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The Souring of Sweet *Acidophilus* Milk: *Speck v. North Carolina Dairy Foundation* and the Rights of University Faculty to Their Inventive Ideas

Although universities and university faculty have litigated many cases concerning patent rights,¹ cases deciding the respective rights of the faculty inventor and the university are few.² The North Carolina Supreme Court addressed this issue in *Speck v. North Carolina Dairy Foundation*.³ The court held that university faculty employed as “teachers and researchers”⁴ fall within the category of persons “hired to invent” and thus have no right to or interest in inventions arising from university research.⁵

This Note analyzes the development of the common-law rights of employees to their inventive ideas and the *Speck* court’s failure to delineate the rights of university employees within this established framework. The Note concludes that the court’s classification of university faculty as persons hired to invent is contrary to the premises upon which higher education is based.

Traditionally, in the absence of an express contract, the rights of employees to their inventions have depended upon the nature of the employment. If the employee was hired to invent, the employer was entitled to full property rights

1. See *Mead Corp. v. United States*, 652 F.2d 1050 (D.C. Cir. 1981) (per curiam) (Dr. Richard Sweet, a research scientist at Stanford University, developed an ink-jet device pursuant to a contract between the university and the Department of Defense. Sweet then conveyed all his rights to A.B. Dick Co. as allowed by his contract with Stanford. Mead Corp. was unsuccessful in its attempts to force the government to recognize that the Department of Defense had acquired all interests in the patent.); *Burns v. Massachusetts Inst. of Technology*, 394 F.2d 416 (1st Cir. 1968) (Burns informed the university of certain secret ideas so that the university could access those ideas and furnish an opinion as to their usefulness to an agency of the United States. Burns alleged that the university presented an unfavorable report but proceeded to develop those ideas. The court held the statute of limitations for torts governed and dismissed the action.); *Vitamin Technologists, Inc. v. Wisconsin Alumni Research Found.*, 146 F.2d 941 (9th Cir.) (Dr. Steenbock of the University of Wisconsin had developed a process for the production of Vitamin D from lipoid contained in milk and other food products. The court held that plaintiff’s failure to authorize the use of this process by the margarine industry was against the public interest. An infringement action against defendant therefore was dismissed. Dr. Steenbock had received \$760,000 in royalties at the time of the action.), *cert. denied*, 325 U.S. 876 (1945); *Dinwiddie v. St. Louis & O’Fallon Coal Co.*, 64 F.2d 303 (4th Cir. 1933) (Dr. Harrison Bashioum, head of the Chemical Engineering Department of the University of Pittsburgh, and others were denied all rights to patents pertaining to coal products that had been developed under the employment of defendant.); *Powell Mfg. Co. v. Long Mfg. Co.*, 319 F. Supp. 24 (E.D.N.C. 1970) (Dr. Francis Hassler, a professor at North Carolina State College, obtained patents relating to the bulk-curing of tobacco. These patents were assigned to Powell Manufacturing. In an infringement suit, the court held that Hassler’s connection to the college did not create a dedication to the public.); *Simmons v. California Inst. of Technology*, 34 Cal. 2d 264, 209 P.2d 581 (1949) (en banc) (Edward Simmons, a student at the California Institute of Technology, developed a strain sensitive element that was used in research conducted by a faculty member. The court allowed Simmons to rescind a contract to convey an interest in the device because of fraud.); Blackwell, *Avoiding Litigation over Faculty Patents*, 1950-51 CURRENT LEGAL PROBLEMS OF COLLEGES AND UNIVERSITIES 21 (Dr. Albert Schatz, assistant professor at Brooklyn College, claimed he was co-discoverer of streptomycin along with Dr. Selman Waksman of Rutgers University. The Superior Court of New Jersey accepted a settlement between the two.)

2. T. BLACKWELL, *COLLEGE LAW: A GUIDE FOR ADMINISTRATORS* 175 (1961).

3. 311 N.C. 679, 319 S.E.2d 139 (1984).

4. *Id.* at 686, 319 S.E.2d at 143.

5. *Id.*

in the invention. If the invention was created during hours of employment with the employer's materials, the employee retained the right to the inventive idea, subject to the employer's shop right—a nonexclusive right to use the invention in the employer's business. If the employee was not hired to invent and the invention was developed without the aid of the employer's resources, the employee retained full title to the invention.⁶

In 1970 Dr. Marvin Speck, a professor at North Carolina State University (NCSU), began working on the development of a pleasant-tasting milk containing lactobacillus acidophilus.⁷ Lactobacillus acidophilus is a bacteria that facilitates proper digestion by neutralizing various undesirable microorganisms in the human intestines.⁸ While an employee of NCSU, Speck, with the assistance of Dr. Stanley Gilliland, developed an improved medium for growing lactobacillus acidophilus.⁹

Speck informed his department chairman, Dr. William Roberts, of this discovery and noted that it would make possible the mass marketing of milk containing such bacteria.¹⁰ In September 1972 Speck sent a memo to the department head stating that "there would appear to be nothing sufficiently novel to warrant the filing of a patent application on this product . . ."¹¹ Instead, Speck suggested that NCSU pursue registration of a trademark and proceed to market milk containing lactobacillus acidophilus. Speck then submitted a proposal to the University's Patent Committee¹² that the North Carolina Dairy Foundation,¹³ a nonprofit organization closely tied to NCSU, pursue licensing of a trademark.¹⁴

6. See *infra* notes 31-44 and accompanying text.

7. *Speck*, 311 N.C. at 680, 319 S.E.2d at 140.

8. Plaintiff-Appellees' New Brief at 1, *Speck v. North Carolina Dairy Found.*, 311 N.C. 679, 319 S.E.2d 139 (1984).

9. Defendant-Appellants' New Brief (Board of Governors, et al.) at 2, *Speck v. North Carolina Dairy Found.*, 311 N.C. 679, 319 S.E.2d 139 (1984).

10. *Speck*, 311 N.C. at 681-82, 319 S.E.2d at 141.

11. Defendant-Appellants' New Brief (Board of Governors, et al.) at 2, *Speck v. North Carolina Dairy Found.*, 311 N.C. 679, 319 S.E.2d 139 (1984).

12. North Carolina State University (NCSU) is one of 16 constituent universities that comprise the University of North Carolina (UNC) system; this system is administered by the Board of Governors. N.C. GEN. STAT §§ 116-4, -11 (1983 & Supp. 1984). The UNC Board of Governors adopted a patent policy that provides for the establishment of a patent committee at each constituent university. Such committees are responsible for reviewing "all patent disclosures made by the faculty and staff . . . [and resolving] questions of invention ownership that may arise between the institution and its faculty . . ." University of North Carolina Patent Policy 10 (Nov. 16, 1973) (available from the University of North Carolina General Administration Office).

13. The Dairy Foundation is a nonprofit organization that promotes University research on dairy products. It has its office on the University campus and one of its officers is a dean at the University. Dr. Speck and University officials helped the Dairy Foundation negotiate a contract for commercial production of acidophilus. The Dairy Foundation's Acidophilus Committee minutes of 9 January 1973 stated that University officials "would be kept informed of all pending actions and would be given the opportunity to review all agreements and contracts prior to execution." The Patent Committee and ranking University officials consistently maintained their desire to "work through" the Dairy Foundation to make Sweet Acidophilus milk a commercially viable product.

Speck v. North Carolina Dairy Found., 64 N.C. App. 419, 421, 307 S.E.2d 785, 787 (1983), *rev'd*, 311 N.C. 679, 319 S.E.2d 139 (1984).

14. University of North Carolina Patent Policy, *supra* note 12, provides that the inventor shall

In 1975 Speck wrote to Roberts to inform him that the royalty rights of Speck and Gilliland had been overlooked in the Dairy Foundation's marketing of Sweet Acidophilus milk.¹⁵ A legal advisor to NCSU responded, asserting that Speck had no claim to any such royalties.¹⁶ Although the Chairman of the University's Patent Committee previously had recommended that the University make a one-time payment of fifteen percent of the royalties to plaintiffs to avoid "hard feelings" within the Department,¹⁷ Speck and Gilliland had received no compensation, other than salaries, for this development. In 1981 Speck and Gilliland sued NCSU and the North Carolina Dairy Foundation.¹⁸

The trial court granted summary judgment for defendants on the ground that the three-year statute of limitations for implied contracts barred any action for recovery of royalties.¹⁹ The North Carolina Court of Appeals reversed, holding that if a special confidence existed between plaintiffs and NCSU, a breach of this fiduciary relationship would result in a constructive trust that triggered the ten-year statute of limitations. The court also rejected the North Carolina Dairy Foundation's contention that the action should be barred on a waiver and abandonment theory.²⁰ Whether a fiduciary relationship existed and whether plaintiffs' actions should be barred by waiver and abandonment were deemed issues for the jury.²¹

The North Carolina Supreme Court held that to prove a constructive trust plaintiffs would have to prove a property interest in the secret process: "If the plaintiffs never had any interest in the process which they developed while employed by the University, the defendants did not stand in a fiduciary relationship

receive not less than 15% of the gross royalties from licensing a patent. As noted by the North Carolina Supreme Court: "The written Patent Policy adopted on November 16, 1973 by the defendant, The Board of Governors of the University of North Carolina, simply was silent as to trademarks and trade secrets." *Speck*, 311 N.C. at 687, 319 S.E.2d at 144. The North Carolina Court of Appeals had stated, "the Patent Committee revised the policy in 1976 to expressly cover trademarks and trade secret agreements." *Speck*, 64 N.C. App. at 421, 307 S.E.2d at 787, *rev'd*, 311 N.C. 679, 319 S.E.2d 139 (1984). The supreme court rebutted this statement: "There is no indication in the record on appeal that the defendant Board of Governors has ever authorized or approved an amendment to its written Patent Policy in any way to cover trademarks and trade secrets." *Speck*, 311 N.C. at 687, 319 S.E.2d at 144. The UNC Patent and Copyright policies as adopted by the Board of Governors in June 1983 specifically state that the issuance of a trademark in the name of the University shall not result in royalties to the individual developing the trademark. University of North Carolina Patent and Copyright Policies 14-15 (June 1983) (available from the University of North Carolina General Administration Office). The policy denounces trade secret agreements as being inconsistent with the goals of the University. *Id.* at 15.

15. *Speck*, 311 N.C. at 684, 319 S.E.2d at 142.

16. *Id.*

17. *Id.* at 684-85, 319 S.E.2d at 142-43.

18. *Id.* at 685, 319 S.E.2d at 143.

19. *Speck v. North Carolina Dairy Found.*, 64 N.C. App. 419, 422, 307 S.E.2d 785, 788 (1983), *rev'd*, 311 N.C. 679, 319 S.E.2d 139 (1984).

20. The North Carolina Dairy Foundation argued: "[A]n employee is not entitled to compensation . . . for the use of his invention, where in express terms the employee *has given* his employer the free use of his invention or by his conduct or actions has manifested his acquiescence in its use without payment therefor." Defendant-Appellee's Brief (N.C. Dairy Foundation, Inc.) at 15, *Speck v. North Carolina Dairy Found.*, 64 N.C. App. 419, 307 S.E.2d 785 (1983), *rev'd*, 311 N.C. 679, 319 S.E.2d 139 (1984).

21. *Speck*, 64 N.C. App. at 431, 307 S.E.2d at 793.

to the plaintiffs with regard to the process."²² The court, after analyzing the rights of employees to their inventions, categorized Speck and Gilliland as "persons hired to invent" who therefore had no right to inventions arising from their research.

The North Carolina Supreme Court embarked upon this path on its own initiative. Of the ten cases cited in the majority opinion, only three were cited in the parties' briefs. None of the numerous cases cited by the court of appeals was even mentioned by the supreme court. Because of the nature of the summary judgment motion, only limited facts had been presented at trial concerning Speck's status as a person hired to invent. It was therefore unusual for the supreme court to allow the case to turn on the rights of the employed inventor. If the issue had been presented properly at the trial level and before the court of appeals, not only would additional facts concerning the context and nature of Speck and Gilliland's employment have come to light, but in all likelihood the court would have been presented with a more developed discussion of the issue whether faculty members should be classified as persons hired to invent.

An employee's claim for compensation for an inventive idea usually is based upon the unjust enrichment of the employer and therefore is a question of state contract law. Although patent infringement is governed by federal statute,²³ state law governs whether the employee has impliedly or explicitly assigned an inventive idea to the employer.²⁴ Trade secret protection, however, is entirely a product of state common law.²⁵ In *Speck* the court failed to distin-

22. *Speck*, 311 N.C. at 685, 319 S.E.2d at 143.

23. The Patent Act provides for the inventor's exclusive right to market and use any product or process that is appropriately filed with the patent office. This right is limited to a maximum of 17 years. 35 U.S.C. § 154 (1982). "Whoever 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, subject to the conditions and requirements of this title." *Id.* § 101. The Patent Act also establishes a civil action for damages as the inventor's remedy against infringement. *Id.* §§ 271, 281.

Trademark and copyright infringement also are governed by federal statute. A trademark is a mark of authenticity used to distinguish a manufacturer's products from those of another. *Elgin Nat'l Watch Co. v. Illinois Watch Case Co.*, 179 U.S. 665, 673 (1901) ("The term has been in use from a very early date, and, generally speaking, means a distinctive mark of authenticity, through which the products of particular manufacturers . . . may be distinguished from those of others."); *BLACK'S LAW DICTIONARY* 1338 (5th ed. 1979). Federal statutes provide for injunctions, recovery of damages, and destruction of infringing goods when the original trademark is properly registered with the United States Patent and Trademark Office. 15 U.S.C. §§ 1051, 1116-18 (1982).

Copyright protection is extended to literary material and the like, with civil and criminal actions available for infringement. 17 U.S.C. §§ 102, 501-509 (1982).

24. *Becher v. Contoure Laboratories, Inc.*, 279 U.S. 388, 390-91 (1929); *Standard Brands, Inc. v. United States Partition & Packaging Corp.*, 199 F. Supp. 161, 176 (E.D. Wis. 1961).

25. *Engelhard Indus., Inc. v. Research Instrumental Corp.*, 324 F.2d 347, 352-53 (9th Cir.), *cert. denied*, 377 U.S. 923 (1964); *Smith v. Dravo Corp.*, 203 F.2d 369, 373 (7th Cir. 1953).

A trade secret is based upon a confidential relationship. *E.I. DuPont de Nemours Powder Co. v. Masland*, 244 U.S. 100, 102 (1917). As defined by the American Law Institute, a trade secret is any formula, pattern, device or compilation of information which is used in one's business, and which gives him an opportunity to obtain an advantage over competitors who do not know or use it An exact definition of a trade secret is not possible. Some factors to be considered in determining whether given information is one's trade secret are: (1) the extent to which the information is known outside of his business; (2) the extent to which it is known by employees and others involved in his business; (3) the extent of measures taken by him to guard the secrecy of the information; (4) the value of the information to him and

guish plaintiffs' claim for compensation for use of a trademark from a claim for use of a patent. Although the opinion refers to the improved medium for growing lactobacillus acidophilus as a "secret process" (implying similarity to both trade secrets and patents), the court applied both patent and trade secret law by analogy. The hired-to-invent doctrine is common to patent,²⁶ trade secret,²⁷ copyright,²⁸ and other similar claims.²⁹ The North Carolina Supreme Court in *Speck* properly recognized, however, as does the greater weight of authority, that an employee's right to compensation for use of an invention should be determined without regard to the patentability of the invention.³⁰

The United States Supreme Court in *Solomons v. United States*³¹ recognized that an employee hired to invent has no property rights in his own inventive ideas: "If one is employed to devise or perfect an instrument . . . , 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 . . . the property of the employer."³² In *Standard Parts Co. v. Peck*,³³ the Court held that an employee under a general employment contract who is later assigned to pursue a project of developing a particular process or machinery has no property rights to inventions related to that project or process.³⁴ This point was further clarified by the United States

his competitors; (5) the amount of effort or money expended by him in developing the information; (6) the ease or difficulty with which the information could be properly acquired or duplicated by others.

RESTATEMENT OF TORTS § 757 comment b (1939). Due to the development of the fields of unfair competition and trade regulation during the 40 years after the formulation of the first Restatement of Torts, the provisions pertaining to trade secrets were eliminated from the second Restatement. RESTATEMENT (SECOND) OF TORTS §§ 708-761 introductory note (1977). For examples of modern courts citing the first Restatement, see *Forest Laboratories, Inc. v. Pillsbury Co.*, 452 F.2d 621, 623-24 (7th Cir. 1971); *Demit of Venezuela, C.A. v. Electronic Water Sys., Inc.*, 547 F. Supp. 850, 852 (S.D. Fla. 1982), *aff'd mem.*, 740 F.2d 977 (11th Cir. 1984) (quoting *Keystone Plastics, Inc. v. C & P Plastics, Inc.*, 340 F. Supp. 55, 74 (S.D. Fla. 1972), *aff'd*, 506 F.2d 960 (5th Cir. 1975) (citing Restatement)); *International Election Sys. Corp. v. Shoup*, 452 F. Supp. 684, 705-06 (E.D. Pa. 1978), *aff'd mem.*, 595 F.2d 1212 (3d Cir. 1979).

26. See *Gill v. United States*, 160 U.S. 426, 435 (1896); *McAlee v. United States*, 150 U.S. 424, 430-31 (1893); *Solomons v. United States*, 137 U.S. 342, 346 (1890).

27. *Vigtron, Inc. v. Ferguson*, 120 N.H. 626, 629-30, 419 A.2d 1115, 1117 (1980).

28. 17 U.S.C. § 201(b) (1982).

29. *Stevens v. National Broadcasting Co.*, 270 Cal. App. 2d 886, 890, 76 Cal. Rptr. 106, 108 (1969) (alluding to doctrine in discussion of "cutting" and "editing" rights in motion pictures).

30. "Nearly all of the cases agree that relief in respect of a defendant's use or disclosure of a secret invention, discovery, etc., is to be granted, or withheld, without regard to questions of patentability." Annot., 170 A.L.R. 481 (1947) (citing cases); see also *Wilson v. Barton & Ludwig, Inc.*, 163 Ga. App. 721, 296 S.E.2d 74 (1982) (The court recognized that an employee could recover compensation for an employer's use of an unpatentable idea or product based on implied contract. The court, however, concluded the employee's idea was not sufficiently novel so as to constitute a protectable interest.); *Dewey v. American Stair Glide Corp.*, 557 S.W.2d 643 (Mo. Ct. App. 1977) (claim for compensation analyzed under shop-right doctrine despite failure to file for patent; invention referred to as "novel idea"); *Vigtron, Inc. v. Ferguson*, 120 N.H. 626, 419 A.2d 1115 (1980) (In employer's suit seeking to enjoin employee from working for competitor, court applied shop-right and hired-to-invent doctrine to unpatented device created by employee that was similar to trade secret.).

31. 137 U.S. 342 (1890).

32. *Id.* at 346.

33. 264 U.S. 52 (1924).

34. *Id.* at 58-60.

Court of Appeals for the Fourth Circuit in *Houghton v. United States*.³⁵ "The right of the employer to the invention or discovery of the employee depends, not upon the terms of the original contract of hiring, but upon the nature of the service in which the employee is engaged at the time he makes the discovery or invention"³⁶ The hired-to-invent doctrine is firmly established,³⁷ but courts have differed in the application of the doctrine. Generally, an employee is classified as one hired to invent only when there exists clear evidence of such a situation. "Courts . . . are reluctant to find a specifically-inventive employment agreement. They distinguish between employees hired to invent and those hired merely to improve the embodiment of an idea."³⁸

An employer acquires an implied license to use the employee's inventive ideas—a shop right—when the employee uses his work time or the employer's materials to reduce his idea to practice.³⁹ The rationale for granting a shop right was articulated in *United States v. Dubilier Condenser Corp.*⁴⁰

Since the servant uses his master's time, facilities and materials to attain a concrete result, the latter is in equity entitled to use that which embodies his own property and to duplicate it as often as he may find occasion to employ similar appliances in his business. But the employer in such a case has no equity to demand a conveyance of the invention, which is the original conception of the employee alone⁴¹

An employer's shop right is personal to the employer and cannot be assigned to

35. 23 F.2d 386 (4th Cir.), *cert. denied*, 277 U.S. 592 (1928).

36. *Id.* at 390.

37. See *Gill v. United States*, 160 U.S. 426, 435 (1896); *McAleer v. United States*, 150 U.S. 424, 430-31 (1893); *Solomons v. United States*, 137 U.S. 342, 346 (1890); *Houghton v. United States*, 23 F.2d 386, 388 (4th Cir.), *cert. denied*, 277 U.S. 592 (1928); *Bandag, Inc. v. Morenings*, 259 Iowa 998, 1005, 146 N.W.2d 916, 921 (1966); *National Dev. Co. v. Gray*, 316 Mass. 240, 247, 55 N.E.2d 783, 787 (1944); *Wireless Specialty Apparatus Co. v. Mica Condenser Co.*, 239 Mass. 158, 162-63, 131 N.E. 307, 308 (1921); *Steranko v. Inforex, Inc.*, 5 Mass. App. Ct. 253, 269-70, 362 N.E.2d 222, 233-34 (1977); *International Pulverizing Corp. v. Kidwell*, 7 N.J. Super. 345, 347, 71 A.2d 151, 151 (Ch. Div. 1950).

38. Note, *Patent Ownership: An Employer's Rights To His Employee's Invention*, 58 NOTRE DAME L. REV. 863, 867 (1983). For an example of a court's reluctance to classify an employee as a person hired to invent, see *Logus Mfg. Corp. v. Nelson*, 195 U.S.P.Q. (BNA) 566, 568 (E.D.N.Y. 1977) (court held that vice-president hired to direct development of microwave products not hired to invent).

39. *United States v. Dubilier Condenser Corp.*, 289 U.S. 178, 188 (1933); *Kinkade v. New York Shipbuilding Corp.*, 21 N.J. 362, 371, 122 A.2d 360, 365 (1956); *Cahill v. Regan*, 5 N.Y.2d 292, 298, 157 N.E.2d 505, 509, 184 N.Y.S.2d 348, 353-55 (1959); see also *Aero Bolt & Screw Co. v. Iaia*, 180 Cal. App. 2d 728, 736-39, 5 Cal. Rptr. 53, 58-60 (1960) (shop right not granted for invention that was created on employee's own time at his own expense); *Brown v. Ocean Drilling & Exploration Co.*, 374 A.2d 842, 847 (Del. Ch. 1977) (court recognized shop-right doctrine, but concluded doctrine was not applicable because of existence of express contract), *rev'd on other grounds*, 403 A.2d 1114 (Del. 1979); *Dewey v. American Stair Glide Corp.*, 557 S.W.2d 643, 648 (Mo. Ct. App. 1977) (shop right not granted because use of employer's materials was *de minimis*); *Annot.*, 61 A.L.R.2D 374-76 (1958) (collecting cases).

40. 289 U.S. 178 (1933). *Dubilier* is the seminal case delineating the rights of employees to inventions created during employment. The United States Supreme Court held that two employees of the United States Bureau of Standards who had conducted research in the use of radio remote control would be required to grant a shop right in a radio receiving set they had invented. *Id.* at 185-86, 193.

41. *Id.* at 188-89.

a third person,⁴² except to a successor corporation.⁴³

When the employee is under a general contract of employment—a person not hired to invent—and the invention is not developed with the use of the employer's resources, the employee retains full rights to the invention.⁴⁴ The employee retains these rights even if the invention is related to the employer's product line.⁴⁵

These classifications of employees were summarized by the United States Supreme Court in *Dubilier*.

One employed to make an invention, who succeeds, during his term of service, in accomplishing that task, is bound to assign to his employer any patent obtained. The reason is that he has only produced that which he was hired to invent On the other hand, if the employment be general, albeit it cover a field of labor and effort in the performance of which the employee conceived the invention for which he obtained a patent, the contract is not so broadly construed as to require an assignment of the patent.

. . . .

. . . [W]here a servant, during his hours of employment, working with his master's materials and appliances, conceives and perfects an invention for which he obtains a patent, he must accord his master a nonexclusive right to practice the invention.⁴⁶

The Florida Supreme Court has examined two cases involving the rights of employees to inventive ideas associated with institutional research. In *State Board of Education v. Bourne*⁴⁷ the court upheld an employee's right to his inventions. Bourne was employed as a member of the research staff of the Everglades Experiment Station on a project attempting to develop new strains of sugar cane.⁴⁸ At trial the chancellor determined that Bourne was hired as a plant pathologist and physiologist, but not as a geneticist.⁴⁹ The chancellor held that the nature of Bourne's employment did not contemplate invention of these strains; thus, Bourne was not hired to invent. The Supreme Court of Florida upheld the chancellor's determination because the employment contract "by express terms or unequivocal inference" did not show that Bourne was hired to invent.⁵⁰ Lacking such evidence, the employment was deemed to be of a general nature.⁵¹ Although Bourne was part of a project researching new plant varieties, unless his individual inventive capacities were employed specifically for the

42. *Standard Parts Co. v. Peck*, 264 U.S. 52, 54 (1924); *Hapgood v. Hewitt*, 119 U.S. 226, 233 (1886); *Francklyn v. Guilford Packing Co.*, 695 F.2d 1158, 1160-62 (9th Cir. 1983); *PPG Indus. v. Guardian Indus.*, 597 F.2d 1090, 1093-94 (6th Cir.), *cert. denied*, 444 U.S. 930 (1979).

43. *Neon Signal Devices, Inc. v. Alpha-Claude Neon Corp.*, 54 F.2d 793, 796 (W.D. Pa. 1931).

44. *Dalzell v. Dueber Watch Case Mfg. Co.*, 149 U.S. 315, 320 (1893).

45. *Mainland Indus. v. Timberland Machines & Eng'g Corp.*, 58 Or. App. 585, 589, 649 P.2d 613, 616, *appeal denied*, 293 Or. 801, 653 P.2d 999 (1982), *cert. denied*, 460 U.S. 1051 (1983).

46. *Dubilier*, 289 U.S. at 187-88.

47. 150 Fla. 323, 7 So. 2d 838 (1942).

48. *Id.* at 324, 7 So. 2d at 839.

49. *Id.* at 325, 7 So. 2d at 839.

50. *Id.* at 328, 7 So. 2d at 840.

51. *Id.*

purpose of deriving such strains he would not be considered a person hired to invent. The court recognized that an individual employed for the purpose of conducting research does not lose the rights to his inventive ideas unless he is assigned to a specific project from which the employer expects to derive a patent or trade secret.⁵²

In *State v. Neal*⁵³ the Supreme Court of Florida heard the appeal of another employee of the Experiment Station who claimed rights to his research. In *Neal* the court found additional facts supporting a finding that the employee was hired to invent. The rationale of *Bourne*, however, was left intact with only slight modification. Dr. Wayne Neal, an assistant in animal nutrition at the Experiment Station, was assigned to a project that was to examine the digestibility of dried citrus waste among livestock.⁵⁴ The project later was modified to include the development of dried citrus waste as a dairy feed.⁵⁵ Neal, as director of the project, applied for a patent for such a dairy feed in the name of the Experiment Station.⁵⁶ Upon being informed that a patent could be issued only in the name of an individual, Neal applied for the patent in his own name.⁵⁷ Neal later assigned the patent, which resulted in litigation between the State and the assignee.⁵⁸ In determining that there was an "unequivocal inference" that Neal was hired to invent, the court pointed to his responsibility for directing the project, the payment of patent expenses by the Station, and Neal's intention of obtaining the patent in the name of his employer.⁵⁹ The only modification of the *Bourne* ruling appears to be that an "unequivocal inference" that an employee was hired to invent need not arise from the express wording of the employment contract, but may arise from subsequent conditions. That *Neal* cites *Bourne* with approval supports this conclusion.⁶⁰

In *Kaplan v. Johnson*⁶¹ the United States District Court for the Northern District of Illinois was faced with the question whether the government had acquired all interests in a whole-body imaging system developed by the Chief of the Nuclear Medicine Services at a Veterans Administration hospital. Plaintiff acknowledged that during the development of this invention he had made use of his employer's facilities and equipment and the services of other employees.⁶² The court addressed the ownership of inventions created in connection with an employer's research:

52. *Id.* at 329, 7 So. 2d at 840.

53. 152 Fla. 582, 12 So. 2d 590, *cert. denied*, 320 U.S. 783 (1943).

54. *Id.* at 583-84, 12 So. 2d at 590.

55. *Id.* at 584, 12 So. 2d at 590.

56. *Id.* at 584, 12 So. 2d at 590-91.

57. *Id.* at 584, 12 So. 2d at 590.

58. *Id.* at 584, 12 So. 2d at 590-91.

59. *Id.* at 585-86, 12 So. 2d at 591.

60. *Id.* at 587, 12 So. 2d at 592 ("[T]he invention in question was the product of Dr. Neal's contract of employment and . . . under the rule announced in *State Board of Education v. Bourne*, . . . it enured to his employer.").

61. 409 F. Supp. 190 (N.D. Ill.), *rev'd sub nom.* *Kaplan v. Corcoran*, 545 F.2d 1073 (7th Cir. 1976).

62. *Id.* at 193.

The government . . . argues that the invention related to [Kaplan's] official duties. This argument is based upon [a] letter . . . indicating that plaintiff was expected to engage in research. . . . In *Dubilier*, the Court did not consider either the performance or the supervision of research to be an absolutely critical factor It is readily apparent that the Court desired to draw a distinction between employment calling for general research work and employment with the specific objective of invention. The Court held that even if an employee receives a general research assignment and ultimately invents a patented process or machine, he will not be required to assign his rights to the patent absent an express agreement or assignment to invent. The Court held this to be true even if the contract of employment covers a field of endeavor to which the invention relates.⁶³

The district court also considered the constitutionality of Executive Order No. 10096, which directs that any government employee who creates an invention during work hours or with government contribution of facilities, material, or funds must assign all rights to the government.⁶⁴ After finding the order unconstitutional, the court found in favor of plaintiff, granting only a shop right to the government.⁶⁵ The United States Court of Appeals for the Seventh Circuit reversed, holding the executive order constitutional, and granted the government full rights to the patent.⁶⁶

The ownership of literary property developed by a university professor has been considered by the California Court of Appeals. In *Williams v. Weisser*⁶⁷ a college professor was awarded damages based on property rights in lectures delivered at the University of California at Los Angeles (UCLA). Defendant Weisser had paid graduate students to audit Williams' class and prepare summaries of his lectures. These notes then were sold to students. Defendant asserted that any rights to the lectures were held by the university, which was not a party to the suit. The court noted that UCLA was incapable of prescribing Williams' "way of expressing the ideas he puts before his students."⁶⁸ This lack of control refuted defendant's contention that Williams was hired to produce these specific lectures. The court also noted that if Williams did not hold property rights to his lectures, the university could enjoin him from teaching similar courses at other schools in the future. The university, however, had not purchased Williams' every thought by virtue of the employment contract.

Despite the holdings in other jurisdictions that an employee assigned to perform general institutional research is not a person hired to invent, the North Carolina Supreme Court in *Speck* categorized faculty researchers as persons hired to invent. The strongest reasoning supporting this classification was expressed in *Houghton v. United States*.⁶⁹

63. *Id.* at 200.

64. *Id.* at 203-06.

65. *Id.* at 206.

66. *Kaplan v. Corcoran*, 545 F.2d 1073, 1077-78 (7th Cir. 1976).

67. 273 Cal. App. 2d 726, 78 Cal. Rptr. 542 (1969).

68. *Id.* at 734, 78 Cal. Rptr. at 546.

69. 23 F.2d 386 (4th Cir.), *cert. denied*, 277 U.S. 592 (1928).

Let a case be supposed of a charitable foundation, which employs chemists and physicians to study diseases, with a view of discovering a cure for them, one of whose employees, in the course of experiments conducted for it, discovers a remedy which it is seeking, and for the discovery of which the experiments are conducted, and procures a patent on it. Should such employee be allowed to withhold the patent from the foundation for his own profit, merely because the foundation does not desire to monopolize the remedy but to give the benefit of the discovery to mankind?⁷⁰

Preserving the interests of an employer that has expended resources in developing a particular inventive idea is the foundation of the hired-to-invent doctrine. "[W]hen an employee merely does what he is hired to do, his successes, as well as failures, belong to his employer."⁷¹ When an employee pursues a particular discovery on behalf of the employer, there is no reason to distinguish the products of an employee's inventive skills and the products of his mechanical skills; both are property of the employer.⁷² The *Restatement (Second) of Agency*⁷³ finds this rationale particularly appropriate when applied to persons assigned to experimental work. The *Restatement* would create an inference of ownership in the employer when a person is hired to conduct "experimental work for inventive purposes."⁷⁴ Finally, a court cannot but notice the vast amounts spent by universities on research. A court determining ownership rights to university research naturally would be inclined to find that the university has acquired all rights to the knowledge it has paid to attain.

Although the common law has recognized a shop right when the inventive idea is reduced to practice with the employer's resources or during hours of employment, the North Carolina Supreme Court in *Speck* did not use these factors to determine the existence of a shop right. Instead, these factors were cited as support for the determination whether the employee was hired to invent. After noting that the secret process was developed during hours of employment and with university resources, the court stated: "Under these facts, the secret process developed through research of the plaintiffs belonged to the University absent a written contract by the University to assign."⁷⁵ Although other courts have shown reluctance in classifying persons as hired to invent because of the risk of implying too much within the employment contract,⁷⁶ the North Carolina Supreme Court has categorically found that university faculty conducting research are persons hired to invent.

In *Speck*, the court also noted the nature of NCSU as an institution pro-

70. *Id.* at 390.

71. *Id.*

72. *Gill v. United States*, 160 U.S. 426, 436 (1896).

73. *RESTATEMENT (SECOND) OF AGENCY* § 397 (1957).

74. *Id.* comment a.

75. *Speck*, 311 N.C. at 686, 319 S.E.2d at 143.

76. See *supra* note 38 and accompanying text. This is particularly true in the area of trade secrets. Legal scholars have emphasized that courts should deny protection of a trade secret if the job skills of the employee are such that "he will have difficulty in obtaining a new position if he cannot take [the trade secret] with him." Note, *Competitive Torts*, 77 HARV. L. REV. 888, 949 (1964).

moting research for the common good.⁷⁷ The court's holding in favor of NCSU, however, does not necessarily promote the public good. The United States Constitution created the patent system upon the theory that placing limited exclusive rights in the inventor would create incentives to pursue inventive ideas and enhance the development of technology.⁷⁸ Courts have refrained from frustrating this policy. As the Supreme Court noted in *Dubilier*, "[T]he courts are incompetent to answer the difficult question whether the patentee is to be . . . compelled to dedicate his invention to the public. . . . [A]ny such declaration of policy must come from Congress"⁷⁹

Academic research is fundamentally different from research conducted by private industry. Although private industry pursues research and development to attain practical applications capable of generating revenue, universities pursue research to attain intellectual enlightenment. For this reason, university research is more adequately characterized as "general research" than as "employment with the specific objective of invention." Teaching is the primary responsibility of professors; their research is conducted to enhance the university's position as an institution designed to convey knowledge. Professors, therefore, are allowed to research whatever problems their minds move them to pursue. One avenue of research may be abandoned at will and another begun, without reflection upon economic consequences and without any consultation with university officials. The United States Supreme Court consistently has recognized the necessity of pursuing scholarship in a free and open environment.

The essentiality of freedom in the community of American universities is almost self-evident. . . . To impose any strait jacket upon the intellectual leaders in our colleges and universities would imperil the future of our Nation. No field of education is so thoroughly comprehended by man that new discoveries cannot yet be made. . . . Teachers and students must always remain free to inquire, to study and to evaluate, to gain new maturity and understanding; otherwise our civilization will stagnate and die.⁸⁰

In contrast to the free pursuit of knowledge stands the *Speck* court's assumption that university professors are hired to pursue specific research from which they are expected to produce patentable inventions. Although university faculty may be encouraged to research or publish, the goal of the university is not to achieve marketable inventions. "[U]niversity personnel, as compared with those in a commercial organization, are employed and promoted on a basis which gives no recognition to the [economic] value of the inventions they make."⁸¹ One court has held that when an employer is disinterested in whether an employee produces an invention, that employee is not a person hired to invent.⁸²

77. *Speck*, 311 N.C. at 688, 319 S.E.2d at 145.

78. U.S. CONST. art. I, § 8, cl. 8.

79. *Dubilier*, 289 U.S. at 208-09.

80. *Sweezy v. New Hampshire*, 354 U.S. 234, 250 (1957).

81. Caruso, UNIVERSITY PATENT POLICIES, 3 C. Couns. 64, 65-66 (1968).

82. *Bowers v. Woodman*, 59 F.2d 797 (D. Mass. 1932). In *Bowers*, the court held that an

The common-law rights of ownership with regard to employed inventors have developed from common expectations concerning employment. The common expectations concerning university employment are not the same as the expectations concerning employees within private industry. University faculty are not hired to produce commercially successful inventions; they are hired as teachers and educators. Unlike the typical hired-to-invent situation in which the acorn of an inventive idea is planted by the employer, patentable inventions arising from university research are results of the individual work of faculty who chose to pursue such research. That professors are encouraged to pursue knowledge by means of research should not be a basis for claiming that a professor who engages in such research is hired to invent.

It is regrettable that the North Carolina Supreme Court classified university employees as persons hired to invent without the issue being properly before the court. Because plaintiffs used university resources, NCSU should have been afforded a shop right. Speck and Gilliland, however, should not have been deprived of all interests in the process they developed. If NCSU had considered Speck's work to be of such importance in improving public health as to require full ownership by the university, it should have taken measures to establish that interest. The university should have the responsibility and obligation to delineate, by means of the employment contract, the rights of employees to patents derived from educational research.

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employee's assignment to study operations at various plants and to suggest improvements did not anticipate that the employee would be required to invent. "If he had never invented anything, he could not have been charged with a failure in the performance of his duties . . . [T]here is, in this case, no contract to invent." *Id.* at 802. This same disinterest characterizes universities' attitudes toward faculty inventions. "[T]he research of university faculty members is not directed by others into channels where its purpose is a solution of specific technological problems. Rather, it is pure or basic research which is undirected in the sense that areas of natural phenomena are explored primarily for the purpose of adding to the store of knowledge." Caruso, *supra* note 81, at 64.