding that an employee was hired to invent.⁵⁴

The shift to a contractual approach also embodied the move toward more modern employment law.⁵⁵ Employers came to realize that contract law offered a way around the "shop-right" and "hired to invent" default rules and would result in more predictable, employer-friendly outcomes.⁵⁶ Once again, however, courts were initially reluctant to find that an

⁵⁵ See Fisk, supra note 4, at 1183.

⁵⁶ As Fisk notes, the "shop-right" and "hired to invent" rules are "notoriously flexible and indeterminate." *Id.* at 1181. Another reason to avoid the shop-right rule was that the right to continue using an invention seemed like a poor tradeoff when "the employee would not have been able to make his improvement but for his employer's time, money, and equipment." Simmons, *supra* note 3, at 32.

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⁵⁰ See Merges, supra note 5, at 5. It is not a simple task to determine whether an employee was hired to invent. It is best to envision a "spectrum" of employees: at one end are "specific-inventive" employees who are hired to invent, while at the other are "non-inventive" employees, who are clearly not hired to invent; the gray area of "general inventive" employees, who often perform research-type work, presents challenges. See Howell, supra note 2, at 84–85; U.S. v. Dubilier Condenser Corp., 289 U.S. 178 (1933) (finding that employees assigned to research but not assigned to work on a certain invention were not "hired to invent"). Where an employee is hired to invent, the employer can only claim ownership of the specific invention that the employee was hired to invent. Chew, supra note 49, at 264.

⁵¹ See Fisk, supra note 4, at 1174.

⁵² Hapgood v. Hewitt, 119 U.S. 226 (1886); *affirming* Hapgood v. Hewitt, 11 F. 422, 424 (C.C.D. Ind. 1882). The Supreme Court in *Hapgood* also concluded that due to the absence of an agreement giving the employer full ownership rights, the employer was only entitled to a shop-right. *Hapgood*, 119 U.S. at 233.

⁵³ Fisk, *supra* note 4, at 1170, 1179.

⁵⁴ *Id.* at 1174–75. *See, e.g.*, Standard Parts Co. v. Peck, 264 U.S. 52, 59 (1924) (finding that a written contract requiring the employee "to devote his time to the development of a process and machinery for the production of the front spring now used on the product of the Ford Motor Company" meant the employee was hired to invent).

employer owned an employee's invention; they first required clear evidence that the agreement existed, and then they would strictly construe it against the employer.⁵⁷ Courts at first only enforced written contracts, and even written contracts would only entitle an employer to an employee's invention if the invention was directly related to the employee's work and was made during the term of the contract.⁵⁸ However, these "assignment agreements" began to be enforced more frequently as research and development became a more collective enterprise because courts recognized the value of employercreated opportunities for invention.⁵⁹ Courts also began to uphold "holdover provisions" requiring employees to assign inventions created after leaving employment to their former employers.⁶⁰ Courts even began to uphold implied assignment agreements, such as those in policy manuals,⁶¹ despite the fact that an implied assignment agreement may fail to provide adequate notice to the employee.62

⁵⁸ Fisk, *supra* note 4, at 1186–87.

⁵⁹ See, e.g., Hulse v. Bonsack Mach. Co., 65 F. 864, 868 (4th Cir. 1895) (describing an ingenious man who would not have had the opportunity to develop his talent but for his employer giving him an outlet "where he could give his inventive faculties full play" and noting that the public benefited from the employer giving the employee such an opportunity, without which "in all human probability, the public would have lost the benefit of his discovery"). Today, assignment agreements are rarely found to be unenforceable. Pisegna-Cook, *supra* note 6, at 172–73.

⁶⁰ See, e.g., Hulse, 65 F. at 866–68.

⁶¹ See Fisk, supra note 4, at 1196; see also Univ. Pats., Inc. v. Kligman, 762 F. Supp. 1212, 1220–29 (E.D. Pa 1991) (denying an inventor's motion for summary judgement and concluding that whether the invention in question had to be assigned to the inventor's university under an implied contract in a policy manual was a question of fact for the jury).

⁶² According to one scholar, assignment agreements are meant to "serve three important functions: specifying the parties' rights, providing notice of those rights to the employee, and executing the transfer of rights." Howell, *supra* note 2, at 87.

⁵⁷ See, e.g., Hale & Kilburn Mfg. Co. v. Norcross, 199 Pa. 283, 293 (1901) (requiring the existence of a contract be shown by "clear and precise" evidence); Pressed Steel Car Co. v. Hansen, 137 F. 403, 405 (3d Cir. 1905) (concluding that conflicting testimony on whether an oral assignment agreement existed meant the agreement could not be enforced because it had not been clearly proven to exist); Hopedale Mach. Co. v. Entwistle, 133 Mass. 443, 443 (1882) (finding that an invention created after the expiration of a one-year assignment agreement belonged to the employee); Eustis Mfg. Co. v. Eustis, 51 N.J. Eq. 565, 573 (1893) (finding that a contract requiring the employee to "give the said company the benefit of any and all patents for cooking utensils made by or issued to him during the term of his office and employment in said company" only gave the employer a license for the invention, not ownership); Joliet Mfg. Co. v. Dice, 105 Ill. 649, 652 (1883) (concluding that the invention of a "check rower" did not fall within the contract, which required the employee to make "shellers and powers").

While courts still apply the "shop-right" and "hired to invent" doctrines in the absence of an express or implied contract,⁶³ contract law has largely supplanted those earlier doctrines. This Note will address what limitations, if any, should be imposed on assignment agreements through a uniform act.

III

MODERN EMPLOYEE INVENTION RULES AND STATUTES

The U.S. default rule is that an inventor owns his or her invention.⁶⁴ However, three previously-mentioned exceptions dramatically narrow this default rule: 1) an express contract provision stating that an employer owns an employee's inventions (an assignment agreement) will generally be upheld; 2) an employer who hires an employee for the purpose of inventing owns the employee's inventions even in the absence of an express contract provision;⁶⁵ and 3) an employee who is not hired for the purpose of inventing and who is not subject to an express assignment agreement does own his or her inventions, but the employer has a non-exclusive license to use the employee's inventions (a shop-right) if the inventions were made using the employer's time or other resources.⁶⁶

Naturally, most employers choose to use assignment agreements to contract around the default rule that an inventor owns his or her inventions, which is why they are the focus of this Note. Assignment agreements increase the certainty that the employer will have ownership rights to the invention, which allows the employer to begin investing in production and marketing

⁶⁴ Id. at 23.

By failing to provide adequate notice, implied assignments agreements fail to serve one of their three important functions.

⁶³ The "shop-right" and "hired to invent" doctrines, while important, will not be the focus of this Note. As noted above, employers have learned to use contract law to get around these rules, and assignment agreements have taken on increasing importance. As Brewer explains, "Where a written contract of employment is in place, determining an employer's obligation to assign starts with a review of the written document." Brewer, *supra* note 5, at 23. Assignment agreements are thus the main topic that will be addressed in this Note.

⁶⁵ In fact, the "hired to invent" doctrine only applies if there is no written agreement. *See* Saka, *supra* note 12, at 253. If an employee is hired for the purpose of inventing, presumably the employee receives a salary that reflects "full compensation for his or her inventive work." Teets v. Chromalloy Gas Turbine Corp., 83 F.3d 403, 407 (Fed. Cir. 1996). The employee would thus be overcompensated if he or she also retained ownership to the invention.

⁶⁶ See LaFrance, supra note 12, at 89, 92.

without worrying about employee "holdups."⁶⁷ Even if an employer orally rejects an employee's invention, the invention is still assigned to the employer if the employee signed an enforceable assignment agreement.⁶⁸ Freedom of contract principles mean that assignment agreements are generally enforceable.⁶⁹

Several states have enacted statutes that purport to protect employees from opportunistic employers.⁷⁰ However, the result of these statutes is that all inventions are assignable except for inventions created on the employee's own time, without use of the employer's resources, and that are unrelated to the employer's business and do not result from the employee's job (inventions meeting these conditions are hereinafter referred to as "protected inventions").⁷¹ One scholar concludes that "the statutes provide greater protection to the employer than the employee" and notes that the statutes afford little more protection to employees than the common law, which allowed judges to strike down "overreaching" assignment agreements on the grounds of adhesion and unconscionability.⁷² While

⁶⁸ See Goldwasser v. Smith Corona Corp., 817 F. Supp. 263 (D. Conn. 1993); see also Charles Tait Graves, *Is the Copyright Act Inconsistent with the Law of Employee Invention Assignment Contracts?*, 8 N.Y.U. J. INTELL. PROP. & ENT. L. 1, 16 (2018) ("[S]ince the invention assignment rules automatically transfer ownership at the moment of creation, if the employer owns the invention, there is nothing that can be verbally bargained over."). But see Camilla A. Hrdy & Mark A. Lemley, *Abandoning Trade Secrets*, 73 STAN. L. REV. 1, 8 (2021) (arguing for a change in this rule under a theory of "trade secret abandonment" which "provides a bit more room for employee-inventors whose employers didn't use their ideas to take them elsewhere and start anew").

⁶⁹ See Banks v. Unisys Corp., 228 F.3d 1357, 1359 (Fed. Cir. 2000). However, note that "even otherwise enforceable agreements can be subject to attack as ambiguous." Howell, *supra* note 2, at 81 (describing how ambiguity was used to attack an assignment agreement in a famous case about Barbie and Bratz dolls).

⁷⁰ See Cal. Lab. Code §§ 2870–2872 (West 2022); Del. Code Ann. ttt. 19, § 805 (West 2022); 765 Ill. Comp. Stat. Ann. 1062/2 (West 2022); Kan. Stat. Ann. § 44-130 (West 2022); Minn. Stat. Ann. § 181.78 (West 2022); N.C. Gen. Stat. Ann. §§ 66-57.1, 66-57.2 (West 2022); Wash. Rev. Code Ann. §§ 49.44.140, 49.44.150 (West 2022).

⁷¹ See Pisegna-Cook, supra note 6, at 178; Howell, supra note 2, at 81.

⁷² Pisegna-Cook, *supra* note 6, at 164, 173–75, 178, 181–82. Courts also may refuse to enforce an assignment agreement due to misrepresentation. Chew, *supra* note 49, at 286–87. At least one court has imposed a duty of fair dealing on an employer in the context of assignment agreements. *See* Roberts v. Sears

⁶⁷ See Pisegna-Cook, supra note 6, at 174–75; Hovell, supra note 45, at 875; Merges, supra note 5, at 12–15. Holdups are an economic concept that occur "whenever one person extorts abnormally large amounts of money from another person." Merges, supra note 5, at 12. Holdups often occur when one person is reliant on another person for the last piece or part to something involving multiple components, which the first person has already invested substantial amounts of money in; the longer the second person holds out, the more money the first person will have invested, and thus, the more money that the second person can extort. *Id.*

"employee-friendly" states appear to provide certainty that a "protected invention" will not be assigned—arguably much better than the unpredictability of the common law—the question merely shifts from asking whether the contract is adhesive and unconscionable to asking whether the invention relates to the employer's business or research.⁷³

The state statutes passed thus far are remarkably alike.⁷⁴ To take California as an example, it is against public policy and therefore unenforceable for an assignment agreement to:

apply to an invention that the employee developed entirely on his or her own time without using the employer's equipment, supplies, facilities, or trade secret information except for those inventions that either:

(1) Relate at the time of conception or reduction to practice of the invention to the employer's business, or actual or demonstrably anticipated research or development of the employer; or

(2) Result from any work performed by the employee for the employer. 75

Roebuck & Co., 573 F.2d 976 (7th Cir. 1978). This reflects that assignment agreements are often treated like any other contract under normal contract law principles. However, at least one scholar has found that "courts are generally unsympathetic" to an inventor who attacks an assignment agreement on contract law grounds. Hovell, *supra* note 45, at 876. Another goes a step further and argues that courts sometimes "enforce preinvention assignment agreements in order to avoid difficult contract issues . . . thereby obscuring and devaluing the contributions of individuals." Cherensky, *supra* note 4, at 600. Another observes that "IP assignment clauses exhibit many of the red flags of an unconscionable contract" and argues that courts should be more willing to find assignment agreements unconscionable, particularly where the time and scope of a holdover clause are overly broad. Knuppel, *supra* note 9, at 973–74.

⁷³ Pisegna-Cook, *supra* note 6, at 182. According to one scholar, "It is reasonable to expect . . . that most inventions—particularly most *important* inventions—an employee-inventor might produce *would* relate to the employer's business, and more specifically, to the actual work the employee-inventor performs for the employer; after all, this is the area of the employee-inventor's expertise and focus." Cherensky, *supra* note 4, at 625.

⁷⁴ Pisegna-Cook, *supra* note 6, at 178–79. They are all modeled after Minnesota's statute since Minnesota was the first state to pass an employee assignment agreement statute. *Id.*

⁷⁵ CAL. LAB. CODE § 2870 (West 2022). Note that time of conception is a "factintensive inquiry and guided in many ways by common sense." Hanna Bui-Eve, *To Hire or Not to Hire: What Silicon Valley Companies Should Know About Hiring Competitors' Employees*, 48 HASTINGS L.J. 981, 1005 (1997). The test for conception is "whether the inventor had an idea that was definite and permanent enough that one skilled in the art could understand the invention; the inventor must prove his conception by corroborating evidence." Sample, *supra* note 11, at 476 (citing Burroughs Wellcome Co. v. Barr Labs. Inc., 40 F.3d 1223, 1228 (Fed. Cir. 1994)).

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An employee has the burden of showing that an invention is not assignable under the statute, and the employer can win by showing just one of the following: that the employee used employer time, that the employee used employer resources, that the invention relates to the employer's business, or that the invention resulted from the employee's work.⁷⁶ Not surprisingly, one scholar who has analyzed cases interpreting these "employee-friendly" statutes has found that employers win assignment of the invention "more often than not."77 Employees very often use at least some work time or employer resources when creating an invention, and the statutes impose no requirement that there be more than a *de minimis* use of work time or employer resources for the invention to become assignable.⁷⁸ Additionally, even if the employee is careful not to use employer time or resources, the "related to" phrase in the statute can be construed quite broadly to result in assignment of a wide range of inventions.⁷⁹ Thus, even though there is ostensibly a narrow category of inventions that are assured

See Howell, supra note 2, at 96. According to Howell, the "relate to" phrase functions like proximate cause in torts, while the "result from" phrase functions like but-for cause. Id. at 96, 98. Arguments that an invention does not relate to the specific portion of the company in which the employee worked or that the invention was not aimed at the same target market the company focused on have both failed due to the broad way "relate to" can be construed. Id. at 97-98. Additionally, "employer's business" and "actual or demonstrably anticipated research or development" are quite broad and likely extend beyond the employer's legitimate interest. See Orly Lobel, The New Cognitive Property: Human Capital Law and the Reach of Intellectual Property, 93 Tex. L. Rev. 789, 823-24 (2015); Knuppel, supra note 9, at 978, 992-93 ("For instance, General Electric has business in the following technical areas: additives, aviation, digital, healthcare, lighting, power, and renewable energy. If a chemical engineer in General Electric's additives business tinkers with a design for a new insulin pump in her free time, that new design could fall within the anticipated research and development of General Electric's healthcare business even though the chemical engineer likely did not use the employer's confidential or proprietary information to create the design, since medical devices are outside the scope of her employment in the additives industry.").

⁷⁶ CAL. LAB. CODE § 2872 (West 2022); Howell, *supra* note 2, at 90. Interestingly, under the common law, the employer had the burden of proof to show ownership, further indicating these state statutes are not actually "employee-friendly." *See* Hovell, *supra* note 45, at 866.

⁷⁷ Howell, *supra* note 2, at 93.

⁷⁸ *Id.* at 93–96. Even use of a company computer would allow the employee's invention to be assigned. *Id.*; Iconix, Inc. v. Tokuda, 457 F. Supp. 2d 969 (N.D. Cal. 2006) (rejecting the employee's arguments that because a company laptop was used on vacation time, the invention was not assignable). Recent increases in the number of employees working from home on company-issued devices and the increased prevalence of "dual use" laptops and phones may have worrisome implications under statutes that do not require more than *de minimis* use of company resources. *See* Graves, *supra* note 68, at 14–15.

protection under the state statutes, the statutes benefit employees in only the rarest of cases, so it is ironic that they are deemed "employee-friendly."⁸⁰

One benefit of the "employee-friendly" statutes in comparison to Nevada's state statute is that at least under the "employee-friendly" statutes, the assignment agreement must exist to contract around the default rules. Nevada's state statute—the only one of its kind—creates a presumption that the employer owns an invention created "during the course and scope of the employment that relates directly to work performed during the course and scope of the employment" and only an "express written agreement" to the contrary can alter this presumption.⁸¹ A Nevada employee who creates an invention during their employment that relates directly to their work would have to assign the invention to their employer even if the employee never consented to an assignment agreement; in contrast, a California employee who makes an invention during their employment that relates directly to their work would have to assign the invention to their employer only if they consented to an assignment agreement covering the invention.⁸² Thus, while the California statute might not prevent many inventions from being assigned once an assignment agreement is in place, it has the benefit of requiring the employee to bargain away his or her ownership rights, which theoretically results in a higher salary for that employee.⁸³ In contrast, Nevada lessens employers' transaction costs but fails to provide any notice or opportunity for bargaining to the employee.⁸⁴

⁸⁴ Nevada employees who are unaware of the Nevada statute might not get salaries that reflect full compensation for their inventive work because they might agree to lower salaries thinking that they get to own their inventions;

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⁸⁰ See Graves, supra note 68, at 14 (explaining that the current failures of the state statutes may in part be caused by changes in the workplace; when the state statutes were passed, there was a clearer work-home divide due to no remote work, and there were far fewer multinational entities encompassing every conceivable department).

⁸¹ Nev. Rev. Stat. § 600.500 (West 2021).

⁸² *Id.*; Cal. Lab. Code § 2870 (West 2022).

⁸³ See Merges, supra note 5, at 16 ("[I]t is arguable that current salaries for R&D employees are a precise measure of the expected, risk-adjusted present value of all future employee inventions."); see also UREAA Prefatory Note (Unif. L. Comm'n 2021) ("[W]orkers with a delayed noncompete have no additional earnings or training than workers without a noncompete, but do have lower job satisfaction and longer job tenure. Starr finds that noncompete agreements presented at the outset of the job offer, by contrast, are associated with higher wages and more training relative to unbound workers.").

While the "employee-friendly" state statutes have received much criticism for only protecting a narrow subset of inventions and for applying to all classes of employees, the statutes arguably do a good job of protecting employers from employee holdups, which benefits the economy because employers are able to invest more in research and development ("R&D").⁸⁵ Employer investment in R&D also benefits inventors themselves; as one court famously put it:

Here we have the case of an ingenious man, without opportunity of developing his talent, and struggling under difficulties, enabled by this contract to secure employment in a large and prosperous corporation, where he could give his inventive faculties full play. He in this way was afforded every opportunity . . .⁸⁶

The state statutes have certainly had a lasting impact. According to one scholar, "companies often mimic the structure of these state statutes in employment agreements, even for employees residing in other states."⁸⁷ This Note takes the position that the state statutes are a useful tool to build off of for UIAAA because the statutes mostly preserve freedom of contract; usually result in assignment of inventions to the employer, which prevents holdup problems and benefits the economy, inventors, and society; and simply need a few key revisions that would enhance notice to employees, increase employee bargaining power, and increase certainty regarding "reasonableness."⁸⁸ With these changes, UIAAA can properly balance the interests of employers and employees.

- ⁸⁷ Graves, *supra* note 68, at 8, n.11.
- ⁸⁸ See infra Part V.

indeed, Nevada employers could emphatically promise employees that they will get to own their inventions since only express written agreements will alter the presumption that the employers own the inventions. LaFrance, *supra* note 12, at 98. Employees will learn later that their "reliance was misplaced" because the oral contracts did not bind the employers, who now own the inventions. *Id.*; *see also infra* Part V, Section A.

⁸⁵ Henrik D. Parker, Note, *Reform for Rights of Employed Inventors*, 57 S. CAL. L. REV. 603, 614 (1984) (arguing that the "most glaring omission in the state laws is the failure to distinguish between classes of employees"); Merges, *supra* note 5, at 12–19 (explaining that a complementary part—which would include any invention related to an employer's business and would likely also include any invention created with company resources—is likely to create holdup problems, which result in underinvestment in R&D).

⁸⁶ Hulse v. Bonsack Mach. Co., 65 F. 864, 868 (4th Cir. 1895).

Why a Uniform Invention Assignment Agreement Act (UIAAA) is Needed

The Uniform Law Commission ("ULC") proposes statutes "in areas of the law where uniformity between the states is Uniform acts provide value through clarity. desirable."89 consistency, and predictability.⁹⁰ The lack of clarity, consistency, and predictability in the common law "shop-right" and "hired to invent" doctrines is what led employers to use assignment agreements in the first place.⁹¹ While employers tend to benefit from the application of contract law principles, which are more employer-friendly than the common law doctrines,92 employers still could benefit from increased clarity, consistency, and predictability in the enforceability of assignment agreements since they need to be certain they will own an employee's invention to start investing in complementary parts, production, and marketing.⁹³ Clarity, consistency, and predictability in the enforceability of assignment agreements would also benefit employees by increasing employees' knowledge of the law and thereby increasing their bargaining power, as well as improving their mobility.94

⁹¹ See Fisk, supra note 4, at 1181 (explaining that uncertainty problems exist with the "hired to invent" and "shop-right" doctrines, which are "notoriously flexible and indeterminate . . . impeding planning and inviting expensive litigation").

⁹² See supra Part II.

⁹³ See Merges, supra note 5, at 15; see also Hershovitz, supra note 18, at 197 ("Certainty is economical.").

⁸⁹ *About Us*, UNIFORM LAW COMMISSION, https://www.uniformlaws.org/aboutulc/ overview [https://perma.cc/ZGY3-WZFB] (last visited June 28, 2024).

⁹⁰ UREAA Prefatory Note (Unif. L. Comm'n 2021) ("Business-community and employee-advocate groups are frustrated both with the lack of clarity within most states on when noncompetes are enforceable or unenforceable and with the variety of approaches among states. State-to-state and within-state variations make it difficult for national employers to adopt consistent policies for the various jurisdictions in which they do business and for workers to know their rights and obligations under a noncompete. The same is true of employees who need predictability in our increasingly mobile society.").

⁹⁴ Knuppel argues that even though engineers and scientists have advanced degrees, they are unlikely to understand the implications of an assignment agreement without a legal degree. Knuppel, *supra* note 9, at 983. If the law were clearer and more consistent—e.g., through adoption of UIAAA—it would be easier for employees to understand the law and their rights, especially if they were given advance adequate notice of them (as proposed in UIAAA). *See infra* Part V, Section A. If employees are aware that they are giving up ownership, they are more likely to bargain for a greater salary or other benefits. *See* LaFrance, *supra* note 12, at 98 (stating that employees who think they retain ownership are likely to agree to lower salaries). Additionally, clarity, consistency, and predictability for employees may have positive effects on employee mobility because unawareness

Additionally, a uniform act provides an opportunity to balance employer and employee interests in such a way that everyone wins.⁹⁵ Employers and employees each contribute to the creation of inventions; employees contribute their brain power, and employers give them the opportunity, facilities, and tools to exercise that brain power and then add value by further developing the invention.⁹⁶ Recognizing this, UIAAA will attempt to balance the interests of both employers and employees and provide a solution that will benefit employers, employees, society, and the U.S. economy.

V

WHAT UIAAA SHOULD CONTAIN

This Note will argue for three essential provisions that should be included in UIAAA. While further provisions could be explored by the ULC,⁹⁷ this Note argues that UIAAA could balance the rights of employers and employees and achieve the goals of clarity, consistency, and predictability by including: 1) a requirement of advance adequate notice, 2) guidelines for the "reasonableness" of holdover provisions, and 3) a requirement of additional consideration for afterthought agreements.

A requirement of advance adequate notice would benefit employees by increasing their knowledge of the law and their rights, giving them time to consult with a lawyer, and improving their bargaining power. It would also take employers' interests into consideration by allowing assignment agreements to continue to be enforced under ordinary contract law principles if notice is provided, which ensures employers get what they paid for.

⁹⁶ See Cherensky, supra note 4, at 605–06; Fisk, supra note 4, at 1154–56, 1193–94; Hulse v. Bonsack Mach. Co., 65 F. 864, 868 (4th Cir. 1895); U.S. v. Dubilier Condenser Corp., 289 U.S. 178, 212 (1933) (Stone, J., dissenting).

of the law may impede an employee from leaving a company if he or she thinks an unenforceable contract is enforceable. *See* UREAA Prefatory Note (Unif. L. Comm'n 2021).

⁹⁵ See Pisegna-Cook, supra note 6, at 185 ("Enacting a statute directed at preinvention assignment agreements enables the state legislatures to set policy regarding the balance between employer and employee rights."); see also Sample, supra note 11, at 468 ("Restoring some balance to the competing interests of employers and employee-inventors is critical.").

⁹⁷ For example, the ULC might consider whether there should be a class of employees (e.g., those defined as non-inventive employees under the common law) for whom assignment agreements are banned completely, similar to how UREAA prohibits restrictive employment agreements other than confidentiality agreements and training-repayment agreements for workers making less than the state's annual mean wage. *See* UREAA § 5 (Unif. L. Comm'n 2021).

Guidelines for the reasonableness of holdover provisions, including a cap of one year on the holdover, would protect employees—who often lack bargaining power—from overreaching employers. A presumption of reasonableness if the guidelines are met would benefit employers by increasing their certainty that their assignment agreements are enforceable.

A requirement of additional consideration for afterthought agreements would require employers to compensate employees for their loss of ownership rights with a material increase in compensation even when employees are not able to bargain for such an increase, but employers would still be allowed to utilize afterthought agreements to protect their interests.

A. Requirement of Advance Adequate Notice

The salary that an employer pays an inventor is likely to be "a precise measure of the expected, risk-adjusted present value of all future employee inventions."⁹⁸ Because the inventor chooses the guarantee of a salary in exchange for ownership rights in any invention created, thereby casting the risk of inventive failure onto the employer, it is only fair that the employer is allowed to "obtain the benefit of any bargains reached" per freedom of contract principles when the inventor does create something.⁹⁹ Indeed, it is best that employers bear the risk of "inventive failure" since they are "more efficient bearers" of risk than employees.¹⁰⁰

However, for a salary alone to be fair compensation, the employee-inventor must actually *choose* to bargain away his or her invention ownership rights.¹⁰¹ The problem with

⁹⁹ Banks v. Unisys Corp., 228 F.3d 1357, 1359 (Fed. Cir. 2000).

⁹⁸ See Merges, supra note 5, at 16. Of course, what is true in economic theory may not be true in practice. Hershovitz maintains that inventors are underpaid since they are not given bonuses when their patents result in millions or hundreds of millions of dollars for a company. See Hershovitz, supra note 18, at 191. But, even Hershovitz acknowledges that employers have strong arguments that they supply salaries, places to work, materials, and resources, and "but for" the employers, the inventive employees would not have developed their inventions. *Id.*

¹⁰⁰ See Merges, supra note 5, at 16; see also Yucheng Wang, Comment, A Statutory Patent Reversion Period May End the Debate on Employee Inventions, 51 J. MARSHALL L. REV. 675, 695 (2018) (proposing that because employers have more resources, employers are "more willing and financially capable to take high risk in investments than individual employees").

¹⁰¹ For a similar argument, *see* Hershovitz, *supra* note 18, at 207 (arguing that non-inventive employees do not actually bargain away their invention ownership rights when they sign boilerplate assignment agreements since the employees have no idea that they will ever invent something, and concluding that since it is not the "intent" of both parties to assign away ownership, contract law would

Nevada's statute, for example, is that an employee-inventor might not get fair compensation if the employee is unaware of Nevada's statutory presumption that the employer owns employee inventions created "during the course and scope of the employment that relates directly to work performed during the course and scope of the employment" even without an assignment agreement.¹⁰² Employee-inventors in Nevada will not demand salaries that fully reflect their inventive work and loss of ownership rights if they (quite reasonably) believe that the absence of assignment agreements means they retain ownership of their inventions.¹⁰³ Even in states other than Nevada, employee-inventors may hold incorrect assumptions about the legal implications of inventing under an assignment agreement, which may result in the employee-inventors failing to bargain for salaries reflective of the rights they are giving 100^{-104}

Some scholars argue that salaries are inadequate to properly incentivize innovation, which has long been recognized as key to the success of the U.S. economy.¹⁰⁵ Most other industrialized nations protect employee-inventors more than the U.S. does, which these scholars argue is the reason for the U.S.'s relative decline in patent productivity.¹⁰⁶ Perhaps providing further evidence of the importance of incentivizing innovation, the states that have adopted the "employee-friendly" statutes mentioned above tend to have "the hottest high-tech economies."¹⁰⁷

While it is true that an inventor may desire recognition for his or her work that a mere salary cannot provide,¹⁰⁸ the question that is relevant to the success of the U.S. economy is whether inventors need the incentive of ownership rights

be failing to effectuate the intent of the parties if the assignment agreement was enforced); *see also* Morris, *supra* note 40, at 52, n.28 (stating that most employees will sign assignment agreements assuming they will never invent something).

 $^{^{102}}$ See supra note 84 and accompanying text; LaFrance, supra note 12, at 88, 98.

¹⁰³ See LaFrance, supra note 12, at 98.

¹⁰⁴ See Knuppel, supra note 9, at 983.

 $^{^{105}}$ See, e.g., Parker, supra note 85, at 605 (arguing that "monetary compensation channeled directly to the inventors" is necessary to incentivize innovation); see also U.S. CONST. art. I, § 8, cl. 8 (Congress shall have the power to issue patents "[t]o promote the Progress of Science").

¹⁰⁶ See Parker, supra note 85, at 615, 622.

¹⁰⁷ See LaFrance, supra note 12, at 110–11.

¹⁰⁸ See Sample, supra note 11, at 470. If this is the case, the inventor can be an entrepreneur rather than work for a company's R&D department, but he or she must accept the corresponding risk. See Merges, supra note 5, at 31.

in their inventions to be motivated to invent. The answer that they typically do not seems clear from the fact that most inventors choose to work for an employer rather than working as entrepreneurs, reflecting a low-risk approach as well as a desire to take advantage of the numerous resources that corporate R&D departments have to offer.¹⁰⁹ Employee ownership is unnecessary if the employer pays the amount that is "a precise measure of the expected, risk-adjusted present value of all future employee inventions," *but this will only occur when the employee-inventor has advance adequate notice of the law and is able to bargain for a salary reflective of the inventive rights given up.*¹¹⁰

Like the UREAA notice requirement for restrictive employment agreements, the UIAAA notice requirement for assignment agreements should require employers to provide a copy of the proposed assignment agreement to a prospective worker at least fourteen days before the prospective worker accepts work or commences work, whichever is earlier.¹¹¹ This would give employee-inventors time to make an informed decision about whether to work for that employer rather than as an entrepreneur, to consult with a lawyer if desired, and to bargain with their employer for a greater salary or benefits, but it would also maintain the status quo of enforcing assignment agreements under ordinary contract law principles as long as notice is provided,¹¹² which ensures employers get what they paid for.

One exception where UIAAA should override contract law is warranted. While freedom of contract principles generally

¹⁰⁹ See Merges, supra note 5, at 30–31 (explaining that inventors are "revealing a preference for relatively low-risk rewards"); Hulse v. Bonsack Mach. Co., 65 F. 864, 868 (4th Cir. 1895) (describing employment at a "large and prosperous corporation" as being a place where the inventor "could give his inventive faculties full play"); Sample, *supra* note 11, at 464 (explaining that "necessary resources and equipment are frequently too expensive—or even unlawful—for the employeeinventor to acquire on their own.").

¹¹⁰ See Merges, supra note 5, at 16; see also LaFrance, supra note 12, at 103 (explaining that copyright law's scope of employment test "seems to reflect a concern that individuals should have reasonable advance notice if their future creative efforts will not belong to them, so that they can strike an appropriate bargain with the party that seeks to obtain those rights").

¹¹¹ See UREAA § 4(a)(1) (Unif. L. Comm'n 2021); see also Pisegna-Cook, supra note 6, at 186 (arguing that state legislation should address "mandatory employee notification of rights").

¹¹² Like UREAA, if notice of an assignment agreement is not provided, the agreement would be prohibited and unenforceable. *See* UREAA § 4(a)(1) (Unif. L. Comm'n 2021); *see also* Appendix.

dictate that an employee-inventor should be allowed to bargain away his or her ownership rights, a departure from these principles is justified where an invention is unrelated to the employer's business or the employee's work, is made on the employee's own time, and is made without employer California's statute is a desirable building resources.¹¹³ block for UIAAA because while-as explained above-salaries are generally enough to incentivize innovation, overly-broad assignment agreements covering inventions unrelated to the employer's business or employee's work and made without employer time or resources "discourage inventive employees from pursuing private investigations outside the scope of their work assignments."¹¹⁴ This is not socially desirable because the U.S. economy will be more successful if employee-inventors are motivated to invent off the job, and the narrow category of "protected inventions" does not create a holdup problem for employers, unlike most other inventions.¹¹⁵ Thus, even with notice, an assignment agreement that attempts to assign a "protected invention" should be prohibited and unenforceable under UIAAA.¹¹⁶

To further the goal of advance notice, UIAAA should also require employers to provide employees with a separate notice prescribed by the State Department of Labor. UREAA requires a separate notice by the State Department of Labor to inform workers of the requirements of UREAA and to explain that employers are subject to penalties if they enter into a prohibited agreement.¹¹⁷ Similarly, the "employee-friendly" state statutes contain notice provisions informing employees of their rights; for example, California requires that the employer "at the time the agreement is made, provide a written notification to the employee that the agreement does not apply to an invention

¹¹³ See Parker, supra note 85, at 608; Cal. Lab. Code § 2870 (West 2022).

¹¹⁴ See Parker, supra note 85, at 608; see also Hovell, supra note 45, at 882– 83, 887 (concluding that the state statutes only differ slightly from the common law and generally do not address the "more fundamental problem of giving the inventor a stake in his invention," but also concluding that the "statutes restore a contractual balance between the inventor and his employer," and "are necessary because they protect the inventor by reducing his employer's ability to obtain a patent unrelated to the inventor's work").

¹¹⁵ See Parker, supra note 85, at 608; see also Merges, supra note 5, at 12– 19 (explaining that a complementary part—which would include any invention related to an employer's business and would likely also include any invention created with company resources—is likely to create holdup problems, which result in underinvestment in R&D).

¹¹⁶ See Appendix.

¹¹⁷ See UREAA § 4(a)(2) (Unif. L. Comm'n 2021).

which qualifies fully under the provisions of Section 2870."¹¹⁸ UIAAA should take a similar approach to UREAA and the state statutes by informing employee-inventors of the law and their rights under UIAAA, but it should also focus on informing employee-inventors of the default common law rules in the absence of an assignment agreement so that employeeinventors are more knowledgeable about what they are giving up if they sign an assignment agreement.¹¹⁹ Additional legal knowledge combined with the fourteen-day time frame in which to utilize it would substantially strengthen employee-inventors' bargaining power.

Another way that UIAAA can further the goal of advance adequate notice and ensuring that employee-inventors bargain for a salary reflective of the inventive rights they are giving up is requiring all assignment agreements to be express written contracts. This would not be totally unprecedented; under UREAA, the employer must provide a copy of a proposed restrictive employment agreement in a record to the employee, and in copyright law, a work created outside the scope of employment belongs to the creator unless the creator agrees in writing to transfer the rights.¹²⁰ As one scholar explains, in copyright law, the result of a written agreement is "actual notice," which ensures that "the employee knows, before creating the work in question, that the employer is likely to be the owner of that work, and the employee therefore has the opportunity to bargain for appropriate compensation before producing the work."¹²¹ Additionally, because the employee has received "appropriate compensation," the employee "should

¹²⁰ See UREAA § 4(a)(1) (Unif. L. Comm'n 2021); LaFrance, *supra* note 12, at 103. ¹²¹ LaFrance, *supra* note 12, at 103–04. See also UREAA § 4 Comment (Unif. L. Comm'n 2021) ("Notice is critical for an effective restrictive agreement. Recent empirical studies suggest that workers who are given advance notice tend to get higher wages and more training than workers without a noncompete, but that workers without notice tend not to get offsetting benefits. Notice is thus a key component of a well-functioning labor market. A worker cannot evaluate the relative merits of a restrictive agreement that the worker does not know about.")

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¹¹⁸ See Cal. Lab. Code § 2872 (West 2022).

¹¹⁹ See Chew, supra note 49, at 289 (noting employees are not aware of the law or their rights, and since employers try to hide this from employees given that they have a "vested interest" in doing so, employees do not know what they are giving up); see also id. at 312 ("[F]aculty should be knowledgeable about their legal rights and about the consequences of their assignment to the university. They should know that as a matter of law they own their inventions. If they do assign their inventions, they should understand that they are giving up ultimate control of the invention in such fundamental questions as product design, licensing, distribution, and royalties.").

not be surprised" when the employer later claims ownership.¹²² For similar reasons, requiring assignment agreements to be in writing makes sense.

While not totally unprecedented, requiring assignment agreements to be in writing would be a change to current law, which typically enforces implied assignment agreements.¹²³ However, the law did not always enforce implied assignment agreements,¹²⁴ and for good reason: implied assignment agreements may fail to provide advance adequate notice to employee-inventors that they are giving up their ownership rights, which means they may not bargain for the appropriate level of compensation.¹²⁵ Notably, requiring assignment agreements to be put in writing is no great burden on employers; smart employers are likely to put their assignment agreements in writing anyway to increase certainty that their assignment agreements will be enforced since some contracts have been found to be unconscionable when they are oral or implied.¹²⁶ Even though courts will sometimes enforce implied-in-fact

¹²² LaFrance, *supra* note 12, at 104.

¹²³ See Teets v. Chromalloy Gas Turbine Corp., 83 F.3d 403, 407 (Fed. Cir. 1996) ("[A] court must examine the employment relationship at the time of the inventive work to determine if the parties entered an implied-in-fact contract to assign patent rights."); Banks v. Unisys Corp., 228 F.3d 1357, 1360 (Fed. Cir. 2000) (employee's refusal to execute assignment meant there was a genuine question of material fact regarding whether employee impliedly agreed to assign patent, making summary judgement on the issue inappropriate); Daniel Orifice Fitting Co. v. Whalen, 18 Cal. Rptr. 659, 665 (Ct. App. 1962) (employee's prior assignment of patents to employer implied that the employee considered himself bound to assign the patent in question); Dickman v. Vollmer, 736 N.W.2d 202, 208 (Wis. Ct. App. 2007) ("An oral agreement to assign a patent may be specifically enforced in equity upon sufficient proofs.").

¹²⁴ See supra Part II. Courts were reluctant to enforce assignment agreements at first: they required clear evidence that the agreement existed, including that it was in writing, and then they would strictly construe it against the employer. See supra note 57 and accompanying text. Although courts had good reason to enforce assignment agreements more frequently as research and development became a more collective enterprise because of the value of employer-created opportunities for invention, implied assignment agreements fail to serve one of the three important functions of assignment agreements: providing notice. See supra notes 58, 59, and 62 and accompanying text.

¹²⁵ See, e.g., Chew, supra note 49, at 289 (explaining that university "policy statements" are a "questionable" way to assign faculty inventions because faculty members "often are unaware policy exists relating to the assignment of their research results" and the policy statements "are not products of negotiation between prospective faculty members and university officials").

¹²⁶ See Pisegna-Cook, supra note 6, at 174–75; see also Hovell, supra note 45, at 875 ("Most modern employers, unwilling to allow vague common law doctrines to determine their patent rights, use express written contracts . . . ").

assignment agreements, not having an express agreement is risky for the employer.¹²⁷

In summation, UIAAA's notice provision would appropriately balance the interests of both employers and employees by supplying an employee with advance adequate notice of an assignment agreement—by providing the document in written form—at least fourteen days before an employee-inventor accepts work or starts work (whichever is earlier).¹²⁸ The written assignment agreement would be accompanied by a separate notice informing the employee of the rules under UIAAA, his or her rights under UIAAA, and the default rules in the absence of a signed assignment agreement, which ought to make clear to the employee in plain language what he or she would be giving up by signing the assignment agreement.¹²⁹

B. Guidelines for the "Reasonableness" of Holdover Provisions

Employee-inventors often face dramatically unfair bargaining power when their employers ask them to sign assignment agreements.¹³⁰ The employee-inventors have not created their inventions yet, so they do not know what they are giving up, and in the case of non-inventive employees, may not think they are giving up anything at all.¹³¹ Additionally, unionizing "is not a viable alternative" and employers can "pick and choose" amongst potential employees, especially when there is high unemployment.¹³² Further, employees are often offered boilerplate assignment agreements on a "take it or leave it" basis and lack

¹²⁸ See Appendix.

¹²⁹ Id.

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¹²⁷ Courts are wary about implying assignment agreements because they do not want to discourage innovation, and so they look carefully at whether there was a "meeting of the minds." *See* LaFrance, *supra* note 12, at 92–93; *Teets*, 83 F.3d at 407.

¹³⁰ See Pisegna-Cook, supra note 6, at 164; see also Hershovitz, supra note 18, at 207 (noting non-inventive employees in particular face unfair bargaining power). While a "super-inventor" like Benjamin Franklin or Thomas Edison may be in a strong position to bargain, the average employee-inventor likely is not. See Hershovitz, supra note 18, at 208; see also Knuppel, supra note 9, at 981– 82 (explaining that while courts sometimes consider whether an individual is a "professional" in determining whether an employee has equal bargaining power, it is an incorrect assumption to assume that a professional—such as an inventor with an advanced degree—actually has more bargaining power, and instead, it is more likely that workers in highly-sought after fields have more bargaining power).

 $^{^{131}}$ $\,$ See Pisegna-Cook, supra note 6, at 164; Hershovitz, supra note 18, at 207.

¹³² See Parker, supra note 85, at 609.

the legal knowledge necessary to understand the implications of signing. $^{\scriptscriptstyle 133}$

Assignment agreements frequently contain "holdover provisions," which require employee-inventors to assign certain inventions created within set periods of time after employment ends and which courts routinely uphold so long as the provisions are "reasonable."¹³⁴ Employers worry that employees will conceal inventions created during employment and impose holdover provisions to attempt to prevent this, though as one scholar has noted, an employee-inventor is "equally likely" to conceal an invention during the holdover period if he or she would do so during the employment period.¹³⁵ Indeed, in *General Signal Corp. v. Primary Flow Signal, Inc.*, an employee miraculously had a "eureka" moment a mere five days after the expiration of a holdover provision.¹³⁶

The test applied to see if a holdover provision is reasonable is almost identical to that used for noncompete agreements: balancing the interests of the employee, employer, and society by upholding agreements that are reasonable in time, scope, and geographic area if they are necessary to protect an employer's legitimate interest and do not injure the public.¹³⁷

¹³⁴ See Hershovitz, supra note 18, at 188.

¹³⁵ *Id.* at 198, 209. Employers also worry that their expenditures on employees will aid the competition because employees will learn on the job and take that knowledge to competitors. *Id.* at 198; *see also* Schaller, *supra* note 18, at 26 ("Needless to say, given the amount of time and money employers invest in recruiting and training their employees, watching them depart to competitors is an unhappy experience.").

¹³⁶ Nos. 85-0471B & 86-034B, 1987 U.S. Dist. LEXIS 6929 (D.R.I. July 27, 1987). The court refused to believe that the employee-inventor had a "eureka" moment, noting that the "concept at issue does not lend itself to such sudden discovery" and concluding that the concept "must have existed in Mr. Halmi's mind before his employment with GSC ended." *Id.* at *11–12. Employers thus need not worry about employee concealment in the absence of holdover provisions because if an employer can show that an employee must have developed the invention while employed, the employer is assigned the invention. *See* Hershovitz, *supra* note 18, at 210–11. *But see* Jamesbury Corp. v. Worcester Valve Co., 443 F.2d 205 (1st Cir. 1971) (employee made drawings of patent concepts only two weeks after the assignment agreement end date, but the court held there was no invention during his employment within the meaning of his contract because none of the ideas were put in tangible form during employment).

 137 See Ingersoll-Rand Co. v. Ciavatta, 542 A.2d 879, 888–92 (N.J. 1988); see also UREAA § 7 Comment (Unif. L. Comm'n 2021) ("In cost-benefit terms, the reasonableness inquiry can be framed as asking whether the benefits of the agreement outweigh the harms.").

¹³³ See Sample, supra note 11, at 462; Knuppel, supra note 9, at 983; see also Wang, supra note 100, at 696 (arguing that the economic theories offered by Merges to justify the status quo of assignment agreements "do not seem to address the potential procedural unfairness to employees").

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While it is essential to stick with the status quo of automatic assignments for several economic reasons,¹³⁸ guidelines for the reasonableness of holdover provisions should be imposed through UIAAA to improve the clarity, consistency, and predictability of the law across the fifty states. The test for holdover provisions is currently quite varied and unpredictable because each jurisdiction applies their own law on covenants not to compete.¹³⁹ As one court put it:

This is not one of those questions on which the legal researcher cannot find enough to quench his thirst. To the contrary there is so much authority it drowns him. It is a sea—vast and vacillating, overlapping and bewildering. One can fish out of it any kind of strange support for anything, if he lives so long.¹⁴⁰

Employers need certainty that assignment agreements with holdover provisions will be effective.¹⁴¹ The cost of litigating an intellectual property dispute has gone up, and the amount of damages awarded in such disputes has increased.¹⁴² Because employees have less bargaining power than employers, courts

138 See Merges, supra note 5, at 12 (describing four inefficiencies that could result from giving employees ownership of their inventions: "(1) bargaining and transaction costs, particularly employee holdups; (2) the difficulties of monitoring and compensating the members of R&D groups; (3) principal-agent problems, in particular the danger that employee ownership would over-reward inventive tasks at the expense of other job requirements; and (4) a change in the implicit risk allocation between employer and employee"); Sample, supra note 11, at 465 (explaining that automatic assignment is important because otherwise "businesses would be unable to use inventions created by teams due to the difficulty of obtaining consensus" since each inventor on a team can only assign their interest, and the employer must collect all of the interests or else only be considered a "partial assignee" and be unable to "make decisions about implementation and use of the property"). Most importantly, assignment before the invention is created "solves the post-grant transactional bottleneck" and can "square away ownership issues-thus preventing costly bargaining breakdownbefore property rights are granted." Merges, supra note 5, at 4.

¹³⁹ See Sample, supra note 11, at 468; Lobel, supra note 79, at 826–27.

¹⁴⁰ Arthur Murray Dance Studios of Cleveland, Inc. v. Witter, 105 N.E.2d 685, 687 (Ohio Ct. C.P. 1952). Of course, state adoptions of UREAA would bring clarity, consistency, and predictability to the enforceability of noncompetes. However, since UREAA explicitly exempts holdover provisions from its reach, UIAAA must adopt its own guidelines for the reasonableness of holdover provisions.

¹⁴¹ See Simmons supra note 3, at 49 ("[W]hen a patent assignment is found to be ineffective, the consequences can be extreme. This is particularly true where the employer acts on its belief that an assignment is effective and incurs costs associated with the patented technology, only to learn that they do not, in fact, hold any patent rights.").

¹⁴² See Howell, supra note 2, at 83.

will try to find ways to "paternalistically" protect employees.¹⁴³ Thus, UIAAA's guidelines—though employee-friendly—will also benefit employers.

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Rather than reinventing the wheel, UIAAA should simply include guidelines for reasonableness similar to those in UREAA since similar interests are implicated and the common law for holdover provisions matches that for noncompetes.¹⁴⁴ UREAA lists four legitimate business interests: the sale of a business, the creation of a business, trade secrets, and ongoing client or customer relationships.¹⁴⁵ Of the four, trade secrets are the only legitimate business interest for holdover provisions because employee-inventors could exploit trade secrets learned on the job to invent something after the employed.¹⁴⁶

Under the common law, "confidential information" has also long been held to be a legitimate interest of the employer.¹⁴⁷ The ULC decided not to include the broader interest of "trade secret or other confidential information" in UREAA because it is "confusing at best and possibly pernicious" since "it is hard to articulate a clear example of confidential information sufficient to justify a noncompete but not amounting to a trade secret."¹⁴⁸ However, in the assignment agreement context, a clear example of such confidential information has been articulated: the creative brainstorming that is characteristic of "think-tank" environments.¹⁴⁹ The court in Ingersoll-Rand Co. v. Ciavatta recognized that "highly specialized, current information not generally known in the industry, created and stimulated by the research environment furnished by the employer, to which the employee has been 'exposed' and 'enriched' solely due to his employment" may qualify as a legitimate interest justifying a restraint on using such information for the benefit of one other than the employer.¹⁵⁰ In contrast, there can be no restraint on

¹⁴³ *Id.* at 87–88; Sample, *supra* note 11, at 462–63.

¹⁴⁴ See Ingersoll-Rand Co. v. Ciavatta, 542 A.2d 879, 888–92 (N.J. 1988).

¹⁴⁵ UREAA § 8 (Unif. L. Comm'n 2021).

¹⁴⁶ In contrast, an ongoing client or customer relationship is unlikely to help the employee invent something for the employee's profit after leaving employment, so the employer's interest is not implicated the way it is for a trade secret or in the noncompete context where an employee who steals an ongoing client or customer relationship hurts the employer's business. Additionally, the sale or creation of a business are not applicable to the assignment agreement context.

¹⁴⁷ See Ciavatta, 542 A.2d at 893–94.

¹⁴⁸ UREAA § 8 Comment (Unif. L. Comm'n 2021).

¹⁴⁹ See Ciavatta, 542 A.2d at 893–94.

¹⁵⁰ Id. at 894.

general skills and knowledge learned on the job because that would be against public policy.¹⁵¹

The court in *Ciavatta* refused to "define the exact parameters" of the protectable interest in "highly specialized, current information," but it recognized the "business reality that modern day employers are in need of some protection against the use or disclosure of valuable information regarding the employer's business."¹⁵² *Ciavatta* reflects the crucial historical shift away from lone "genius" entrepreneurs tinkering in their garages toward team-based inventing in corporate R&D laboratories.¹⁵³ Thus, UIAAA ought to similarly reflect this shift by recognizing not only trade secrets but other confidential information as a legitimate interest of the employer.¹⁵⁴

Whether an employer has a legitimate interest in an assignment agreement is an important issue, but even a legitimate business interest begins to disappear the longer an employee has stopped working for their old employer, which translates into the reasonableness of the length of the holdover period.¹⁵⁵ Currently, the test for reasonableness of holdover provisions focuses on the scope of the type of invention and the duration of the assignment obligation.¹⁵⁶ Geographical area does not tend to come up in holdover provision cases.¹⁵⁷ Holdover provisions that are unlimited in time and/or scope will likely be deemed unreasonable,¹⁵⁸ but otherwise there is great variability in what is enforced as reasonable.¹⁵⁹

The scope of a holdover provision can be narrowed in one of three ways: 1) to only cover inventions made in areas in which the employee worked or had contact, 2) to cover inventions made

¹⁵⁵ See Knuppel, supra note 9, at 990. While holdover provisions may be "necessary to the maintenance of decent standards of morality in the business community," they also "diminish potential competition" and "impede the dissemination of ideas and skills throughout industry," and therefore must be limited. See Winston Rsch. Corp. v. Minn. Mining & Mfg. Co., 350 F.2d 134, 137– 38 (9th Cir. 1965).

¹⁵⁶ See Howell, supra note 2, at 87.

¹⁵⁷ See Peter Caldwell, Employment Agreements for the Inventing Worker: A Proposal for Reforming Trailer Clause Enforceability Guidelines, 13 J. INTELL. PROP. L. 279, 291, n.43 (2006).

¹⁵⁸ Lobel, *supra* note 79, at 818–19. *See, e.g.*, Guth v. Minn. Mining & Mfg. Co., 72 F.2d 385, 388-89 (7th Cir. 1934) (invalidating holdover provision that was unlimited in time and scope); Aspinwall Mfg. Co. v. Gill, 32 F. 697, 700 (C.C.D.N.J. 1887) (invalidating holdover provision that was unlimited in time and scope).

¹⁵⁹ See Hershovitz, supra note 18, at 199–201; Sample, supra note 11, at 459.

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¹⁵¹ See Morris, supra note 40, at 42.

¹⁵² *Ciavatta*, 542 A.2d at 894.

¹⁵³ *Id.*; *see supra* Part II.

¹⁵⁴ See Appendix.

in all areas in which the employer operated its business at the time the employee left, or 3) to cover inventions made in all areas in which the employer does business and all areas in which the employer may have an interest in developing business.¹⁶⁰ Limiting what kind of scope is deemed "reasonable" and what length holdover is deemed "reasonable" is desirable because holdover provisions raise employee mobility problems.¹⁶¹ Competitors do not want to risk hiring an inventive employee whose inventions might fall under a prior employer's assignment agreement.¹⁶² Overly broad holdover provisions may also discourage employees from creating anything after the employment relationship ends, which harms society and the economy.¹⁶³

For these reasons, UIAAA should limit the "reasonable" scope of holdover provisions to inventions made in areas in which the employee worked or had contact and should limit the "reasonable" timeframe of holdover provisions to one year.¹⁶⁴ UREAA similarly prohibits noncompetes lasting over a year where the employer's legitimate business interest is a trade secret,¹⁶⁵ and the rationale behind this restriction in UREAA is equally applicable to holdover provisions under UIAAA:

One year is a significant burden for a worker to be restricted from the industry where the worker is most productive, and at the same time a year often diminishes the value of a trade secret [O]n balance, after a year the detriment to a worker's professional life generally exceeds the continued value to further protecting the employer's trade secrets¹⁶⁶

¹⁶² *Id.*; *see also* Sample, *supra* note 11, at 475. While it is important to protect an employer's trade secrets and other confidential information, the policy of protecting trade secrets conflicts with the policy of employee mobility. *See* Sample, *supra* note 11, at 479; Hovell, *supra* note 45, at 878; Wexler v. Greenberg, 160 A.2d 430, 433 (Pa. 1960).

¹⁶³ See Knuppel, *supra* note 9, at 988–89.

¹⁶⁶ UREAA § 8 Comment (Unif. L. Comm'n 2021).

¹⁶⁰ See Hershovitz, supra note 18, at 199–201.

¹⁶¹ *Id.* at 198–99 ("While a trailer clause technically does not prohibit an inventive employee from working for a competitor, business competitors do not desire to hire individuals obligated under such a clause because the work product of such employees may not accrue to the new employer's benefit. At best, employers that hire inventive employees obligated under such agreements will under-utilize the employees' inventive skills so as not to develop conflicts with prior trailer clauses. This under-utilization of a burdened inventive employee's creative capacity may concomitantly diminish his rate of compensation. At worst, the inventive employee is unemployed. In today's society, where technology is advancing at breakneck speed, under-utilization or non-utilization of inventive skill may cause an inventive employee's creative capabilities and talent to atrophy.").

¹⁶⁴ See Appendix.

¹⁶⁵ UREAA § 8(3)(b) (Unif. L. Comm'n 2021).

This clear cap on the holdover timeframe benefits employers simply by providing guidance as to what is *not* reasonable.¹⁶⁷ Anything outside the limitations on scope and timeframe imposed by UIAAA would be prohibited and unenforceable.¹⁶⁸ However, to further benefit employers, thereby balancing the interests of employers and employees. UIAAA should provide employers with as much certainty as possible as to what is reasonable. This could be accomplished in UIAAA by providing that a holdover provision is "presumptively reasonable" if it 1) protects a legitimate business interest in a trade secret or other confidential information, 2) is limited in scope to only cover inventions made in areas in which the employee worked or had contact, and 3) is limited in timeframe to one year or less.¹⁶⁹ The presumption of reasonableness could only be rebutted by clear and convincing evidence of unreasonableness.¹⁷⁰ Note that it is not entirely unprecedented to give the employer a rebuttable presumption of reasonableness; Florida's statute for noncompetes deems "presumptively reasonable" the time restriction of five years or less for any noncompete "predicated upon the protection of trade secrets," with the presumption being rebuttable.¹⁷¹

In summation, UIAAA should define an employer's legitimate business interest in a holdover provision to only include trade secrets and other confidential information.¹⁷² Where such a legitimate interest is supported by a holdover provision that is limited in scope to cover inventions made in areas in which the employee worked or had contact and is limited in duration to one year or less, the holdover provision is presumptively reasonable and can only be rebutted by clear and convincing evidence.¹⁷³ If the holdover provision does not support a legitimate business interest under UIAAA or goes outside the reasonable scope or timeframe defined in UIAAA, it is prohibited and unenforceable.¹⁷⁴

¹⁶⁹ See Appendix.

¹⁷² See Appendix.

- ¹⁷³ Id.
- ¹⁷⁴ Id.

 $^{^{167}~}$ See id. ("Great value comes from the certainty and predictability of having a clear, outer time limit.").

¹⁶⁸ See Appendix; see also UREAA § 8 (Unif. L. Comm'n 2021).

¹⁷⁰ Id.

¹⁷¹ FLA. STAT. ANN. § 542.335(e) (West 2022).

C. Requirement of Additional Consideration for Afterthought Agreements

An afterthought agreement is an assignment agreement that is signed after an employee-inventor has already started working for his or her employer, meaning the traditional period of bargaining for a salary has passed.¹⁷⁵ Courts generally consider continued employment to be valid consideration for afterthought agreements,¹⁷⁶ though a minority of courts will require additional consideration for an afterthought agreement to be enforceable.¹⁷⁷ Some employers simply provide "additional consideration" of \$1 to their employee-inventors asked to sign afterthought agreements.¹⁷⁸

A requirement of additional consideration for afterthought agreements would mimic the requirement in UREAA that a current worker who is asked to sign a restrictive employment agreement must receive a "material increase in compensation."¹⁷⁹ Rather than making afterthought agreements unenforceable per se, UIAAA takes employers' interests into consideration and simply requires employers to compensate employees appropriately for their loss of ownership rights. A material increase in compensation reflects the fact that the employeeinventor is losing an ownership right, the lack of which was not previously reflected in the employee-inventor's salary.¹⁸⁰

¹⁷⁵ See Pisegna-Cook, supra note 6, at 175. An employer might even terminate an employee who refuses to sign an assignment agreement, putting the employee in a difficult position. See Sample, supra note 11, at 462.

¹⁷⁶ Pisegna-Cook, *supra* note 6, at 175; Sample, *supra* note 11, at 456.

¹⁷⁷ Pisegna-Cook, *supra* note 6, at 176–77. *See, e.g.*, Kadis v. Britt, 29 S.E.2d 543, 548–50 (N.C. 1944) (explaining that "consideration cannot be constituted out of something that is given and taken in the same breath—of an employment which need not last longer than the ink is dry upon the signature of the employee").

¹⁷⁸ Afterthought agreements with nominal consideration of \$1 are "routinely enforced." Merges, *supra* note 5, at 8. 54% of inventors received \$1 or less despite the fact that many of their inventions were worth over a million dollars. *Id.* at 8, n.24 (citing John P. Sutton, *Compensation for Employed Inventors*, 1975 CHEMTECH 86, 88).

¹⁷⁹ See UREAA § 4(a)(1)(B) (Unif. L. Comm'n 2021); see also Pisegna-Cook, supra note 6, at 186 (arguing that "state legislation should at the very least consider and address whether employment or continued employment will satisfy the consideration requirement for a contract").

¹⁸⁰ Note that neither UREAA and UIAAA attempt to go further and define precisely what qualifies as a "material increase in compensation" since that is a "fact-specific question that ought to be driven by the context of the job at issue." *See* UREAA § 4 Comment (Unif. L. Comm'n 2021). The need for additional compensation for afterthought agreements is clear from research showing that delayed noncompetes result in no more earnings than in the absence of a noncompete, reflecting the employee's reduced bargaining power once the job has

CONCLUSION

The ever-increasing use of assignment agreements to control ownership of employee inventions warrants a uniform act that will ensure clarity, consistency, and predictability. This Note has explained why a uniform act is needed to govern the area of employee inventions and how a uniform act could balance the rights of employers and employees. Requiring advance adequate notice through an express written agreement, providing guidelines for the reasonableness of holdover provisions, and requiring additional consideration for afterthought agreements are sensible ways to balance the interests of employees and employees while benefitting employers, employees, society, and the economy. The key provisions discussed in this Note and provided in the Appendix will be helpful tools to build off in the future when crafting legislation concerning employee inventions.

begun, whereas noncompetes presented at the outset of a job offer result in higher wages relative to the absence of a noncompete. *See* UREAA Prefatory Note (Unif. L. Comm'n 2021). Requiring a material increase in compensation for afterthought agreements protects employees who deserve additional compensation for giving up their important ownership rights but who may no longer be in as good of a position to bargain for this increase due to the threat of termination. Of course, if an employee has already begun the inventive process of a promising invention, they may have increased bargaining power, but in such a case, they would likely already receive a material increase in compensation for signing an afterthought agreement, so there is no change to the status quo.

APPENDIX: TEXT OF THE PROPOSED UIAAA¹⁸¹

Section 1. Title

This [act] may be cited as the Uniform Invention Assignment Agreement Act (UIAAA).

Section 2. Definitions

- In this [act]:
 - (1) "Assignment agreement" means a contract that is signed before the employment relationship begins that transfers the ownership rights of an invention created by the employee during the employment relationship from the employee to the employer.
 - (2) "Afterthought agreement" means a contract that is signed after the employment relationship begins that transfers the ownership rights of an invention created by the employee during the employment relationship from the employee to the employer.
 - (3) "Employee" means an individual who works for an employer.
 - (4) "Employer" means an individual or legal entity that hires an employee to work for the individual or legal entity.
 - (5) "Holdover provision" means a provision in an assignment agreement or afterthought agreement that transfers the ownership rights of an invention created by an employee after the employment relationship ends from the employee to the former employer.
 - (6) "Invention" means anything that is created or devised.
 - (7) "Material increase in compensation" is a fact-specific question that ought to be driven by the context of the job at issue.
 - (8) "Other confidential information" means information that does not qualify as a trade secret, but which is highly specialized, current information not generally known in the industry, created and stimulated by the research environment furnished by the employer, to which the employee has been 'exposed' and 'enriched' solely due to his employment.

 $^{^{181}}$ Note that some parts of UIAAA borrow heavily from UREAA, while others are entirely original to UIAAA. See UREAA §§ 1–4, 8, 16.

- (9) "Protected invention" means an invention: 1) that is unrelated at the time of conception or reduction to practice of the invention to the employer's business, or actual or demonstrably anticipated research or development of the employer, 2) that does not result from any work performed by the employee for the employer, and 3) that the employee developed entirely on his or her own time without using the employer's equipment, supplies, facilities, or trade secret information.
- (10) "Trade secret" has the meaning given to it in the Uniform Trade Secrets Act.
- (11) "Work" means providing service.

Section 3. Scope

- a) This [act] applies to assignment agreements and afterthought agreements. If an assignment agreement or afterthought agreement is part of another agreement, this [act] does not affect other parts of the other agreement.
- b) This [act] supersedes common law only to the extent that it applies to assignment agreements and afterthought agreements, but it otherwise does not affect principles of law and equity consistent with this [act].
- c) This [act] does not affect [cite to another state law or rule that regulates assignment agreements or afterthought agreements that is not inconsistent with this act].

Section 4. Requirements of Advance Adequate Notice

- a) An assignment agreement or afterthought agreement is prohibited and unenforceable unless:
 - (1) the employer provides a written copy of: the proposed assignment agreement to a prospective employee at least 14 days before the prospective employee accepts work or commences work, whichever is earlier, unless the employee waives this requirement under subsection (b); or the proposed afterthought agreement to a current worker at least 14 days before either the material increase in compensation required by [Section 5 of this act], the worker accepts a change in job status or responsibilities, or the afterthought agreement

is required to be signed, whichever is earlier, unless the employee waives this requirement under subsection (b);

- (2) the employer accompanies the written copy of the proposed agreement with a separate notice, in the preferred language of the employee if available, prescribed by the [State Department of Labor] under subsection (d);
- (3) the proposed agreement and the signed agreement clearly specify the scope of inventions that must be assigned and the duration for which these inventions must be assigned, with neither the scope nor the duration of a holdover provision exceeding the limitations set by [Section 6 of this act];
- (4) the agreement is in a record separately signed by the employee and employer, and the employer promptly provides the employee with a copy of the signed agreement; and
- (5) subject to subsection (c), the employer provides an additional copy of the agreement to the employee, not later than 14 days after the employee, in a record, requests a copy, unless the employer reasonably and in good faith is unable to provide the copy not later than 14 days after the request and the employee is not prejudiced by the delay.
- b) An employee may waive the 14-day requirement of subsection (a)(1) if the employee receives the signed agreement before beginning work. If the employee waives the requirement, the employee may rescind the entire employment agreement not later than 14 days after the employee receives the agreement.
- c) An employer is not required under subsection (a)(5) to provide an additional copy of the agreement more than once during a calendar year.
- d) The [State Department of Labor] shall prescribe the separate notice that an employer must provide under subsection (a)(2). The notice must inform the employee, in language an average reader can understand, of the rules under this [act], the employee's rights under this [act], and the default rules governing employee inventions in the absence of a signed assignment agreement or afterthought agreement. The notice must make clear to the employee in plain language what the employee would

be giving up by signing the agreement. The [State Department of Labor] shall make the notice available to employers on its publicly accessible website or in other ways and may translate the notice into languages other than English.

Section 5. Material Increase in Compensation for Afterthought Agreements

An employee who signs an afterthought agreement must receive a material increase in compensation for doing so.

Section 6. Reasonableness of Holdover Provisions

- a) A holdover provision is to be considered unreasonable, and thereby prohibited and unenforceable, unless:
 - (1) the holdover provision protects the legitimate business interest of a trade secret or other confidential information;
 - (2) the holdover provision is limited in scope to only cover inventions made in areas in which the employee worked or had contact; and
 - (3) the holdover provision is limited in duration to one year or less.
- b) A holdover provision that meets the requirements in subsections (a)(1)-(3) is to be considered presumptively reasonable. This presumption of reasonableness may only be rebutted by clear and convincing evidence of unreasonableness.

Section 7. Prohibition on the Assignment of Protected Inventions

Even if the foregoing requirements of Sections 4, 5, and 6 are met, an assignment agreement or afterthought agreement is prohibited and unenforceable if it purports to assign a protected invention as defined in this [act].

Section 8. Penalty

An employer that enters an assignment agreement or afterthought agreement that the employer knows or reasonably should know is prohibited by this [act] commits a civil violation. The [Attorney General] [State Department of Labor] [other state official] may bring an action on behalf of the employee, or the employee may bring a private action, against the employer to enforce this subsection. The court may award statutory damages of not more than [5,000] per employee per agreement for each violation of this subsection.