

# Faculty And Graduate Student Generated Inventions: Is University Ownership A Legal Certainty?

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[I. Introduction](#)

[II. Common Law](#)

[III. Pre-Employment Assignments & Employee Handbooks](#)

[IV. State & Federal Statutory Provisions](#)

[V. Conclusion](#)

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## I. Introduction

1. As federal and state funding for academic institutions becomes more difficult to procure, colleges and universities have sought new ways to generate revenue. A source of potential income is money generated from licensing agreements or assignments of faculty and graduate student generated inventions. In just over a decade royalty income from faculty generated inventions increased nearly 40-fold, from \$7 million to over \$260 million. [\[2\]](#) The latest figures indicate that during the fiscal year 1993 the top ten institutions in licensing royalties received a total of \$170 million. [\[3\]](#) While this number is small compared to the total amount of revenue required to run a major college or university, it is not insignificant, especially considering that many universities have only recently begun to institute policies that allow for patenting and transfer of technology derived from faculty research. The economic incentive, coupled with any increase in prestige that accrues to a university that successfully commercializes a product derived from one of its own, provides a significant inducement to patent and license inventions generated by faculty research.
2. In their haste to commercialize the fruits of academic labor, many universities have simply assumed that any invention generated by its employees, especially faculty and graduate students, is property of the university. The following report attempts to outline some of the legal aspects of ownership with respect to faculty generated inventions. There are three areas of the law which deal

with ownership issues in this context: common law ownership, pre-employment assignment agreements and federal and state legislative initiatives.

## II. Common Law

3. In the absence of a contractual agreement for the assignment of intellectual property rights from the employee to the employer, common law principles will rule. The seminal case delineating the respective rights and obligations of employers and employees in this context is *United States v. Dubilier Condenser Corporation*.<sup>[4]</sup> This case embodies legal principles that were developed from 90 years of Supreme Court cases dealing with the respective patent rights of employer and employee.<sup>[5]</sup>
4. In *Dubilier*, two employees of the United States Bureau of Standards, Francis W. Dunmore and Percival D. Lowell, were engaged in research and testing in the radio section of the Bureau. During their tenure they developed inventions, on which three patents ultimately issued, concerning the use of alternating current in broadcast reception. "[These] project[s] were not involved in or suggested by the problems with which the radio section was then dealing and was not assigned by any superior as a task to be solved by either of these employees."<sup>[6]</sup> At all times, Dunmore and Lowell apprised their superiors of their activities and after such notification they were permitted to "pursue their work in the laboratory and to perfect the devices embodying their inventions."<sup>[7]</sup> The United States government believed it was the rightful owner of the patents and sued the two employees to assign the patent rights to the United States. It was well-settled that one who was specifically employed to produce a particular invention was, upon completion of the task, bound to assign the patent rights to the employer.<sup>[8]</sup> The government argued that although Dunmore and Lowell were not specifically assigned the tasks for which the inventions were created they were still obliged to assign the patent right of their inventions to their employer because of their general employment to conduct research. The U.S. opined:

Their duties were not confined to the solution of specifically designated problems, but they were expected and did follow 'leads' uncovered during the progress of their work. The inventions in questions represented a natural and progressive development of work which they were pursuing under the direction of their superiors, and which they systematically described in their official reports.<sup>[9]</sup>

The government attempted to argue that research and invention are indistinguishable, and since the nature of the inventive process is unpredictable it is virtually impossible to assign a specific inventive task.<sup>[10]</sup>

5. The court did not find research and invention to be equivalent. Rather it found research to be what might commonly be referred to as basic research, the elucidation of natural laws, and invention to be the application of such laws in the production of a beneficial product, device or process.<sup>[11]</sup>

Thus, one hired to conduct research is not necessarily hired to invent. Additionally, the court followed previous case law by stating:

...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 assignment of the patent.[\[12\]](#)

Under a contract for general employment no assignment from employee-inventor to employer absent an express assignment is required.[\[13\]](#) The court did not leave the employer without some rights in an employee's invention. If an employee conceives and perfects an invention during the hours of his employment with the use of his employers' tools, materials or resources the employer receives a shop-right in this invention.[\[14\]](#) A shop-right is a non-exclusive right to practice the invention which can not be licensed or assigned. The right extends for the duration of the patent irrespective of the inventors' employment status.

6. On its particular facts the court awarded the patent rights in the inventions to Dunmore and Lowell and the United States receive a shop-right in the inventions since such work was conducted during the employees' hours of employment and with the employer's resources. When decided, this case had applicability for both federal government employees and those employed by private companies, but federal statute now determines the rights of federal employees.[\[15\]](#)
7. Thus, unless there is a pre-employment assignment agreement or state statute, the disposition of faculty and student ownership of their inventions is controlled by common law. Under the common law there are three different employment scenarios:
  - (1) specific inventive employment, which is employment for the express purpose of creating employer-specified inventions;
  - (2) general inventive employment, which is typically referred to today as 'research', 'design' or 'development' employment and
  - (3) general employment.[\[16\]](#)

Scenario 1 requires that the employee assign all rights in the invention to the employer. Scenario 2 enables the employee to retain patent rights and in most situations the employer will receive a non-exclusive shop-right in the invention. Finally, general employment, scenario 3, presumes no inventive responsibilities of the employee and any invention which she creates is her property.

8. With respect to common law the ownership of faculty or graduate student generated inventions turns on the questions of into which category of employment do these employees fall. Graduate students can be placed into at least three classes: teaching assistants (TA), research assistants (RA) and those receiving extra-university support such as fellowships or scholarships. Students receiving federal stipends are most likely covered under federal statute. Teaching assistants are usually half-time appointments and their primary responsibility is assisting in the teaching of

university courses. Although TAs often engage in research during their employ it is unlikely that one would consider they are hired to conduct research, let alone hired to invent. Research assistants, also half-time employees, conduct research primarily under the advisement of a professor most often funded by state, federal or private non-profit organization research money and less frequently by private companies. A difficult question is whether RAs are employees of the university or of the investigator for which they work. If the RA is an employee of the professor can the school be a third party beneficiary of any agreement between the professor-employer and the RA-employee?

9. In *Simmons v. California Institute of Technology*, Edward E. Simmons sued the university to have two agreements he executed while employed by the university rescinded or declared void and to recover damages for benefits conferred to the university based on these two agreements.[\[17\]](#) Mr. Simmons receive a Master's Degree from California Institute of Technology in 1936, and continued after graduation to do part-time work. Simmons was consulted by faculty members concerning the feasibility of developing a mechanism which could be used in a method for measuring the force of time relations which occur to metals during impact loading.[\[18\]](#) Simmons developed a strain sensitive element that could be used to study metal stress. During the time Simmons conceived the idea he was not employed nor did he receive any compensation for services rendered to the research project.[\[19\]](#) Eventually Simmons received a fellowship and was employed by the Institute to work with Impact Research, a commercially sponsored project for which Simmons' strain sensitive element would have practical import. In 1939, Baldwin Locomotive Works expressed interest in Simmons' invention and Dr. Donald S. Clark, the director of the Impact Research project, suggested to Simmons that any royalties generated from Baldwin's use of the invention should go to Impact Research so the project could continue. Simmons agreed but stipulated that all royalties received would go to Impact Research and not to the California Institute of Technology generally and that any licensing agreement would have to be approved by the California Institute of Technology. Simmons' motivation for the royalty arrangement was the continuation of the Impact Project which apparently received little funding.[\[20\]](#) In the spring of 1941, Simmons became aware of the fact that not royalty money was being channeled to Impact Research, but in fact the Institute was retaining all royalties. Shortly after Simmons' inquiry he was informed that his fellowship would not be renewed because Impact Research funds were running low.
10. Simmons filed suit against the University and the court ruled in favor of Simmons. Both agreements were nullified and Simmons received the royalties paid by Baldwin Locomotive Works for the duration of the licensing agreement. Although the student/fellow prevailed in this case, the decision was based on contract (lack of consideration) and misinterpretation, not on employment status. Thus, it remains unclear whether a graduate student would be considered an employee "hired to invent."
11. With respect to most faculty, few would argue that they are not hired to conduct at least some research. While many institutions require their faculty to spend some percentage of time preparing

and teaching either graduate or undergraduate courses as well as performing certain administrative tasks such as serving on committees, the focus of many faculty members, especially in the sciences, is on research. It is unclear whether research and invention are equivalent. There are many academicians who have had successful careers, but have produced no patents nor any licensable technology. Faculty are hired to perform research, and although the departments which hire them may have a keen interest in their particular area of research, it is certainly a stretch to contend that faculty are hired specifically to invent. While there is little case law derived from common law on the matter of faculty ownership two particular cases are of interest.

12. The first case concerns the respective rights of the U.S. Government and Dr. Ervin Kaplan.[\[21\]](#) Dr. Kaplan was employed by the United States Veterans Administration primarily to serve as administrator for the Nuclear Medicine Service at a VA hospital in Hines, Illinois. During his tenure in this capacity Dr. Kaplan developed "a system for whole body imaging and count profiling with a scintillation camera."[\[22\]](#) At the trial court the U.S. argued in much the same fashion as in *Dubilier* that because research was part of his job, Kaplan was hired to invent and furthermore the hospital had contributed resources for Kaplan's venture, thus Kaplan was bound to assign his invention to the U.S.[\[23\]](#) The court determined that the principles in *Dubilier* were controlling and determined that contribution of resources to the perfection of the invention and/or employment calling for general research work were insufficient basis for expropriation of important property rights.[\[24\]](#) The lower court also determined that Executive Order 10096, which at this time determined the intellectual property rights of federally employed workers, was unconstitutional because it departed from the spirit of the common law as defined in *Dubilier*. The 7th circuit overruled the lower court and determined that Executive Order 10096 was constitutional and that the Dr. Kaplan's invention Dr. Kaplan was covered by this provision. The court refused to comment on the difference, if any, between hired for research and hired to invent and ruled that the patent be assigned to the U.S. government.[\[25\]](#)
  
13. In *Speck v. North Carolina Dairy Foundation* the issue of faculty ownership of inventions was directly addressed.[\[26\]](#) Dr. Marvin Speck and Dr. Stanley Gilliland were employed as professors at the North Carolina State University, where they developed a method for improving the taste of milk containing the microorganism *lactobacillus acidophilus*.[\[27\]](#) The professors disclosed the process to the department chairman and subsequently Speck suggested that although the process was not patentable, the university should seek trademark registration and market milk containing the bacteria. Ultimately, trademark protection and licensing was pursued by the North Carolina Dairy Foundation, a non-profit organization that promotes university research on dairy products.[\[28\]](#) The Foundation procured Miles Laboratories to produce and G.P. Gunlick and Company to market the milk and by 1981 over \$500,000 in royalties had been amassed.[\[29\]](#) In 1975, Speck advised the University that he was entitled to a percentage of the royalties.[\[30\]](#) Legal counsel for the university suggested that because the discovery was unpatentable, it was not subject to the university patent policy and thus, Speck probably was the owner of it. Nonetheless, the school rejected Speck's petition for royalties and Speck instituted suit in 1981 to recover royalties. The trial court determined that the school had breached its fiduciary duty to Speck



because Speck reasonably assumed that although the discovery was unpatentable, the patent policy of the University would apply.[\[31\]](#) The trial court never reached the issue of who owned the discovery and on appeal the North Carolina Supreme Court decided to put its own spin on *Dubilier* in determining the ownership issue.

14. Initially the court misstated the *Dubilier* principle by twice saying that the employer owns the invention absent an express assignment by the employer to the employee.[\[32\]](#) But *Dubilier*, in quoting *Dazell v. Dueber Watch Case Mfg. Co.*, in fact states the reverse proposition:

But a manufacturing corporation, which has employed a skilled workman, for a stated compensation, to take charge of its works, and to devote his time and services to devising and making improvements in articles there manufactured, is not entitled to a conveyance of patent so obtained for inventions made by him while so employed, in the absence of express agreement to that effect.

More damaging, at least in the context of the question of "hired for research" versus "hired to invent" is the court's decision that Dr. Speck was hired to specifically invent the new acidophilus process:

Regrettably, the plaintiffs in the instant case were not employed pursuant to a written contract detailing their duties as professors and researchers. It is clear, however, that the plaintiffs were permitted and encouraged by their employer the University to conduct the precise research which led to the discovery and perfection of the secret process. It is equally clear that the plaintiffs performed this work on their employer's time and with their employer's research resources and they were paid a salary to do so.[\[33\]](#)

It is also ironic that the court premised much of its decision on *Houghton v. United States*, a case that is narrowly interpreted and pre-dates *Dubilier*.[\[34\]](#)

15. Although there are few situations remaining where common law will be applicable, I believe that these cases are relevant because they were decided upon principles of equity. The reasoning appears sound because it attempts to apportion rights based on the relevant contribution made by each party. Thus, the decision to award the patent rights to companies which hire employees to specifically solve a particular problem upon solution thereof rewards the company because it provides the motivation and the means for making the invention. Inventions made outside the sphere of company influence and without company resources are reserved to the inventor, since a company's contribution is negligible. Finally, the court saw fit to reward both employer (receipt of shop-right) and employee (receipt of patent rights) in cases where both contribute to the final development of the invention. For many institutions of higher learning, a shop-right is of little value since universities and colleges are normally not in the business of manufacturing and selling commodities and because the shop-right is a non-transferable non-exclusive right to use make or

sell it is of little economic value. The only value may be in that the invention could be used internally by the university. The underlying inability to determine whether "hired for research" is equivalent to "hired to invent" led universities and businesses alike to promulgate the use of pre-employment assignment of intellectual property rights that delineate the respective rights of employers and employees.

### **III. Pre-employment Assignments and Employee Handbooks**

16. Most universities and colleges have an intellectual property policy that is often included in the faculty/staff handbook. In some states, statutes have been promulgated that require institutes to have definitive stated policies.[\[35\]](#) These policies are as varied as the schools which produce them, but can be grouped into three categories: 1) resource-provider, 2) maximalist and 3) supra-maximalist.[\[36\]](#) Pat Chew defines these categories in the following way. Resource-provider are institutions that base ownership of faculty generated inventions upon use of university resource to develop the invention.[\[37\]](#) Maximalist institutions are those that claim ownership of inventions that were derived using university resource or are developed in the course of employment.[\[38\]](#) Supra-maximalist universities claim ownership of "any invention that the faculty develops, whether or not faculty use university resources or develop the invention during the course of employment."[\[39\]](#) Finally, there is a group intermediate between maximalist and supra-maximalist. Exemplary of this category are the University of Texas and University of Illinois which "claim ownership of inventions arising from faculty's course of employment, use of university resource and research funded by a non-university sponsor."[\[40\]](#) There are, however some schools whose policy is to permit allow faculty to retain rights in their inventions.[\[41\]](#)
17. Irrespective of the type of policy a particular institution chooses to pursue it will usually require a new hire to sign a Patent Disclosure and Assignment Agreement as a condition of employment. Alternatively, a new employee will sign an agreement by which she will be bound to the policies and rules stated in the Faculty Handbook. A third mechanism utilizes the grant procedure as a way of securing patent rights which might be generated by faculty while using resources obtained in the grant. At the University of Houston faculty are required to sign a form each time an application for grant money is made through the Office Of Sponsored Programs which includes the statement:

I agree to be bound by the terms and conditions of the outside grant or contract which supports this proposed activity and, in consideration of the information and facilities made available to me by the university or the outside sponsor, to assign copyright (where appropriate) and patent rights to the University of Houston in accordance with the terms and conditions stated in the Faculty Handbook."[\[42\]](#)
18. It is not clear whether graduate students are contemplated under this scheme of assignment of patent rights. At some universities all employees sign such an agreement and as such graduates students may suffer the same rights and obligations as others under the agreement. Student

handbooks are quite different from faculty handbooks and intellectual property policies concerning employed students is even less well-defined than those for faculty. An informal poll of graduate students at the University of Houston indicated that the policy of assignment of patent right to the school was applied unevenly - some students had signed an agreement while others had not. As alluded to previously, there may be rights and obligations between professor and graduate student if they in fact have an employer-employee relationship. This may affect faculty, graduate student and university rights concerning intellectual property.

19. Although patent is embodied in federal law the pre-employment assignments and employee handbooks are the subject of contract law and thus a determination of whether such assignments are valid and enforceable are the domain of state law.[\[43\]](#) As delineated in *Dubilier*: "A patent is property and title to it can pass only by assignment. If not yet issued an agreement to assign when issued, if valid as a contract, will be specifically enforced."[\[44\]](#) Thus, the question of enforceability of assignments turns on whether the contract is valid. Contracts of pre-employment assignments, or clauses therein if the state permits blue lining, can be invalidated for a variety of reasons.[\[45\]](#)
20. In the faculty/graduate student assignment context there are three circumstances for invalidation of particular importance where: 1) the contract is oral or implied, 2) no consideration has been given for the assignment and 3) the contract is one of adhesion.
21. The first circumstance includes a situation in which there is no pre-employment assignment but rather the rights and responsibilities of faculty and university are dictated by a Faculty Handbook. In *University Patents v. Kligman*, university trustees and University Patents, Inc. (UPI), an organization designed to patent and market university inventions, brought action against Dr. Albert M. Kligman, tenured professor, and patent licensee to recover royalties owed for anti-aging composition invented by Kligman and marketed by the licensee.[\[46\]](#) Dr. Kligman was a professor of dermatology and also the inventor of Retin-A, and enormously successful vitamin A based product assigned to Johnson and Johnson (J & J), for which the University had received millions of dollars in royalties.[\[47\]](#) Dr. Kligman had developed this product on his own time and with his own money and retained rights to the patent until it was assigned to J & J. At no time did the University own the patent rights and the University executed an agreement that made clear the Dr. Kligman was the sole owner of the invention. The millions made by the University were a result of Dr. Kligman's donation of all royalty proceeds to the Dermatology Department at the University of Pennsylvania.
22. Dr. Kligman continued to work with vitamin A derivatives and developed a new compound effective in reducing photo-aging. Ultimately, Dr. Kligman filed a patent in his own name and before the patent issued licensed the compound to J & J. The University was unaware of this new venture and had, prior to the invention, procured a company "to provide licensing services for the University in exchange for a percentage of the royalties to which the University became entitled because of rights it might acquire under its Patent Policy."[\[48\]](#) In 1988, UPI became aware of the



new invention, notified the university and contacted Dr. Kligman in hopes of having him provide evidence that he discovered this new invention independent of the University. After repeated attempts to discuss this matter with Dr. Kligman, UPI brought suit.

23. Although the court denied the defendants motion for summary judgment, it made several salient points about assignments in a university/faculty context. Initially the court held that an assignment of a patent must be in writing, and the writing must show a clear and unmistakable intent to transfer ownership.[\[49\]](#) Express contracts to transfer patent rights which are clear and unambiguous will be enforced, but the court found that there was no express written contract to assign.[\[50\]](#) Although the Patent Policy provided that "all personnel who may be involved in research execute a Patent Agreement," Dr. Kligman had never done so or been asked to do so.[\[51\]](#) The university also had an assignment clause incorporated into its patent Disclosure Forms, but Dr. Kligman never filled out a disclosure and it was unclear whether any prior inventors had filled out such a form. UPI contended that Dr. Kligman had impliedly assigned the patent rights based on the Faculty Handbook, university policy and the parties' course of dealing. Although the court acknowledged that it is reluctant to find an assignment of right based on implied contract, it would not rule as a "matter of law that employer handbooks and policies cannot constitute implied contract against employees."[\[52\]](#) Two additional factors weighed against the Handbook as creating an assignment: 1) the handbook was not communicated as a definite offer of employment and 2) the Handbook states that it is a guide rather than a legal document.[\[53\]](#) In a footnote the court implies that the use of handbooks for assignment of patent rights is probably inadvisable.[\[54\]](#) Although not definitive, because the ownership issue was never resolved it is clear that it is important that universities scrupulously follow whatever guidelines they promulgate. If a pre-employment assignment is a condition of employment then all must sign it or make some other written arrangements. If a particular event is required by the handbook to transpire by a particular time then it should happen in that time. If the university wants to construe the assignments and handbooks and policies as contracts, then the university's obligations as well as those of the inventor must be fulfilled.[\[55\]](#)
24. The second scenario, lack of consideration in an employment contract applies in *Kligman* as well. Although it is well-settled that employment is adequate consideration for an assignment agreement, continued employment or past employment are probably inadequate. In *Kligman*, it is clear that Dr. Kligman was a tenured professor and the Patent Policy, or his agreement thereto, antedates his employment. The court opined:

Even courts which have taken a liberal view of the applicability of handbook provisions have held that a handbook issued after the existence of an express or implied contract of employment is not binding in the absence of additional consideration.[\[56\]](#)

In *Simmons*, previously discussed, the court held that "such [past] employment is inadequate consideration to support a contract, and the promises of Simmons to grant licenses to use his

invention only upon approval by the Institute and to pay royalties to the Institute were made without any counter-promise by the Institute." [57] Therefore, the change of a substantive provision of an existing patent policy or the institution of an original policy will most likely be held invalid with respect to those employed before its institution without some additional consideration.

25. Finally, one must consider whether faculty are free to bargain with the university-employer concerning assignment of intellectual property rights. "A basic policy of contract law is that persons should be able to structure consensual transactions as they see fit and obtain the benefit of any bargains reached." [58] But as one commentator noted, unless you're a Nobel laureate your chances of negotiating patents rights is poor. Considering the difficulty in obtaining an academic position there is likely to be little parity in bargaining power. Consequently, the potential faculty member is left to accept the assignment of intellectual property rights to his prospective university or look for work elsewhere. Contracts in which the parties are placed in positions of unequal bargaining power, where one party has a superior position have been termed adhesion contracts. [59] But to simply characterize a contract as an adhesion contract does not invalidate the contract.
26. In *Cubic Corp. v. Marty*, an employer brought an action against a former employee for breach of employment contract. [60] The employee signed a pre-employment invention and secrecy agreement that permitted the employer to retain all rights and interest in any ideas, processes, improvements, developments and discoveries coming within the scope of the Company's business. Marty, the employee, thereafter developed an electronic warfare simulator which he disclosed to his employers. Subsequent to his disclosure Marty filed a patent application without his employer's knowledge and the patent issued less than two years later. The employer sued to recover the patent rights to the invention based on the assignment agreement. Marty contended, *inter alia*, that the assignment was an unconscionable adhesion contract and thus unenforceable. The California 4th Judicial District observed that "a contract of adhesion can be fully enforced unless some other factor exist, such as an oppressive or 'unconscionable' provision. [61] The court did not specifically define these terms and one is left to imagine the fact pattern which would give rise to oppressive or unconscionable provisions. It is noteworthy in this case that *Cubic* maintained that it was necessary to employ such assignments since it was required of all defense contractors to give title or license to the government all patents conceived or reduced to practice during the performance of the government contract. [62] It is likely that only an extremely oppressive situation will give rise to rescission of pre-employment assignments based on the existence of an adhesion contract.

#### **IV. State and Federal Statutory Provisions**

27. In response to employers overreaching and universities' supra-maximalist approach to assignment of intellectual property eight states, three within the past three years have enacted statutes which limit the extent to which employers can claim interest in employee inventions. California, Delaware, Illinois, Kansas, Minnesota, North Carolina, Utah and Washington currently have

statutes that limit pre-employment assignment to inventions utilizing employer resources (equipment, supplies or facilities) or which "relate" to the business of the employer.[\[63\]](#) All eight provisions, while mitigating the harshness of an "all encompassing" assignment, severely limit the employee's rights hammered out in *Dubilier*. These statutes simply take the easy case where the employer contributes nothing and allows the inventor to retain his rights irrespective of an assignment agreement. By allowing the employer to retain rights in inventions that "relate" to the employer's business or to inventions which utilize some percentage of the employer's resources these statutes have eliminated any scenario under which the employee retains patent rights and the employer receives a shop-right. With respect to faculty/graduate student invention what invention could be crafted that would not "relate" to the employer's business? What scientific invention could be made that would not require the use of one's "own" laboratory? Although I believe these statutes were crafted with the best intention, employee ownership remains only when it is crystal clear that the employer had nothing at all to do with the inventive process.

28. Other states having taken an approach which codifies whatever intellectual property policy a university might chose to follow.

All employees of state supported institutions of higher education including the Virginia Community College System, as a condition of employment shall be bound by the patent and copyright policies of the institution employing them. Anyone using facilities of a state-supported institution who has not otherwise entered into a written contract with the institution concerning such use shall be subject to the institution's patent and copyright policies where the institution's Board of Visitors, the State Board for Community Colleges or their designees determine that such use constitutes a significant use of the institution's facilities.[\[64\]](#)

In fairness it must be stated that university ownership of faculty/graduate student invention does not prohibit the inventor from sharing in the proceeds from licensing agreements or assignments. A survey of the top ten U.S. universities in generating royalty revenue shows that in no case does a patent policy allow for less than 20% of the revenue to go to the inventor for personal use.[\[65\]](#) Some of the more creative policies allow for distribution of moneys to the departments for which the employee works and to a particular professor inventor's laboratory. Many of the policies have escalation clauses that decrease the take of the inventor as the royalty amount becomes greater.

29. Promulgation of federal statues has also influenced the apportionment of patent rights. Most notably the Patent and Trademark Act of 1980, the Bayh-Dole Act, has served to standardize the way in which inventions sponsored by federal money are treated.[\[66\]](#)

Bayh-Dole is intended to work in the following way: the government agency sponsors research conducted by the faculty with the university acting as the contractor. If faculty develop an invention arising from the research, they follow the

disclosure procedures outlined under the law. The university can then elect title to the invention and work with the faculty members to apply for a patent and to market the invention. The government receives a nonexclusive, nontransferable, irrevocable, paid-up license (shop-right) to the invention.[\[67\]](#)

But under this scenario the university need not retain the rights to the invention. If the university declines to seek patent rights the government may claim title. [\[68\]](#) If the government does not claim title to the invention the inventor can petition for ownership. [\[69\]](#) The primary purpose of the academic institution as contractor is to secure the government's rights in the invention. The law does not require that the university own the invention, simply that the university work with the faculty to assure that the government's interest is protected. [\[70\]](#) Just as the university must convey shop rights to the government a faculty member owning an invention could do the same. "Even if the university is required to be the owner, the law contains no express prohibition against the university assigning its ownership rights to the inventor faculty member as it might to any other third party assignee."[\[71\]](#)

30. Interestingly, the statute provides no private right of action for disposition of patent rights made with federal assistance. That is, it appears that only the U.S. government can sue contractors or inventors who have used federal funding for the invention under 35 U.S. C. § 202 to retain rights it has preserved under this section. In *Gen-Probe Inc. v. Center for Neurological Study*, the United States District Court for Southern California determined that private corporations have no standing under 35 U.S.C. § 202 to sue an inventor employed by the corporation for refusing to assign patent rights to the corporation from inventions discovered utilizing federal funding.[\[72\]](#) The court also determined that an inventor is not bound by the agreement between the corporation and the U.S. government in the course of obtaining federal funding.[\[73\]](#) A corporation's employee/inventor is not bound by the government-corporation agreement simply because he is employed by the corporation that receives federal funding. To be bound by such an agreement he must acquiesce to the arrangement as evidenced by his signed statement of his intent to be bound.[\[74\]](#)
31. The lack of a private right of action applies to both contractor and inventor. In *Platzer v. Sloan-Kettering Institute*, three inventors employed by Sloan-Kettering at the time of invention sued the Institute to recover royalties derived from their invention.[\[75\]](#) The court ruled that the inventors lacked standing under 35 U.S.C. § 202 to sue their employers.[\[76\]](#) Additionally, the court determined that although 35 U.S.C. § 202(c)(7)(B) provides for the sharing of royalties received by the contractor with the inventors, there is no express provision for determining the amount to be disbursed.[\[77\]](#) Thus, it appears that the court interprets this statute to provide redress only for the U.S. government. Determinations of patent rights as between contractor and inventor will be settled by contractual obligations under the relevant state law. [back](#)

## V. Conclusion

32. Although it appears to this author that the common law decisions concerning ownership of employee generated inventions culminating in *Dubilier* is the most equitable solution to the ownership problem, the truth is that pre-employment assignments, university policy, and state and federal statute are controlling. There is little doubt that a pre-employment assignment of intellectual property rights from faculty to university will be enforceable absent unconscionable or coercive acts by the university. Overreaching, assignment of any and all inventions, is likely permissible in the absence of a state statute to the contrary. Federal statute likely does not preclude faculty ownership of inventions derived from federal funding, but in the absence of case law there is no guidance as to how the law might be interpreted.
33. There are many commentaries favoring faculty ownership of inventions<sup>[78]</sup> and I must admit after going through the university patent process I too believe this is where the inquiry should start. I favor a presumption of faculty ownership with the option to negotiate royalty disbursement based upon university involvement. If the inventor believes that he can contract the patent and marketing services and pay for them out of pocket so be it. If, on the other hand, he has neither the inclination nor the resources to pursue patenting and would welcome university participation then the university could, if so inclined, contract their services for a portion of royalties received - the more work the higher the percentage. One might posit that the university would have option only on those inventions which the inventor through were relatively worthless. I can only say that in my limited exposure to this system and to venture-capitalists, no one knows which inventions will succeed in the marketplace. [back](#)
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## Footnotes

[1] Associate at McDonnell Boehnen Hulbert & Berghoff, Ltd. 300 South Wacker Drive, Chicago, IL 60606.

[2] Mark R. Wisner, *Proposed Changes to the Laws Governing Ownership of Inventions Made with Federal Funding*, 2 Tex. Intell. Prop. L.J. 193, 195 (1994). A survey conducted by the Association of University Technology Managers (AUTM) in which 130 U.S. and Canadian schools responded determined that in the fiscal year 1992 academic institutions received 7604 invention disclosures, filed 3251 patent applications, were granted 1731 patent and received \$260 million in gross royalties. In 1981 only \$7 million was received in royalties. *Id.* Nearly one-fourth of all patents issued to academic institutions in the U.S. since 1969 were awarded in 1990-1991. National Science Board, *Science & Engineering Indicators* 107 (1993).

[3] Lee Katterman, *University Technology Offices Focus Effort on Overcoming Academic Cultural Barriers*, June 12, 1995, *The Scientist* at 1, 10-11. The top 10 List: 1) University of California system, \$45,440,002 in royalties, 2) Stanford University, \$31,200,000, 3) Columbia University



\$21,088,217, 4) University of Wisconsin, Madison, \$15,882,400, 5) University of Washington, \$14,755,000, 6) Michigan State University, \$14,150,029, 7) Iowa State University, \$11,600,000, 8) Massachusetts Institute of Technology, \$5,808,000, 9) University of Florida, \$5,666,412 and 10) Harvard University, \$5,430,000. Based on the 1992 FY number for the 130 universities in the AUTM study these 10 schools received approximately 65% of the total royalties received. *Id.* See also, Sandip H. Patel, *Graduate Students' Ownership and Attribution of Rights in Intellectual Property*, 71 Ind. L. J. 481, 484 n.7 (1996) stating: "The fruits of research endeavors independent of industry or government also boast hefty economic figures. For instance, the popular drink, "Gatorade" has brought the University of Florida over \$21 million since 1973, when faculty researchers invented and tested the drink's ability to replenish nutrients lost through perspiration. Jack Wheat, *In the Lab: "The Next Gatorade" Means to University Researchers What the National Championship Does to Many Sports Fans*, Miami Herald, Jan. 24, 1993 at 6B. The Massachusetts Institute of Technology has 'spun off 836 businesses with sales of \$60 billion..' Howard Goodman, *University Research: Whose Work is it Anyway?*, Phila. Inquirer, Sept. 12, 1993, at A1."

[4] *United States v. Dubilier Condenser Corporation*, 289 U.S. 178, amended, 289 U.S. 706 (1933).

[5] See *McClurg v. Kingsland*, 42 U.S. (1 How.) 202 (1843) (holding that the employment relationship justified the presumption of a license from employer to employee); *United States v. Burns*, 79 U.S. (12 Wall.) 246 (1871) (holding that employers had a right to inventions of "specifically employed" inventors); *Hapgood v. Hewitt*, 119 U.S. 226 (1886) (holding that an employee's implied license is personal and non-transferable); *Solomons v. United States*, 137 U.S. 342 (1890) (discussing the employed to "invent doctrine"); *McAlee v. United States*, 150 U.S. 424 (1893) (holding that an implied license estopped an employee from bringing an action against her employer); *Standard Parts v. Peck*, 264 U.S. 52 (1924) (establishing an implied shop-right of an employer), Steven Cherenky, *A Penny for Their Thought: Employee-Inventors, Preinvention Assignment Agreements, Property and Personhood* 81 Cal. L. Rev. 597 (1993).

[6] *Dubilier* at 185.

[7] *Id.*

[8] *Standard Parts v. Peck*, 264 U.S. 52 (1924) (holding that an employee specifically hired to perform a particular inventive task must assign the patent rights to his employer even without an express agreement).

[9] *Dubilier* at 180.

[10] "Discoveries and inventions seldom can be anticipated, and, hence, it is often impossible to assign the development of a particular invention as a task to be performed" *Dubilier* at 181.

[11]*Dubilier* at 188.

[12]*Dubilier* at 187 (citing *Hapgood v. Hewitt*, 119 U.S. 226 (1886) and *Dalzell v. Dueber Watch Case Mfg. Co.*, 149 U.S. 315 (1893)).

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

[14]*Dubilier* at 188. *See also*, *McClurg v. Kingsland*, 42 U.S. (1 How.) 202 (1843); *Solomons v. United States*, 137 U.S. 342 (1890); *Lane and Bodley Co. v. Locke*, 150 U.S. 193 (1893).

[15]Exec. Order 10,096, 3 C.F.R. § 292 (1949-1953), *reprinted as amended in* 35 U.S.C. § 266 (1988). *See also* *Kaplan v. Corcoran*, 545 F.2d 1073 (7th Cir. 1976) (holding that the Executive order was constitutional), cert. denied, 480 U.S. 930; *Heinemann v. United States*, 796 F.2d 451, 456 (Fed. Cir., 1986) (stating that "Executive Order 10,096, relating to the ownership determinations on inventions made by Government Employees, is constitutional.") In part Exec. Order 10,096 states:

1. The following basic policy is established for all Government agencies with respect to inventions hereafter made by any Government employee:

(a) The Government shall obtain the entire right, title and interest in and to all inventions made by any Government employee (1) during work hours, or (2) with a contribution by the Government of facilities, equipment, materials, funds or information, or of time or services of other Government employees on official duty, or (3) which bear a direct relation to or made in consequence of the official duties of the inventor. *Id.*

[16]*Cherensky*, *supra note 5*, at 616.

[17]*Simmons v. California Institute of Technology*, 209 P.2d 581 (CA. 1949).

[18]*Simmons* at 583.

[19]*Id.*

[20]"I told Dr. Clark I was very much interested in having the Impact Research project continue, and I would be glad to have the income from this patent go to the Impact Research fund for further use in the development of equipment and tests in the laboratory." *Simmons* at 584.

[21]*Kaplan v. Corcoran*, 545 F.2d 1073 (7th Cir. 1976)

[22]*Id.* at 1077-78.

[23]*Id.*

[24]*Id.*

[25]*Id.*

[26]*Speck v. North Carolina Dairy Foundation*, 307 S.E.2d 785 (N.C. 1983) *rev'd* 319 S.E.2d 139 (1984).

[27]Lactobacillus acidophilus improves digestion, but previously had imparted a sour taste to milk. *Speck* at 787.

[28]Christopher Grafflin Browning, Jr., *The Souring of Sweet Acidophilus Milk: Speck v. North Carolina Dairy Foundation and the Rights of University Faculty to Their Inventive Ideas*, 63 N.C. L. Rev. 1248, 1249 (1985).

[29]Pat K. Chew, *Faculty Generated Inventions: Who Owns the Golden Egg?* 1992 Wis. L. Rev. 259, 298-300 (1992).

[30] In fact the university patent policy traditionally awarded 15% of the royalties it received to the inventor. *Speck* at 787.

[31] *Speck* at 789. "[Speck] reasonably assumed that the university had ownership rights to his invention but that he would be equitably compensated as specified in the Patent Policy. The university did not inform him that the ownership rights were his." *Id.*

[32] *Speck v. North Carolina Dairy Foundation*, 319 S.E. 139, 143 (N.C., 1984) "The fruit of the labor of one who is hired to invent, accomplish a prescribed result of aid in the development of products belongs to the employer absent a written contract to assign." "Under these facts, the secret process developed through the research of plaintiffs belonged to the University absent a written contact by the University to assign." *Id.*

[33]*Id.* At 143-144.

[34]*Houghton v. United States*, 23 F.2d 386 (4th Cir. 1928).

[35]*See* TEX. EDUC. § 51.680 (West, 1995). This statute requires that institutions of higher learning promulgate rules concerning intellectual property matters. Ostensibly the policies were to be reviewed not for content, but to determine whether they addressed some minimum requirement set out by statute.

[36] Chew, *supra* note 29, at 276. Interestingly, most of these school do not prevent professors who create copyrightable works from retaining control over these works. Thus, the professor can market, license or sell the work without university involvement. Sunil R. Kulkarni, *All Professors Create Equally: Why Faculty Should Have Complete Control over the Intellectual Property Rights in Their Creations*, 47 *Hastings L. J.* 221 (1995).

[37]*Id.* University resources are usually undefined in most patent policies, but probably include work time, facilities, personnel, equipment and funds. *Id.* at 277.

[38]*Id.* Examples of maximalist policies include those of Yale, Columbia and Cornell Universities. *Id.* at nn.. 72, 75.

[89]*Id.* Examples of supra-maximalist approaches can be seen in the policies promulgated at the University of Pittsburgh and University of California. *Id.* at nn. 76, 79. At the University of Houston, all employees (faculty, staff) are also required to sign a Patent Disclosure and Assignment Agreement that is quite expansive.

[40]*Id.* at n. 78.

[41] The University of Wisconsin at Madison disclaims the rights to faculty inventions, University of Wisconsin-Madison Patent Policies and Procedures 1 (1984). At UW-Madison, however there is a technology transfer office run by the University of Wisconsin Alumni Research Foundation (WARF) which is often instrumental in helping professors license or market their invention even though the professor is under no obligation to assign the rights to WARF. *See* Kulkarni, *supra* note 36 at 235.

[42] Transmittal Form for Proposed Review and Approval, University of Houston.

[43] *Aronson v. Quick Point Pencil*, 440 U.S.. 257, 262 (1979) ("Commercial agreements traditionally are the domain of the state. State law is not displaced merely because the contract relates to intellectual property which may or may not be patentable; the states are free to regulate the use of intellectual property in any manner not inconsistent with federal law.")

[44] *Dubilier* at 187.

[45]*See* Cherensky, *supra* note 5, at n. 113.

[46]*University Patents, Inc. v. Kligman*, 762 F. Supp. 1212 (E.D. Pa. 1991).

[47] *Id.* at 1217.

[48] *Id.* at 1218.

[49] *Id.* at 1219., *See also, McClaskey v. Harbison-Walker Refractories Co.*, 138 F.2d 493, 499 (3d Cir. 1943). (The writing must show a clear and unmistakable intent to transfer ownership.)

[50] *Kligman* at 1220.

[51] *Id.*

[52] *Id.* at 1222. The court commented that the question of whether an employee manual can create an employment contract or can change the terms of employment had not been answered in Pennsylvania. *Id.* The question of whether an employee handbook can alter the terms of an employment contract in this context has not been answered in Texas. Most case law concerning alteration of an employment agreement based on an employee handbook are in the context of at-will employment. The general rule is that employee handbooks do not constitute written contracts that create specific limitations and take the employment out of the at-will doctrine. *See generally, Badgett v. Northwestern Resources Co.*, 818 F. Supp. 998 (W.D. Tex. 1993); *Federal Express v. Dutschmann*, 838 S.W.2d 804 (Tex. App. 1992). *Cf. Aiello v. United Air Lines Inc.*, 818 F.2d 1196 (5th Cir. 1987) (holding that if the handbook creates specific procedures for termination the employment relationship can be modified). *See also, Stephen L. Hayford and Micheal J. Evers, The Interaction Between the Employment-at-Will Doctrine and Employer-Employee Agreements to Arbitrate Statutory Fair Employment Practices Claims: Difficult Choices for At-Will Employers*, 73 N.C. L. Rev. 443 (1995) for a general treatment of this issue in all states.

[53] *Kligman* at 1224.

[54] *Id.* at 1224 n. 14.

[55] In the last year I had the opportunity along with a colleague to disclose an invention to the University of Houston. The patent application has received a notice of allowance and the rights were assigned to the University. The Faculty Handbook (it is arguable if this handbook should apply to graduate students) provides a six month time frame for a determination of whether the school wishes to retain rights to the invention or whether the invention should be returned to the inventors. Not only did the process exceed the requisite six months but many substantive provisions of the handbook's policy on intellectual property were violated.

[56] *Kligman* at 1227-1228 *citing Toth v. Square D Company*, 712 F. Supp. 1231, 1235-36 (D.S.C., 1989) and *Thompson v. Kings Entertainment Co.*, 653 Supp. 871, 875-876 (E.D. Va. 1987).



[57] *Simmons* at 585.

[58] DONALD S. CHISUM, PATENTS § 22.03[2] at 22-29 (1996).

[59] Cherensky, *supra* note 5, at 621. *See also*, *Gray v. Zurich Ins. Co.*, 419 P.2d 168 (Ca., 1966); *Ponder v. Blue Cross of Southern California*, 145 Cal. App.3d 709 (Cal. App. 1983).

[60] *Cubic Corp. v. Marty*, 229 Cal. Rptr. 828 (Cal. App. 4th Dist. 1986).

[61] *Id.* at 830. *See also*, 66 ALR 4th 1135.

[62] 66 ALR 1135, 1159 (1988).

[63] *See* CAL. LAB. CODE §§ 2870-2872 (West Supp. 1995); DEL. CODE ANN. TIT. 19 § 805 (West Supp. 1995); ILL. REV. STAT. CH. 140 § 302 (1994); KAN. STAT. ANN. § 44-130 (West Supp. 1995); N.C. GEN. STAT. §§ 66-57.1, .2 (1994); UTAH CODE ANN. § 34-39-2 (1994). WASH. REV. CODE ANN. §§ 49.44.140, .150 (West Supp. 1994).

In the Delaware Code under Employee's right to certain inventions: Any provision in an employment agreement which provides that the employee shall assign or offer to assign any of his rights in an invention to his employer shall not apply to an invention developed entirely on his own time without using the employer's equipment supplies, facilities or trade secret information, except for those inventions that; (i) relate to the employer's actual business or actual or demonstrably anticipated research or development, or (ii) result from any work performed by the employee for the employer. To the extent a provision in an employment agreement purports to apply to the type of invention described, it is against the public policy of this state and is unenforceable. An employer may not require a provision of an employment agreement be made unenforceable under this section as a condition of employment or continued employment.

[64] VA. CODE ANN. § 23-4.3B (1994). *See also* W.V. CODE ANN. §§ 18-11-24 (1995) and N.D. DENT. CODE § 47-28-01 (1994). CONN. CODE ANN. § 10a-98c (1994) requires that a sole faculty inventor receive at least 20% of the proceeds derived from royalties for personal use.

[65] Katterman, *supra* note 3, at 11.

[66] 35 U.S.C.A. §§ 200-211, ch 18 (West 1980) as amended (West Supp. 1984). *See also* the Stevenson-Wydler Technology Innovation Act, 15 U.S.C.A. § 3701, *et seq.* (West Supp. 1992).

[67] Chew, *supra* note 29, at 293-94. *See* 35 U.S.C. § 202(c)(4) (West 1988). With respect to any invention in which the contractor elects rights, the Federal agency shall have a non-exclusive, non-

transferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States any subject invention throughout the world, and may, if provided in the funding agreement, have additional rights to sub-license any foreign government or international organization pursuant to any existing or future treaty or agreement. *Id.*

[68]35 U.S.C.A. §§ 202 (c) (1), (2), (3); ( 203.

[69]35 U.S.C.A. § 202 (d) (West 1980). If a contractor does not elect to retain title to a subject invention in cases subject to this section, the Federal agency may consider and after consultation with the contractor grant requests for retention by the inventor subject to the provisions of this Act and regulations promulgated hereunder. *Id.*

[70]Chew, *supra* note 29, at 295-296.

[71]*Id.* at 296.

[72]*Gen-Probe Inc. v. Center for Neurological Study*, 853 F. Supp. 1215 (S.D.Cal. 1993). "In short no court has concluded that a private right of action exists under Section 202." *Id.* at 1218.

[73]*Id.* At 1219.

[74]*Id.* The statute requires that "the contractor agrees to require by written agreement, its employees . . .to disclose promptly in writing to personnel identified as responsible for the administration of such patent matters . . ." *Id.*

[75]*Platzer v. Sloan-Kettering Institute*, 787 F.Supp. 360 (S.D.N.Y. 1992).

[76]*Id.* at 365.

[77]*Id.* at 367; 35 U.S.C. § 202(c)(7)(C) (West Supp. 1994) "In the case of a non-profit organization ... a requirement that the contractor share royalties with the inventor."

[78]One commentator proposes:

1. All faculty creations will be treated equally; copyrightable works (including computer software), patentable inventions, and technological "know-how" that may not qualify for patent or copyright protection.
2. The professors who produce these creations will own all intellectual property rights in the creations. The only right the university will have is a shop right to use the creation for university purposes.
3. Universities will revamp their existing TTOs (technology transfer office) Š to market inventions

or copyrightable works the professors voluntarily assign to the university

4. For federally funded inventions, the university should elect to take title under the Bayh-Dole Act. Then the university would re-assign the invention back to the professor for nominal consideration. Kulkarni, *supra* note 36, at 253. *See also*, Patel, *supra* note 3.