

NEVADA'S EMPLOYEE INVENTIONS STATUTE: NOVEL, NONOBVIOUS, AND PATENTLY WRONG

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"My grandfather once told me that there were two kinds of people: those who do the work, and those who take the credit. He told me to try to be in the first group; there was much less competition."

—Indira Nehru Gandhi, Prime Minister of India (attributed).

"If you don't like your job, you don't strike. You just go in every day and do it really half-assed. That's the American way."

—Homer Simpson.

I. INTRODUCTION

In its Seventy-First Session, the Nevada Legislature enacted a new statute granting employers complete ownership of any work-related inventions created by their employees, regardless of whether the employer contributed any resources whatsoever to the inventive process. This stunning reversal of long-standing common law was little noticed by the public, and was debated only superficially in the state legislature before receiving its overwhelming vote of approval.

The new law reads:

Except as otherwise provided by express written agreement, an employer is the sole owner of any patentable invention or trade secret developed by his employee during the course of the employment that relates directly to work performed during the course of the employment.¹

This single sentence represents potentially a revolutionary change in Nevada's employment and property laws. As a result of this statute, Nevada has become the only state that allows ownership of patentable inventions to be transferred from one party to another in the complete absence of an assignment agreement, and without any form of actual notice to the transferor.

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¹ S. Bill No. 558, amending Chapter 600 of the Nevada Revised Statutes, NEV. REV. STAT. 600.500 (effective Oct. 1, 2001).

The common law of employee inventions has evolved over more than a century of decisional law,² and is remarkably uniform throughout the United States. The common law rule, simply stated, provides that:

1. If an employment contract expressly provides that the employee's inventions will belong to the employer, the law will generally uphold the express provisions of that contract;
2. Even in the absence of an express assignment, if an employee is hired *for the purpose of inventing*, the law will recognize an implied contract giving the employer ownership of contracted-for inventions;
3. If an employee is not hired for the specific purpose of inventing, then, in the absence of an assignment agreement, the employee's inventions belong to the employee, except that if the employee used the employer's time and/or other resources in the inventive activity, the employer may have an implied nonexclusive license (a "shop right") to make and use the invention even though ownership of the intellectual property (the invention and any patent that issues thereon) belongs to the employee.

The question of ownership, then, is resolved under familiar principles of contract law, reflecting the general rule that the law should respect the express or implied contract between the parties to an employment relationship. The shop right, discussed in more detail below, is based on traditional principles of equity.

Until S.B. 558 became law, it appears that the common law rule of employee inventions was the governing law in Nevada, as it has been, historically, throughout the United States unless and until modified by individual state legislatures. Although there are no reported opinions from Nevada's courts on the ownership of employee inventions,³ Nevada law has incorporated common law principles since 1911,⁴ and, as early as 1934, the Ninth Circuit applied the common law rule of employee inventions to a case arising from the inventive activities of an employee at a Nevada factory.⁵ Under the new statute, how-

² See, e.g., DONALD S. CHISUM, CHISUM ON PATENTS § 22.03 (2002) [hereinafter "CHISUM"] (recounting this history); Steven Chersky, *A Penny for their Thoughts: Employee-Inventors, Preinvention Assignment Agreements, Property, and Personhood*, 81 CAL. L. REV. 595, 616 n.93 (1993) (similar).

³ The only reported Nevada opinion mentioning a dispute over an employee invention arose out of a burglary charge against a disgruntled former employee attempting to regain possession of disputed *tangible* property, and thus did not reach the underlying intellectual property question:

Robert James Bernardelli, "one of five of the best gunsmiths west of the Rocky Mountains," worked for Juenke-Saturn, Inc. of Reno. While in that company's employ, he invented certain gunsmith tools. When his employment with that company ended, he sought to take the tools, but was repulsed on the grounds they belonged to the company because invented on its time. Bernardelli brooded about the circumstance and later, while drinking with his brother, Edward, decided to break in the gun shop and retrieve the tools. Unbeknown to them a burglary alarm system had been installed which they tripped. The police arrested them inside the building.

State v. Second Judicial Dist. Court, 455 P.2d 923, 924 (Nev. 1969).

⁴ Civil Practice Act of 1911, § 532; RL (1912), § 5474; NCL (1929), § 9021.

⁵ Barton v. Nev. Consol. Copper Co., 71 F.2d 381 (9th Cir. 1934), *aff'd* 58 F.2d 646 (D. Nev. 1932).

ever, Nevada's law of employee inventions is now dramatically differently from the common law. The change, unfortunately, is not for the better.

This Article examines Nevada's new employee invention statute from the perspectives of common law and public policy. It compares Nevada's new statute with the traditional common law rules governing employee inventions, as well as with the statutory schemes developed in other states. The analysis leads to the conclusion that Nevada's statute is unique, in that it deprives employees of their common law rights, whereas other states have, at a minimum, preserved those rights, and, in many cases, have enhanced those rights through pro-employee legislation. Although the ostensible purpose of S.B. 558 was to attract more high-technology businesses to Nevada,⁶ the new law is unlikely to achieve the economic objectives articulated in its legislative history. On the contrary, it is likely to exact substantial social and economic costs by depriving Nevada's technological innovators of the fruits of their creative efforts while increasing the volume of commercial litigation in Nevada's courts.

II. THE LAW OF EMPLOYEE INVENTIONS

Professor Donald S. Chisum, a leading commentator on patent law, has described the problem of allocating ownership of employee inventions as "an ancient but eternal one."⁷ Until a patent application has been filed for the invention in question, it is generally acknowledged that the question of who owns an employee invention is a matter of state law.⁸ With the exception of a few states that have enacted employee invention legislation that is very limited

⁶ *Minutes of the Senate Committee on Commerce and Labor, 71st Sess.* (April 3, 2001) (comments of Lt. Gov. Lorraine T. Hunt and Gilbert P. Hyatt), available at <http://www.leg.state.nv.us/71st/Minutes/Senate/CL/Final/807.html> (last visited Oct. 24, 2002); *Minutes of the Meeting of the Assembly Committee on Commerce and Labor, 71st Sess.* (May 14, 2001) (comments of Stateline attorney Kenneth D'Alessandro and Gilbert P. Hyatt), available at <http://www.leg.state.nv.us/71st/Minutes/Assembly/CMC/Final/1348.html> (last visited Oct. 24, 2002).

⁷ CHISUM, *supra* note 2, at § 22.03. Since the Supreme Court first addressed this question in *McClurg v. Kingsland*, 42 U.S. (1 How.) 202 (1843), Professor Chisum notes that there have been hundreds of reported opinions. CHISUM, *supra* note 2, at § 22.03[5] (offering a state-by-state compendium of cases). No doubt hundreds more of these disputes have been resolved through settlements or unreported decisions.

⁸ Under section 261 of the federal patent statutes, an assignment of patent rights is invalid unless it is in writing. 35 U.S.C.A. § 261 (2002). Although federal patent law preempts conflicting state law, *see, e.g., Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 151-56 (1989), it is widely accepted (although the matter is not entirely free from doubt) that federal law governs the ownership of rights only with respect to patents that have been *issued or applied for*; thus, ownership of inventions that are not yet the subject of a patent application is governed by state law. *See* Robert A. Kreiss, *The "In Writing" Requirement for Copyright and Patent Transfers: Are the Circuits in Conflict?*, 26 DAYTON L. REV. 43, 62-78 & n.157 (2000) (noting conflict between the "hired to invent" rule of common law and the requirement of a signed writing to assign patent ownership under section 261 of the federal patent statutes; citing commentators who argue that the common law applies before the application is filed, and section 261 applies thereafter); William P. Hovell, *Patent Ownership: An Employer's Rights to His Employee's Invention*, 58 NOTRE DAME L. REV. 863, 889 (1983) (noting the apparent conflict between the common law and section 261, and suggesting that, under the canon of statutory interpretation requiring that statutes in deroga-

in scope,⁹ this question is governed by common law. Moreover, these common law rules – summarized above – are virtually identical in every state.¹⁰

“Ownership” of an invention can mean a number of things. If the invention becomes the subject of a patent application, the invention’s owner also owns the right to the patent application, and will own the patent rights if the application is successful. The owner of a valid patent has exclusive rights to the invention claimed in the patent, and can bring an infringement action against another who exploits the invention without the owner’s consent, even if the exploiter has developed the same invention independently.¹¹ If the owner of the invention does not apply for a patent, either by choice or because the invention is not patentable,¹² there may still be significant value in the ownership of that invention if it can be exploited as a trade secret.

tion of the common law be strictly construed, perhaps section 261 should be applied only to post-application assignments).

Before a patent application for a particular invention is filed, of course, it cannot be known for certain that the application *ever* will be filed. If no application is ever filed, then patent law (including section 261) will *never* apply to the invention, and thus the common law rule (or state statutory law, if any) must apply because federal law provides no alternative rule that could have preemptive effect. In the case of inventions which eventually do lead to patent applications (some of which will result in issued patents), section 261 clearly applies to assignments of rights in the *issued* patent, although it is less clear that it should apply to assignments of rights in the patent application itself, since the application may prove to be unsuccessful. To say that section 261 also applies retroactively to transactions that *pre-date* the patent application would make it impossible for the parties engaging in a pre-application transaction to know which set of rules – state or federal – governed their transaction until long after the transaction took place.

Perhaps the best approach to this problem would be to apply section 261 only to issued patents. Under this approach, parties could enter enforceable oral or implied contracts for the transfer of rights to any invention that was not the subject of an issued patent.

Presumably state law would also govern ownership of inventions that are the subject of *unsuccessful* patent applications; however, because current law requires that the disclosures in most such applications be made public within eighteen months of filing, 35 U.S.C.A. § 122 (2002), if no patent issues for the invention then there is no longer any property (such as a trade secret) for anyone to “own,” because the relevant information will have entered the public domain.

⁹ See *infra* notes 28-34 and accompanying text.

¹⁰ Much of the early common law on employee inventions came from the federal courts in the era preceding *Erie R.R. v. Tompkins*, 304 U.S. 64 (1938). Although the federal courts could no longer formulate common law rules for the states after *Erie*, state courts addressing employee invention questions have uniformly followed these early federal precedents. CHISUM, *supra* note 2, at § 22.03[4]. See also 27 AM. JUR. 2D *Employment Relationship* §§ 228-37 (2002) (summarizing the common law rules, and collecting cases).

¹¹ A narrow exception to this rule allows good faith prior users of a patentable business method to continue exploiting that method even after another party secures a patent on it. 35 U.S.C.A. § 273 (2002).

¹² Generally speaking, to be patentable, an invention must be novel, nonobvious, and either useful (in the case of utility patents) or ornamental (in the case of design patents). 35 U.S.C.A. §§ 101-103, 171 (2002). To be “novel,” an invention must not have been previously known or accessible to the public, *id.* at § 102, and to be “nonobvious,” the invention must represent more than a trivial advance over what has been previously known or accessible to the public, *id.* at § 103. “Useful” and “ornamental” are mutually exclusive categories. See, e.g., *Avia Group Int’l, Inc. v. L.A. Gear Calif., Inc.*, 853 F.2d 1557, 1562-63 (Fed. Cir. 1988) (distinguishing between the utilitarian and ornamental components of a shoe design for purposes of determining which components may be the subject of a design patent).

In recent years, the United States Court of Appeals for the Federal Circuit has on several occasions reiterated the longstanding common law rules governing ownership of employee inventions. In *Banks v. Unisys Corporation*, the court summarized the rule as follows:

The general rule is that an individual owns the patent rights to the subject matter of which he is an inventor, even though he conceived it or reduced it to practice in the course of his employment. There are two exceptions to this rule: first, an employer owns an employee's invention if the employee is a party to an express contract to that effect; second, where an employee is hired to invent something or solve a particular problem, the property of the invention related to this effort may belong to the employer. Both exceptions 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

The Federal Circuit has repeatedly stressed the preeminence of contract law in determining the ownership of employee inventions. For example, in *Teets v. Chromalloy Gas Turbine Corporation*,¹⁴ the court explained that, in a situation "where the employer specifically hires or directs the employee to exercise inventive faculties," this indicates that "the purpose for employment thus focuses on invention," so that the employee bargains for, and receives, a salary in exchange for inventing.¹⁵ Accordingly, upon receipt of that salary, "the employee has received full compensation for his or her inventive work," so that the employee, now fully compensated, is not also entitled to ownership of the invention.¹⁶

Under the common law rule, an enforceable contract to invent need not be express or written; therefore, an implied-in-fact contract will suffice to shift ownership of the invention to the employer.¹⁷ However, the implied-in-fact contract must still reflect a "meeting of the minds" or "tacit understanding" between employer and employee.¹⁸ The requirement of a meeting of the minds is essential to the common law rule, because it ensures that an employee will not be divested of inventorship rights without his or her consent.¹⁹ Thus, "[a]s

¹³ *Banks v. Unisys Corp.*, 228 F.3d 1357, 1359 (Fed. Cir. 2000).

¹⁴ 83 F.3d 403, 407 (Fed. Cir. 1996).

¹⁵ *Id.*

¹⁶ *Id.*

¹⁷ As the court noted in *Teets*, "[t]o apply this contract principle, 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." *Id.*

¹⁸ *Id.* See also *Hapgood v. Hewitt*, 119 U.S. 226, 233-34 (1886) (where employee "was not expressly required, by his contract, to exercise his inventive faculties for the benefit of his employer," and no facts were presented "from which it could fairly be inferred that he was required or expected to do so," the employer did not own the rights to the invention (citing *McClurg v. Kingsland*, 42 U.S. (1 How.) 202 (1843))).

¹⁹ A recent decision by the Colorado Court of Appeals exemplifies the common law rule:

Generally, an invention is the property of the inventor who conceived, developed, and perfected it. Hence, the mere fact that the inventor was employed by another at the time of the invention does not mean that that inventor is required to assign the patent rights to the employer. The right, if any, of an employer to inventions of its employee is determined primarily by the contract of employment. If, as here, the contract of employment does not contain an express provision respecting the subject, an employer is, nonetheless, not necessarily precluded from claiming a right to the invention. . . . If an employee's job duties include the responsibility for inventing or for solving a particular problem that requires invention, any invention created by

a general matter, courts have been reluctant to imply contracts to assign patent rights for fear of discouraging invention”²⁰ As Professor Chisum has noted, elimination of the “meeting of the minds” requirement could have just such an effect:

A basic policy of the patent system is that technological creativity should be encouraged by affording property rights to the creator. Incentives to invent might be dampened if those property rights are too readily stripped away from the actual human creator by implication or inference. A basic policy of contract law is that persons should be able to structure consensual transactions as they see fit and obtain the benefit of any bargains reached.²¹

Decades of decisions by state and federal courts have echoed this view in defending the narrow scope of the “hired to invent” rule.²² These decisions emphasize the importance of giving each party to the employment bargain the benefits that he or she bargained for – no more and no less. This rationale recognizes that contracts are devices for allocating the risks and benefits of any undertaking, including an employment relationship. Thus, inventions that were not reasonably within the contemplation of the parties at the time they negotiated the employment agreement should generally belong to the inventor, since the inventor could not reasonably be expected to have bargained for compensation for an invention that was anticipated by neither party:

One by merely entering an employment requiring the performance of services of a noninventive nature does not lose his rights to any inventions that he may make during the employment, although the employment might have afforded the opportunity or occasion for the conception of an idea which may lead to a patent and the rendition of services in the course of his employment may have so enhanced his mechanical skill, scientific knowledge and inventive faculties as to enable him to develop and perfect the idea into a patentable article, and this is true even if the patent is for an improvement upon a device or process used by the employer or is of

that employee during the performance of those responsibilities belongs to the employer. Hence, such an employee is bound to assign to the employer all rights to the invention. This is so because, under these circumstances, the employee has produced only that which he was employed to produce, and the courts will find an implied contract obligation to assign any rights to the employer.

Scott Sys. Inc. v. Scott, 996 P.2d 775, 778 (Colo. Ct. App. 2000). For an extensive compilation of state and federal court opinions following the same common law rule, see CHISUM, *supra* note 2, at § 22.03[5].

²⁰ *Sim Kar Lighting Fixture Co. v. Genlyte, Inc.*, 906 F. Supp. 967, 973 (D.N.J. 1995).

²¹ CHISUM, *supra* note 2, at § 22.03[2].

²² *E.g.*, *United States v. Dubilier Condenser Corp.*, 289 U.S. 178, 187-89 (1933); *Barton v. Nev. Consol. Copper Co.*, 71 F.2d 381, 384 (9th Cir. 1934) (noting that courts are reluctant to force assignments of patent rights due to unique nature of the inventive act; distinction between idea and its application is basis for rule that employment to design, construct, or devise methods of manufacture is not employment to invent); *Aetna Standard Eng'g Co. v. Rowland*, 493 A.2d 1375, 1378 (Pa. Super. Ct. 1985) (noting that rationale of the “hired to invent” rule is that “[g]iven the personal, intellectual nature of the inventive process, the courts must otherwise hesitate to imply agreements to assign”); *Nat'l Dev. Co. v. Gray*, 55 N.E.2d 783, 786-87 (Mass. 1944) (“Public policy favors the exercise by an individual of his inventive powers and seeks to stimulate the exertion of such powers by granting him the exclusive use and enjoyment of the fruits of his endeavors for the period of seventeen years. The law looks upon an invention as the property of the one who conceived, developed and perfected it, and establishes, protects and enforces the inventor's rights in his invention unless he has contracted away those rights.”).

such great practical value as to supersede the devices or processes with which the employee became familiar during his employment.²³

Under common law, even an express employee preinvention assignment agreement may be held to be unenforceable. Contract law does not require the enforcement of contracts that violate public policy; accordingly, courts have declined to enforce preinvention assignments which are found to be overreaching.²⁴ In addition, under principles of equity, courts interpreting preinvention agreements have required, as a condition of enforceability, that the relevant terms of the contract be sufficiently explicit to reflect the unmistakable intent of the inventor to surrender ownership of his or her inventions.²⁵

One other aspect of the common law of inventorship rights is relevant to this discussion. That is the concept of an employer's "shop right." An employer may hold a "shop right" in an invention created by an employee who was not hired to invent if the employee's inventive activities made sufficient use of the employer's resources. A "shop right" is an irrevocable, royalty-free, nonassignable right to use the employee's invention, but does not give the employer any exclusive rights in the invention, or any right to grant others permission to use the invention. It is, therefore, not an ownership right. As described by the Supreme Court in *United States v. Dubilier Condenser Corporation*:

Recognition of the nature of the act of invention also defines the limits of the so-called shop right, which, shortly stated, is that, where a servant, during his hours of employment, working with his master's materials and appliances, conceives and perfects an invention for which he obtains a patent, he must accord his master a nonexclusive right to practice the invention. This is an application of equitable principles. Since the servant uses his master's time, facilities, and materials to attain a concrete result, the latter is in equity entitled to use that which embodies his own property and to duplicate it as often as he may find occasion to employ similar appliances in his business. But the employer in such a case has no equity to demand a conveyance of the invention, which is the original conception of the employee alone, in which the employer had no part. This remains the property of him who conceived it, together with the right conferred by the patent, to exclude all others than the employer from the accruing benefits.²⁶

²³ *Nat'l Dev.*, 55 N.E.2d at 786-87.

²⁴ See, e.g., *Guth v. Minn. Mining & Mfg. Co.*, 72 F.2d 385, 388 (7th Cir. 1934) (invalidating, as contrary to public policy and therefore void, preinvention assignment provisions of employment agreement that were unlimited in time and subject matter); *id.* at 388 n.3 (collecting additional cases); *Aspinwall Mfg. Co. v. Gill*, 32 F. 697, 700 (C.C.D.N.J. 1887) (invalidating an agreement to assign all the products of employee's future inventive activities).

²⁵ See, e.g., *Monsanto Chem. Works v. Jaeger*, 31 F.2d 188, 193 (W.D. Pa. 1929) ("Where the product of an inventive mind is sought to be appropriated under an agreement to assign to another, the language of the agreement must be clear and show an unmistakable intention that the particular matter covered by the invention or patent is within the intention of the parties.") (citing *Allison Bros. Co. v. Allison*, 144 N.Y. 21 (1894); *Joliet Mfg. Co. v. Dice*, 105 Ill. 649 (1883)); *id.* at 191 ("Where specific performance is sought, vague or indefinite terms cannot be supplanted by clear and definite ones through forced or strained construction. Equity will lend its aid only in enforcing those terms which the parties themselves have made clear and definite.").

²⁶ *Dubilier Condenser*, 289 U.S. at 188-89 (citations omitted) (citing *McClurg*, 42 U.S. (1 How.) at 202; *Solomons v. United States*, 137 U.S. 342 (1890); *Lane & Bodley Co. v.*

Under the shop right doctrine, if an employee creates an invention either on the employer's time or using the employer's resources, the employer may continue to use that invention indefinitely without the consent of the employee. Thus, the employer receives compensation for the fact that his or her resources were used to create the invention. However, because the employer did not make a creative contribution to the employee's inventive act, the employer is neither the inventor nor a co-inventor, and thus cannot claim ownership by virtue of inventorship. Furthermore, because the benefits of the inventive act were not bargained for in the employment contract between the parties, there has been no "meeting of the minds" as to the ownership of the invention. Absent such an agreement, the invention continues to belong to the inventor, but the shop right doctrine provides that the employer is allowed to share in the benefits of the invention as a form of compensation for the use of the employer's resources. Thus, the shop right doctrine reflects the same policy as the "employed to invent" doctrine – making sure that each party to the employment relationship receives what was bargained for in the original employment agreement, with the employer receiving equitable compensation for his or her later contributions to the employee's inventive activity.²⁷

In contrast to the nationwide common law rule requiring that an employer receive an employee's express or implied consent to an assignment of invention rights, Nevada's new statute allows an employer to claim those rights unilaterally, without the consent – or even the knowledge – of the employee.

Locke, 150 U.S. 193 (1893)). See also *Hapgood*, 119 U.S. at 233-34 (where there was no contract to invent, employer's right was limited to "a naked license to make and sell the patented improvement").

²⁷ Both the common law "hired to invent" rule and the shop right doctrine have been the subject of extensive scholarly commentary, and there is no need for this Article to reinvent that particular wheel. See, e.g., CHISUM, *supra* note 2, at §§ 22.01-.03 (providing an extensive and up-to-date compendium of case law); Paul M. Rivard, *Protection of Business Investments in Human Capital: Shop Right and Related Doctrines*, 79 J. PAT. & TRADEMARK OFF. SOC'Y 753 (1997); Sandip H. Patel, *Graduate Students' Ownership and Attribution Rights in Intellectual Property*, 71 IND. L.J. 481, 492-500 (1996); Sunil R. Kulkarni, *All Professors Create Equally: Why Faculty Should Have Complete Control over the Intellectual Property Rights in their Creations*, 47 HASTINGS L.J. 221, 256 n.64 (1995) (collecting sources on standards for determining if person was "hired to invent"); Paul C. Van Slyke & Mark M. Friedman, *Employer's Rights to Inventions and Patents of its Officers, Directors, and Employees*, 18 AIPLA Q.J. 127, 128 (1990); Pat K. Chew, *Faculty-Generated Inventions: Who Owns the Golden Egg?*, 1992 WIS. L. REV. 259, 314 & n.21; Arthur N. Bishop, Jr., *Employers, Employees, and Inventions*, 31 S. CAL. L. REV. 38 (1957) (discussing common law, enforceability of assignments, and trends in case law); 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 (1994); Justin Hughes, *The Personality Interests of Artists and Inventors in Intellectual Property*, 16 CARDOZO ARTS & ENT. L.J. 81 (1998); Henrik D. Parker, *Reform for Rights of Employed Inventors*, 57 S. CAL. L. REV. 603 (1984); 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 (1998); Robert P. Merges, *The Law and Economics of Employee Inventions*, 13 HARV. J.L. & TECH. 1 (1999); Ann Bartow, *Inventors of the World, Unite! A Call for Collective Action by Employee-Inventors*, 37 SANTA CLARA L. REV. 673 (1997); Christopher M. Mislow, *Necessity May be the Mother of Invention, But Who Gets Custody? The Ownership of Intellectual Property Created by an Employed Inventor*, 1 SANTA CLARA COMPUTER & HIGH TECH. L.J. 59, 62-67 (1985); Hovell, *supra* note 8, at 864-80.

III. ASSIGNMENT WITHOUT NOTICE

Under Nevada's new statute, an employee can lose all right to own, *or even to use*, an invention which he or she develops in the course of employment, without ever knowing that this transfer of rights has occurred. This is because the Nevada statute, unlike the common law and statutory law in other states, does not require the employer to give any form of actual notice – either express or implied – to the employee as a condition precedent to the employee's loss of rights. This differs markedly from the results not only under common law, as described above, but also under the employee inventions statutes that have been enacted in other states.

As noted in the previous section, under the common law rule, one of two conditions must exist before the employee can lose the rights to an invention created during the course of employment. Either the transfer of rights must have been specified in the employment contract, or the employee must have been hired specifically for the purpose of inventing, in which case the employee's consent to the transfer of rights is implied. In either case, the employee has received some form of actual notice – express or implied – indicating that the employer will own the rights to any inventions that are sufficiently related to the employment.

Like Nevada, eight other states have enacted employee invention legislation that departs in certain respects from the common law rule: California, Utah, Washington, Minnesota, Delaware, Kansas, Illinois, and North Carolina.²⁸ However, in contrast to Nevada's decision to broaden the right of an employer to claim ownership of employee inventions, all of these states have enacted statutes that enhance, rather than curtail, the rights of employed inventors. They do so by limiting the ability of employers to contract around the common law rules. Sometimes referred to as "Freedom to Create" statutes,²⁹ these provisions typically limit the enforceability of preinvention assignment agreements – even those that are express and written – which require employees to assign their future invention rights to their employers as a condition of their employment. All of these statutes preclude enforcement of any provision of an employment contract that purports to give an employer ownership of an invention that was developed entirely on the employee's own time, using none of the employer's resources, unless the invention (1) relates either to the employer's business or to the employer's actual or "demonstrably anticipated" research or development, or (2) results from work performed by the employee for the employer. Some of these statutes even require employers to provide

²⁸ *E.g.*, CAL. LAB. CODE § 2870 (West) (enacted 1979); DEL. CODE ANN. 19 § 805 (1995); 765 ILL. COMP. STAT. ANN. 1060/2 (enacted 1983); KAN. STAT. ANN. § 44-130 (enacted 1986) (also requiring employee to disclose all inventions developed by employee, for purpose of determining employer's and employee's respective rights); MINN. STAT. § 181.78 (enacted 1977); N.C. GEN. STAT. §§ 66-57.1, 57.2 (enacted 1981) (also allowing employer to require disclosure of all inventions created during employment term); UTAH CODE ANN. §§ 34-39-2, 34-39-3 (enacted 1989); WASH. REV. CODE § 49.44.140 (enacted 1979).

²⁹ See Robert L. Gullette, *State Legislation Governing Ownership Rights in Inventions under Employee Inventions Agreements*, 62 J. PAT. & TRADEMARK OFF. SOC'Y 732 (1980) (describing several of these statutes); Hovell, *supra* note 8, at 881-83 (similar); Parker, *supra* note 27, at 610-14 (similar).

their employees with written notice of these exemptions.³⁰ Several place the burden of proof on the employees.³¹ Most of these statutes were enacted in the 1970s and 1980s.³²

The limitations imposed by these state statutes apply even to *express, written* preinvention assignment agreements. In addition, these statutes co-exist with the common law rules, rather than completely supplanting them. Thus, in these eight states, the common law rules which prohibit most noncontractual assignments of employee invention rights are supplemented by legislation which limits the enforceability even of contractual assignments. Significantly, the states which have adopted these statutes have chosen a default rule which favors the interests of the employee over those of the employer, by overriding the common law of contract in order to protect employees from the consequences of overly-broad preinvention assignment agreements. Because the statutes limit the enforceability of preinvention assignment contracts, employers cannot contract around the statutes. This paternalistic policy of protecting employees from the consequences of their own contracts counteracts, to some degree, the greater bargaining power that may be wielded by the employer in negotiating the terms of employment.

Concern that the common law rules do not adequately protect employed inventors against overreaching preinvention assignment agreements imposed on them as a condition of their employment has not been limited to the eight states that enacted protective legislation for inventors. On several occasions, federal legislation has been proposed as well. The federal proposals, which have not been successful, generally fall into two categories. One of these follows the model of the state laws described above, limiting the enforceability of express preinvention assignment agreements imposed by employers. The proposals that fall into the second category, which are modeled after laws that have been adopted in a number of European countries, would allow enforcement of such contracts but would require employers to guarantee to employees a minimum level of compensation (based on statutory guidelines) in exchange for the rights to their inventions.³³

The pro-employee legislation that has been enacted in other jurisdictions, and which has received serious consideration in Congress, is dramatically different from Nevada's approach under the 2001 legislation. The Nevada statute does not make any attempt to protect employees from the consequences of overbroad preinvention assignments. Rather than simply leave the common law of contracts to govern employment agreements, however, Nevada's new law goes one step further. By providing for an automatic assignment of employee inventions, even where the employment contract is silent on the

³⁰ E.g., CAL. LAB. CODE § 2872 (West) (enacted 1979); 765 ILL. COMP. STAT. ANN. 1060/2 (enacted 1983); MINN. STAT. § 181.78(3) (enacted 1977); WASH. REV. CODE § 49.44.150 (enacted 1979).

³¹ E.g., 765 ILL. COMP. STAT. ANN. 1060/2 (enacted 1983); N.C. GEN. STAT. § 66-57.1 (enacted 1981).

³² See *supra* note 28 (collecting statutes).

³³ The federal proposals spanned a period from the 1960s through the 1980s. See generally Gullette, *supra* note 29, at 739-40; Parker, *supra* note 27, at 617-22; Hovell, *supra* note 8, at 883-87.

question of inventions, the statute injects a new term into the employment contract, even where the parties have not negotiated such a provision. Thus, Nevada's law does not protect the employee from the consequences of unequal bargaining power. It does not even allow the employee to rely on the express or implied terms of the employment contract. Instead, the new statute adds to every contract of employment an implied provision that divests the employee of his or her invention rights, with no notice to the employee. The implied assignment provision apparently applies to all employment contracts – written or oral, express or implied – no matter how “bare-bones” the terms of the contract might be, so long as it gives rise to an employment relationship.

In fact, Nevada's statute does more than effect an assignment without notice. It also appears that in certain circumstances it will *override* the express or implied terms of a contract of employment. In other words, even if an employer has given the employee an *express or implied* assurance that the employee's inventions will remain the property of the employee, under the statute the employer will still own the employee's inventions if these contrary assurances were not reduced to writing. This result follows because the statute allows the parties to the employment contract to supersede the rule of the statute *only* if they communicate their intent in an “express written agreement.” Thus, an employer and employee can enter into an oral employment contract that is binding on the employee but not entirely binding on the employer. In reliance on the express oral assurance that all inventions will remain the employee's property, or that the rights to those inventions will be shared by employer and employee, an employee might agree to a lower wage or give other concessions in the employment negotiation, only to discover later that this reliance was misplaced and that he or she will not get the benefit of the bargain to which the parties ostensibly agreed. Only the most well-informed employees would know that, in an otherwise binding oral contract of employment, this particular part of the agreement would have to be in writing in order to be enforceable.

Thus, neither statutory nor common law in other states calls for employees to lose their invention rights without some form of actual notice, either express (by contract) or implied (by the purpose of the employment).³⁴ In contrast,

³⁴ In a handful of states and one territory, there remain on the books some older statutes, some of them traceable to the nineteenth century, which provide broadly that anything acquired by an employee “by virtue of his employment” (other than compensation) belongs to the employer. N.D. CENT. CODE § 34-02-11 (enacted 1943); 18 GUAM CODE ANN. § 55311; CAL. LAB. CODE § 2860 (West 1989); MONT. CODE ANN. § 39-2-102 (2002); S.D. CODIFIED LAWS § 60-2-10 (Michie 1993). The North Dakota and California statutes are derived from predecessor laws enacted in 1865 and 1872, respectively. *First Am. Bank W. v. Berdahl*, 556 N.W.2d 63, 64 n.2 (N.D. 1996). However, these statutes have been construed as inapplicable to an employee's own skills, knowledge, or inventive conceptions, or any information gleaned from the employment relationship that is not itself a trade secret or protected by a confidentiality agreement. *See, e.g., Best Dairy Farms, Inc. v. Houchen*, 448 P.2d 158 (Mont. 1968) (refusing to enjoin former employee from soliciting former employer's customers where customer list was not confidential). Indeed, these statutes have been interpreted in a manner that is consistent with the common law rule under which, in the absence of an express assignment agreement, an employment relationship does not give rise to an assignment of invention rights unless the employment was for the purpose of inventing. For example, in *Rural Pennington County Tax Association v. Dier*, 515 N.W.2d 841, 844-46

Nevada's new statute appears to cause an assignment of rights to occur with no

(S.D. 1994), a South Dakota court held that § 60-2-10, the state statute granting an employer the ownership of anything which the employee "acquired by virtue of his employment," did not apply to the revenues generated by software which the employee, a county highway superintendent, had designed for use by highway departments. The employee had designed the software on his own time, at home, with the assistance of his wife, and with equipment supplied by a computer company rather than the county. Finding that the employee's job responsibilities did not include software development, the court applied the common law rule regarding employee inventions:

In the absence of an express or implied agreement as to the ownership of inventions of the employee, the employer from the mere fact of a general employment has no exclusive rights to the inventions of his employee, even though in order to perfect his invention the employee uses his employer's property, or receives the assistance of others in the employer's pay, or takes time which should have been given to his employer's business.

The fact of employment also does not give an employer exclusive rights to the inventions of an employee even though it can be said that the employee's inventive power was incited by knowledge necessarily derived from his employment, or that, by reason of his rendition of services in the course of his employment, he may have so enhanced his mechanical skill, scientific knowledge, and inventive faculties as to enable him to develop and perfect an idea into patentable material.

There is no difference between the government and any other employer in this respect. Under such circumstances a patent obtained by an employee need not be assigned to the employer.

Rural Pennington, 515 N.W.2d at 846 (quoting 30 C.J.S. *Employer-Employee* § 117 (1992)) (also citing *United States v. Dubilier Condenser Corp.*, 289 U.S. 178 (1933); *Wommack v. Durham Pecan Co., Inc.*, 715 F.2d 962 (5th Cir.1983); *Barlow & Seelig Mfg. Co. v. Patch*, 286 N.W. 577 (Wis. 1939)). The California Court of Appeals has taken a similar approach to the California statute, declining to interpret it more broadly than the common law rule:

None of the cases [citing section 2860] depended upon section 2860 of the code as a basis for holding that the information possessed by the employee belonged to the employer. The right of the employer to protection derived from the fact that the information was secret, and not from the mere fact that it came to the employee in the course of his employment. The code section cannot be given an interpretation at variance with the established rule that business information acquired by an employee which is not confidential in fact, or by agreement, is not protectible property of the employer. What the employee acquires in his own right by way of experience and useful knowledge of a business may be of far greater value to him than knowledge of the identity of the employer's customers and their business connections. We would not doubt that it is a universal custom for salesmen or executives, or other employees, to be sought and lured away from present employment because of exceptional skill and proficiency they have manifested, nor can it be questioned that they have a right to make capital of their abilities. That is what happened when [employee] McQuade left King and went with Pacific. He took with him nothing that belonged to King; only what was his own to use fairly and honestly.

King v. Pacific Vitamin Corp., 256 Cal. App. 2d 841, 849-50 (Cal. Ct. App. 1967). Similarly, the Court of Appeals in *Williams v. Weissner*, 273 Cal. App. 2d 726 (Cal. Ct. App. 1969) rejected a university's claim, under § 2860, to ownership of a professor's lectures:

It is obvious that a literal application of that section does not cover the present situation. The code speaks of things which the employee "acquires," not matters which he creates. In *Burns v. Clark*, 133 Cal. 634, 639 [66 P. 12, 85 Am. St. Rep. 233], the Supreme Court said that the section, then section 1985 of the Civil Code, was to be construed as "but an expression of the familiar principle that forbids an agent or trustee from using the trust property or powers conferred upon him for his own benefit, and which, in case of his doing so, requires him to account for the profits." (See also *Southern Cal. Disinfecting Co. v. Lomkin*, 183 Cal. App. 2d 431, 444 [7 Cal. Rptr. 43].) Thus the section has been applied principally, though not exclusively, to unfair competition carried on by former employees with the use of trade secrets and the like. Even so it has been narrowly employed. (*Aetna Bldg. Maintenance Co. v. West*, 39 Cal. 2d 198, 204 [246 P.2d 11].) We do not believe it applies here.

notice to the employee, even in the absence of an express or implied agreement to assign, and apparently even in the face of a contrary oral agreement.

IV. COMPARISON WITH COPYRIGHT'S "WORK MADE FOR HIRE" DOCTRINE

As explained above, Nevada's adoption of a law which implicitly assigns an inventor's invention rights, without notice to the inventor and without any meeting of the minds between the parties, is unprecedented in the statutory or common law of other states. However, it might be argued that the statute is not entirely unprecedented in federal law. Although there are no provisions in federal patent law that resemble the Nevada statute, there are distinct parallels between the latter and a provision in federal copyright law known as the "work-made-for-hire" doctrine.

Federal copyright law provides that, in the case of an employment relationship, all rights to a copyrightable work created by an employee belong to the employer, even in the absence of an assignment agreement, provided that the work was "prepared by an employee within the scope of his or her employment."³⁵

Williams, 273 Cal. App. 2d at 733-34; *accord*, *Cal. Intelligence Bureau v. Cunningham*, 83 Cal. App. 2d 197, 203-04 (Cal. Ct. App. 1948) (interpreting § 2860 as codifying the common law rule that a former employee's use of "confidential information gained by the employee during his prior employment as to the business secrets of his employer is unfair competition and will be enjoined"); *S. Cal. Disinfecting Co. v. Lomkin*, 183 Cal. App. 2d 431, 444-46 (Cal. Ct. App. 1960) (applying trade secret law to analyze a § 2860 claim); *Alex Foods, Inc. v. Metcalfe*, 137 Cal. App. 2d 415, 423-24 (Cal. Ct. App. 1955) (applying trade secret law to analyze a § 2860 claim); *Reiss v. Sanford*, 47 Cal. App. 2d 244, 246-47 (Cal. Ct. App. 1941) (describing trade secret law as the basis for § 2860); *Santa Monica Ice & Cold Storage Co. v. Rossier*, 42 Cal. App. 2d 467, 470-71 (Cal. Ct. App. 1941) (similar); *Hollingsworth Solderless Terminal Co. v. Turley*, 622 F.2d 1324, 1330 n.5 (9th Cir. 1980) (noting that California courts have not relied on the language § 2860 to decide cases involving allegations of trade secret thefts by employees); *KGB, Inc. v. Giannoulas*, 104 Cal. App. 3d 844, 853-56 (Cal. Ct. App. 1980) (§ 2860 has been applied to employee misappropriation of trade secrets and confidential information, but that it does not "protect an actor's or artist's creations during employment in the absence of a contract providing express protection," and therefore does not give an employer exclusive rights to a character created by an employee); 28 CAL. JUR. 2D 417, § 18 (noting that § 2860 is "merely an expression of the familiar principle that forbids an agent or trustee to use the trust property or powers conferred on him for his own benefit"). There are no decisions construing the North Dakota statute, but in *Kellar v. Clark Equipment Co.*, 715 F.2d 1280, 1287 (8th Cir. 1983), the Eighth Circuit implied that the analysis under the statute should parallel the "employed to invent" rule of common law.

In addition, a few states provide by statute that the state may claim ownership of inventions developed by state employees acting in their official capacities. *See, e.g.*, MONT. CODE ANN. § 20-25-109(1) (2001); OR. REV. STAT. § 3345.14 (2001); 62 PA. CONS. STAT. § 1148 (enacted 1967); 3 P.R. LAWS ANN. § 694a (enacted 1974). However, there is no case law in these jurisdictions indicating whether these provisions would be considered enforceable without some sort of notice to the employees (such as an employee handbook).

³⁵ 17 U.S.C. § 201 (employer is considered author of "work made for hire"), 101 ("work made for hire" definition) (2002). As described by one court, this rule reflects the policy that "[i]t is only when 'an employee creates something in connection with his duties under his employment, [that] the thing created is the property of the employer and any copyright obtained thereon by the employee is deemed held in trust for the employer.'" *City of Newark v. Beasley*, 883 F. Supp. 3, 8 (D.N.J. 1995) (quoting *Sawyer v. Crowell Pub. Co.*, 46 F.

Although superficially the work-made-for-hire definition of federal copyright law bears some resemblance to Nevada's employee invention statute, in fact the latter appears to state a broader assignment rule. Nevada's employee invention statute grants the employer ownership of anything invented by the employee developed "*during the course of the employment*," as long as the trade secret or invention "*relates directly to work performed during the course of the employment*."³⁶ In contrast, the work-made-for-hire statute applies to a copyrightable work prepared by an employee "*within the scope of his or her employment*."

In spite of the "relates directly" limitation, the activities encompassed by the Nevada statute's "course of employment" standard appear to be broader than those which would be encompassed under a "scope of employment" standard similar to that used in copyright law. In the leading case interpreting the work-made-for-hire definition in copyright law, *Community for Creative Non-Violence v. Reid*,³⁷ the Supreme Court held that the determination whether an employment relationship exists for purposes of copyright law should be made by applying "the general common law of agency," which requires courts to "consider the hiring party's right to control *the manner and means by which the product is accomplished*," rather than merely the hiring party's right to control the nature of the *product itself*.³⁸

Supp. 471, 473 (S.D.N.Y. 1942)). The House Report on the 1976 Act notes that the concept of a work-made-for-hire in copyright law was already well-established prior to the drafting of section 101, and specifically distinguished that rule from the "shop right" doctrine of patent law (while somewhat misspelling the latter rule):

The work-made-for-hire provisions of this bill represent a carefully balanced compromise, and as such they do not incorporate the amendments proposed by screenwriters and composers for motion pictures. Their proposal was for the recognition of something similar to the 'shop right' doctrine of patent law: with some exceptions, the employer would acquire the right to use the employee's work to the extent needed for purposes of his regular business, but the employee would retain all other rights as long as he or she refrained from the authorizing of competing uses. However, while this change might theoretically improve the bargaining position of screenwriters and others as a group, the practical benefits that individual authors would receive are highly conjectural. The presumption that initial ownership rights vest in the employer for hire is well established in American copyright law, and to exchange that for the uncertainties of the shop right doctrine would not only be of dubious value to employers and employees alike, but might also reopen a number of other issues.

H.R. REP. NO. 94-1476, at 121 (1976). Copyright law, it should be noted, applies to expressive works of authorship rather than useful inventions. 17 U.S.C. §§ 102(b), 101 (definition of "pictorial, graphic, and sculptural works") (2002).

³⁶ NEV. REV. STAT. 600.500 (2002) (emphasis added).

³⁷ 490 U.S. 730, 751 (1989).

³⁸ *Id.* at 748-50 (emphasis added). The Supreme Court's "manner and means" test echoed the agency analysis that had been adopted by the Fifth Circuit in a case that arose even before Congress had articulated the "scope of employment" requirement that appears in the current copyright statutes. See *Murray v. Gelderman*, 566 F.2d 1307 (5th Cir. 1978) (in deciding whether employee created work as a work made for hire, court must determine whether work was created at employer's "insistence and expense," or "in other words, whether the motivating factor in producing the work was the employer who induced its creation; another factor is whether the employer had the right to direct and supervise the manner in which the work was performed, though actual exercise of that right is not controlling").

Although the issue in *Reid* was whether or not an employment relationship existed in the first place, in subsequent cases, courts have applied the *Reid* standard in situations where the creative party is undisputedly an employee, but where the issue before the court is whether that party's particular creative effort was *within the scope* of his or her employment. Thus, for example, courts interpreting the "scope of employment" language in copyright law have recognized that an employee's creative efforts may fall outside the scope of employment even if they are related to and/or inspired by the employee's assigned duties, if the creative work was not specifically assigned or supervised by the employer.³⁹

Increasingly, courts faced with determining whether an employee's particular creative effort was within the scope of his or her employment have turned to three of the four factors listed in section 228 of the Restatement (Second) of Agency as indicative of an employment relationship.⁴⁰ For example, a 1992 Fourth Circuit decision, *Avtec Systems, Inc. v. Pfeiffer*,⁴¹ holds that "the key principle is that a servant's conduct is within the scope of employment 'only if: (a) it is of the kind he is employed to perform; (b) it occurs substantially within the authorized time and space limits; [and] (c) it is actuated, at least in part, by a purpose to serve the master.'"⁴² The court added that, to establish that a creative effort is within the scope of the employment relationship, it is not sufficient to show merely that "the subject matter of the work . . . bears upon or arises out of the employee's activities for his employer"; rather, it must be

³⁹ E.g., *Hays v. Sony Corp. of Am.*, 847 F.2d 412, 417 (7th Cir. 1988) (because high school teachers are not normally expected to pursue writing projects as part of their assigned duties, where teachers prepared a manual for their students on how to operate the school's word processing equipment "on their own initiative without direction or supervision by their superiors," and where their employment contract was silent on copyright ownership, preparation of manual may have been outside scope of their employment).

⁴⁰ The fourth factor is never cited in this context, because it pertains only to tortious conduct by the employee. See, e.g., *Miller v. CP Chems.*, 808 F. Supp. 1238, 1243 n.5 (D.S.C. 1992).

⁴¹ 21 F.3d 568 (4th Cir. 1994).

⁴² *Id.* at 571-72; accord, *Quinn v. City of Detroit*, 988 F. Supp. 1044, 1049 (E.D. Mich. 1997) (applying same three-factor test, and emphasizing that all three factors must be present); *Roeslin v. D.C.*, 921 F. Supp. 793 (D.D.C. 1995) (similar, citing *Avtec*); *Miller*, 808 F. Supp. at 1243-44 (applying same test, but implying that the first and third factors are more important than the second) (distinguished in *Quinn*). Although the second factor of the Restatement analysis – whether the work occurs substantially within the authorized time and space limits – would seem to require courts to consider when and where the creative activities took place, courts have analyzed this factor rather inconsistently. The Fourth Circuit in *Avtec Systems* suggested that courts have not treated time and place as significant considerations in cases where the *first* Restatement factor favors the employer. 21 F.3d at 571. As an example, the Fourth Circuit cited *Miller*, 808 F. Supp. at 1243-44, which held that an employee's creation of software was a "work made for hire" even though he created it at home, after his normal work hours, and for no additional compensation, because it was the type of work that was generally within the scope of his duties, the work was performed during his period of employment even though after hours, and the work was motivated by a desire to serve the employer. In contrast, the court in *City of Newark v. Beasley*, 883 F. Supp. 3, 7-9 (D.N.J. 1995) treated all three factors as essential, citing *Avtec Systems*, then paraphrased the Restatement test to require that the creative activities occur "substantially within authorized work hours," and accordingly found it significant that the work in question was created "at home during off hours."

demonstrated that the employee's effort is at least "appreciabl[y] motivated by a desire to serve the employer."⁴³ In addition, several courts have relied on section 229 of the Restatement, which broadens the "scope of employment" beyond conduct that has been specifically authorized by the employer, to include conduct "of the same general nature as that authorized, or incidental to the conduct authorized."⁴⁴ However, the mere fact that an employment relationship exists between two parties does not, under the Restatement test on which the "work made for hire" cases rely, establish that a particular act falls within the scope of the employment relationship.⁴⁵

Why does copyright law concern itself with the question of whether a particular work is within the "scope of employment?" The reasoning behind this standard 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. Thus, in copyright law, if a work is created outside the scope of employment, initial ownership of the copyright generally vests in the individual creator, even if that person is someone's employee, and the creator is then free to negotiate a transfer of those rights to the employer or anyone else with whom they strike a bargain. For ownership of a copyright in such a work to reside in anyone other than the individual creator, the latter must consent in writing, either in a written work-made-for-hire agreement or in a signed writing transferring exclusive rights.⁴⁶ Thus, the creator will have *actual notice* that he or she is surrendering the copyright. When a work is created within the scope of employment, under the Restatement test, the notice may be implied rather than express, in which case it is not necessarily in writing, but it is nonetheless a type of actual notice that is manifested by the conduct of the parties. Thus, the employee knows, before creating the work in question, that the employer is

⁴³ 21 F.3d at 572 (citing MELVILLE B. NIMMER, 1 NIMMER ON COPYRIGHT § 5.03[B][1][b] [i]).

⁴⁴ RESTATEMENT (SECOND) OF AGENCY, § 229, cited in *Roeslin*, 921 F. Supp. at 798, and *Miller*, 808 F. Supp. at 1243. The courts that have used § 229 in a "work made for hire" analysis have not discussed the specific factors which are listed in § 229 as relevant to determining whether the conduct is sufficiently similar to, or incidental to, the conduct authorized by the employer, perhaps because those factors were developed (like sections 228 and 229 themselves) not to determine who should own the fruits of an employee's creative efforts, but to determine when the employer should be held liable for the tortious conduct of the employee under a theory of respondeat superior; as a result, several of these factors have little or no value in the intellectual property context. Cf. *Miller*, 808 F. Supp. at 1243 nn.4 & 5 (noting this distinction).

⁴⁵ RESTATEMENT (SECOND) OF AGENCY, § 228, cmt. b, provides:

Proof that the actor was in the general employment of the master does not of itself create an inference that a given act done by him was within the scope of employment. If, however, it is also proved that the act tended to accomplish an authorized purpose and was done at an authorized place and time, there is an inference that it was within the scope of employment.

⁴⁶ In certain cases, if one party commissions a non-employee to create a copyrightable work, the hiring party can be designated the legal author (and thus the copyright owner) of the work under a written work made for hire agreement signed by both parties (although this option is available only for certain specified classes of copyrightable works). 17 U.S.C.A. § 101 ("work made for hire" definition), § 201(b) (ownership of works made for hire) (2002). In addition, exclusive rights in any type of copyrightable work can be transferred in a signed writing, under section 204(a).

likely to be the owner of that work, and the employee therefore has the opportunity to bargain for appropriate compensation before producing the work. Whatever bargain the employee strikes with the employer, when the employee is hired for (or subsequently assigned) a set of tasks that reasonably can be expected to include the production of a copyrightable work, the reasonable employee should not be surprised when the employer claims ownership of the work so produced. This same argument, of course, can also be applied to many independent contractors, who (it can be argued) should expect that the party hiring them to produce a copyrightable work expects to own the resulting copyright; nonetheless, ever since the enactment of the Copyright Act of 1976,⁴⁷ copyright law has imposed an express notice requirement in the case of non-employee works, by providing that only a signed writing can create a work-made-for-hire outside of the "scope of employment" context,⁴⁸ just as only a signed writing can effectuate a transfer of copyright from one party to another.⁴⁹

Some form of notice thus seems to be implicit in the work-made-for-hire concept of federal copyright law, both as it applies to employees and as it applies to independent contractors. The more explicit notice is provided to independent contractors, who will not be deemed to have surrendered their authorship, or assigned their copyright, unless they have signed an express written conveyance.⁵⁰ Notice to employees is less conspicuous, but nonetheless is arguably implicit in the relationship between the parties, because the loss of an employee's authorship rights can occur only if the employee's creative efforts are "within the scope" of his or her employment. The "within the scope" requirement of the work-made-for-hire definition roughly parallels the "hired to invent" requirement of the common law rule governing employee-inventors. If the "scope" of a person's employment includes the creation of certain copyrightable works, then it seems fair to say that the person was "hired to create" such works. In contrast, if a newspaper hires a reporter to write articles on business, and the employee also works on a novel in his or her spare time, the novel is not something that the employee was "hired to create," and the writing of it falls outside the "scope" of the reporter's employment.

In contrast, the Nevada statute applies to inventions "*developed . . . during the course of the employment.*" The phrase "during the course of the employment" does not itself require that the invention in question bear any relationship

⁴⁷ Pub. L. No. 94-553, 90 Stat. 2541 (1976), *codified at* 17 U.S.C.A. § 101 *et seq.* (2002).

⁴⁸ 17 U.S.C.A. § 101 (2002) (definition of works made for hire) (providing that a work by a non-employee can be a work made for hire only if certain conditions are met, including execution of an express, written, work-made-for-hire agreement signed by both parties).

⁴⁹ 17 U.S.C.A. § 204(a) (2002) (providing that ownership of a copyright can only be assigned by a written agreement signed by the transferor).

⁵⁰ The case law involving commissioned (as opposed to employee-created) works made for hire emphasizes the importance of a signed writing in order "to protect people against false claims of oral agreements" and "to make the ownership of property rights in intellectual property clear and definite, so that such property will be readily marketable." *Schiller & Schmidt, Inc. v. Nordisco Corp.*, 969 F.2d 410, 412 (7th Cir. 1992); *see also Playboy Enters. v. Dumas*, 53 F.3d 548, 558-59 (2d Cir. 1995) (noting that "Congress's goal of 'predictability' would be thwarted if a hiring party and an independent contractor could enter into a work-for-hire agreement years after a work was created").

to the purpose of the inventor's employment – that is, to the bargain that was struck between employer and employee. However, the statute also specifies that the employee invention belongs to the employer only if the invention “relates directly to work performed during the course of the employment.” It is possible that this language was intended to impose some limitations on the employer's power to claim an employee's inventions, by requiring some functional relationship between the invention and the employee's assigned duties, but the statutory language does not effectuate this intent. By giving the employer exclusive rights to any employee invention that “relates directly” to any work actually “performed during the course of the employment” rather than only to work that is *within the assigned duties* of the employee, the statute seems to give the employer the exclusive rights to inventions that relate to work which the employer *never asked or expected the employee to perform*.⁵¹

For example, an employee who is hired simply to assemble DVD players for a manufacturer might conceive of a better design for those DVD players, or perhaps a better method for assembling them. Since either of these inventions arguably “relates directly” to the work actually performed during the employment relationship, the statute might allow the employer to claim exclusive ownership of one or both of these inventions. If so, then a particularly enterprising employee who decides to go beyond his or her assigned duties in order to explore ways to better perform the tasks related to those duties could, it appears, be penalized for this extra effort by losing ownership of any resulting invention, even losing the right to *practice* that invention outside of the employment relationship. In contrast to the federal work-made-for-hire rule, the nature of the employee's assigned duties in this case – the “scope” of his or her employment – would not have given the employee reason to anticipate the employer's broad rights to claim ownership of such inventions. Rather than rewarding employees who develop better ways to accomplish their assigned tasks, the Nevada statute leaves them bereft. They are no better off, it seems, than if they had emulated Homer Simpson, bringing minimal effort and no inspiration whatsoever to their assigned duties.

Furthermore, the Nevada statute does not define what it means to “develop” an invention. In patent law, inventions are first “conceived,” and then “reduced to practice.” An invention is “conceived” when the inventor has formed “a definite and permanent idea of the complete and operative invention, as it is hereafter to be applied in practice.”⁵² In contrast, the invention is “reduced to practice” when a complete and functional embodiment of the invention is actually made or used.⁵³ Thus, an inventor might conceive an

⁵¹ There is also a more mundane ambiguity in the “course of the employment” language. For hourly employees, it is not clear whether inventive activities performed while “off the clock” would be considered to be in the “course of the employment.” Such activities certainly could be functionally related to their work activities for the employer, but would be undertaken on their own time. “Course of the employment” thus could refer either to the duration of the overall employment relationship or to the actual hours paid for by the employer. Cf. *supra* note 42 (discussing conflicting interpretations of the “time and space” provisions in the Restatement test for the scope of employment).

⁵² *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1376 (Fed. Cir. 1986).

⁵³ *Corona Cord Tire Co. v. Dovon Chem. Corp.*, 276 U.S. 358, 383 (1928). This refers to an “actual” reduction to practice. A legally sufficient disclosure in a patent application consti-

invention before entering an employment relationship, and then reduce it to practice after entering that relationship. Alternatively, an employee may conceive of an invention during a period of employment, then terminate the employment before reducing it to practice. Or the employee may develop only the first glimmerings of the inventive concept during the period of employment, then terminate employment before forming the "definite and permanent idea" that constitutes a "conception" under patent law. The ambiguous language of the Nevada statute thus does not identify when an invention is considered to have been "developed" – at the first glimmering, at full conception, at reduction to practice, or at some other point in the creative process. This ambiguity opens the door to further litigation.

Thus, even the very pro-employer policy of federal copyright law's work-made-for-hire doctrine is more protective of employees, and less ambiguous, than Nevada's employee inventions statute. In contrast to the carefully confined "scope of employment" concept that controls the work-made-for-hire determination, the scope of an implied assignment under Nevada's statute is expressed in language that is both vague and circular: it applies to any invention developed "during the course of the employment that relates directly to work performed during the course of the employment." Surely the drafters of this statute could have come up with language that defines more clearly the requisite relationship between the invention and the bargain that was actually contemplated by the parties to the employment agreement.

V. COMPARISON WITH THE LAW OF TRADE SECRETS

The common law rules governing employers' exclusive rights in their trade secrets are closely related to the common law rules for patentable inventions, because in many cases the same subject matter may qualify for trade secret protection initially,⁵⁴ and then subsequently qualify for patent protection upon the filing of a patent application which discloses the secret.⁵⁵ Thus, in the absence of express contractual provisions regarding the trade secret (either in the employment contract and/or in a separate confidentiality agreement), courts have held that the ownership of trade secrets, whether imparted to or developed by employees, depends on several factors: (1) the nature of the work for which the employee was engaged; (2) the relationship between the invention and the employer's business; and (3) the extent to which the employee used the employer's resources in conceiving or developing the secret information.⁵⁶

tutes a "constructive" reduction to practice. *See, e.g., Credle v. Bond*, 25 F.3d 1566, 1571 (Fed. Cir. 1994).

⁵⁴ Although maintaining the secrecy of an invention can, in some circumstances, prevent the inventor from obtaining a patent, it is not an automatic bar. 35 U.S.C.A. § 102 (2002).

⁵⁵ Under current law, the contents of most patent applications become public eighteen months after filing, regardless of whether the application is successful. 35 U.S.C.A. § 122(b) (2002). In any case, the contents of a successful application become public when the patent issues. 35 U.S.C.A. §§ 153, 154(a)(4) (2002).

⁵⁶ *See Wexler v. Greenberg*, 160 A.2d 430, 435-37 (Pa. 1960) (denying employer's claim for trade secret protection where the facts and circumstances of the employment would not have put the employee on notice that developing this proprietary information was the pur-

Under the common law of trade secrets, an employee can be held liable for misappropriation of a trade secret *only* if the employee had reason to know that the information was secret.⁵⁷ Under appropriate circumstances, an agreement to maintain information in confidence may be implied, based on the circumstances of a person's employment.⁵⁸ Thus, under trade secret law, an employer cannot claim exclusive rights to information used by its employees unless the latter have actual notice – express or implied – that such exclusivity is claimed.

In the case of an express agreement which assigns to the employer the exclusive right to any trade secrets developed by an employee, the same state statutes previously discussed in Part III⁵⁹ impose comparable limits on the enforceability of these contracts as well.

VI. PURPOSE AND PROBABLE EFFECTS OF THE NEVADA EMPLOYEE INVENTION STATUTE

Nevada's employee invention legislation is unique in the United States. No other state has passed a law divesting employee-inventors of their common law rights.⁶⁰ It may even be unique in the world; most other industrialized nations have enacted laws that define the rights of employee-inventors more broadly than United States common law,⁶¹ and it has been suggested that the

pose of the employment relationship); *Q-Co. Indus., Inc. v. Hoffman*, 625 F. Supp. 608 (S.D.N.Y. 1985); *Rohm & Haas Co. v. Adco Chem. Co.*, 689 F.2d 424 (3d Cir. 1982).

⁵⁷ *E.g.*, *Buffet's, Inc. v. Klinke*, 73 F.3d 965, 969 (9th Cir. 1996) (denying trade secret protection where employer did not provide employees with sufficient notice that information was secret); *Nordale, Inc. v. Samsco, Inc.* 830 F. Supp. 1263, 1274-75 (D. Minn. 1993) (denying trade secret protection where plaintiff did not provide notice to defendant or its employees that the information was secret) (citing *Electro-Craft Corp. v. Controlled Motion, Inc.*, 332 N.W.2d 890, 902-03 (Minn. 1983); *Gordon Employment, Inc. v. Jewell*, 356 N.W.2d 738, 741 (Minn. App. 1984)); *Allied Supply Co. v. Brown*, 585 So.2d 33, 36 (Ala. 1991) (denying trade secret protection where employer did not provide employees with sufficient notice that information was secret); *Gordon*, 356 N.W.2d at 741 (denying trade secret protection where "confidentiality was never discussed between employer and employee"); *Electro-Craft*, 332 N.W.2d at 903 ("[A] common law duty of confidentiality arises out of the employer-employee relationship only as to information which the employer has treated as secret: '[T]he employee is entitled to fair notice of the confidential nature of the relationship and what material is to be kept confidential.'" (citation omitted); *Nat'l Rejectors, Inc. v. Trieman*, 150 U.S.P.Q. 120, 135 (Mo. S. Ct. 1966).

⁵⁸ *E.g.*, *Zoecon Indus. v. American Stockman Tag Co.*, 713 F.2d 1174, 1178 (5th Cir. 1983).

⁵⁹ See *supra* notes 28-34 and accompanying text.

⁶⁰ Federal government regulations address the rights of inventors employed by the federal government. Even though they are somewhat different from the common law rules, in general they allow the government to claim rights only in inventions created by employees acting within the scope of duties that pertain to invention or research. 37 C.F.R. § 501.6 (2002). To the extent that federal regulations are considered incorporated in federal employment agreements, these regulations can be seen as another instance of preinvention assignment agreements that supplant the common law rule.

⁶¹ See Gullette, *supra* note 29, at 739-40 & nn.11-15 (discussing British and German statutes); Parker, *supra* note 27, at 615-16 (describing the laws of Sweden, Holland, Japan, West Germany, Italy, Great Britain, Austria, and Switzerland, and noting that the only industrialized nations without national laws that protect the rights of employed inventors are France, Canada, and the United States); Hovell, *supra* note 8, at 881 (discussing foreign statutes).

United States' low level of protection for employee-inventors may be at least partly responsible for this country's relative lack of patent productivity.⁶² On several occasions, the United States Congress has considered adopting legislation designed to enhance the rights of employee-inventors.⁶³ Thus, S.B. 558 may very well be the most restrictive employee-invention statute anywhere in the world. Yet this legislation was enacted in Nevada with minimal debate and very little testimony.

The legislative history of the Nevada statute is sparse. The proponents of the legislation argued that the statute would attract new business to the state.⁶⁴ However, in the hearings on S.B. 558, no evidence was presented to support the hypothesis that divesting employee-inventors of their common law rights would contribute to the state's economy. Indeed, there was very little discussion of the common law rules at all,⁶⁵ which raises the question whether the legislators even understood the substance of the century and a half of nationwide common law they were voting to supplant. There certainly was no acknowledgment of the trend, in other states and industrialized nations, toward enhancing the rights of the employee-inventor rather than diminishing them.

Nor does it appear that the members of the Nevada Legislature shared a clear understanding of the meaning of the statute which they were enacting. Testimony at the hearings highlighted the ambiguity of the phrase "course of employment," and the unfairness of divesting employees of their common law rights without notice,⁶⁶ yet the troublesome phrase was not modified, and the bill was not amended to provide any form of notice to employees. During the hearings, one commentator implied that "course of employment" and "scope of employment" actually mean the same thing.⁶⁷ Of course, until there is some legislative or judicial clarification of this phrase, this interpretation is doubtful, and nothing else in the legislative history of the statute supports it. Even if that interpretation were eventually adopted by Nevada's courts, the statute would still divest employees of their common law rights by converting the employer's

⁶² Parker, *supra* note 27, at 603, 622, 628 (citing evidence of a decline in U.S. patent productivity compared with that of other countries, and suggesting that federal legislation favoring employee-inventors may be needed to improve U.S. competitiveness).

⁶³ Parker, *supra* note 27, at 617-22 (describing history of federal employee-inventor bills introduced between 1963 and 1983); Hovell, *supra* note 8, at 883-87 (similar).

⁶⁴ *Minutes of the Meeting of the Assembly Committee on Commerce and Labor, 71st Sess.* (May 14, 2001) (comments of Pat Phillips, Deputy Chief of Staff for Lt. Gov. Lorraine Hunt, and others), available at <http://www.leg.state.nv.us/71st/Minutes/Assembly/CMC/Final/1348.html> (last visited Oct. 24, 2002); *Minutes of the Senate Committee on Commerce and Labor, 71st Sess.* (April 3, 2001) (comments of Lt. Gov. Lorraine Hunt and others), available at <http://www.leg.state.nv.us/71st/Minutes/Senate/CL/Final/807.html> (last visited Oct. 24, 2002).

⁶⁵ *Minutes of the Senate Committee on Commerce and Labor, 71st Sess.* (April 16, 2001) (comments of Lobbyist John P. Sande III, noting that "until now, Nevada law has deferred to common law"), available at <http://www.leg.state.nv.us/71st/Minutes/Senate/CL/Final/952.html> (last visited Oct. 24, 2002).

⁶⁶ *Minutes of the Meeting of the Assembly Committee on Commerce and Labor, 71st Sess.* (May 14, 2001), *supra* note 64 (statement of Las Vegas attorney Mark Tratos) (commenting on the difference between "course of employment" and "scope of employment," and expressing concern over the lack of notice to employees).

⁶⁷ *Id.* (statement of attorney Kenneth D'Alessandro).

non-exclusive shop right⁶⁸ into an exclusive ownership right. As explained earlier, this would be a significant change in the law, unique in the fifty states, and would constitute a major shift in Nevada's public policy with respect to employees' rights, without any clear indication of whether and how such a change will benefit the state. In contrast to the broader interpretation of "course of employment," however, under this narrower reading of the phrase the problem of lack of notice is somewhat lessened, and the Nevada statute falls more into line with the work-made-for-hire rule of copyright law, divesting employees of intellectual property rights only when the employee can reasonably be said to have undertaken the inventive acts as an agent of the employer, as determined under the common law rules of agency articulated in the Restatement of Agency.⁶⁹

Unfortunately, there is nothing in the legislation, or its history, to indicate whether or not the Legislature intended to adopt this interpretation of the statutory phrase. Thus, the interpretation of the phrase will apparently be left to the courts. This exacerbates the notice problem discussed earlier, of course, because now neither employers nor employees, no matter how educated or well-informed, will know for sure which inventions belong to the employer, and which to the employee, until the dispute winds up in court. Well-informed parties with sufficient bargaining power can reduce the attendant risks by entering into express written agreements that specify the ownership of employee inventions in advance. However, many employers and employees will lack the knowledge and/or bargaining power to execute such agreements. Thus, rather than increase predictability of invention rights, the new legislation actually gives rise to greater uncertainty. Those who are unaware of the statute may proceed on the erroneous assumption that the common law rules apply. Those who are familiar with the statute are left to guess about its meaning, and have little recourse but to attempt to contract around its ambiguities. Thus, the uninformed employee is worse off, and the informed employee is no better off, than under the common law rules. Informed employers do not benefit, either, because if they are informed, they will know that they must still contract around the statute in order to obtain certainty. As a result, the only parties that will benefit from the new law are uninformed employers, because if they attempt to claim ownership of an employee's invention after the fact, without having entered a preinvention assignment agreement with the employee, they now have a slightly greater chance of prevailing, but their actual likelihood of success remains unpredictable until courts have clarified the meaning of the statute.

Leaving crucial questions of statutory interpretation to the courts is inefficient, imposes significant costs both on the disputing parties and on the state which bears the cost of the judicial process, and can lead to results unintended by the Legislature and unanticipated by the parties at the time they engaged in their transaction. When the courts do resolve the ambiguities created by this statute, only then will we know for sure how the rights of employees have been altered by the actions of the Legislature.

⁶⁸ See *supra* notes 26-27 (discussing shop right).

⁶⁹ See *supra* notes 40-45 and accompanying text (discussing the Restatement).

The Nevada Legislature was apparently presented with no empirical studies to support the hypothesis that divesting employees of their common law rights would benefit the state's economy by attracting more high technology businesses to the state. It is extremely unlikely that any such studies exist, of course, because no other state has adopted a statute resembling Nevada's. The empirical work that does exist, however, indicates that high levels of research and development spending in a state are correlated to a number of factors, most notably the educational level of the workforce.⁷⁰

In fact, the empirical evidence shows that several of the hottest high-tech economies in the country are located in states that not only protect the traditional common law rights of employee-inventors, but which have also enacted

⁷⁰ For example, one study shows that Nevada's rank among high tech economies slipped from twenty-first (out of fifty states) in 1999 to thirty-second in 2002. Two of the categories in which Nevada scored the lowest were the educational level of its workforce, and the use of technology in the schools; in both categories, Nevada ranked forty-ninth out of fifty states. Progressive Policy Institute, Technology, Innovation, and the New Economy Project, *The 2002 State New Economy Index*, at <http://www.neweconomyindex.org/states/2002/summary.html> (last visited Oct. 24, 2002). These findings are echoed by the Corporation for Enterprise Development (CED), in its *Development Report Card for the States 2001* (assessing each state's economy and growth potential based on seventy factors). On a scale of A (high) to F (low), Nevada received an overall grade of "D" for its "Development Capacity" – a category representing "the quality and availability of the building blocks of successful economies." Nevada ranked high only in one of these building blocks – "Physical Infrastructure" – and received a "D" in Innovation Assets, a category defined in large measure by the educational level of the workforce and the level of research conducted in the state's universities. *Id.* at <http://drc.cfed.org/?section=grades&page=development> (last visited Oct. 24, 2002). Indeed, Nevada received three of its worst scores in the categories that measured (relative to the state's population) the number of PhD's and engineers in the workforce, the number of science and engineering graduate students, and the level of university R&D. Innovation assets are important, the study notes, because "[t]he larger the potential pool of innovators in the state, the greater the likelihood that innovation will become reality." *Id.* at <http://drc.cfed.org/index.php3?section=measures&page=innovation> (last visited Oct. 24, 2002). Evaluating the factors common to those states whose economies earned the highest scores, the report concludes that "[s]tates with companies that are taking the high road to development and investing in human resources – high salaries, wage increases, and health benefits – are among the highest performing states overall." *Id.* at <http://drc.cfed.org/?section=main&page=kf2> (last visited Oct. 24, 2002). Nevada's poor showing in the "Development Capacity" and "Innovation Assets" categories in 2001 was unchanged from its showing in these categories in the CED's 2000 *Report Card*, where the CED concluded that:

States that are rich in innovation assets – that is, states with students and employees in high tech fields, a large degree of research and development funding, and success in marketing new products through universities and small businesses – have the most competitive, diverse, and entrepreneurial business climates [and] . . . States that make key investments in the education and health care of children tend to have higher quality jobs and more competitive businesses . . .

CED, *Development Report Card for the States 2000*, at <http://drc.cfed.org/2000> (last visited Oct. 24, 2002).

Along the same lines, in a recent speech to the Technology Alliance (a business consortium), uber-techie Bill Gates argued that improvements in transportation and elementary education, but most importantly in the state universities, were among the most vital factors in strengthening Washington state's high-tech economy. *High-Tech Handshake*, THE SEATTLE POST-INTELLIGENCER, May 18, 2002, at C6. See also Richard Perez-Pena, *Albany Chosen as Research Hub for the Next Generation of Chips*, N.Y. TIMES, July 18, 2002, at A1 (citing low cost of living and high quality of university engineering programs, as factors crucial to regional high tech growth in Texas and New York).

pro-employee statutes that *enhance* those common law rights by limiting the power of an employer to enforce even a *written contract* assigning ownership of employee inventions to the employer.⁷¹ Two of the states which combine strong high-tech economies with pro-employee legislation – California and Washington – are among Nevada's closest neighbors and toughest competitors in the market for high-tech businesses. If the goal of S.B. 558 was to emulate the success of these high-tech economies, then the unstated premise underlying Nevada's legislation seems to be that California and Washington have succeeded not *because* of their pro-employee legislation, but *in spite* of it. There is simply no evidence to support this counter-intuitive assumption.

The notion that states can best attract new business by offering subsidies and low-cost business environments has come under attack as failing to take account of the shift toward a high-tech, information-based economy in which a region must first figure out how to attract the most skilled workers, because without those skilled workers the employers simply will not follow. Indeed, according to a recent study by the Progressive Policy Institute and CEOs for Cities, the strategy underlying Nevada's legislation – diminishing the rights of employee-inventors to make it less costly for employers to obtain the rights to their inventions – may be not only outdated, but counterproductive, in that it may slow the growth of technology-based businesses in Nevada by discouraging the most inventive employees from accepting jobs in the state:

In a knowledge economy with low unemployment, companies place more importance on attracting and retaining talent. Moreover, highly skilled workers are more geographically mobile than workers with less education. As a result, a key ingredient in determining a region's success is its ability to attract (and grow) knowledge workers. This paradigm is a distinct shift away from that in the old economy where the key was attracting companies to a region.

Knowledge workers are important because the principal factor in determining where high-tech firms locate is an adequate supply of skilled labor. But knowledge workers are also important because they lead to a more prosperous regional economy. Economic researcher Paul Gottlieb found that from 1980 to 1997, the per capita incomes of metro areas with the most educated populations grew ten percent, while those with the least educated declined eight percent.

Moreover, entrepreneurs are more likely to have higher levels of education, and as entrepreneurial start-ups become more important to a region's economic success,

⁷¹ According to one recent study, nearly fifty percent of the nation's research and development expenditures are concentrated in six states. California, with its strong pro-employee invention legislation, tops the list of R&D expenditures, with twenty percent of the nation's total R&D. Rounding out the top five, in descending order, are New York, Michigan, Massachusetts, New Jersey, and Texas. Richard J. Bennoff, *National Science Foundation, Division of Science Resource Studies Data Brief NSF 01-320* (March 23, 2001), at <http://www.nsf.gov/sbe/srs/databrf/nsf01320/sdb01320.htm> (last visited Oct. 24, 2002). When R&D spending is expressed as a percentage of a state's total gross product, the hottest high-tech economy is that of Delaware, which has enacted pro-employee invention legislation almost identical to that of California. *Id.* Another study of the strongest high-tech economies gave top-ten rankings to three states that have strong pro-employee invention statutes – California, Delaware, and Washington. Progressive Policy Institute, *The 2002 State New Economy Index*, at <http://www.neweconomyindex.org/states/2002> (last visited Oct. 24, 2002) (also listing Massachusetts, Virginia, New Jersey, Colorado, Maryland, Connecticut, and New York in the top ten, and showing Nevada slipping from twenty-first place in 1999 to thirty-second place in 2002, the second largest drop in rank (after Alaska) on the list).

having more knowledge workers increases the odds that an entrepreneurial startup will be successful and turn into a rapidly growing company.⁷²

VII. CONCLUSION

With the enactment of S.B. 558, Nevada has become the least inventor-friendly state in the nation. The legislation was adopted by an overwhelming vote of the state's legislators, based on the speculative (but apparently sincere) belief that a law giving employers greater power over inventors would stimulate growth in the state's high technology sector. Although no one can say for certain that this prediction will prove to be false, the Legislature did not receive, or even demand, one piece of supporting evidence before adopting this prediction as its sole justification for repealing the common law rights of inventors.

With common law rights repealed, what rights do employee-inventors retain in Nevada? Unfortunately, neither the statutory language nor the legislative history provide much clarity on the scope of their remaining rights. Greater clarity could have been achieved had the legislature adopted a "scope of employment" limitation comparable to that which exists in copyright's work-made-for-hire regime, or a "hired to invent" limitation similar to that which existed at common law. Either such limitation could have been given a relatively precise statutory definition in order to lend greater clarity to the law, which would enable interested parties to proceed with greater certainty in negotiating for the ownership of valuable patent rights. Such clarity would reduce the potential for litigation over the meaning of the "course of employment" language in the current statute.

Alternatively, the lawmakers could have required, as a condition to enjoying the benefits of this legislation, that each employer seeking to invoke the statute provide appropriate written notice to the affected employees prior to the invention's conception or reduction to practice. The risk-averse employer would provide this notice at the commencement of the employment relationship, rather than risk waiting too long and missing out on ownership of a valuable invention.

Because S.B. 558 came before the Nevada Legislature as a result of extensive lobbying by a single entrepreneur,⁷³ the legislators apparently never considered – and perhaps were unaware of – the statutory schemes in eight other states which now favor inventor-employees by granting them rights far greater than those recognized by the common law rules. Nevada's lawmakers might have benefited from inquiring into the legislative histories of those enactments,

⁷² Rob Atkinson, Director of the Technology and New Economy Project, Progressive Policy Institute, *Urban Economic Prospects in the New Knowledge Economy* 2-3 (Paper presented to the "CEOs for Cities" Conference, Chicago, Illinois, October 20, 2000), available at http://www.ceosforcities.org/research/2000/urban_economic_prospects/urban_economic_prospects.pdf (last visited Oct. 24, 2002) (proposing that urban economic development strategy be transformed from focusing on attracting business through subsidies and low costs, to focus on increasing presence of knowledge workers by providing a high quality environment for those workers).

⁷³ Wealthy inventor Gilbert Hyatt was the moving force behind this legislation, and participated in the hearings on S.B. 558.

which might indicate why those states concluded that their economies would be better served by giving more, rather than fewer, rights to inventor-employees.

Perhaps a future legislative session can remedy some of these problems, by taking a more considered look at striking the right balance between protecting the reasonable expectations of employers and creating a climate that attracts and retains an educated workforce.⁷⁴ In the interim, disputes over the scope of the statute may give Nevada's courts an opportunity to clarify the statute's scope, perhaps adopting a narrowing interpretation of the term "course of employment" so that it more closely tracks the "hired to invent" or "scope of employment" limitations that provide somewhat greater certainty. For example, the courts might adopt a functional interpretation of the "course of employment" limitation, by inquiring whether and to what extent the employee actually used the employer's resources (including paid work hours) in developing the invention. Such an approach could distinguish situations in which the employer would, at common law, have had at least a shop right, from other situations in which the employer should have no rights in the invention whatsoever, because the inventive activity was merely inspired by the employee's work assignments but was neither contemplated by the employment relationship nor subsidized by the employer. These interim measures cannot fully resolve the fundamental policy question of how the rights of inventors and employers should be balanced, but they can at least remedy the most egregious cases of employer overreaching.

It is not at all clear how Nevada's new employee invention statute will benefit the public. In fact, it appears that the new law will benefit only those employers that aspire to obtain their employees' property without notice or consideration. The legislative history of the statute indicates that the Legislature believed that businesses considering entering Nevada will give some weight to the state's laws relating to inventorship in making this relocation decision. However, it seems reasonable to believe that employers who are savvy enough to research Nevada's business laws before moving here are certainly savvy enough to include express preinvention assignment agreements in their employment contracts, which renders the statute superfluous for those employers. Employees who sign such contracts receive actual notice of the employers' rights to their inventions, and will find it more difficult to establish unfair surprise or inadequate consideration if they subsequently regret the bargain they struck. Where no express contract exists, the common law rule is designed to assess the parties' reasonable expectations, based on the nature of their implied contract, and award ownership, or a shop right, according to well-

⁷⁴ To some commentators, the common law rule, in its actual application, has at times been too heavily stacked against employees. In her study of the evolution of the common law rule in the nineteenth and early twentieth centuries, Catherine Fisk observed that, over time, the trend of decisions began to favor employers more:

This is an area where law and culture cross-fertilized one another in their creation of and reaction to social class. If a judge could not see an inventive man as part of the working class, the judge vastly increased the employee's chances of becoming an entrepreneur if he was not one already. Once judges began to see inventive employees as employees first and inventors second, it became much harder for the employee to capitalize on his ideas.

Fisk, *supra* note 27, at 1198.

established principles of contract law and equity. In contrast, under Nevada's new statute, the employer obtains absolute ownership of the employee's creative product, regardless of the parties' reasonable expectations, and with no advance notice to the employee, who will accept an offer of employment without realizing how much he or she is potentially surrendering, and who may even rely to his or her detriment on an employer's oral assurance that no preinvention assignment is intended. The new statute therefore operates to the detriment of uninformed employees, and is simply not necessary to protect the rights of well-informed employers. It could, of course, benefit uninformed employers, who might stumble into a windfall if their employees produce inventions never contemplated in their employment agreement. However, an employer who is unaware of the benefits of a preinvention assignment agreement is also unlikely to be aware of Nevada's inventorship laws, and thus it is likely that when such an uninformed employer decides to enter the state, it will be for reasons that are completely unrelated to the new statute. Thus, it seems that the statute will enhance Nevada's attractiveness only for those employers who would like to take advantage of the ignorance of their employees.

At the same time, the statute will make Nevada uniquely *unattractive* to the highly educated workforce that makes a high-tech economy possible. Studies show that a workforce which is well educated in science, engineering, and computer technology is essential to attracting and retaining high-technology businesses.⁷⁵ States that offer this essential resource have succeeded in the competition for high-technology business, regardless of whether they have retained the common law rules that protect the rights of employee-inventors⁷⁶ or have enhanced those protections through modern pro-employee legislation.⁷⁷ However, by enacting a law that deprives technologically creative workers of their common law rights, Nevada may have made itself a significantly less attractive place for these workers. The employee invention statute is likely to discourage such workers from relocating to Nevada, and may even prompt some of the state's existing innovators to leave for nearby states – such as California and Washington – which have combined vibrant high-tech economies with pro-inventor legislation. Whatever benefit Nevada derives from devoting greater resources to science and engineering research at its two universities may be significantly undermined by an employee invention statute that constitutes a giant step backward in attracting and retaining professional innovators.

⁷⁵ See *supra* note 70 and accompanying text.

⁷⁶ See *supra* note 71 and accompanying text.

⁷⁷ See *supra* notes 71 and accompanying text.