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NECESSITY MAY BE THE MOTHER OF INVENTION, BUT WHO GETS CUSTODY?: THE OWNERSHIP OF INTELLECTUAL PROPERTY CREATED BY AN EMPLOYED INVENTOR

By Christopher M. Mislow*

One of the hottest new items in the microcomputer market today is the so-called “portable” computer. In one crucial respect, though, computers have always been portable: the knowledge underlying each particular technology travels in the mind of every person familiar with it. Hence, when a skilled employee leaves his employment, he often carries with him valuable information concerning his former employer’s business. The more knowledgeable employees, moreover, being in greater demand, tend to shift jobs more frequently. And the problems raised by employee mobility are especially acute in the computer industry, where, in amoeba-like fashion, employees split from one firm to join or form another with breath-taking rapidity.

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1. Microcomputers, popularly referred to as “personal computers,” are the smallest class of computers in the spectrum from microcomputers through supercomputers. The primary characteristic of “micros” is that their central processing units (the area where the logical and arithmetic operations usually associated with the term “computing” occur) are implemented on a single integrated circuit known as a microprocessor. C. Parker, Understanding Computers and Data Processing 18-20 (1984).


6. In one series of employee defections, for example, Bell Laboratories begat Shockley
Much has been written about the legal techniques available to intellectual property owners seeking to halt the use or disclosure of inventions by former employees. But this concern begs a central issue, viz., does the supposedly aggrieved former employer own the invention? Where an employee merely becomes familiar with his employer's inventions while on the job, and then, having jumped ship, uses his acquired knowledge of those inventions in competition with his former employer, the legal characterization of his actions is virtually a foregone conclusion. In these circumstances, the employer is deemed to have disclosed his invention to the employee in confidence; any misappropriation of the information thus disclosed is a betrayal of that confidence.

In those circumstances where it was the former employee himself who actually created the invention, however, a much closer question arises, for "no one sells or mortgages all the products of his brain to his employer by the mere fact of employment." The issue is further complicated by the oftentimes balkanized nature of ownership rights in intellectual property. One party may "own" an invention, yet be unable to prohibit, or even to exact payment for, another party's use of that invention. Nor is the question limited to the context of a master-servant relationship;


8. Cf. Barlow & Seelig Mfg. Co. v. Patch, 232 Wis. 220, 222, 286 N.W. 577, 579 (1939) (characterizing a dispute over ownership of an invention created by the defendant while in the plaintiff's employ as "a question of meum et tuum").

9. See, e.g., Junker v. Plummer, 320 Mass. 76, 67 N.E. 2d 667 (1946) (employee attempted to compete with his former employer using a trade secret which had been the former employer's "brain child").


11. The distinction, though, has occasionally been overlooked. See, e.g., Sperry Rand Corp. v. Rothlein, 241 F. Supp. 549 (D. Conn. 1964), where the court, in something of a non sequitur, quoted from Allen Mfg. Co. v. Loika, 145 Conn. 509, 514, 144 A.2d 306, 309 (1958) ("the law is well settled that knowledge acquired by an employee during his employment cannot be used for his own advantage . . .") (emphasis added) in support of its conclusion that "[t]he fact that it was the defendants who developed the process gives them no greater right to use it . . . than that of any other employee." 241 F. Supp. at 564-65 (emphasis added).


independent consultants\(^\text{14}\) can walk off with valuable information just as easily as can employees.\(^\text{15}\)

This article analyzes the ownership of inventions created by employees\(^\text{16}\) and by employed consultants.\(^\text{17}\) The purpose of this article is not to suggest any radical departure from prevailing legal principles, although reasons for change are hardly lacking.\(^\text{18}\) Rather, its aim is more pragmatic: to chart a course through the turbid waters of current legal doctrine so that the reader may be more aware of the shoals en route. To that end, Part I discusses the manner in which the ownership rights in three recognized forms of intellectual property— patents, trade secrets and copyrights\(^\text{19}\) —

\(\text{\textsuperscript{14}}\) Whether one is an independent contractor or an employee depends upon a number of variables, among them: (1) the extent of control which, by the agreement, the employer may exercise over the details of the work; (2) whether or not the one employed is engaged in a distinct occupation or business; (3) the kind of occupation, with reference to whether, in the locality, the work is usually done under the direction of the employer or by a specialist without supervision; (4) the skill required in the particular occupation; (5) whether the employer or the one employed supplies the instrumentalities, tools, and the place of work for the person doing the work; (6) the length of time for which the person is employed; (7) the method of payment, whether by the time or by the job; (8) whether or not the work is a part of the regular business of the employer; and (9) whether or not the parties believe they are creating the relation of master and servant. \textit{Restatement (Second) of Agency} \$ 220 (1957). The most important factor is the degree of control. If the employer reserves the right to control not only the result to be achieved, but also the means to be used in attaining that result, then an employer-employee relationship usually exists. If, on the other hand, the employer reserves only the right to control the result to be achieved, then an independent contractor relationship usually exists. \textit{E.g.,} Building Material and Dump Truck Drivers, Teamsters Local Union No. 36 v. NLRB, 215 U.S. App. D.C. 373, 669 F.2d 759 (1981), \textit{aff'd on other grounds sub nom.} Shepard v. NLRB, 459 U.S. 344 (1983).

\(\text{\textsuperscript{15}}\) This facet of the problem will become more important as the proportion of research contracted to outside consultants increases. See generally \textit{Stedman, Employer-Employee Relations}, in \textit{F. Neumeyer, The Employed Inventor in the United States: R&D Policies, Law and Practice} 29, 70-71 (1971) [hereinafter cited as \textit{Neumeyer}].


\(\text{\textsuperscript{17}}\) See \textit{supra} note 15.


\(\text{\textsuperscript{19}}\) Patents, copyrights and trade secrets are sometimes referred to as the “big three” of intellectual property law. See \textit{R. Baker, Scuttle the Computer Pirates: Software
are allocated in the absence of an express contract. Part II then explores some of the obstacles to an allocation of ownership rights by express contract.

I. OWNERSHIP IN THE ABSENCE OF AN EXPRESS CONTRACT

A. Patents

1. Persons Hired to Invent

Ordinarily, the person who invents or discovers a patentable process or device is entitled to the patent thereon. Only by assignment can this right be divested. Included in this category of persons is the inventive employee hired to perform non-inventive work. When an employee is hired to invent, however, the law implies a duty to assign all resulting patents to his employer, the


20. The Patent Act, 35 U.S.C. §§ 1-376 (1982), was enacted pursuant to Congress' constitutional authority "[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries." U.S. CONST. art. I, § 8, cl. 8. To acquire patent protection under the Act, an inventor must first create an "invention." An invention does not occur until the subject matter of the invention has been both conceived and reduced to practice. Rex Chainbelt Inc. v. Borg-Warner Corp., 477 F.2d 481, 487 (7th Cir. 1973). ("Conception" denotes the complete mental act of formulating the invention to be claimed; "reduction to practice" denotes the making of a prototype and the testing of it to see whether or not it performs as envisioned. USM Corp. v. SPS Technologies, Inc., 514 F. Supp. 213, 245 (N.D. Ill. 1981), aff'd in part, rev'd in part on other grounds, 694 F.2d 505 (7th Cir. 1982)). The inventor must then establish that the invention is a "new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof," that the invention has not already been thought of by others, and that the invention was not obvious to one familiar with prior art. 35 U.S.C. §§ 101-03 (1982).

21. 35 U.S.C. § 101 (1982) provides, in pertinent part, that "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor . . . ."


24. E.g., Standard Parts Co. v. Peck, 264 U.S. 52 (1924). The employee hired to invent has been likened to a miner hired to find and remove precious minerals: the miner is paid whether or not he finds anything, but any gems belong to his employer. See G. KIVENSON,
rationale being that:

If one is employed to devise or perfect an instrument, or a means for accomplishing a prescribed result, he cannot, after successfully accomplishing the work for which he was employed, plead title thereto as against his employer. That which he has been employed and paid to accomplish becomes, when accomplished, the property of his employer. Whatever rights as an individual he may have had in and to his inventive powers, and that which they are able to accomplish, he has sold in advance to his employer.25

It is of no consequence, in other words, whether such an employee is assigned to a specific project26 or works in general research and development;27 in either event, "what he is paid to produce belongs to his paymaster."28 The same rule applies to independent consultants as well.29

Distinguishing employed inventors from inventive employees, however, entails more than simply looking for the people wearing white lab smocks. In some instances, identifying employed inven-

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25. Solomons v. United States, 137 U.S. 342, 346 (1890). Another rationale often advanced to justify the compulsory assignment of patent rights to an inventor's employer is the "risk of the enterprise" doctrine. See e.g., National Dev. Co. v. Gray, 316 Mass. 240, 246, 55 N.E.2d 783, 787 (1944) ("If the employee fails to reach his goal the loss falls upon the employer, but if he succeeds in accomplishing the prescribed method then the invention belongs to the employer . . . "). But cf. GAF Corp. v. Anchem Prod., Inc., 399 F. Supp. 647, 658-59 (E.D. Pa. 1975) (invoking the "risk of the enterprise" doctrine to estop an employer from challenging the validity of a use patent obtained by a consulting firm that the employer had hired to conduct research concerning possible uses for the employer's chemicals).


ors is an easy task.30 But a virtually imperceptible line often separates those employees paid to be inventive from those merely encouraged to be creative.31 In *Melin v. United States*,32 for example, the general manager of a lumber manufacturing company had been assigned the responsibility of supervising the construction of a new plant. Part of his assignment was specifically to incorporate in the new plant as much labor-saving equipment as possible. In an effort to meet this directive, the general manager conceived the idea for a semi-automatic lumber-handling device, called a "mechanical off-bear and slab-handling apparatus," which he later patented. Ruling that the general manager, and not his employer, was entitled to ownership of the patent rights to that apparatus, the Court of Claims reasoned that "[a]lthough [the general manager] was directed by [his employer] to incorporate in the new plant as much labor-saving equipment as possible, he was not employed . . . to *invent* the mechanical off-bear and slab-handling apparatus, or any other equipment."33

A kindred and equally gossamer distinction separates research from its tandem partner development. Employees assigned to conduct research34 usually are deemed hired to invent,35 while employ-
ees assigned to work solely on development, on the other hand, usually are not:

Though the mental concept is embodied or realized in a mechanism or a physical or chemical aggregate, the embodiment is not the invention and is not the subject of a patent. This distinction between the idea and its application in practice is the basis of the rule that employment merely to design or to construct or to devise methods of manufacture is not the same as employment to invent.\textsuperscript{36}

Thus, in \textit{Barlow \& Seelig Mfg. Co. v. Patch},\textsuperscript{37} a mechanical engineer directed to examine ways to improve a washing machine invented a novel transmission mechanism which did, in fact, improve the performance of his employer’s washing machine. In an ensuing dispute over the patent rights to the mechanism, the Wisconsin Supreme Court ruled in favor of the engineer, holding that “[h]e was employed not in the hope that he would invent a new machine or a new mechanical movement, but with the expectation that he would develop and improve the product which the company was then manufacturing.”\textsuperscript{38}

Even when an employee is unquestionably hired to invent, that does not end the inquiry. The question still remains whether or not the invention which he has created is one which he was paid to create. \textit{United States v. Dubilier Condenser Corp.}\textsuperscript{39} illustrates the problem. Francis Dunmore and Percival Lowell were employed in the radio laboratory section of the United States Bureau of Standards, and had been assigned to work on certain specific research projects. A project involving radio reception devices had been assigned to other research scientists in the laboratory, and was not part of Dunmore and Lowell’s task. Nevertheless, “impelled hired to invent, \textit{i.e.}, not hired to invent for the exclusive benefit of their employer. See \textit{supra} notes 23-24 and accompanying text.

\begin{itemize}
\item 37. 232 Wis. 220, 286 N.W. 577 (1939).
\item 38. \textit{Id.} at 223, 286 N.W. at 579. \textit{Accord,} De Jur-Amsco Corp. v. Fogle, 233 F.2d 141 (3d Cir. 1956); Cahill v. Regan, 5 N.Y.2d 292, 157 N.E.2d 505, 184 N.Y.S.2d 348 (1959). \textit{But see} International Pulverizing Corp. v. Kidwell, 7 N.J. Super. 345, 71 A.2d 151 (ch. 1950); \textit{cf.} Davis v. Alwac Int’l Inc., 369 S.W.2d 797 (Tex. Civ. App. 1963) (a corporate vice president whose responsibilities included “technical development work,” and who developed improvements to his employer’s equipment, \textit{held,} subject to an implied duty to assign patent rights). In \textit{Standard Parts Co. v. Peck}, 264 U.S. 52 (1924), an employee who had agreed to “devote his time to the development of” a certain process was held to be subject to an implied duty to assign his patents. Viewed in the context of the overall facts in \textit{Standard Parts}, however, it becomes clear that the term “develop” was used imprecisely, as a synonym for “invent”.
\item 39. 289 U.S. 178 (1933). \textit{But see supra} note 35.
\end{itemize}
thereto solely by his own scientific curiosity," Dunmore began toying with the idea of improving radio reception sets by substituting alternating current in lieu of direct current. After some experimentation at the Bureau of Standards laboratory, he and Lowell then devised and patented an apparatus for operating radio reception sets by means of alternating current. Because this patented invention was not the fruition of work on research projects assigned to them, the Supreme Court ruled that Dunmore and Lowell were under no duty to assign their patent to the federal government.

As a practical matter, determining whether or not an invention is one that the employed inventor was paid to create involves the classic scope-of-employment test whose outcome will vary with the circumstances of each given situation. Depending upon the details of a particular employed inventor's assignment, upon the nature of his invention and upon the relationship between the two, the invention may or may not be within the scope of his employment. Generalities, therefore, are of little avail.

In at least one significant respect, however, scope-of-employment analysis as applied in the employed inventor context differs from its application in other contexts. A key factor usually taken into account when determining whether or not certain conduct falls within the scope of an individual's employment is whether or not the conduct "occurs substantially within authorized time and space limits . . ." But time and space limits have little relevance to the employed inventor, for creative minds seldom keep regular hours. Accordingly, where and when the inspiration for an invention otherwise encompassed within the scope of an employed inven-

40. 289 U.S. at 184.
41. Id. at 193; cf. id. at 197 ("The field of research is as broad as that of science itself.") (dictum).
42. Conduct is generally deemed within the scope of a person's employment if (1) it is of the kind that he is employed to perform; (2) it occurs substantially within authorized time and space limits; and (3) it is motivated, at least in part, by a purpose to benefit his employer. RESTATEMENT (SECOND) OF AGENCY § 228(1) (1958).
44. RESTATEMENT (SECOND) OF AGENCY § 228(1)(b) (1958).
45. See e.g., T. KIDDER, THE SOUL OF A NEW MACHINE 85 (1981) (idea for computer memory enhancement conceived during a wedding, and scribbled on the cover of a matchbook); Land, On Some Conditions for Scientific Profundity in Industrial Research, in NURTING NEW IDEAS, supra note 24, at 7, 9 (idea for polaroid camera conceived while on vacation); Wolff, Inventing at Breakfast, IEEE SPECTRUM, May 1975, at 44, 46 (idea for snap-action disk conceived by MIT student during a summer job, while tending a sawmill furnace at night); PEOPLE WEEKLY, Dec. 10, 1984, at 105 (idea for 3M's "Post-It" adhesive-backed notepads conceived while daydreaming during a church sermon.) See also infra note 171.
tor's job assignment occurs to him has minimal bearing on whether he or his employer is entitled to the patent. As one court aptly commented:

It is difficult to understand how [the employee] could cut his mind off and on at will under the circumstances, i.e., think of things during the lunch hour, for example, which would constitute an improvement to [his employer's] product, and later claim such improvement as his own because he was not working for the company at that particular moment when the thought struck him.\(^6\)

Courts thus routinely order employed inventors to assign to their employers the patent rights to inventions conceived off-hours and away from work.\(^7\)

2. Persons Impliedly Assenting to Assign Their Patent Rights

Whether an employee is hired to invent or not,\(^8\) he may be deemed, by virtue of prior conduct consistent with such an obligation, implicitly to have acknowledged a contractual duty to assign all patents to his employer.\(^9\) In *Marshall v. Colgate-Palmolive-Peet*


Although both this type of tacit agreement to assign and the type discussed in the text accompanying notes 20-47, *supra*, are referred to as "implied contracts," each differs fundamentally from the other. The latter are more properly denominated "quasi-contracts" or "contracts implied in law." These are not true contracts, but rather are legal fictions created without regard to the parties' actual intent in order to prevent injustice. *Restatement (Second) of Contracts* § 4 comment b (1981). They are, in other words, more a species of remedy than a source of rights. The former variety of implied contracts, on the other hand, are "contracts implied in fact." These differ from explicit agreements between the parties only in that they have not been articulated orally or in writing, but instead are inferred from the parties' conduct. Bloomgarden v. Coyer, 156 U.S. App. D.C. 109, 479 F.2d 201, 208
Co. for instance, the plaintiff had been the director of the defendant’s engineering department, where the practice had been to assign patents to the defendant. In conformity with this practice, the plaintiff himself had assigned to the defendant the patent rights to several of his inventions, and had instructed his subordinates to do likewise. On this basis, the court ruled that the plaintiff had tacitly agreed to assign his patent rights: “[T]he constant practice in plaintiff’s [engineering department] and his enforcement of the practice on men under him as well as on outside engineers and his own independent compliance in other inventions indicate to me assent on plaintiff’s part that the inventions should belong to defendant.”

Inferring the existence of a tacit agreement under these circumstances is merely an application of the “practical construction” doctrine, i.e., where two parties have not explicitly agreed upon how to resolve a particular matter, their conduct is entitled to great weight in ascertaining how they intend that it be resolved. As was true with regard to the question of an employed inventor’s scope of employment, no one set of circumstances exist in which this doctrine will guarantee the conclusion that an employee is obligated to assign patent rights to his employer. Conforming to an unspoken practice, obeying explicit instructions and submitting ideas through an established suggestion system have all produced this

(1973). See generally 1 S. Williston, CONTRACTS § 3A (3rd ed. 1957); Introductory Note in RESTATEMENT OF RESTITUTION § 4, 5-9 (1937).

50. 76 F. Supp. 378 (D. Del. 1948), aff’d, 175 F.2d 215 (3d Cir. 1949).
51. Id. at 389.
52. See, e.g., Franklin Research and Dev. Corp. v. Swift Elec. Supply Co., 340 F.2d 439, 443 n.3 (2d Cir. 1964); U.C.C. § 1-205(3) (1976). The doctrine of practical construction is premised upon the common sense concept that “actions speak louder than words.” Crestview Cemetery Ass’n v. Dieden, 54 Cal. 2d 744, 750, 356 P.2d 171, 177, 8 Cal. Rptr. 427, 433 (1960). It becomes even more dispositive, therefore, in the absence of words addressing the problem in dispute. See generally 3 A. Corbin, CONTRACTS § 558 (1960 & Kaufman Supp. 1984). Because the doctrine of practical construction purports to interpret the parties’ agreement ab initio rather than to infer a tacit modification thereof, the obstacle of furnishing additional consideration that plagues express contracts of assignment executed after an inventor is already employed, see infra notes 240-62 and accompanying text, does not arise here. But cf. New Jersey Zinc Co. v. Singmaster 71 F.2d 277 (2d Cir.) (an inventor who had previously obeyed his employer’s unilateral instructions, issued nearly twelve years after the inventor began working for the employer, that all patentable ideas be assigned to it, was held to have contractually assented to these instructions; the consideration issue, however, was never addressed), cert. denied, 293 U.S. 591 (1934).
53. See supra text accompanying notes 42-43.
result. Suffice it to observe that, as a general proposition, an employee who has assigned patent rights to his employer in the past will usually be deemed bound to do so for all inventions conceived during the term of his employment.

3. Employer Shop Rights in Employee-Owned Inventions

Even when an employed inventor is held to be the owner of his inventions, that does not necessarily divest his employer of all claims thereto; the employer may retain a "shop right," which is an implied non-exclusive royalty-free license to use the invention. An oft-quoted formulation of the shop right rule provides 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 non-exclusive right to practice the invention." In the leading decision on point, for example, a foundry worker had invented and patented an improved process for casting metal rollers. He had perfected the process by conducting experiments at the foundry, at his employer's expense. He had also permitted his employer to utilize the process without objection for nearly a year. On these facts, the

57. Past patent assignments can, of course, be explained, and thus the inference of an implicitly acknowledged duty rebutted. Previous assignments for a cash reward, for example, would strongly suggest an ad hoc opportunity rather than a binding obligation.

58. The question remains open whether or not the implied obligation includes inventions unrelated to the employee's job responsibilities. Cf. e.g., New Jersey Zinc Co. v. Singmaster, 71 F.2d 277 (2d Cir.), cert. denied, 293 U.S. 591 (1934), in which a plant superintendent was held to have assented to his employer's instructions that "[a]ll patentable ideas . . . developed by an employee of this Company, while in the employ of the Company, . . . shall be formally assigned to the Company . . . ." Id. at 279 (emphasis supplied). The court construed the phrase "while in the employ of" chronologically, to mean "until such time as the employment relationship is terminated." See id. at 278. It could just as well have been construed qualitatively, i.e., "while acting within the scope of employment."


60. Hobbs v. United States, 376 F.2d 488, 494 (5th Cir. 1967).


62. McClurg v. Kingsland, 42 U.S. (1 How.) 202 (1843). Although the McClurg decision was partly premised upon statutory construction no longer relevant today, see id. at 208-09 (construing section 7 of the Patent Act of 1839, 5 Stat. 353, 354) it is still regarded as the seminal case expounding the shop right rule. See, e.g., Wommack v. Durham Pecan Co., 715 F.2d 962, 966-67 (5th Cir. 1983).
Supreme Court held that the employee's assignees were precluded from suing his employer for patent infringement. The shop right rule is, in other words, a judicially created exception to the statutory scheme of patent exclusivity.\(^\text{63}\)

The shop right rule is an equitable doctrine\(^\text{64}\) resting upon two principal considerations. First, it is only fair that when an employee has used his employer's time and equipment to create an invention, his employer should be able to use the invention without paying a royalty.\(^\text{65}\) The judicial inference of a shop right based upon this consideration has been characterized as "equity refusing

63. Mechmetals Corp. v. Telex Computer Prod., Inc., 709 F.2d 1287, 1293 (9th Cir. 1983).

64. Id. at 1291. See, e.g., Gill v. United States, 160 U.S. 426, 430 (1896). Some commentators suggest that the doctrine has contractual underpinnings as well. See Sandrock, supra note 59, at 959-60, 965-66; Note, Employer's and Employee's Rights in Patents Arising from the Employment, 11 Villanova L. Rev. 823, 826 (1966). There is, indeed, judicial language superficially supporting this view. See, e.g., Solomons v. United States, 137 U.S. 343 (1890):

> [W]hen one is in the employ of another in a certain line of work, and devises an improved method or instrument for doing that work, and uses the property of his employer and the services of other employees to develop and put in practicable form his invention, and explicitly assents to the use by his employer of such invention, a jury, or a court trying the facts, is warranted in finding that he has so far recognized the obligations of service flowing from his employment and the benefits resulting from his use of the property, and the assistance of the co-employees of his employer, as to have given to such employer an irrevocable license to use such invention.

Id. at 346 (emphasis added). Language such as that quoted above reflects not a true contractual analysis, however, but rather one premised upon quasi-contract. See Gill v. United States, 160 U.S. 426, 430 (1896) (the parties' intent is irrelevant); id. at 435 (an employee's express agreement to allow the use of his invention is merely "the most conclusive evidence" of the consent need to create an estoppel). See generally supra note 49.

Nor do those cases in which employers have been denied a shop right because consultants or employees refused to execute a gratuitous patent license agreement, see, e.g., Hobbs v. United States, 376 F.2d 488 (5th Cir. 1967); Gemco Eng'g & Mfg. Co. v. Henderson, 151 Ohio St. 95, 84 N.E.2d 596 (1949), support a contract rationale. Rather, by thus unequivocally announcing their intent not to license their patent rights, the consultants and employees in these cases simply did not mislead their employers into assuming otherwise, an indispensable prerequisite to the equitable implication of a patent license. E.g., Minnesota Mining & Mfg. Co. v. Blume, 533 F. Supp. 493, 517-21 (S.D. Ohio 1979), aff'd, 684 F.2d 1166 (6th Cir. 1982), cert. denied, 461 U.S. 939 (1983).

This is not to gainsay, of course, that the facts of a particular situation might permit the inference that an employee has, as a matter of fact, actually albeit impliedly consented to grant to his employer a license. Cf. supra text accompanying notes 48-53 (employee's implied assent to assign his patent right to his employer). But cf. infra text accompanying notes 240-245 (in order to bind an employee to a contractual obligation to assign his patent rights, the employee must receive consideration therefor). Such a situation, though, would implicate garden variety contract principles, not the shop right rule. See Neon Signal Devices, Inc. v. Alpha-Claude Neon Corp., 54 F.2d 793, 793-94 (W.D. Pa. 1931) (dictum). See generally 4 A. Deller, Walker on Patents §§ 393-95 (2d ed. 1965) [hereinafter cited as Deller].

65. Hobbs v. United States, 376 F.2d 488, 495 (5th Cir. 1967).
to help the employee bite the hand that fed him." Second, under the doctrine of estoppel, if an employee encourages his employer to use an invention, and then stands by and allows him to construct and operate the new device without demanding any compensation, it would be inequitable to allow that employee later to assert a claim for royalties. Although there is disagreement concerning the relative significance of these two considerations, each by itself is sufficient to create a shop right.

With respect to the first consideration, consider the case of McAleer v. United States. Philip McAleer was employed as a mechanic by the United States Bureau of Engraving and Printing. His job required him to maintain the Bureau's machines for cutting and trimming currency. Partly during working hours, partly during leisure hours at the office and partly at home, McAleer devised a paper-perforating machine which he constructed using Bureau equipment and with the aid of co-employees. He then took out a patent at government expense. McAleer was later discharged. Not until two years after McAleer's discharge did the Bureau first begin to use his invention. Nevertheless, the Supreme Court ruled that the Bureau was entitled to a shop right which defeated McAleer's patent infringement claim. The significance of McAleer is that its

66. Gemco Eng'g & Mfg. Co. v. Henderson, 151 Ohio St. 95, 107, 84 N.E.2d 596, 601-02 (1949) (Taft, J., dissenting). The "risk-of-the-enterprise" doctrine, which has occasionally been invoked in support of an implied duty to assign patent rights, see supra note 25, also comes into play here. Thus, in Gill v. United States, 160 U.S. 426 (1896), the Supreme Court analyzed two of its earlier shop right decisions as follows:

In neither case did the patentee risk anything but the loss of his personal exertions in conceiving the invention. In both cases, there was a question whether machines made after his idea would be successful or not, and if such machines had proven to be impracticable, the loss would have fallen upon [his employer]. Id. at 434.

67. The doctrine of equitable estoppel requires that there be (1) actions inconsistent with a claim later asserted; (2) a change of position by the other party in reliance upon these actions; and (3) a resulting injury to the other party if the first party is allowed to repudiate his previous actions. E.g., Martin Marietta Aluminum, Inc. v. General Elec. Co., 586 F.2d 143 (9th Cir. 1978).

68. Hobbs v. United States, 376 F.2d 488, 495 (5th Cir. 1967).

69. Compare Mechnetals Corp. v. Telex Computer Prod., Inc., 709 F.2d 1287, 1293 (9th Cir. 1983) ("[T]he basic premise justifying the creation of shop rights . . . [is] that the employer should receive a share of the invention he has financed."), with Wommack v. Durham Pecan Co., 715 F.2d 962, 966 (5th Cir. 1983) ("[T]he principal consideration in the shop right determination is not the employer's assistance, but the employee's consent [to the employer's use of his invention].").

70. 150 U.S. 424 (1893).

71. Although a written license agreement was also at issue in McAleer, the Supreme Court upheld the Court of Claims' determination that the case fell within the latter tribunal's previous decisions recognizing a common law shop right in the absence of any agreement,
facts isolate the first consideration underlying the shop right rule:
despite the absence of any evidence showing that McAleer had con-
sented to the Bureau's use of his invention, a shop right was implied
by virtue of the Bureau's investment of personnel, equipment and
money.

It appears to make little difference at which point in the inspira-
tion-to-patent spectrum the employer contributes.\textsuperscript{72} Most com-
monly, employers' resources have helped transmute their
employees' abstract ideas into patentable inventions.\textsuperscript{73} Even after
an employee's idea has independently been reduced to practice,
though, his employer's assistance may suffice to create a shop
right.\textsuperscript{74} And, at the other extreme of the spectrum, it is at least
arguable that, where an employee spends an inordinate amount of
his employer's time daydreaming,\textsuperscript{75} the employer may have a shop
right in patentable ideas conceived during these unwittingly em-
ployer-sponsored reveries.

Illustrating the second basis for the shop right rule, \textit{viz.}, estop-
pel, although not so much by its facts as by its analysis, is \textit{Gill v. United States}.\textsuperscript{76} Gill, a machinist with limited job responsibilities at
a federal arsenal, had designed and patented several machines to
improve ordnance handling. At his suggestion, the commanding of-
licer authorized the construction of these machines, all of which
were then put into use at the arsenal. Gill never objected to the use
of his machines. Later, however, he filed a patent infringement suit
seeking to collect royalties for the government's use of the ma-
chines. The Supreme Court denied Gill's claim. In its opinion, the
Court stressed that the expense undertaken by the government to
and ruled that the agreement merely "secured the right to use the device . . . which right
would, under the circumstances, have otherwise been implied." \textit{Id.} at 432.


\textsuperscript{73} \textit{See, e.g., McClurg v. Kingsland, 42 U.S. (1 How.) 202 (1843); Franklyn v. Guilford
Packing Co., 695 F.2d 1158 (9th Cir. 1983); Neon Signal Devices, Inc. v. Alpha-Claude Neon
Corp., 54 F.2d 793 (W.D. Pa. 1931).}


\textsuperscript{75} The test for an "inordinate concept" of time would be a functional one, \textit{i.e.} whether
or not the employee's cerebrations detract from his ability to perform the tasks assigned to
him. If so, then the employer would effectively be subsidizing the employee's mental research
efforts. If the employee's ability to handle his normal assignments remains unimpaired, on
the other hand, then the employer has received what he paid for — a full day's work — and
no reason exists to imply a shop right. This line of analysis would obviously be far easier to
apply to an employee paid by the hour than to one on salary.

\textsuperscript{76} 160 U.S. 426 (1896).
construct the machines at his behest was merely an evidentiary matter bearing upon the pivotal issue of the estoppel arising from Gill's consent:

The principle [of implied shop rights] is really an application or outgrowth of the law of estoppel *in pais*, by which a person looking on and assenting to that which he has power to prevent, is held to be precluded ever afterwards from maintaining an action for damages . . . .

. . . .

[T]he fact . . . that the patentee made use of the property and labor of the government in putting his conceptions into practical shape, is important only as furnishing an item of evidence tending to show that the patentee consented to and encouraged the government in making use of his devices. The ultimate fact to be proven is the estoppel, arising from the consent given by the patentee to the use of his inventions by the government, without demand for compensation.\hfill 77

The lynchpin of equitable estoppel — that the party urging estoppel will suffer injury if the other party is allowed to disavow the implications of his prior conduct\hfill 78 — is not always immediately apparent where, as in Gill, mere permissive use is the basis for implying a shop right. After all, even if now forced to desist from using his former employee's invention, has not the employer enjoyed the benefit of its use during the interim? As a practical matter, though, an employer ordered to abandon the advantages provided by his former employee's invention will invariably sustain some form of financial loss. Depending upon the invention, the resulting losses might include the expenses of retooling, the cost of acquiring substitute equipment\hfill 79 and the loss of customer goodwill,\hfill 80 to name a few. Frequently, moreover, former employees in

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77. *Id.* at 430, 434-35 (original emphasis). *Accord,* Wommack v. Durham Pecan Co., 715 P.2d 962 (5th Cir. 1983).
78. *See supra* note 67.
79. An extreme case is Neon Signal Devices, Inc. v. Alpha-Claude Neon Corp., 54 F.2d 793 (W.D. Pa. 1931). There, the employee had persuaded his employer, a manufacturer of neon tube advertising signs, to enter an entirely new line of business — the manufacture of traffic signals — based upon his invention. The adjustment required, *inter alia,* that new equipment and tools be purchased. *See id.* at 795. It takes little imagination to envision the financial devastation that would have ensued had the employer been required to return to its original line of business.
80. Most inventions worth fighting over are those which improve operating efficiency. *See, e.g.,* Wommack v. Durham Pecan Co., 715 F.2d 962 (5th Cir. 1983). The resulting decrease in operating costs can translate into higher profits or lower prices. If a decision is made to sell at lower prices, and the employer is then enjoined from using the invention, a return to original prices will probably result. While, from a strict competitive price perspec-
these situations seek not to enjoin the future use of their inventions, but instead to collect royalties allegedly due for the use of their inventions in the past. Where an employer has been allowed to use his employee’s invention ostensibly for free, exacting an after-the-fact payment in this manner would clearly injure the employer.

Because of the shop right rule’s equitable origins, most courts hold that, “[w]hile it is generally true that questions of shop right arise between employer and employee, such right is not restricted alone to the case of an employer, as the doctrine is only a phase of the broad doctrine of estoppel.” Consequently, one who employs an independent consultant is entitled to a shop right in the appropriate circumstances. Indeed, given the appropriate circumstances, a shop right may arise regardless of how the parties’ relationship is characterized.

Even so, what has the owner of a shop right really won? As a means of avoiding financial losses, a shop right amply serves its purpose. But its value as a tool for economic betterment is far less than the value of the patent rights themselves. The real value of a

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81. See e.g., Gill v. United States, 160 U.S. 426 (1896); McAleer v. United States, 150 U.S. 424 (1893). The identity of the plaintiff in a patent infringement lawsuit often determines the relief sought. Patent assignees from inventors employed in private industry tend to be competitors of the latters’ employers. Consequently, they usually seek to enjoin the employers’ use of the inventions, rather than to collect royalties. See, e.g., Neon Signal Devices, Inc. v. Alpha-Claude Neon Corp., 54 F.2d 793 (W.D. Pa. 1931).


83. E.g., Franklyn v. Guilford Packing Co., 695 F.2d 1158 (9th Cir. 1983); Graham-White Sales Co. v. Prime Mfg. Co., 237 F. Supp. 694 (E.D. Wis. 1964), aff’d per curiam, 343 F.2d 534 (7th Cir. 1965).


85. See supra text accompanying notes 79-81.

86. Curiously, the Commissioner of Patents and Trademarks has stated that “ ‘shop rights’ may result in the employer reaping all economic benefits resulting from an employee’s
patent is the right which it vests in the patentee to exclude all others from making, using or selling an invention. 87 The owner of a shop right, however, has no such power of exclusion. 88 Thus he is forced to meet the competitive use of the invention in question by his former employee or by those whom the former employee chooses to license. 89 And, without monopoly power, the shop right owner cannot collect royalties. 90 Nor can he even license his own shop right, for shop rights are not transferable. 91 Finally, consider the situation where an employee uses his employer's facilities to create an invention which cannot be exploited in the employer's business. 92 In this circumstance, the economic rationale for the shop right rule — that "the employer should receive a share in the invention he has financed" 93 — would result in a shop right which, ironically, gives the employer no economic benefit at all.

Nevertheless, as the plethora of lawsuits involving shop rights indicate, shop rights are valuable, albeit substantially less so than outright patent ownership. And a shop right does offer a cost advantage over competitors who must pay royalties in order to use the invention. 94 At least to that extent, therefore, the shop right rule...
has significant economic implications, as well as equitable implications, for employer and employee alike.

4. Employee Shop Rights in Employer-Owned Inventions

When an employer is entitled to the patent on an invention created by one of his employees, can the employee claim a shop right? That is a question on which virtually no precedent exists. And, in part for that very reason, one court has declined to recognize such a right.

The principal dispute in Mainland Industries, Inc. v. Timberland Machines and Engineering Corp. was between Mainland Industries and its former chief engineer, F.L. Miller. Miller had left Mainland to join a competitor, and had helped his new employer manufacture a patented knife that he had invented while in Mainland's employ. Mainland then successfully filed an action seeking to compel Miller to assign the patent to it. The trial court, however, allowed Miller a lifetime shop right to use the patented knife. On appeal, this was held to be improper. The Oregon Court of Appeals pointed out that no precedent existed for applying the shop right in favor of an employee, and that, moreover, the equities traditionally supporting the creation of a shop right were lacking in the case before it:

The rationale for the [shop right] rule is that because the patent resulted from use of the employer's property and from labor for which the employee was paid by his employer, it is equitable that the employer share in the invention . . . . [T]he facts here do not warrant application of the doctrine. As Mainland's chief engineer, Miller's duties included solving problems in the use of his employer's products. If a solution was possible, it was his duty to find it. Having already received a substantial salary from Mainland to invent, design and develop products and improvements, Miller now has no equitable claim to a license.

The reasoning in Mainland seems eminently sound. In the rare
case where an employee implicitly assents to convey his patent rights to his employer, and where he has spent his own money creating the invention at issue, a tenable shop right argument might perhaps be advanced under the investment rationale for the shop right rule. But, in the vast majority of situations where employers are entitled to patents on their employee's inventions, the employer rather than the employee makes the investment.

The equitable estoppel rationale offers even less support for an employee shop right. It is difficult, after all, to imagine how an employee who is hired to invent, or who has agreed to assign his inventions to his employer, could reasonably be induced by his employer's silence to use an invention in the belief that the employer intended to allow him to use it forever and for free.

The paucity of authority on point precludes any categorical assertions concerning the status of the law on employee shop rights. With this caveat, though, and with the further caveat that a small group of apparently contrary trade secret cases exists, it may safely be predicted that an employee will seldom succeed in claiming a shop right in those of his inventions which belong to his employer.

B. Trade Secrets

Before considering whether or not the answers to the various questions of ownership change as the focus shifts from patents to trade secrets, it should be observed that the questions themselves change slightly, for no one can truly "own" a trade secret. A patent is a statutory right which vests the patentee with a traditional indicium of ownership: as a reward for disclosing his invention, the patentee is given the right to exclude all others from using his invention for the life of the patent.\(^{102}\) Trade secrets, on the other

98. See supra note 93 and accompanying text.
99. See infra notes 149-50 and accompanying text.
100. A trade secret is "any formula, pattern, device or compilation of information which is used in one's business, and which gives him the opportunity to obtain an advantage over competitors who do not know . . . it . . . ." Restatement of Torts § 757 comment b (1939). The owner of a trade secret has no legally cognizable interest in the idea itself; rather, its value lies in the competitive advantage which it provides. E.I. duPont de Nemours & Co. v. United States, 288 F.2d 904, 911 (Ct. Cl. 1961). But see Affiliated Hosp. Prod., Inc. v. Baldwin, 57 Ill. App. 3d 800, 373 N.E.2d 1000 (1978) (information was a trade secret even though it had not yet been put to commercial use).
hand, as their name suggests, exist by virtue of nondisclosure.103 Like ether when exposed to sunlight, trade secret status evaporates once the information is made public.104 Consequently, a person possessing knowledge of a trade secret cannot prohibit others from discovering and using it;105 he can prohibit only the use and disclosure of a misappropriated trade secret106 — that is, one acquired by improper means such as theft107 or the breach of a nondisclosure agreement108 — and even then he can oftentimes prohibit its use only for as long a period of time as it would have taken the defendant to "reverse engineer"109 the trade secret or to have developed it independently solely on the basis of information available to the general public.110 When we speak of trade secret "ownership," therefore, it should be borne in mind that we are really talking about little more than the right to be protected against misappropriation.111

1. Persons Hired to Invent

As they have held with regard to patents,112 most courts hold that a trade secret created by an employee who is hired to invent belongs to his employer, whether that employee is engaged in general research113 or has been assigned to a particular project.114

104. National Starch Prod., Inc. v. Polymer Indus., Inc., 273 App. Div. 732, 735, 79 N.Y.S.2d 357, 360 (1948). Limited disclosure in order to exploit the trade secret, however, will not destroy the right to legal protection. See, e.g., Board of Trade v. Christie Grain & Stock Co., 198 U.S. 236, 247 (1905) (distribution to 1,800 members of commodity exchange did not impair validity of trade secret); Data General Corp. v. Digital Computer Controls, Inc., 357 A.2d 105, 108 (Del. Ch. 1975) (distribution to 6,000 vendors and customers who signed secrecy agreements did not impair validity of trade secret).
109. "Reverse engineering" is the technique of "starting with the known product and working backward to devise the process which aided in the development or manufacture." Kewanee Oil Co. v. Bicron Corp., 416 U.S. 470, 476 (1974).
112. See supra text accompanying notes 20-29.
113. E.g., Basic Chemicals, Inc. v. Benson, 251 N.W.2d 220 (Iowa 1977); B.F. Goodrich
These courts apply the general principle of employee trade secret misappropriation — that employees and independent contractors owe an implied duty to their employers not to use or disclose trade secrets learned on the job — to employees who themselves created the trade secrets. In Sperry Rand Corp. v. Rothlein, for example, several Sperry Rand research engineers left Sperry Rand to form the National Semiconductor Corporation; with them they took Sperry Rand's secret process for the commercial production of silicon alloy junction transistors. Even though these former employees were entirely responsible for creating this process, the court held that they had misappropriated Sperry Rand's trade secret: "The fact that it was the defendants who developed the process gives them no greater right to use it in competition with the plaintiff than that of any other employee."

The law in this area, however, is not completely settled. Some courts, recognizing that the close balance of competing policy considerations shifts when the employee himself has created the

Co. v. Wohlgemuth, 117 Ohio App. 493, 192 N.E.2d 99 (1963). See also National Surety Corp. v. Applied Systems, 418 So. 2d 847, 849 (Ala. 1982) (holding, in an action alleging that the plaintiff's former employee had converted a computer program, that "even though [the defendant] developed the program, he did not have any property rights or interest in the programs. He developed the programs for [the plaintiff], which facilitated the development of the programs and provided financial backing.").


119. Id. at 564-65.

120. Compare, e.g., Chicago Lock Co. v. Fanberg, 676 F.2d 400 (9th Cir. 1982) (locksmith whom lock owner hired to reverse engineer secret tumbler combination of lock manufacturer owed a duty of nondisclosure to the lock owner) (dictum), with Wexler v. Greenberg, 399 Pa. 569, 160 A.2d 430 (1960) (chemist whom manufacturer hired to reverse engineer secret chemical formulas of a competitor owed no duty of nondisclosure to the manufacturer).

121. The inherent tension in accommodating the employer's interests, the employee's interests, and society's interests as a whole reflects the fact that while the disclosure of information is favored, excessive disclosure can be too much of a good thing. Disclosure is fa-
trade secret,\textsuperscript{122} have refused to imply a duty of non-use and nondisclosure under these circumstances. Thus, in \textit{Structural Dynamics Research Corp. v. Eng'g Corp. v. Eng'g Mechanics Research Corp.},\textsuperscript{123} a case in which two employees hired to write a structural analysis software program began using the program on behalf of a new employer, the court distinguished the facts before it from the far more common situation in which an employee merely learns about a trade secret from his employer. Employed inventors, ruled the court, are entitled to use and disclose trade secrets after they change jobs:

If the subject matter of the trade secret is in being and an employee learns about it in the course of his employment in a relationship of confidence, the duty not to use or disclose trade secret knowledge adversely to his employer arises. On the other hand, if the subject matter of the trade secret is brought into being because of the initiative of the employee in its creation, innovation or development even though the relationship is one of confidence, no duty arises since the employee may then have an interest in the subject matter at least equal to that of his employer or in any event, such knowledge is a part of the employee's skill and experience. In such a case, absent an express contractual obligation by the employee not to use or disclose such confidential information acquired during his employment adverse to his employer's interest, he is free to use or disclose it in subsequent employment activity.\textsuperscript{124}

There are a few decisions in accord with \textit{Structural Dynam-\textsuperscript{vored}, because it helps to disseminate knowledge; excessive disclosure, however, is disfavored, because it reduces the economic incentives for innovation. \textit{Structural Dynamics Research Corp. v. Eng'g Mechanics Research Corp.}, 401 F. Supp. 1102, 1110 (E.D. Mich. 1975). Employee mobility is also encouraged because, in theory at least, it maximizes the likelihood that employees will become most productively employed. \textit{Maryland Metals, Inc. v. Metzner}, 282 Md. 31, 37, 382 A.2d 564, 568-69 (1978). On the other hand, with the growth of larger business organizations, the resulting dispersion of responsibility has made it essential that confidential information be entrusted to a greater number of employees. And an optimal amount of entrusting will not occur without sufficient legal bulwarks against unauthorized disclosure. \textit{Wexler v. Greenberg}, 399 Pa. 569, 578, 160 A.2d 430, 435 (1960). "[M]aintaining decent standards of morality in the business community" has also been advanced as a reason for restricting the disclosure of information confided to employees. \textit{See Western Research Corp. v. Minnesota Mining & Mfg. Co.}, 350 F.2d 134, 138 (9th Cir. 1965).

122. \textit{See Developments in the Law - Competitive Torts, 77 HARV. L. REV. 888, 951 (1964) [hereinafter cited as Developments] ("[i]f the employee has himself helped to develop the trade secret, this . . . weighs against protection, since he may have some claim to ownership himself.").}


124. \textit{Id. at} 1111. The court nevertheless entered a judgment against the former employees, on the ground that they had violated a written nondisclosure agreement. \textit{See id. at} 1116.
2. Persons Impliedly Assenting Not to Use or Disclose Trade Secrets.

Because trade secrets cannot legally be "owned" as such,\textsuperscript{128} the ownership of trade secrets cannot be assigned.\textsuperscript{129} Of course, since most lawful agreements can be implied from the parties' conduct,\textsuperscript{130} no reason exists why employees cannot by their conduct acknowledge a contractual duty not to use or disclose their employers' trade secrets.\textsuperscript{131} There appears, however, to be no case law directly so holding.\textsuperscript{132}

As a practical matter, much the same result occurs by virtue of the implied duty owed by employees and independent consultants not to use or to disclose trade secrets revealed to them by their employers.\textsuperscript{133} In this manner, the employees and consultants are

\textsuperscript{125} See Wexler v. Greenberg, 399 Pa. 569, 160 A.2d 430 (1960); Hickory Specialties, Inc. v. B & L Labs, Inc. 592 S.W.2d 583, 587 (Tenn. App. 1979) (dictum); cf. B.F. Gladding & Co. v. Scientific Anglers, Inc., 245 F.2d 722 (6th Cir. 1957) (a consulting engineering firm which jointly developed a trade secret with its employer was held entitled to use the trade secret—a fortiori, had the consultant developed the trade secret by itself). See also Developments, supra note 122, at 951. But see Case Comment, 74 Harv. L. Rev. 1473 (1961) (criticizing the Wexler decision).

\textsuperscript{126} See supra notes 113-19 and accompanying text. See also Trade Secrets, supra note 18, at 839-41 (analyzing cases involving computer programs).

\textsuperscript{127} See supra text accompanying notes 20-47.

\textsuperscript{128} See supra text accompanying notes 100-11.

\textsuperscript{129} Many courts uphold "agreements for the sale and license of trade secrets . . . ." Painton & Co. v. Bourns, Inc., 442 F.2d 216, 225 (2d Cir. 1971). See generally 12 R. Milgrim, Business Organizations § 1.02 (1984) [hereinafter cited as Milgrim]. A closer examination of the agreements involved, however, reveals that in fact they merely regulate competition and disclosure, and do not purport actually to transfer ownership of the "assignor's" knowledge. See, e.g., Heltra, Inc. v. Richen-Gemco, Inc., 395 F. Supp. 346, 348 (D.S.C. 1975) ("[T]he plaintiff agreed that it would no longer engage directly or indirectly in the manufacture, production or sale of any product to which the yarn processing apparatus in question related nor disclose or make known to any third party any of its confidential information in the field"), rev'd, 540 F.2d 1235 (4th Cir. 1976).

\textsuperscript{130} See Restatement (Second) of Contracts § 4 comment a (1981). Merely because an unwritten agreement is valid, however, does not always guarantee that it will be enforced. See, e.g., Myers v. Waverly Fabrics, 101 A.D.2d 77, 475 N.Y.S. 2d 860 (1984) (non-exclusive license to reproduce copyrighted fabric pattern held unenforceable because of the Statute of Frauds).

\textsuperscript{131} 12 Milgrim, supra note 129, § 5.02[4], at 5-43.

\textsuperscript{132} Id.

\textsuperscript{133} See supra notes 115-16.
deemed effectively to have agreed that their employers are to retain as many ownership rights in the trade secrets as the law recognizes. And, in most instances, employees and consultants who actually develop the trade secrets are encompassed within this rule.

3. Employer Shop Rights in Employee-Owned Inventions

Whether the shop right rule applies to trade secrets is a problematic issue, although at least one court seems to have assumed that it does apply. The plaintiff in Kinkade v. New York Shipbuilding Corp. had formerly worked for the defendant shipbuilding company as a tinsmith. He had been assigned to a crew whose task was to install bunks in troop ships. While so engaged, he conceived an idea for relocating the hooks on the metal straps used to fasten bunks to the bulkhead so as to simplify the installation process, and thereby reduce labor costs. He and several fellow employees in the company tinshop, using company materials, constructed a number of these redesigned straps, one of which he helped to install in a ship under construction. Up to this point, the plaintiff had been paid under an incentive system: he was paid on the basis of the estimated time for each particular task; if he managed to accomplish the task in less time, he was paid for the estimated time anyway. In a perverse twist of irony, the defendant shipbuilding company then reduced the plaintiff’s incentive rates by two-thirds, to account for the efficiencies introduced by his invention. Understandably angered, the plaintiff quit and filed suit to recover damages for the defendant’s use of his metal strap design. The New Jersey Supreme Court rejected his claim, reasoning that the defendant had acquired a shop right. In so ruling, the court found that the plaintiff’s invention qualified as a trade secret, and declared that the shop right rule controlled “whether or not the idea is patentable . . .”

Notwithstanding Kinkade, certain analytical problems arise in attempting to apply the shop right rule in a trade secret context. Suppose, for example, that an employee develops a secret process on

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134. See supra notes 113-19 and accompanying text. But see supra notes 123-25 and accompanying text.
135. See supra notes 59-94 and accompanying text.
137. See id. at 369, 122 A.2d at 363. But cf. id. at 366, 122 A.2d at 363. (“[W]e do not consider the facts here can be disposed of [sic] by the principles applicable to trade secrets but rather it is controlled by . . . the ‘shop right rule’.”)
138. Id. at 368, 122 A.2d at 365.
his employer's time using his employer's facilities, yet never discloses this fact to his employer. Obviously, absent such disclosure, there can be no permissive use by the employer. It has been suggested that, in this situation, the employee has acquired no trade secret because the secret has not been used to a competitive advantage, and hence that the employer can acquire no shop right therein.\textsuperscript{139}

This concern, however, overlooks the origins of, and hence underestimates the potential breadth of, the shop right rule. The shop right rule, it should be remembered, is a creature of equity.\textsuperscript{140} And equitable doctrines do not depend upon property classifications.\textsuperscript{141} Hence equity imposes upon employees a duty not to disclose information revealed to them in confidence by their employers, even though this information does not rise to the level of a trade secret.\textsuperscript{142} In the same spirit of flexibility, no reason appears why an employer ought not, under the proper circumstances, to have a shop right to use employee inventions regardless of how those inventions are pigeonholed for property law purposes.\textsuperscript{143} Where an employee countenances his employer's use of an invention, the case for a shop right in trade secrets becomes even stronger.

Again, though, the dearth of authority on point precludes any facile conclusions. The only truly accurate assertion concerning the state of the law in this area is that it is presently uncertain.\textsuperscript{144}

4. Employee Shop Rights in Employer-Owned Inventions

Because the crux of a trade secret dispute is use and disclosure rather than ownership,\textsuperscript{145} the cases addressing the respective rights of employees and employers where the latter are held to be the owners of employee-developed trade secrets\textsuperscript{146} would seem dispositive of

\textsuperscript{139}See 12 MILGRIM, supra note 129, § 5.02[4], at 5-47. See generally supra note 100.

\textsuperscript{140}See supra note 64 and accompanying text.

\textsuperscript{141}H. McClintock, Equity § 3-21, 46 (West 1948). See e.g., Extrin Foods, Inc. v. Leighton, 202 Misc. 592, 598, 115 N.Y.S.2d 429, 434 (Sup. Ct. 1952) (injunction prohibiting misappropriation of trade secrets was "predicated on the breach of this [implied] duty [of non-disclosure] rather than on a specific property right of the plaintiff.").

\textsuperscript{142}See supra note 19.

\textsuperscript{143}Although it has been theorized that requiring the employee to disclose his secret to his employer for shop right purposes might jeopardize trade secret status, see 12 MILGRIM, supra note 129, § 5.02[4], at 47, this seems unlikely; for such a limited disclosure would most certainly be privileged. See supra note 104.

\textsuperscript{144}12 MILGRIM, supra note 129, § 5.02[4], at 5-46 to 5-47.

\textsuperscript{145}See supra text accompanying notes 100-11.

\textsuperscript{146}See supra notes 113-14, 118-20, 123-25.
an employee's right to use such trade secrets. And, for all practical purposes, they are.

In theory, a distinction may be drawn between an employee's full "ownership" rights in a trade secret, on the one hand, and his license to use it, on the other. Full ownership rights in a trade secret entitle the owner both to use it, and also freely to disclose it. Arguably, a license to use a trade secret, while likewise allowing the licensee to use it, authorizes only such limited disclosures as are necessary to use it. The difference, in other words, is in the right of disclosure.

On close scrutiny, though, the distinction fades. Why, after all, would a trade secret owner reveal his secret except in order to exploit it? Accordingly, those decisions holding that employees hired to invent nonetheless have "an unqualified privilege to use" trade secrets which they invent in the course of their employment lend support to the view that such employees are entitled to a shop right in trade secrets. The vast majority of cases enjoining former employees from using or disclosing trade secrets which they invented, however, suggests that this view is seldom likely to prevail.

C. Copyright

Under the Copyright Act of 1976 ("the 1976 Act"), copyright ownership vests in the author of a copyrightable work.

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147. Cf. E.I. duPont de Nemours & Co. v. United States, 288 F.2d 904, 911 (Ct. Cl. 1961) (trade secret owner has a monopoly and can completely convey to others the knowledge needed to use his secret).

148. Cf. Kinkade v. New York Shipbuilding Corp., 21 N.J. 362, 366, 122 A.2d 360, 363 (1956) (finding that disclosure of a trade secret to the plaintiff's fellow employees "was necessary for without such there could have been no use of the [trade secret] . . . .").


150. See supra notes 123-25.

151. See supra notes 113-14, 118-19.


154. Copyright "subsists . . . in original works of authorship fixed in any tangible medium of expression . . . ." 17 U.S.C. § 102(a) (1982). In order to be copyrightable, a work must at some point have been reduced to a physical expression, Columbia Broadcasting Sys-
This is similar to the rule regarding patents. Unlike patents, though, the allocation of copyright ownership between employers and employees is not relegated to common law.

Section 201(b) of the 1976 Act explicitly provides that an employer is deemed to be author of all “work[s] made for hire”:

In the case of a work made for hire, the employer or other person for whom the work was prepared is considered the author for purposes of this title, and, unless the parties have expressly agreed otherwise in a written instrument signed by them owns all of the rights comprised in the copyrights.

A work made for hire, in turn, is defined as:

(1) a work prepared by an employee within the scope of his or her employment; or
(2) a work specially ordered or commissioned for use as a contribution to a collective work, as a part of a motion picture or other audiovisual work, as a translation, as a supplementary work, as a compilation, as an instructional text, as a test, as answer material for a test, or as an atlas, if the parties expressly agree in a written instrument signed by them that the work shall be considered a work made for hire.

The resolution of a copyright dispute between employer and inventor, in other words, depends upon whether or not a particular work fits within either of the two classifications quoted above. If so, then the employer is considered the author, and owns the copyright in its entirety; if not, then the inventor is considered the author, and he instead owns the copyright in its entirety. The outcome is apparently winner-take-all, for Congress deliberately omitted from the 1976 Act a proposed amendment that would have adopted the shop

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155. See supra note 21 and accompanying text.
156. 17 U.S.C. § 201(b) (1982). In addition to vesting copyright ownership in the employer, concluding that a work is one “made for hire” has at least three other consequences. First, it affects the duration of copyright. Copyright in a work ordinarily expires from the creation of the work until fifty years after the author's death. Id. § 302(a). But, if the work is one made for hire, copyright expires from the creation of the work either until seventy-five years from first publication, see id. § 101 (defining “publication”), or for one hundred years, whichever period of time expires first. Id. § 302(c). Second, whereas a copyright transfer or license can generally be terminated under certain conditions, see id. § 203, these termination provisions do not apply to works made for hire. Id. § 203(a). And third, the nationality or domicile of the author may determine whether or not the work in question is subject to the 1976 Act. See id. § 104(b). It thus becomes essential to know who the author is. See e.g., Olympia Press v. Lancer Books, Inc., 267 F. Supp. 920 (S.D.N.Y. 1967). See also infra text accompanying notes 213-14.
right rule.\textsuperscript{158}

1. Works Prepared by an Employee within the Scope of Employment

Presumptively,\textsuperscript{159} the copyright in a work prepared by an employee within the scope of employment vests in his employer.\textsuperscript{160} This raises two obvious questions: (1) who is an employee, and (2) when are works prepared in the scope of employment?

Who Is an Employee? The test used to determine whether or not the creator of a copyrightable work is an employee differs little from the common law test used in the patent and trade secret contexts.\textsuperscript{161} Many factors are relevant: whether the parties had an arrangement going beyond the assignor-assignee relationship prior to the undertaking of the particular work, whether the putative employee receives a regular wage or salary, whether he created the particular work on his employer’s premises and whether he can be discharged at will, among others.\textsuperscript{162} Virtually all of these factors, however, pale in significance\textsuperscript{163} compared to whether or not the em-

\begin{footnotesize} 
\begin{enumerate}
\item Representatives of screenwriter and composer groups had urged that employers be granted a shop right in works made for hire, rather than complete copyright ownership. See \textit{e.g.}, \textit{Hearing}s \textit{on H.R. 4347, H.R. 5680, H.R. 6831, and H.R. 6835, before Subcommittee No. 3 of the House Committee on the Judiciary}, 89th Cong., 1st Sess., pt. 1, at 271-77 (1966) (comments on behalf of the Composers and Lyricists Guild of America). This proposal was rejected on the ground that its speculative benefits could not justify unsettling the established rule that the copyright in a work for hire vests in the employer. H.R. Rep. No. 94-1476, 94th Cong., 2d Sess. 121 (1976) [hereinafter cited as House Report], \textit{reprinted in} 1976 \textit{U.S. CODE CONG. & AD. NEWS} 5659, 5736-37.

Merely because Congress declined to adopt the shop right rule as an alternative to vesting employers with copyright ownership of works made for hire, of course, does not necessarily compel the conclusion that it intended to preclude the courts from implying a shop right with respect to works not made for hire in the appropriate circumstances. \textit{Cf.} \textit{Boucicault v. Fox}, 3 Fed. Cas. 977, 980 (C.C.S.D.N.Y. 1862) (No. 1,691) (employer of author of play not written for hire might be entitled to a license to have the play performed) (dictum); \textit{Everts v. Arkham House Publishers, Inc.}, 579 F. Supp 145, 149, (W.D. Wis. 1984) (decided under the Copyright Act of 1909) (publisher of collection of poems not written for hire might be entitled to a license to publish the collection) (dictum). \textit{But see 1 M. NIMMER, NIMMER ON COPYRIGHT, § 5.03[B][2][d]}. at 5-26.1 (1984) [hereinafter cited as NIMMER].

The parties may, however, “expressly agree otherwise . . . .” 17 U.S.C. § 201(b) (1982).

\item \textit{Id.} §§ 101 (defining a “work made for hire”), 201(b).


\item Consider, for example, the payment of a regular wage or salary. While this is probative of an employer-employee relationship, \textit{Von Tizler v. Jerry Vogel Music Co.}, 53 F. Supp 191 (S.D.N.Y. 1943), \textit{aff’d} \textit{sub nom.} Gumm v. Jerry Vogel Music Co., 158 F.2d 516
\end{enumerate}
\end{footnotesize}
ployer had the right to exercise control over the manner in which the work was created.164 This is "the crucial factor."165 The greater the employer's right to determine the style and content of a particular work, therefore, the greater the likelihood that the person who created the work will be deemed an employee.166 And, conversely, the less the employer's right to determine style and content, the less likely this result will become.167

**When Are Works Prepared within the Scope of Employment?**

Although the 1976 Act does not define "scope of employment," Congress evidently intended to adopt the common law standard168 discussed earlier.169 As was the case in defining "employee," many factors are relevant, such as at whose insistence and expense the work was created,170 and on whose time.171 But once again, these

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168. See supra note 164, at 221-22.

169. Compare, e.g., Murray v. Gelderman, 566 F.2d 1307 (5th Cir. 1978) (employee who wrote menu book at employer's insistence and expense was acting within the scope of employment), with Public Affairs, Inc. v. Rickover, 268 F. Supp. 444 (D.D.C. 1967) (employee who wrote speeches on his own initiative, and with negligible assistance from his employer, acted beyond the scope of employment).

170. Compare, e.g., Scherr v. Universal Match Corp., 417 F.2d 497 (2d Cir. 1969) (employees who built statue during working hours acted within the scope of employment), cert. denied, 397 U.S. 936 (1970), with Public Affairs, Inc. v. Rickover, 268 F. Supp. 444 (D.D.C. 1967) (employee who wrote lectures after working hours acted beyond the scope of employment). But see Williams v. Weisser, 273 Cal. App. 2d 726, 739, 78 Cal. Rptr. 542, 549 (1969) (holding that a university professor rather than the university which employed him owned the copyright to his lectures, but refusing to rely upon the fact that the lectures were largely
factors are vastly overshadowed in importance by the question of the employer's right to control the manner in which the work was created.\textsuperscript{172} Consequently, as a practical matter, the right-of-control criterion is dispositive concerning whether or not a particular work was prepared by an employee in the course of employment.

2. Works Prepared by an Independant Contractor on Special Order or Commission

At common law, where an independent contractor had been commissioned to create a work, it was presumed — absent a clear showing of the parties' contrary intent — that copyright in the resulting work was to be owned exclusively by the commissioning party.\textsuperscript{173} The Copyright Act of 1909 ("the 1909 Act")\textsuperscript{174} was silent on this point.\textsuperscript{175} Consequently, with few exceptions,\textsuperscript{176} the courts interpreting the 1909 Act continued the presumption of ownership in favor of the commissioning party.\textsuperscript{177}

The 1976 Act, however, radically altered the status quo.\textsuperscript{178} Now, in order for a work prepared by an independent contractor to constitute a "work made for hire," all of three criteria must be satisfied. First, the work must have been "specially ordered or commis-

\textsuperscript{173} E.g., Dielman v. White, 102 F. 892, 894 (C.C.D. Mass. 1900).
\textsuperscript{176} See, e.g., W.H. Anderson Co. v. Baldwin Law Publishing Co., 27 F.2d 82 (6th Cir. 1928).
\textsuperscript{177} See, e.g., Brattleboro Publishing Co. v. Winmill Publishing Corp., 369 F.2d 565 (2d Cir. 1966); Lin-Brook Builders Hardware v. Gertler, 352 F.2d 298 (9th Cir. 1965); Morton v. Raphael, 334 Ill. App. 399, 79 N.E.2d 522 (1948); Douglas v. Stokes, 149 Ky. 506, 149 S.W. 849 (1912).
sioned for use." Second, the work must fit within certain prescribed categories. And third, the parties must agree in writing that the work is to be considered a work made for hire.\footnote{179}

**Works "Specially Ordered or Commissioned for Use."** The special order or commission requirement focuses upon the party at whose initiative and expense the work in question was commenced. "If [an independent contractor] is solicited by a patron to execute a commission for pay, the presumption should be indulged that the patron desires to control the publication of copies . . . ."\footnote{180} This requirement is designed to exclude situations in which an independent contractor creates a copyrightable work on his own initiative, and for his own purposes.\footnote{181}

**Works Fitting with the Prescribed Categories.** Whereas copyright ownership in a commissioned work was previously a function of the parties' intent,\footnote{182} now copyright in only nine categories of works can vest in the commissioning party,\footnote{183} regardless of the parties' intent.\footnote{184} These categories are: (1) a contribution to a collec-
tive work;\textsuperscript{185} (2) a part of a motion picture or other audiovisual work;\textsuperscript{186} (3) a translation; (4) a supplementary work;\textsuperscript{187} (5) a compilation;\textsuperscript{188} (6) an instructional text;\textsuperscript{189} (7) a test; (8) answer material for a test; and (9) an atlas. Precisely because they do not fit within any of the foregoing categories, architectural drawings,\textsuperscript{190} photographs\textsuperscript{192} and fabric designs prepared by independent contractors have all been held not to qualify as "works for hire," thereby vesting copyright ownership in the independent contractor.\textsuperscript{193}

\begin{itemize}
  \item \textsuperscript{185} A "collective work" is defined as "a work, such as a periodical issue, anthology, or encyclopedia, in which a number of contributions, constituting a separate and independent works in themselves, are assembled into a collective whole." 17 U.S.C. § 101 (1982).
  \item \textsuperscript{186} "Audiovisual works" are defined as:
    \begin{quote}
    [W]orks that consist of a series of related images which are intrinsically intended to be shown by the use of machines or devices such as projectors, viewers, or electronic equipment, together with accompanying sounds, if any, regardless of the nature of the material objects, such as films or tapes, in which the works are embodied.
    \end{quote}
    \textit{Id.} Video games, for example, are considered to be audiovisual works. Midway Mfg. Co. v. Arctic Int'l, 704 F.2d 1009 (7th Cir. 1983).
  \item \textsuperscript{187} A "supplementary work" is defined as:
    \begin{quote}
    [A] work prepared for publication as a secondary adjunct to a work by another author for the purpose of introducing, concluding, illustrating, explaining, revising, commenting upon, or assisting in the use of the other work, such as forwards, afterwords, pictorial illustrations, maps, charts, tables, editorial notes, musical arrangements, answer material for tests, bibliographies, appendices, and indexes . . . .
    \end{quote}
  \item \textsuperscript{188} A "compilation" is defined as "a work formed by the collection and assembling of preexisting materials or of data that are selected, coordinated, or arranged in such a way the resulting work as a whole constitutes an original work of authorship." \textit{Id.} This definition includes collective works. \textit{Id.}
  \item \textsuperscript{189} An "instructional text" is defined as "a literary, pictorial, or graphic work prepared for publication with the purpose of use in systematic instructional activities." 17 U.S.C. § 101 (Supp. V 1981). By virtue of the conjunctive requirement that the work have been prepared "with the purpose of use in systematic instructional activities," this definition excludes books intended for use by a general readership. House Report, \textit{supra} note 158, at 121, \textit{reprinted in} 1976 U.S. CODE CONG. & AD. NEWS at 5737.
  \item \textsuperscript{192} Mr. B Textiles, Inc. v. Woodcrest Fabrics, Inc., 523 F. Supp. 21 (S.D.N.Y. 1981). In \textit{Mr. B Textiles}, however, copyright was awarded jointly to the fabric manufacturer and the design firm which it had engaged to create the pattern at issue. Finding that the fabric manufacturer had made a significant contribution to the ultimate design, the court found the fabric manufacturer and the design firm to be "[t]he authors of a joint work" for purposes of 17 U.S.C. § 201(a) (1982). \textit{See} 523 F. Supp. at 25. \textit{Compare id. with} B.F. Gladding & Co. v. Scientific Anglers, Inc., 245 F.2d 722 (6th Cir. 1957) (where consulting engineering firm jointly developed a trade secret with its employer, both the consulting firm and the employer were entitled to use the trade secret).
  \item \textsuperscript{193} \textit{But see} Arthur Retlaw & Associates, Inc. v. Travenol Laboratories, Inc., 582 F.
The consequences of restricting the categories of works in this fashion can be not only surprising, but also financially devastating. Consider, for example, the plight of a manufacturer who engages a consultant to create a custom software program designed to optimize production efficiency. Such a program does not fit within any of the classifications of works eligible to be considered works made for hire. As a result, even though the manufacturer funded all of the development costs, and even though both parties might have assumed that the manufacturer would own the copyright, the consultant would then be free to license the program to the manufacturer's competitors. As if to add insult to injury, moreover, the consultant, thus relieved of the need to recoup any development costs, could license the program to these competitors at a price far lower than the manufacturer paid for its use.

Agreements Designating the Work as One Made for Hire. Under the 1909 Act, the works for hire doctrine was applied on the basis of the parties' presumed intent, rather than as a matter of law. And the presumed intent favored copyright ownership in the commissioning party. Under the 1976 Act, however, the doctrine operates as a matter of law, and presumptively favors the party commissioned to create the work; for a work created by an independent contractor is one made for hire only if, *inter alia*, "the parties expressly agree in a written instrument signed by them that the work shall be considered a work made for hire." Absent a written agreement, therefore, a commissioned work cannot be one made for hire. Furthermore, unlike a copyright assignment, the agreement is insufficient unless signed by both parties.

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195. For other entries in the parade of potential horribles, see O'Meara, *supra* note 178, at 535-37.
Finally, some question arises concerning the effect of the adverb "expressly." This term must denote more here than merely the antonym of "impliedly"; implied agreements are already proscribed by the requirement that there be a written instrument. Consequently, it may well mean that the parties' intent that a commissioned work be deemed one made for hire be set forth in *haec verba*. If so, then language providing that copyright in a particular work "shall be owned exclusively by" the commissioning party would not pass muster. Language parroting the statute, and declaring that the work "shall be considered a work made for hire," would be required. Whether or not this precaution is actually necessary remains uncertain.

This much, though, is certain: that the copyright in a work prepared by an independent contractor for a commissioning party will generally vest in the independent contractor; and that, in the absence of an express agreement, it always will.

II. OWNERSHIP PURSUANT TO EXPRESS CONTRACT

The ownership of intellectual property need not be relegated to the vagaries of statute or common law; the parties can resolve the matter by express contract. The advantages of this approach are manifold. Foremost among these advantages are the ability to avoid the uncertainties created by unsettled areas of law and the possible frustration of the parties mutual understanding. Moreover, a contract can do more than merely alter otherwise applicable ownership rights. It can also more effectively protect contractually

202 This language might nevertheless qualify as copyright assignment under 17 U.S.C. § 204 (1982). Note, however, that the contractor would still remain the "author" of the work in question, the commissioning party thereby becoming merely his assignee. Hence the consequences flowing from the redesignation of legal authorship when a work is deemed to be one made for hire, see supra note 156, would not occur in this situation. Apparently, this result was intentional. See *Supplementary Report of the Register of Copyrights on the General Revision of the U.S. Copyright Law: 1965 Revision Bill*, 89th Cong., 1st Sess. 68 (1965).
204 See, e.g., supra text accompanying notes 120-25.
205 See, e.g., supra text accompanying notes 182-95.
stipulated ownership rights by means of ancillary provisions not directed to ownership as such. Clauses requiring an employee to disclose to his employer all inventions conceived during the term of employment, for example, render it easier to enforce a patent assignment agreement. Likewise, non-competition clauses prohibiting an employee from competing against his employer within reasonable territorial limits and for a reasonable period of time obviate the difficulty of proving that an employee presently competing against his former employer is doing so improperly, through the use of his former employer's trade secrets.

On the other hand, there are disadvantages as well. When an employer requests his employees to sign confidentiality agreements, the danger arises that, by demanding what are in effect loyalty oaths, he will insult his employees by suggesting that he considers them capable of perfidy. Employees disaffected in this manner have been known to allow "leaks" of valuable information, a result precisely the opposite of that sought to be achieved.

Moreover, where a choice exists whether to characterize an employee's creations as works made for hire belonging to his employer in the first instance or, instead, to require an assignment of all rights in those creations, each choice offers corresponding benefits and drawbacks. Pursuing the works-made-for-hire route enables the employer to become the "author" for a variety of copyright purposes. By the same token, though, it may also expose the employer to workmen's compensation and unemployment insurance liability where none would otherwise have existed. Pur-

208. See generally Blake, Employee Agreements Not to Compete, 73 HARV. L. REV. 625 (1960).
210. See 12 MILGRIM, supra note 129, § 3.02[2][e].
211. Such a choice is not always available. See supra text accompanying notes 182-93.
212. See supra note 156.
213. See CAL. LABOR CODE § 3351.5 (West Supp. 1984):
Employee includes:
(c) Any person while engaged by contract for the creation of a specially ordered or commissioned work of authorship in which the parties expressly agree in a written instrument signed by them that the work shall be considered a work for hire, as defined in Section 101 of Title 17 of the United States Code, and the ordering or commissioning party obtains ownership of all the rights comprised in the copyright in the work.
suing the assignment route avoids the exposure to workmen's compensation and unemployment insurance liability, but, of course, also deprives the employer of those collateral benefits flowing from statutory authorship.215

This article will not endeavor to recommend particular contract language. "How to" manuals already abound.216 Instead, it will focus upon several selected obstacles to the allocation of ownership rights by express contract. Knowing what to avoid, after all, is at least half the battle.

A. Leading the Horse to Water

An obvious but often overlooked problem in attempting to resolve ownership rights by contract is that some employees and consultants may simply refuse to sign on the dotted line.217 Although many employees will "knuckle under,"218 key employees219 — those very persons whose signature on a written contract is most significant — are generally aware of their worth, and hence are often reluctant to relinquish the fruits of their creativity. Collective bargaining agreements may also make it difficult to persuade employees to sign contracts conveying their ownership rights.220

An employee's refusal to sign an express contract can be more than merely a stalemate, moreover; as illustrated by Future Plastics, Inc. v. Ware Shoals Plastics, Inc.,221 it can be a setback. While em-

"Employer" also means any person contracting for the creation of a specially ordered or commissioned work of authorship when the parties expressly agree in a written instrument signed by them that the work shall be considered a work made for hire, as defined in Section 101 of Title 17 of the United States Code, and the ordering or commissioning party obtains ownership of all of the rights comprised in the copyright in the work. The ordering or commissioning party shall be the employer of the author of the work for the purposes of this part.


217. See, e.g., Hobbs v. United States, 376 F.2d 488 (5th Cir. 1967); Gemco Eng'r & Mfg. Co. v. Henderson, 151 Ohio St. 95, 84 N.E.2d 596 (1949).


219. "Key employees" are those employees whose special knowledge makes them particularly valuable to their employer. See Von Kalinowski, Key Employees and Trade Secrets, 47 VA. L. REV. 583 (1961); Arnold, Before a Key Employee Leaves . . . , COMPUTERWORLD, September 10, 1984, at ID/33, col. 1.

220. Many collective bargaining agreements limit employers' ability to compel their employees to assign patents. NEUMeyer, supra note 15, at 179 (Table 4.2). Some prohibit employee patent assignments altogether. See, e.g., id. at 182 (General Dynamics agreement).

ployed by Future Plastics, George Massey had twice been asked to sign secrecy agreements. He refused both requests. After Massey left to form his own company, Future Plastics brought suit, alleging that he had misappropriated confidential information pertaining to the manufacture of polyethylene. The court dismissed the lawsuit, reasoning that Massey’s refusal to sign a secrecy agreement negated the implied duty of confidentiality which employees are usually deemed to owe to their employers:

The relationship of employer-employee is not by itself sufficient to create a confidential relationship. There must be an express understanding as to the confidential nature of the information or the circumstances must be such that the employee is aware of the confidence placed in him by the employer. Massey refused to sign two secrecy and non-competitive agreements submitted to him. The circumstances of Massey’s employment were not sufficient to make him aware of any special confidence reposed in him.

One lesson to be learned from Future Plastics, perhaps, is the risk of having one’s bluff called. An employer ought to think twice before presenting invention ownership or confidentiality agreements to employees whom he cannot afford to discharge in the event they refuse to sign.

B. Covering All the Bases

Admittedly, it is much easier to inveigh against imprecise contract language than it is to formulate language of sufficient precision to withstand the afflictions to which imprecise language is prey. Nevertheless, precision is an ideal well worth striving for, as Motorola found out too late in Motorola, Inc. v. Fairchild Camera and Instrument Corp. The controversy in that case began when eight executives left Motorola to work for Fairchild Camera. Each had

222. Id. at 1384. See also Hobbs v. United States, 376 F.2d 488, 496 (5th Cir. 1967) (consultant who has been hired to invent, but who refused to execute patent waiver, retained full patent rights to inventions conceived in connection with consulting activities).

223. Cf. Hogan v. Bergen Brunswig Corp., 153 N.J. Super. 37, 43, 378 A.2d 1164, 1167 (App. Div. 1977) (“A . . . threat of immediate discharge in the event that the employee does not sign a proposed restrictive covenant . . . can be inferred from conduct . . . . [T]he request for the restrictive covenant indicates that the employer [is] insisting upon its execution.”). See also Higdon Food Service, Inc. v. Walker, 641 S.W.2d 750, 751 (Ky. 1982) (employee who signed non-competition agreement testified that the employer “didn’t put it where you’d be fired or anything, but I took it that if I didn’t sign it I probably . . . wouldn’t be there long . . . .”).

signed an agreement with Motorola obligating him, upon termination of his employment, not to disclose any

[D]ata and information . . . which I may originate . . . during my employment with [Motorola] and which is of a confidential or secret nature such as product, machine and process developments, whether patentable or not patentable, manufacturing “know-how” and specifications, cost and pricing practices, customers’ lists, records of customers’ requirements and usages, personnel records, company financial records, and the like . . . .

After these executives joined Fairchild, Motorola filed suit, alleging that they had wrongfully disclosed to Fairchild over one hundred trade secrets involved in Motorola’s semiconductor manufacturing process. The court rejected Motorola’s claim, finding the above-quoted language impermissibly vague. Motorola had not specified in the non-disclosure agreement what items it considered to be trade secrets; nor had it ever furnished to its employees a list of identified trade secrets either during or at the termination of their employment. Consequently, the court held the agreement to be “unenforceable without specific advice at some time to employees as to specific trade secrets claimed . . . .”

A converse but equally illustrative situation arose in GTI Corp. v. Calhoon. Three former GTI engineers, each of whom had signed an agreement requiring them to assign to GTI all their “ideas and improvements,” decided to form their own company for the purpose of competing with GTI. After they left, GTI filed suit in order to compel them to assign the ownership rights to a welding machine which they had developed. Unlike the Motorola case, the court held that the agreement did effectively include trade secrets — but only trade secrets: “The terms ‘ideas’ and ‘improvements’ as used in the employment agreement are broad and ambiguous. The Court is of the opinion that these terms were intended to embrace trade secrets only.” And, because the welding machine did not meet all the criteria necessary to qualify as a trade secret, GTI walked away empty-handed.

Inadvertent overprecision used imprecisely can also backfire, as occurred in Ferroline Corp. v. Gen. Aniline & Film Corp. Ferroline had licensed an affiliate corporation to use its secret process

225. Id. at 1183.
226. Id. at 1185.
228. Id. at 772.
229. 207 F.2d 912 (7th Cir. 1953), cert. denied, 347 U.S. 953 (1954).
for the commercial production of iron pentacarbonyl. The license agreement expressly provided that the affiliate would not divulge Ferroline's secret anti-knock compound, whose principal ingredient was iron pentacarbonyl. The agreement did not so provide, however, with regard to the process for manufacturing the carbonyl itself. Because of this omission, the court ruled that the affiliate was under no obligation to maintain the confidentiality of Ferroline's carbonyl manufacturing process, even though such an obligation might have been implied had the parties not executed a written agreement:

The trial court . . . [held] that, as the contract expressly provided secrecy only as to the anti-knock compound, no further restrictions were implied. We think the trial court ruled correctly on this feature. Although a confidential relationship may be implied in a proper case, . . . where there is an express agreement between the parties covering the subject matter, . . . the law will not create another by inference.230

Ferroline provides an excellent counterpoint to the Motorola decision discussed earlier,231 for the contrast underscores the caution required to steer between the Scylla of underinclusiveness, on the one hand, and the Charybdis of overinclusiveness, on the other.

Another common instance of inadvertent overprecision involves the term “invention.” More than one former employer has stumbled over that word. In Jamesbury Corp. v. Worcester Valve Co.,232 for instance, Howard Freeman, the director of research for the Rockwood Sprinkler Company, had agreed to assign to Rockwood all “inventions” made during his employment there. While so employed, he conceived an idea for a double-seal ball valve, but he deliberately refrained from making any drawings until approximately one week after he had left Rockwood to form his own double-seal ball valve manufacturing company. He then obtained a patent on the valve. Several years later, a dispute arose concerning whether Rockwood or Freeman's new company was the rightful patentee. Rockwood argued that, because Freeman had conceived of the valve while in its employ, it was contractually entitled to the resulting patent. The United States Court of Appeals for the First Circuit disagreed. The court reasoned that “invention” was a term of art in patent law, denoting an idea not merely conceived, but also reduced to tangible form. It then concluded that “Freeman had not

230. Id. at 922.
231. See supra text accompanying notes 224-26.
232. 443 F.2d 205 (1st Cir. 1971).
made an invention, within the meaning of the employment when he left Rockwood, because he had not put any of his ideas down in any tangible form."233

Similar reasoning undermined Amoco's claim in Amoco Production Co. v. Lindley.234 While employed by Amoco, Ralph Lindley had created a software program, known as the "Lindley System," designed to analyze data regarding the prospects of locating oil in certain geological formations. After he left Amoco, Amoco instituted suit to obtain ownership of the Lindley System pursuant to the terms of an employment contract whereby Lindley had agreed to "disclose . . . all inventions . . . which [he] . . . has made or may make during his employment by [Amoco], and . . . to assign all his right, title and interest in and to such inventions . . . to [Amoco] . . . ." The Oklahoma Supreme Court reasoned that, since the term "invention" was based upon patent law, "it follows that [an] 'invention'. . . must be patentable whether it is or not [patented]."235 The court then held that, because software is generally not patentable,236 the Lindley System was not an "invention" to which Amoco was entitled by virtue of its employment contract with Lindley.237

Finally, where potentially copyrightable works are anticipated, the agreement should provide for more than merely ownership of the object or idea at issue; it should also explicitly allocate ownership of all proprietary interests therein. The importance of this distinction stems from the rule that "[o]wnership of a copyright, or of any of the exclusive rights under a copyright, is distinct from ownership of any material object in which the work is embodied."238 By failing to observe this distinction, one purchaser of a film found

233. Id. at 213.
234. 609 P.2d 733 (Okl. 1980).
235. Id. at 740.
237. Accord, Monsanto Chem. Works v. Jaeger, 31 F.2d 188 (W.D. Pa. 1929), aff'd, 427 F.2d 1018 (3d Cir. 1970); Shur-loc Elevator Co. v. Purcell, 196 App. Div. 546, 188 N.Y.S. 25 (1921). But see Bailey v. Chatter, Inc., 684 F.2d 386, 391 (6th Cir. 1982) (a jury could find that "invention" did not require reduction to practice); Kysor v. Alma Motor Co., 290 Mich. 76, 78-79, 287 N.W. 385, 386 (1939) (in contract agreeing to assign to employer all inventions "except any invention which has already been started before this employment," the term invention meant "a new idea of means created by the exercise of the inventive faculty for the attainment of some useful purpose [...] a mental result, a concept, a thing evolved from the mind, a product of the intellect, a new idea of means generated by the mind of the inventor, the embodiment of the inventive idea."); cf. New Jersey Zinc Co. v. Singmaster, 71 F.2d 277 (2d Cir.) (agreement to assign "all patentable ideas"), cert. denied, 293 U.S. 591 (1934).
itself without any right to license the display of that film.\textsuperscript{239}

\textbf{C. Getting Only What You Pay For}

Consideration, the giving of something in exchange for the benefit sought,\textsuperscript{240} is a condition precedent to the existence of an enforceable contract at common law.\textsuperscript{241} It is likewise essential to an effective patent assignment.\textsuperscript{242} And, although copyright assignments do not require consideration,\textsuperscript{243} there are hazards in proceeding without it. First, a copyright assignment taken without consideration can be superseded by a subsequent assignment taken for consideration.\textsuperscript{244} Second, it cannot always be determined in advance whether an invention will be copyrightable; recourse to another form of intellectual property protection may become necessary. Third, even though copyright assignments themselves may not need consideration, there is no authority suggesting that agreements providing for future such assignments are exempt from the common law contract rule requiring consideration.\textsuperscript{245} Consideration is therefore a practical prerequisite to any contract attempting to allocate ownership rights in intellectual property.

\textsuperscript{240} Restatement (Second) of Contracts § 71 (1981). Consideration must be "bargained for." \textit{Id.} comment b. Consequently, where an employer coerces an employee into signing an agreement, there may not be bargaining, but instead duress. \textit{Cf. id.} § 176 comment e illustration 11:

A makes a threat to discharge B, his employee, unless B releases a claim that he has against A. The employment agreement is terminable at the will of either party, so that the discharge would not be a breach by A. B, having no reasonable alternative, releases the claim. A's threat is a breach of his duty of good faith and fair dealing, and the release is voidable by B.

The employee in Pemco Corp. v. Rose, 257 S.E.2d 885 (W. Va. 1979), for example, having accepted an oral offer of employment, cancelled the lease on his home and contracted to purchase a house near his new employer. On the first day of work, he was asked to sign a non-competition agreement. Having already committed himself to his new job, the employee had little choice but to sign. Under these circumstances, ruled the West Virginia Supreme Court, the agreement was void for lack of consideration: "The covenant not to compete was not a freely bargained for term or condition of employment, but rather was a term or condition of employment extracted from or imposed upon an employee under circumstances which deprived him of any fair ability to negotiate." \textit{Id.} at 890. \textit{But see} Barr Car Co. v. Chicago & N.W. Ry., 110 F. 972 (7th Cir. 1901) (employer's threat to fire an inventor for refusing to assign a patent does not constitute duress), \textit{cert. denied}, 186 U.S. 484 (1934).

\textsuperscript{241} Restatement (Second) of Contracts § 71 (1981). \textit{But see id.} §§ 82-94.
\textsuperscript{242} 35 U.S.C. § 261 (1982); 4 Dellér, supra note 64, § 340.
\textsuperscript{243} 3 Nimmer, supra note 158, § 10.03(A), at 10-35. \textit{Compare} 17 U.S.C. § 204(a) (1982) (assignment of copyrights requires writing by assignor) \textit{with id.} § 205(c) (in conflict of assignments, first in time "for valuable consideration" and in good faith prevails).
\textsuperscript{244} 17 U.S.C. § 205(c) (1982).
\textsuperscript{245} \textit{Cf.} Aronson v. Quick Point Pencil Co., 440 U.S. 257, 262 (1979) ("State law is not displaced merely because the contract relates to intellectual property . . . ").
Consideration presents a problem whenever an employer seeks contractual concessions from persons already in his employ. An offer of employment is itself sufficient consideration to support contractual concessions from persons not yet employed. But what is required to bind current employees? This question arises most frequently with respect to non-competition agreements, yet is fully applicable to contracts purporting to allocate rights in intellectual property.

The major dispute centers upon whether the mere offer of continued employment to someone already employed constitutes adequate consideration. Most courts hold that it does, the rationale being that, by agreeing to continue the employment of a person whom he can discharge at will, the employer has conferred a real benefit upon the employee. In Higdon Food Service, Inc. v. Walker, for example, Higdon Food Service had requested its present employees, among them Gene Walker, to sign a non-competition agreement. Walker signed the agreement, but, after leaving Higdon, attempted to have it declared invalid for lack of consideration. Walker contended that the contract "was a one-way street, providing certain protection for Higdon but nothing for him that [he] did not already have." The Kentucky Supreme Court disagreed:

Higdon was under no more of an obligation to continue or renew the employment than Walker was. The hiring itself (or rehiring,


247. See generally 12 MILGRIM, supra note 129, § 3.05[1][c]; Epstein & Friedman, Sufficiency of Consideration for an Employee's Covenant Not to Compete, 1 COMPUTER LAW., No. 5, at 1 (1984); Annot., 51 A.L.R. 3d 825 (1973).

248. See Cybertek Computer Prod., Inc. v. Whitfield, 203 U.S.P.Q. (BNA) 1020 (Cal. Super. Ct. 1977) (agreement not to disclose not void for lack of consideration, even though entered after employment began, where the written agreement merely documented the parties' oral agreement at the inception of employment); Hewett v. Samsonite Corp., 32 Colo. App. 150, 507 P.2d 150 (1973) (mere continuation of employment is insufficient consideration to support a contract to assign patent rights); Mosser Industries, Inc. v. Hegar, 200 U.S.P.Q. (BNA) 608 (Pa. C.P. 1978) (invention ownership agreement reciting $1.00 as consideration was enforceable, even though entered into two months after employment began); A.B.L. Liquidating Co. v. McCabe, 62 Pa. D. & C.2d 29 (C.P. 1973) (invention ownership agreement executed under seal during employment lacked adequate consideration, and was therefore unenforceable).


250. 641 S.W.2d 750 (Ky. 1982).

251. Id. at 751.
if one prefers that word) was sufficient consideration for the conditions agreed to by Walker. It makes no difference that Higdon could have discharged him the next day. The point is that it did not have to hire him — or keep him on — at all.252

The fact that the continuation of at-will employment still leaves the employee vulnerable to immediate and arbitrary discharge, however, has persuaded a minority of courts to adopt a contrary position, viz., that "consideration cannot be constituted out of something that is given and taken in the same breath — of an employment which need not last longer than the ink is dry upon the signature of the employee . . . ."253

This majority/minority alignment is subject to some qualification, for the majority position is not as monolithic as might appear at first glance. Initially, there is disagreement concerning whether or not an employer is required to threaten the employee with discharge unless he or she signs the agreement.254 Additionally, many of the courts comprising the majority position require employment to continue for a substantial length of time following execution of the agreement in order to be deemed adequate consideration.255 Lastly, the doctrinal foundation of the majority position — that, absent a contract providing otherwise, employees can be discharged at will — is beginning to show signs of erosion.256 Whether the mere offer of continued employment is sufficient consideration to support an invention ownership agreement is, in other words, hardly the subject of firm consensus. As a consequence, failing to confer some genuine benefit upon an employee in exchange for that

252. Id.

Were an employer to discharge an employee without cause in an unconscionably short length of time after extracting the employee's signature to a restrictive covenant through a threat of discharge, there would be a failure of the consideration . . . . Rather than adopt a bright line but inequitable rule, we deem the better approach is to hold that the continuation of employment for a substantial period beyond the threat of discharge is sufficient consideration for a restrictive covenant. What constitutes a substantial period is dependent on the facts and circumstances of a particular case.


employee's agreeing to an allocation of ownership rights may jeopardize the agreement.

The most obvious form of genuine benefit is money or its equivalent. Although the amount of money need not be large,257 it must be more than nominal.258 And, although payment can be deferred,259 the right to payment must be more than illusory. In one case, for example, a so-called "guaranteed bonus" which was, in fact, to be distributed only "in such amount as the Board of Directors . . . in its sole discretion shall determine," was held to confer upon the employee a mere expectancy, not a right to payment sufficient to constitute consideration.260 Finally, payment, whether present or deferred, should be a right to which the employee is not already entitled;261 otherwise, it cannot qualify as new consideration.

There exists no exhaustive laundry list of benefits that qualify as consideration in these circumstances. Common sense is the operative principle. Suffice it to observe that, so long as the employee in question is actually better off in some fashion,262 the courts will not likely refuse to enforce an invention ownership agreement for lack of consideration.

257. See, e.g., Hammermill Paper Co. v. Palese, Civ. No. 7128 (Del. Ch. June 14, 1983) (salary raise of $100.00 per week).
259. A practice much like the nominal "consideration of $1.00" recitation in its reliance upon formalism, that of signing a contract "under seal" in lieu of consideration, has produced uneven results. Compare Marine Contractors Co. v. Hurley, 365 Mass. 280, 310 N.E.2d 915 (1974) (covenant not to compete was valid) with A.B.L. Liquidating Co. v. McCabe, 62 Pa. D. & C.2d 29 (C.P. 1973) (invention ownership agreement was invalid).
260. See, e.g., Bradford v. New York Times Co., 501 F.2d 51 (2d Cir. 1974) (ten annual stock payments following termination of employment); Modern Controls, Inc. v. Andreadakis, 578 F.2d 1264 (8th Cir. 1978) (payment of base salary for two years after termination of employment).
D. **Biting Off More Than You Can Lawfully Chew**

Employers occasionally overreach. A rather extreme illustration of this is *Hillsboro Nat'l Bank v. Hyde*,\(^263\) where a bank attempted to enforce what the court characterized as "the most extraordinary contract which has ever fallen under our observation."\(^264\) The contract provided that the defendant, a bank employee, was to give the bank the benefit of his entire time. The bank interpreted this to mean that any gainful activity whatsoever by its employee, not merely services rendered in the bank's employ, were to inure to the bank's benefit. On this basis the bank sought to recover commissions earned by the employee after hours as a real estate broker. Not surprisingly, the bank's effort was rebuffed: "We do not think that . . . if defendant, in spare moments, wrote a book, or taught at night school, or sang in a church choir, the fruits of his extra toil on his own behalf should be swept into the tills of the bank."\(^265\)

Employers' efforts to reap the rewards of their employees' ingenuity outside the job are seldom this bizarre. But the potential for similar overreaching on a lesser scale arises in conjunction with "hold-over"\(^266\) or "trailer" clauses\(^267\) requiring the assignment to the employer of inventions created by the employee after the termination of employment.\(^268\) Trailer clauses reflect "the fact of business life that employees sometimes carry with them to their new employers inventions or ideas so related to work done for a former employer . . . that the fruits of that work should belong to the former employer."\(^269\)

In *National Dev. Co. v. Gray*,\(^270\) for example, Lawson had been employed by National Development to design a machine used in shoe manufacturing. While so employed, he conceived an idea for a

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\(^{263}\) 7 N.D. 400, 75 N.W. 781 (1898).

\(^{264}\) *Id.* at 400, 75 N.W. at 781. The court, indeed, questioned whether the contract "[could] be paralleled in the history of Anglo-Saxon jurisprudence." *Id.*, 75 N.W. at 781.

\(^{265}\) *Id.* at 403, 75 N.W. at 782. *But see* Mallory v. MacKaye, 86 F. 122 (C.C.S.D.N.Y. 1898) (enforcing an agreement that "the entire product and income of [the employee's] intellectual and physical labor and skill should belong absolutely to [the employer], and be his exclusive property . . . ").


\(^{267}\) Comment, *supra* note 89, at 258.


\(^{270}\) 316 Mass. 240, 55 N.E.2d 783 (1944).
new type of machine. He then changed jobs, constructed the new machine, and assigned the resulting patent to his new employer. On these facts, the Massachusetts Supreme Court held that National Development was entitled to ownership of the patent:

We think that the idea had crystallized into such definite form by the time Lawson left the plaintiff's employment that he and those with whom he spoke concerning the new machine knew in a general way the principles governing its operation and its probable practical value . . . [W]hatever Lawson accomplished up to the time he quit his employment belonged to the plaintiff . . . .

When used to protect an employer's rights in such circumstances, trailer clauses serve a legitimate function. When trailer clauses go beyond what is reasonably necessary to protect the employer's rights, however, they are unenforceable. A research chemist employed by 3M, for example, had signed an agreement obligating him to assign to 3M "all my rights to inventions which I . . . may at any time hereafter make or conceive, . . . relating to . . . any subject matter with which my work for said company [3M] is or may be concerned . . . ." The absence of time or subject matter limitations in this agreement prompted the United States Court of Appeals for the Seventh Circuit to reverse a decree in favor of 3M. The appellate court reasoned that, under the terms of the contract, the chemist was effectively indentured for life:

He was a research man prepared to devote his life to discoveries of value to industry. Under this contract he was, however, if he worked in another laboratory or for another manufacturer, required to assign his discoveries to appellee. This would effectively close the doors of employment to him. Until the end of the chapter he was compelled either to work for appellee or turn over the children of his inventive genius to it.

This result, concluded the court, "conflicts with the public policy of the land, which . . . encourages inventions and discourages the exclusion of an employee from engaging in the gainful occupation for which he is particularly fitted for all time, anywhere in the United

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271. Id. at 247, 55 N.E.2d at 788. The precise moment when an employee sufficiently conceives of an idea so as to entitle his former employer to patent rights in the resulting invention developed after the termination of employment is a question of fact to be resolved anew in each case. See, e.g., John Mohr & Sons, Inc. v. Jahnke, 55 Wis. 2d 402, 198 N.W.2d 363 (1972).


274. Id. at 388.
Trailer clauses bespeak caution, in other words, and should be drafted in the same spirit; for, in the eyes of the law, a fine line separates cautious from rapacious. In order to preserve the effectiveness of trailer clauses, both time and subject matter limits ought to be imposed.

III. Conclusion

Ideally, the law governing ownership of inventions created by employees should mirror the parties' expectations. Instead, legislative compromise and judicial confusion have produced a sometimes bewildering maze of different rules, each with its own qualifications and exceptions, in unwitting tribute to Justice Holmes' famous aphorism that "[t]he life of the law has not been logic . . . ." Rescue may be on the way. Until it arrives, however, it behooves inventor and employee alike to become famil-

275. Id. at 388-89 (footnote omitted).
276. See GTI Corp. v. Calhoon, 309 F. Supp. 762 (S.D. Ohio 1969) (invalidating a five-year trailer clause, even though the invention in dispute was related to the inventor's line of work for his former employer). Milgrim recommends one year as the maximum safe duration. See 12 MILGRIM, supra note 129, § 5.02[4][d], at 5-50.
277. See Dorr-Oliver v. United States, 193 Ct. Cl. 187, 432 F.2d 447 (1970) (invalidating a one-year trailer clause, where the invention in dispute was unrelated to the inventor's line of work for his former employer).
278. Cautious draftsmanship is further compelled by the growing number of state "freedom to invent" statutes. See generally Gullette, State Legislation Governing Ownership Rights in Inventions Under Employee Invention Agreements, 62 J. PAT. OFF. SOC'y 632 (1980). Minnesota's statute, for example, declares that:

Any provision in an employment agreement which provides that an employee shall assign or offer to assign any of his rights in an invention to his employer shall not apply to an invention for which no equipment, supplies, facility or trade secret information of the employer was used and which was developed entirely on the employee's own time, and (1) which does not relate (a) directly to the business of the employer or (b) to the employer's actual or demonstrably anticipated research or development, or (2) which does not result from any work performed by the employee for the employer. Any provision which purports to apply to such an invention is to that extent against the public policy of this state and is to that extent void and unenforceable.

279. See supra note 183.
280. See supra notes 11, 120, and accompanying text.
iar with the twists in the maze lest, like the blind men contemplating the elephant,\(^2\) one suppose that he is inventing a trunk, the other suppose that he is entitled to ownership of a tail, and both end up with a rather unweildy pachyderm.

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\(^2\) See E. Ziegler, Folklore 10 (1973).