DRAFT-Work in Progress

Horizontal Issues in IP Law - Uncovering The Matrix:
University Innovation and Technology Transfer--
The Bayh-Dole Act after Thirty Years of Incentives to Commercialize

By

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I. Introduction

What do the Australia, the United Kingdom, P.R. of China, the United States, South Africa, India, Japan, Brazil, and Malaysia have in common? While you are pondering this riddle, I would like to thank Professor Annette Kur, ATRIP President, for the opportunity to present and explore these issues at the 2009 ATRIP Congress, our host, Professor Vytautas Mizaras, the staff, and especially students at the University of Vilnius for their warm and gracious hospitality. The topic of the 2009 ATRIP Congress, *Horizontal Issues in IP Law - Uncovering The Matrix* is especially relevant since the focus of the subject matter of my topic is quite visible; yet, it depends heavily for its success on hidden ancillary bodies of law, custom, and obvious but unremarked economic development for its success. I just provided my one hint. Because this is an intellectual property conference, the top three answers to the riddle, I guess would be intangible or tangible cultural heritage, biodiversity, and the Bayh-Dole Act Model of government sponsored research at universities. The correct answer is "Bayh-Dole Act Model." By the Bayh-Dole Act Model, I am referring to policies that transfer ownership of government sponsored research to the research institution to promote commercialization with the government retaining limited patent rights to protect the public interest.

You may be asking yourself why I am speaking about an almost thirty-year old U.S. law regulating U.S. government sponsored research and universities – well with a bit of a rhetorical flourish, it may be coming to a university or country near you. For example, the following countries have or are considering Bayh-Dole Act Model laws include: United States, Brazil, Malaysia, South Africa, Japan, India, Philippines, Austria, Denmark, Finland, Belgium, Germany, Norway, Korea, Taiwan (P.R.C.), Hong Kong, SAR (P.R.C.), and People's Republic of China (mainland). Some countries such Austria, Denmark, Germany and Norway have also abolished "professor's privilege" so as to assign title to the university rather than the individual researcher. A third group of countries rely on hortatory best practices guidelines. Finally, in some, for example France, university research already belonged to the university. One may find it hard to believe that any one model, regardless of how well designed, is able to meet the needs of such a disparate group of countries. Regardless how how one measures the Bayh-Dole Act model, by GDP of the countries adopting it to population of the countries adopting it, the Bayh-Dole Act Model dominates the global academic research community.

The countries named in the riddle made it a trick question since I agree not all of these countries have adopted the Bayh-Dole Act Model to regulate the relationship between government sponsored research and ownership of the patents that may result as a consequence of that research, but all of these countries have considered whether the Bayh-Dole Act Model is

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appropriate under their unique economic, cultural, legal, and political environment.[2] Some for example, Australia and the United Kingdom have rejected the Bayh-Dole Act Model in favor of a *sui generis* path of their own.[3] While others have adopted the Bayh-Dole Act Model to greater or lesser degrees. So, it behooves us as intellectual property scholars as well as members of the academy, especially in a setting such as this ancient university to remember that universities through faculty holds as a public trust the intellectual heritage of humankind—we preserve the past, document the present, and prepare for the future. How changes in government funding will affect national development issues, faculty research agendas, and the unique role of the university is clearly part of the matrix.

II. History of the Bayh-Dole Act

Thirty or so years ago, facing economic malaise, stagflation, high unemployment, and numerous political and social crises, the United States electorate rejected (at least rhetorically) the technocratic-regulatory state and under the aegis the Administration of President Ronald Reagan, adopted policies that transferred power from the national government to smaller political and economic units and increasingly relied on the invisible hand of the marketplace. The United States government is one of the world's largest investors in pure and applied research. Pre-Bayh-Dole Act, the intellectual property rights (patent) were owned by the U.S. government, and the government agencies sponsoring the research had little incentive to prosecute patents and find potential licensees. Therefore, much of the federally funded research was never commercialized and left in the dusty tomes of academic publications. As part of the trend of increasing the privatization of government functions, Congress enacted the Bayh-Dole Act which granted to the grantees of federally funded research ownership of the patent rights subject to some limited exceptions. Now that the ownership was in the hands of academic intuitions, these institutions were expected to become entrepreneurial. The ownership of the patent rights in theory motivated both the university and the individual researchers to seek out potential licensees who would then commercialize the product and in so doing grow the U.S. economy and provide revenue to the university. If this actually worked it would be a prime example of the invisible hand of Adam Smith at work.[4]

In 1980, the United States Congress, realizing the existing policies for commercialization of government sponsored research through agency licensing was at best feckless and at worse stifling innovation, passed the University and Small Business Patent Procedures Act (Bayh-Dole Act).[5] The full scope of the Bayh-Dole Act is beyond the scope of this article. But, a basic understanding of some of the history of the Bayh-Dole Act and some of its provisions are necessary to understand the legal context. Prior to the enactment of the Bayh-Dole Act, there were twenty-five different intellectual property policies that governed federally sponsored university research.[6] Although the United States government owned over 28,000 patents, only five percent of these were actually licensed, and of that five percent only a infinitesimally small number lead to a commercial product.[7] Companies were loath to invest in commercialization of government owned patents because as one commentator quipped "what is available to everyone is

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4 A rhetorical point outside the scope of this presentation, but university and faculty motivation may not necessarily be tied to royalty revenue as a result of research.

5 P.L. 96-517, *codified at* 35 U.S.C. §§200-12

6 RUTH TAPLIN,VALUING INTELLECTUAL PROPERTY IN JAPAN, BRITAIN, AND THE UNITED STATES 24 (2004). See also de Larena, supra note xx, at 1378-79.

7 Taplin, *supra* note xx at 25.

of interest to no one."[8] To the degree that either commercialization or royalty revenue was a goal prior to the enacting of Bayh-Dole, the preexisting policies were a failure.

III. Summary Analysis of the Bayh-Dole Act

The Bayh-Dole Act represented a sea change in the commercialization of federally sponsored research. The Bayh-Dole Act provided that patentable inventions as a result research done at universities and other not-for profit institutions would belong to the not-for-profit research entity[9] To protect the public interest, the federal government retained some limited march-in rights, a grant-back, the right to take title, if statutory formalities are not observed, and a preference for licensing to small businesses.[10] But largely, universities could grant licenses to the technology they developed without governmental interference.[11] The Bayh-Dole Act, while not free from criticism, has by many measures been a success.[12] The most recent Association of University Technology Managers (AUTM) 2007 licensing survey reports that university research resulted in 3,622 patents, 5,109 licenses and options, 555 new start-up companies, and 686 products release to the public.[13] Overall in 2006, 189 universities generated a total of $1.5 billion dollars.[14] A slightly out of date 2002 article reveals that only one percent of university patent generate more that $1 million in income.[15] The ratio licensing royalties to patent expenses was roughly four-to-one.[16] Although, this institution may be unique since about 56% of the patent expenses were reimbursable by licensees.[17] All-in-all in comparison to the commercialization, royalty revenue, and exploitation of federal research dollars prior the Bayh-Dole Act, the Bayh-Dole Act is an unqualified success.[18]

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[8] Id. This violates our basic understanding of patent law as necessary to prevent free riding on the labors of others. But upon closer examination, it does make sense in some markets, in the absence of clear patent rights and exclusive licensing agreements; if investment is required for commercialization then companies will not make that investment. For example, pharmaceutical companies will not invest huge sums to translate the basic research into a commercial product and then obtain the necessary regulatory approval. See NICO STEHR AND BERND WEILER, WHO OWNS KNOWLEDGE?: KNOWLEDGE AND THE LAW 135 (2007).

[9] 35 U.S.C. § 202(a).

[10] See generally 35 U.S.C. § 202.

[11] Peter S. Arno, *Why Don't We Enforce Existing Drug Price Controls?*, 75 Tulane L. Rev. 631 (2001).

[12] See generally, de Larena, *supra* note xx (criticism of Bayh-Dole Act).

[13] http://www.autm.net/AM/Template.cfm?Section=FY_2007_Licensing_Activity_Survey&Template=/CM/ContentDisplay.cfm&ContentID=2805

[14] http://www.forbes.com/2008/09/12/google-general-electric-ent-tech-cx_mf_0912universitypatent.html

[15] http://www.hopkinsmedicine.org/webnotes/licensing/0210.cfm

[16] Id.

[17] Id.

[18] For ***rhetorical comparison***, university technology research is not an investment it's a gamble. Please consider this the United States government invested $37.1 billion dollars in university research efforts. This resulted in 3,622 patents, or an average research investment cost per patent of $10 million dollars. IBM filed for 4,186 patents after investing $6 billion dollars in research and development or an average research investment per patent cost of $1.43 million dollars. So, if the goal is maximum number of patents then private investment is more efficient, the goal is revenue, invest in a government bonds whatever the justification for Bayh-Dole Act Model legislation it cannot not be university revenue nor can it be justified solely on commercial grounds. For many U.S. universities, investing in a ticket for the state lottery may have a better rate of return.

Critics of the Bayh-Dole Act are both numerous and vociferous, and their complaints too numerous to address in this presentation.[19] Consequently, this presentation will just offer a flavor of some of the criticisms of the Bayh-Dole Act. Critics often challenge the baseline assumptions from which the success of the Bayh-Dole Act is measured.[20] For example, the baseline of the number of federal patents that were not being commercialized is a poor basis on which to make any assumptions as to the need for private ownership and exploitation of government research. These patents were the result of Department of Defense sponsored research with defense contractors, and this often cited figure consisted of Department of Defense patents that the contractor could have taken titled to but rejected thus suggesting that these patents had little value. Other critics point to the fact that the contribution of university research is made through the public dissemination of the research.[21] Other critics point to the fact that "A dollar's worth of investment of academic invention or discover[y] requires upwards of $10,000 of private equity capital to bring [it] to market."[22] If the figure is even roughly true, then an implicit assumption of the Bayh-Dole Act is that there is access to well developed capital markets, including angel and venture capital funding.[23] Absent access to capital, even with strong intellectual property rights in the fruits of government sponsored research there will be no commercialization.[24] A recent study disclosed that the top 20 institutions received 83% of the net patent royalties while most institutions received negative or negligible net patent royalties.[25] Critics also question the impact of the Bayh-Dole Act on university patenting and attribute the modern propensity to patent university innovation to changes in the law. Many university patents are in the biotechnology areana. At the time of the Bayh-Dole Act, there were some questions as to whether some biotechnology innovations were patentable subject matter. Other critics question the validity of using the quantity of patents as a measure and suggest that the quality of university patents maybe decreasing over time. While numerous and anecdotally successful, the actual success rate of university spin-offs is also subject to debate. There are also questions as to whether the entrepreneurial effects of the Bayh-Doyle Act has contaminated the truth seeking nature of scientific research or redirected faculty from pure research to applied research with commercial applications. Even in the United States among university technology managers, there is a shift from the purely entrepreneurial statistics "[to] examples where our efforts were delivering more benefit to our local communities and to society in general. Our member organizations have long

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19 For a succinct critical summary of the Bayh-Dole Act and its application in developing economies, see Anthony D. So, et al., Is Bayh-Dole Good for Developing Countries? Lessons from the US Experience, available at http://www.plosbiology.org/article/citationList.action;jsessionid=514A216992AA6D1E8E0F4E488763430D?articleURI=info%3Adoi%2F10.1371%2Fjournal.pbio.0060262; see generally also Schecht, supra note xx

20 Rebecca S. Eisenberg, *Public Research and Private Development: Patents and Technology Transfer in Government-Sponsored Research*, 82 VA. L. REV. 1663, 1680-81 (1998).

21 So, *supra* note xx, at 2078.

22 Schacht, *supra* note xx, at 4 (quoting "Innovations Golden Goose," The Economist (US), Dec. 14, 2002)).

23 Access to capital markets, venture capital, and angel funding in a perennial problem in most developing economies. Even in the U.S., at least twenty-six states have at least one state sponsored venture or seed capital program. Many if not most research universities have found it necessary to independently raise capital and run their own seed or venture capital investment funds. Commercialization of federally sponsored university research is a capital intensive, expensive, and risky endeavor.

24 This is especially true because similar to the U.S. Bayh-Dole Ac many national Bayh-Dole Act Models requires that the innovation be developed and exploited by local businesses so theses businesses are less likely to be able to enter global capital markets.

25 HARUN BULUT AND GIAN CARLO MOSCHINI, U.S. UNIVERSITIES' NET RETURNS FROM PATENTING AND LICENSING: A QUANTILE REGRESSION ANALYSIS, Working Paper 06-WP 432 at 2 (September 2006) available at Http:/www.card.iastate.edu/publications/DBS/PDFFiles/06wp432.pdf at 2

recognized the importance of public benefit and many other aspects of technology transfer captured in their mission statements."[26]

Finally, the acquisition, maintenance, and exploitation of patent rights are extremely expensive.[27] From the technical expertise to identify and obtain legal protection of patent rights, the costs of prosecuting patents potentially on a global scale, and the costs associated with licensing the patents, the Bayh-Dole Act Model imposes significant costs on universities.[28] Because the United States does not have an absolute novelty requirement, universities enjoy a one year grace period and can seek potential licensees before seeking patent protection-albeit at the cost of absolute novelty and protection in other countries. Alternatively, if the invention has global potential, the university may file a relatively inexpensive provisional patent application, use that year to seek a commercialization partner, and then if the innovation has value then file a non-provisional patent application. In other words, in the United States universities can test the commercial market for their inventions before heavily investing in the expenses associated with patent protection. Legal options such as these minimize the costs of legal protection by limiting seeking patent protection to innovation that has potential commercial value. These options are not as readily available outside the United States.[29] Any examination of the appropriateness of the Bayh-Dole Act Model requires an extensive understanding of the legal and economic underpinnings that are necessary for its success but which are not explicitly part of the Bayh-Dole Act--in other words, the hidden matrix.[30]

IV. Recommendations

The Bayh-Dole Act gifted the fruits of federally sponsored research that results in patentable inventions to among others not-for-profit universities.[31] This munificent gift may have been more than adequate thirty years ago when patentable subject matter with the limited exceptions of trade secret "know how" was largely discrete from other forms of intellectually property.[32] This is no longer the case. Many modern innovations especially software or methods of doing business are not only patentable but are likely to contain trade secrets and copyrightable

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[26] See AUTM, U.S. Licensing Activity Survey: 8. In fact, AUTM no longer survey's its members regarding royalty revenues. "Further, industry is the primary point of control and commercialization and research institutions ultimately have very little control over how much revenue is generated. Numerous factors influence the success or failure of research institution's licensees, and these licensee's products, in the marketplace, including timing, funding, marketing and other elements." Id. at ___.

[27] Most U.S. university technology transfer offices have seven-to-fourteen staff members; although, almost as many operate on three-or-fewer staff members. See 2007 AUTM Survey. The median salary for a director of technology transfer at a public university was US$123,000, assistant director US$95,960, and licensing associates US$87,829. 2008 AUTM Salary Survey.

[28] One U.S. law firm suggested the costs of a U.S. patent ranges from $2,000 to $9,000 (or more), and the costs of filing may range from $1,000 in Canada to $12,000 in Japan where translations are required. https://www.oppedahl.com/cost/ A recent New York Times article suggested that costs for a patent were $15,000 no including the salaries of university administrators. http://www.nytimes.com/2008/09/07/technology/07unbox.html

[29] Also, the economy of the United States is sufficiently large that merely seeking protection in the U.S. is often a viable option. Universities in countries with less developed economies or export-dependent economies may be forced to rely on expensive patent cooperation treaty applications in order to achieve adequate protection.

[30] Arguendo, U.S. tax laws, bankruptcy code, state and local incentives to business are all hidden (as in not part of the Bayh-Dole Act but instrumental to its success).

[31] Mary Margaret Styer & Jack Kerrigan, *A Guide to the Labyrinth: Evaluating and Negotiating a University Technology Transfer Deal*, 11 B.U.J. Sci & Tech. L. 221, 222 (2005).

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elements.[33] The Bayh-Dole Act, with the exception of patentable inventions, makes no provision for allocating the other intellectual property rights that are a result of federally sponsored research, thus leaving the ownership of these forms of intellectual property to statutory default rules, state law, and university policy. This is not surprising. In 1980, computer programs were protected, if at all, through copyright law.[34] Business methods were not subject to either copyright or patent protection.[35] And, the U.S. Supreme Court had not yet declared that patentable subject matter "include[s] *anything* under the sun that is *made by man*" thus opening the new frontiers of biotechnology, software, and methods of doing business

The premise of this section is simple: in order to effectively commercialize some university research ownership of the patent alone is insufficient. A Bayh-Dole Act Model law must embrace other forms of intellectual property. A fully enabled patent application must disclose the best mode of practicing the claimed invention and permit one of ordinary skill in the art without undue experimentation to practice the disclosed invention.[36] Against, this statutory requirement, it would seem that trade secret and copyright would play a minor insignificant role at best. But, this is not necessarily the real-world case.[37] A researcher may possess significant negative know-how that facilitate commercialization by preventing the commercializing entity from wasting time and resources going down blind alleys.[38] The researcher may also be aware of more promising avenues of research leading to commercialization. Also, the disclosure in the patent is the best mode as of the date of the application; there is no requirement that the inventor reveal subsequent research as to newer preferred ways of practicing the claimed invention.[39] This subsequent research may not be patentable, but may be instrumental in the commercialization of the patented invention. None of this commercially valuable information are revealed in the patent application, but rather are trade secrets or know-how of either the inventor or university. In the case of software or business method patents, the copyrightable but unpatentable aspects of the invention may hold the key to the patent's eventual commercialization. For example, a college of education professor discovers a patentable method of delivering instructional material; a prospective licensee is unlikely to want to invest in writing new software and constructing new lessons in

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[33] See generally Deborah Azar, A *Method To Protect Computer Programs: The Integration Of Copyright, Trade Secrets, And Anticircumvention M*easures, 2008 UTAH L. REV. 1395; http://www.aaup.org/AAUP/issues/DE/sampleIP.htm (" Computer programs fall into a gray area between the two types of intellectual property. Programs that are a part of a "new and useful process" may be eligible for patent protection, while programs embodying minimally original expression may be eligible for copyright protection.]"

[34] See Final Report of the National Commission on New Technology Uses of Copyrighted Works;

[35] See State Street Bank & Trust Co. v. Signature Financial Group, Inc., 149 F.3d 1368 (Fed. Cir. 1998)(rejecting business method exception to patentable subject matter) abrogated by In re Bilski, 545 F.3d 943 (Fed. Cir. 2008); Baker v. Selden, 101 U.S. 99 (1879)(the practice of a method of accounting not protected by copyright).

[36] 35 U.S.C. § 112; *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988).

[37] See http://www.jordasecrets.com/jorda_on ("over 80% of technology licenses cover Trade Secrets or are hybrid licenses covering Patents and Trade Secrets. Furthermore, it is indisputable that licenses under Patents without access to the associated or collateral know-how are often insufficient to practice the patented technology commercially. A patent specification is often too brief and too general and discloses only embryonic or rudimentary R&D results rather than the ultimate scaled-up commercial embodiment."). For example, one commentator suggested that bio-tech spin offs from universities rely on trade secrets unless there is high market value and high levels of patent enforcement. See Tonis Mets, et al., *The Role of Intellectual Property Protection in the Business Strategy of University Spin-Off Biotech Companies in a Small Transition Economy*, 32 REV. OF CENTRAL & EAST EUROPEAN L. 19, 20 (2007).

[38] Cf. *Rutgers Council of AAUP Chapters v. Rutgers*, 884 A.2d 821, 825-27 (N.J. Super. Ct. App. Div. 2005)(University must negotiate with faculty over ownership of laboratory notebooks.).

[39] 35 U.S.C. § 112; *U.S. Gypsum v. Nat'l Gypsum Co.*, 74 F.3d 1209, 1212 (Fed. Cir. 1996).

order to make use of the university owned patent on the method of delivering instruction much less to evaluate the commercial value of licensing the patent.[40]

A. Patent

Under the Bayh-Dole Act, the patent rights to patentable inventions discovered using federal funds belongs to the university.[41] There is an obligation to share the royalties with the researcher.[42] If the university elects not to prosecute a patent then the researcher has the right to do so.[43] Under the Bayh-Dole Act, the patent rights of faculty members and universities regarding federally sponsored research is unambiguous.[44] As the primary federal law governing the allocation of patent rights for federally sponsored research, the Bayh-Dole Act raises the specter of federal preemption of state laws. This is not the case. The Bayh-Dole Act is primarily designed to regulate relationships between grantees of federal research funds and the federal government so the Bayh-Dole Act is unlikely to preempt state laws regarding patent ownership.[45] In the absence of federal preemption, states and state courts have created an extensive body of law governing the ownership of patentable inventions.

B. Trade Secret

Although, the Bayh-Dole Act focuses on patent rights, patents should not be the default norm for protecting university based innovation. Trade secrets sometimes described as know how protect information that conveys a competitive advantage by being kept secret.[46] Accordingly, trade secret law will protect information from misappropriation even if the information does not qualify for protection under either patent or copyright law.[47] Trade secret protection should be chosen over patent if the university believes that it will take longer than the patent term to replicate the invention and that the invention will have value in excess of the patent term; that the value of the invention is less that the costs of patenting; or that the invention is not

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[40] See Atari Games Corp. v. Nintendo of America Inc., 975 F.2d 832, 839 (1992)(" the expression adopted by the programmer is the copyrightable element in a computer program, and that the actual processes or methods embodied in the program are not within the scope of the copyright law."). Also, the potential licensee, even if he or she licenses the patent, risks a copyright infringement suit when commercializing the patent. Finally, rather than following the more conservative and better path of addressing intellectual property issues in individually signed contracts between the faculty member and the university, many universities erroneously attempt to allocate intellectual rights through employment manuals or university policies.1[1]

[41] *Board of Trustees of Leland Stanford Junior University v. Roche*, 487 F. Supp.2d 1099, 117-18 (N.D. Cal. 2007).

[42] 35 USCA 202(c)(7)(B). As one "venture capitalist, emphasized [before a Ohio House Ethics and Standards Committee]that [we] are wholly dependent on university researchers to help [us] in the process of moving technology from the research setting into a startup company. He said for the researchers part, "if the rewards are not there, faculty are not inclined toward invention or participating in the technology transfer process." http://www.rotundacollection.com/Hannah/Report_CommitteeReport.aspx?id=4636&ps=true

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[45] Fenn, 393 F. Supp. 2d at 141.

[46] Lars S. Smith, *RFID and Other Embedded Technologies: Who Owns the Data*, 22 Santa Clara Computer & High Tech. L.J. 695, 722-23 (2006).

[47] See Smith, supra note 46.

patentable, but has commercial value by being kept secret.[48] As one distinguished professor posted:

> Over 90% of all new technology is grist for Trade Secrets. Patents are but tips of icebergs in an ocean of Trade Secrets. All technical and business information, including inventions, know-how and show-how can be maintained as Trade Secrets. Thus, Trade Secrets are not just for early-stage and subpatentable developments and manufacturing processes at best, as some believe.
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> All companies and institutions have tons of Proprietary Information, whether or not they appreciate it. In an IPO survey awhile back, 88% of the participating corporations rated Trade Secrets as their most important intellectual assets. So it's no surprise that Trade Secrets are often referred to in industry as "crown jewels." And, especially internationally, Trade Secrets are the "workhorse of technology transfer."[49]

Accordingly, unless universities are sui generis in that they produce patentable innovation without associated trade secret know-how then the ownership of trade secrets must be considered as an element in a university's intellectual property portfolio especially as an ancillary to its patent portfolio

In the United States, there is no conflict or preemption between federal patent law and state trade secret law.[50] States have substantial discretion in their creation of property rights or torts liability under trade secret law.[51] Accordingly, the ownership of a trade secret is a matter of state law.[52] Some states like Ohio already have laws that assert a broad claim on research conducted at state universities. For example in Ohio, "All rights to and interests in discoveries, inventions, or patents which result from research or investigation . . ." could be interpreted as a claim on not only patentable inventions but also trade secrets or know-how.[53] The limited case law also supports the position of employer ownership of trade secrets. In *Speck v. North Carolina Dairy Foundation, Inc.***,** the Court held that faculty members who were hired to do research and paid salaries had no claim to the trade secret process they discovered, the trade secret was the property of the university, and an express written policy regarding patent that was silent on the issue of trade secrets will not be deemed a waiver of the university's property right in the trade secret.[54] However, even in the absence of such a policy involving university faculty, the general

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[48] David A.Friedman, et al., Some Economics of Trade Secret Law, 5(1) J, Econ. Persp. 61, 63 (1991).

[49] Karl Jorda, http://www.jordasecrets.com/jorda_on/

[50] *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 484 (1974). There is no general federal trade secret law prohibiting the misappropriation of trade secrets. HENRY J. PERRITT, TRADE SECRETS: PRAC. GUIDE §1:6

[51] Cf. Uniform Trade Secret Act with Restatement (Third) of Unfair Competition

[52] *Rohm and Haas Co. v. Adco Chemical Co.*, 689 F.2d 424, 429 (3d Cir. 1982).

[53] OH. REV. CODE ch. 3345.14(b). The legislative history is silent on what the legislature intended by the operative language of chapter 3345.14(b); there is nothing in the meeting reports to suggest that chapter 3345.14(b) should be limited to patents, and the goal of commercialized of resarch at state universities is consistent with a broad interpretation to include patent rights. See generally http://www.rotundacollection.com/viewBill.aspx?billnum=sb286&ga=8

[54] Speck v. North Carolina Dairy Foundation, Inc., 319 S.E.2d 139, 143 (N.C. 1984). It is interesting to note that in this case the university had a patent policy providing for royalties to be paid to the faculty member. Refusing to apply the policy by analogy, the Court held that

rule is that an employer can prevent an employee from revealing a trade secret which the employee developed during employment only by an express contract restricting its use or by virtue of the special confidential relationship of the parties.[55] In the absence of an express agreement, the focus is on whether the employee was hired to invent.[56] Most research faculty who are recipients of funding and assigned specific research projects will probably fall within the class of those a court is likely to find to have been hired to invent.[57] Consequently, the trade secret should be owned by the university.

Critics reject this conclusion that the university should own the trade secrets associated with faculty research, because if the university owned the trade secrets generated by faculty research then the university may suppress knowledge regarding university research out of its desire to increase the value of its intellectual property portfolio.[58] First, considering the paucity of university licensing revenues and that in academia the coin of the realm is not federal reserve notes but rather first to publish, for untenured faculty, the mantra is "publish or perish," and for faculty on soft grant generated money, publication is instrumental in obtaining further grants and continued employment; therefore, a rational university, especially one desiring to keep productive researchers who bring in large grants (for which the university receives an overhead payment) is unlikely to suppress or delay publication for any significant period.[59] In fact, often submission of a patent application follows the actual submission of an article for peer review prior to publication under the dangerous assumption that submitting an article for publication does not start the 35 U.S.C. § 102 statutory bar nor could otherwise raise issues of patentability.[60]

> Further, the written Patent Policy of the University was not a written contract to waive the University's rights in the secret process or to assign all or any part of those rights to the plaintiffs. That policy merely assigns fifteen percent of the royalties from any *patent* obtained on an invention by an employee of the University to the inventor. The secret process developed by the plaintiffs was not patentable, and this fact was recognized by the plaintiffs at the time they discovered the process. 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. Id. At 144.

This would suggest that absent a trade secret policy the trade secret belongs to the employer and courts will not grant royalties under parent provisions in university policy manuals.

55 *Wexler v. Greenberg*, 160 A.2d 430, 433-34 (Pa. 1959).

56 *McClain v. State*, 269 S.W.3d 191, 198 (Tex. App. 2008)(citing 5 Milgrim on Trade Secrets § 5.02 (Lexis 2008); 13 William V. Dorsaneo, III, and Herbert J. Hammond, *Texas Litigation Guide* § 200.04 (Lexis 2008)).

57 See *supra*, section xx patent discussion of "hired to invent."

58 Of course a university is free by contract to waive its ownership of its trade secrets, this article posits that universities would not assert trade secret protection in basic (unpatentable) research. Rather, the university would claim and assert trade secret protection only when the trade secret is instrumental to the commercialization or licensing of a university owned patent.

59 Cf. de Larena, supra note xx at 1387 (most universities receive 50% of the grant for in-direct costs and pointing out that at one university over 20% of the budget was funded through federal research grants).

60 *Solarex Corp. v. Arco Solar, Inc.*, 121 F.R.D. 163, 177 (E.D.N.Y. 1988)(focusing on the confidential relationship of the journal to the outside reviewers); BENGT DOMEIJ, PHARMACEUTICAL PATENTS IN EUROPE 134 (2000)(disclosure under a duty of confidentiality not a public disclosure under principles of absolute novelty). *But see generally*, Edwin S. Flores Troy, *Publish and Perish: Patent Aspects of Peer Review Misconduct*, 5 TEX. INTELL. PROP. L.J. 47, 48 (1996)(observing that "One important way that the peer review system is flawed is through its reliance on the perfunctory confidentiality agreements that peer reviewers are asked to sign. Even if scientists sign confidentiality agreements, a breach of such an agreement will not salvage an inventor's right to a patent."). For an example of reviewer misconduct, "an author discovered, when he went to visit a friend's lab in New York, that not merely did the friend have a copy of his paper, but so did the postdocs in the lab as well, and he

Second, the university ownership of trade secrets may actually increase the diffusion of knowledge. The stereotype in this debate is the faculty member as noble seeker of truth versus the avaricious, incompetent, university administrator. The reality is that by permitting the faculty member to retain the trade secrets that university has a weakened its ability to negotiate with potential licensees, especially if the researcher desires to create a university spin off.[61] Potentiality, the licensee must consider the costs of obtaining the trade secrets from the research (usually through a consulting contract) as a factor in the patent license royalties. If trade secrets are instrumental to the exploiting license then the researcher has an effective veto over any license. Further, as one commentator has observed, there is no incentive for academics to publish information about failed research.[62]

Finally, the incremental knowledge that is the subject matter of university research potentially kept as trade secrets is often ignored in the university context. It is not the ground breaking basic research that is the hallmark of a peer reviewed journal article nor is it necessarily new and non-obvious so as to be worthy of a patent. Rather it falls in between so it will neither be published as original research or as part of the patent application consequently, there is no dissemination to the public unless there is some motivation to commercialize this knowledge. If the University owns the trade secret, it is likely through its technology transfer office to attempt to locate potential licensees rather than permitting the knowledge to remain passively in a laboratory bench-book and to be re-discovered through the process of serendipity. University ownership under these circumstances is more likely to lead to dissemination of knowledge, if not to the public and least to the relevant business entities.

C. Copyright

Even under the U.S.'s utilitarian approach to copyright law, copyright ownership in university research is problematic for at least two reasons.[63] Countries with strong moral rights

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was offended." *Id.* at 64. Clearly the distribution of the article to postdocs under no agreement or obligation of confidentiality raises the specter of a 35 U.S.C. § 102 statutory bar and the lost of patent rights in countries requiring absolute novelty. See generally, JEFFREY G. SHELDON , HOW TO WRITE PAT. APPLICATION § 4.4 ("If a paper is published about the invention before the United States patent application is filed, then, in absolute novelty countries, it would be impossible to obtain a patent."). Consequently, filing a patent application before publication submission is always the best policy. See 1 PAT. L. FUNDAMENTALS § 1:36 (2d ed.)("*However, the one-year grace period provided for by the Paris Convention only applies once there has been a patent application filing in the Patent Office of a member country; it is of no avail if any public use, sale, or disclosure preceded the filing of a patent application, even by a single day."*)(emphasis in original).

[61] A researcher may have a superior claim to the license as opposed to a larger and more profitable licensee since Bayh-Dole Act gives a preference to small businesses. See 35 U.S.C. §200 (2000) ("It is the policy and objective of the Congress...to encourage maximum participation of small business firms in federally supported research and development efforts....").

[62] John T. Cross, *Dead Ends and Dirty Secrets: Legal Treatment of Negative Information*, 25 J. Marshall J. Computer & Info L. 619, 620 (2009). "False starts can be incredibly valuable information. The fact that an experiment failed is useful knowledge. It is useful at the very least because if it were widely available, it would prevent other people from pursuing the same option . . . Even more significantly, knowing that an invention failed can lead to knowledge as to why it failed. That knowledge can be very useful." Id.

[63] See *Pittsburg State Univ. v. Kansas Bd of Regents*, 122 P3d 336, 347 (Kan. 2005)("whether any particular creative work of a faculty member constitutes work for hire will depend on whether the work meets the Restatement test, *i.e.*, whether it is the type of work the faculty member was hired to create; whether it was created substantially within the time and space limits of the job; and whether it was motivated by a purpose to serve the university employer.. This will necessarily involve not just a case-by-case evaluation, but potentially a task-by-task evaluation.")(citations omitted).

regimes may find the ownership of faculty works even more problematic. First, the 1976 Copyright Act's provisions regarding works created through employees or independent contractors may be difficult to apply and second, despite explicit textual changes in the law, some courts still employ ancient principles of faculty privilege to shield faculty copyright works from university ownership.[64] Finally, unlike patent law and trademark law, there is very little room for the state to enact legislation affecting the ownership of a copyright or the process by which it is transferred. This section will explore how universities may assert rights in faculty generate copyrightable materials. Although invaluable for their scholarly merit from email, blog-postings to scholarly articles and trade-books, the vast amounts of copyrightable materials produced by faculty often have no significant commercial or economic value.[65] Only an irrational university would assert a copyright in those materials considering the cost of administering a university based licensing office. Further, traditional faculty copyrightable works such as scholarly articles, books, and other creative works are unlikely to be created if the university asserted a copyright claim to the work so the focus of copyright in this section is on copyrightable works that are associated with patentable inventions or are akin to patentable inventions, for example practical, utilitarian works such as computer programs.

1. 1976 Copyright Act

Faculty exist under the penumbra of copyright law, and as fonts of [a modicum of] originality with a propensity to fix their original expression, the academy is awash with copyrighted works. The vast majority of which have no commercial value. However, some works such as lectures which in the past were transitory and lacking in commercial value, may now be digitally "fixed," repackaged, and sold as distance learning courses.[66] The 1976 Copyright Act provides that a copyright vests in the author.[67] In *Community for Creative Non-Violence v. Reid*, the Court held that "[a]s a general rule, the author is the party who actually creates the work,

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64 See, e.g., Weinstein v. Univ. of Ill., 811 F2.d 1091 (7th Cir. 1987); Hays v. Sony, 847 F.2d 412, 416-17 (1988). Under the 1909 Copyright Act, some commentators and courts suggested that because faculty received regular salaries, use university supplies, university facilities, and were expected to publish, faculty writings could have been considered works-for-hire. Laura G. Lape, Ownership of Coprightable Works of University Professors: The Interplay Between the Copyright Act and University Copyright Policies, 37 Vill. L. Rev 223, 233-34 (1992). Faculty rightly by custom and tradition are free to write on any topic of their choice in a manner of style of their own choosing, but university control of dismissal, tenure, promotion, and salary is clearly a form of indirect control. Id. However, based on academic traditions and in two distinctly limited factual cases, some courts have declined to find that faculty writings are works-for-hire under the 1909 Copyright Act. Id.

65 If you doubt this, remember most professors are prepared to surrender their copyright in a journal article merely in exchange for publication and faculty books are rarely best sellers. See,e.g., BETH LUEY,HANDBOOK FOR ACADEMIC AUTHORS 92 (4th Ed. 2002)(discussing university subvention to publishers to publish books that to not otherwise make economic sense). Of course, this principle is not true for books, text books, study aides, etc, but even there a faulty author could more profitably invest his or her time, if economic remuneration was the sole motivating factor. Faculty incentives to publish rarely are tied to the economic value of the copyright. See Assaf Jacob, *Tort Made For Hire - Reconsidering The Ccnv Case*, 11 YALE J. L. & TECH. 96, 146 (2007-2008)(suggesting that pre-tenure "publish or perish" is adequate incentive, post-tenure some other incentive perhaps economic may be required.)but see Lape, *supra* note xx, at 267 (suggesting that depriving faculty of supplemental income based on copyrighted works may "contribute to flight from the university.").

66 Elizabeth Townsend, *Legal and Policy Responses to the Disappearing "Teacher Exception," or Copyright Ownership in the 21st Century University*, 4 MINN. INTELL. PROP. REV. 209, 224 (2003), available at http://mipr.umn.edu/archive/v4n2/townsend.pdf

67 17 U.S.C. § 201; 2 PATRY ON COPYRIGHT § 5:3 (The 1976 Copyright Act does not define the term "author" instead relying on case law.).

that is, the person who translates an idea into a fixed, tangible expression entitled to copyright protection."[68] Authors for the purposes of the Copyright Act can either be the natural persons who created and fixed the original works or another entity including a juridical person, if the work is deemed a "work for hire."[69] A work for hire is either a work created by an employee acting within the scope of his or her employment or a work created by an independent contractor if the work falls within the categories of works enumerated in the Copyright Act, and there is an express written agreement signed by the author or the author's agent that the work is a work for hire.[70] In either case, the employer is the author for all legal purposes.[71] Alternatively, the copyright in the work can be assigned by the author to his or her employer in a clear written document signed by the employee or his agent.[72] Clearly, the simplest and best way to arrange a university copyright policy is through individually signed agreements rather than through purporting a transfer of copyright ownership through a university policy manual or employee handbook.[73] Albeit in the absence of such agreements, these written published policies may be sufficient to grant a non-exclusive license to the university.

2. Faculty Prerogatives a/k/a "Teacher Exception"

Traditional principles of academic freedom, the recognition that faculty members have a sui generis role that is not replicated elsewhere in our society coupled with the fact that most faculty authored works had little or no commercial value resulted in a judicially created exception for faculty works under Copyright law.[74] The 1976 Copyright Act deems the employer as the author for work done by an employee within the scope of his or her employment.[75] The case law is mixed on whether scholarly works prepared by faculty are works-for-hire under the 1976 Copyright Act.[76] Section 201(b) clearly states that

> In the case of a work made for hire, the employer or other person for whom the work was prepared is considered the author for purposes of this title, and, unless

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68 490 U.S. 730, 737 (1989).

69 17 U.S.C. § 201; see also 17 U.S.C. § 101 (defining work for hire).

70 CCNV, 490 U.S. at 737.

71 17 U.S.C. § 101

72 17 U.S.C, § 204(a); *Radio Television Espanola S.A. v. New World Entertainment, Ltd*., 183 F.3d 922, 929 (9th Cir.1999). Lape, supra note xx. at 248-49.

73 The question of whether new consideration is required for contacts with existing employees, especially tenured ones, is complex so probably the better practice in an absence of clear law is to provide new consideration. See Hogan v. Bergen Brunswig Corp., 378 A.2d 1164, 1167 (N.J. Super. A.D. 1977))(NJ does not require new consideration for post-employment contracts "where the supporting consideration is at least, in part, the continuation of employment."); Credit Bureau Management Co. v. Huie, 254 F.Supp. 547, 554 (D. Ark 1966) (same Arkansas and Texas); but see, Mary J. Hackett and Patricia E. Antezana, 2002-2003 Update: Non-Compete Agreements And Consideration--What's An Employer To Do?, 74 Pa. B.A. Q. 47, 48 n.2 & n.4 (2003)(citing cases for and against a requirement for new consideration).

74 See generally, Townsend, *supra* note xx (discussing the history of copyright and faculty works).

75 CCNV, 490 U.S. at 738. The argument that the 1976 Copyright Act rejects the 1909 Copyright Act's in essence is that the 1909 Copyright Act cases relied on custom and under the 1976 Copyright Act only a written agreement can vary the provisions of § 201. See Manning v. Board of Trustees of Community College Dist. No. 505, 109 F. Supp. 2D 976, 980 C.D. Ill. 2000); Lape, *supra* note XX, at 243.

76 *Weinstein v. Univ. of Ill*., 811 F.2d 1091 (7th Cir. 1987); *Hays v. Sony Corp. of Am.*, 847 F.2d 412 (7th Cir. 1988); *but see Shaul v. Cherry Valley-Springfield Central Sch. Dist.*, 363 F.3d 177 (2d Cir. 2004); *Vanderhurst v. Colorado Mt. College Dist.*, 16 F. Supp. 2d 1297 (D. Colo. 1998); *Gilpin v. Siebert*, 419 F. Supp. 2d 1288 (D. Or. 2006). See Lape, supra note XX, at 259 (suggesting that university copyright policies avoid relying on works made for hire in light of the "confusion" in the courts).

> the parties have expressly agreed otherwise in a written instrument signed by them, owns all of the rights comprised in the copyright.[77]

Even *Hays v. Sony*, the leading case supporting the continuation of the teaching exception to the work-for-hire doctrine noted *in dicta* that although a literal reading of 17 U.S.C § 201(b) would destroy the teacher exception, Congress could only have done so "inadvertently," that abolishing the teacher exception would wreck "havoc" on the settled practices of academic institutions, and to be a work for hire the work under 201(b) must be made "for" the employer which is not the case for most academic works.[78] This last argument stressing the word "for" was made after earlier condemning a literal interpretation of the language of § 201(b).

In the absence of a statutory teacher's exemption, a court is most likely to find that faculty authored works are works-for-hire under § 201(b). The first element that the university will have to prove is that whether the copyrighted work is of the kind that the employee was hired to perform.[79] Under § 228 of the *Restatement*, authoring a work is scope of a faculty members employment if "(a) it is of the kind he is employed to perform; (b) it occurs substantially within the authorized time and space limits; (c) it is actuated, at least in part, by a purpose to serve the master."[80] Addressing the first element the kind of work that the employee was hired to perform, in *Genzmer*, the court found that a doctor was hired to undertake a research assignment with "a myriad of activities" wrote a computer program within the scope of his employment.[81] Under the facts of the case, the court founds that authoring computer code was "within the ultimate objective of the principle and an act that is not unlikely that a servant might do."[82] The second element of the Restatement test is whether the work took place substantially with the authorized time and space limits. The *Genzmer* court recognized that professional employees do not work regular shifts and at a regular place of business rather they work as needed where needed. The *Genzmer* Court found that it was sufficient that the work took place "during the time period that he was employed."[83] The third and final step is whether the employee was motivated at least in part to serve the employer or at least that the employee's motivation was appreciably motivated to further the employer's goals.[84] If the goal of the university is the creation and diffusion of knowledge then almost any scholarly work falls within the employer's goals. Publications, research, and the production of other copyrighted works which are disseminated to the scholarly community and to the public at large are critical to a university's reputation and bottom line.[85] This can be read more narrowly as supporting the goals of the research laboratory or the goals of

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77 17 U.S.C. § 201(b)

78 847 F.2d 412, 416-17 (1988)

79 Genzmer v. Pub. Health Trust of Maimi-Dade County, 219 F. Supp. 2d 1275, 1981 (S.D. Fl. 2002) (citing Rest. (Second) of Agency § 229). Other courts have applied the same test in the context of University faculty, see, e.g., Rouse v. Walter & Associates, L.L.C., 513 F.Supp.2d 1041, 1056-61 (S.D. Iowa 2007)(applying the § 229 test to research faculty who developed a computer program).

80 Id. (citing Restatement (Second) of Agency § 228)

81 Id.

82 Id. Quoting § 228, cmt b.("To be incidental, however, it must be one which the servant is employed to perform. It must be within the ultimate objective of the principal and an act which it is not unlikely that such a servant might do. The fact that a particular employer has no reason to expect the particular servant to perform the act is not conclusive.").

83 Id. at 1282

84 Id.

85 MURRAY SPERBER, BEER AND CIRCUS HOW BIG-TIME COLLEGE SPORTS HAS CRIPPLED UNDERGRADUATE EDUCATION 97 (2001) (primary function of adminstrators and faculty at research instutitions is prestige maximumization and institutional excellence as measured by the fame of the school's research programs and professors);PETER MICHAEL BLAU, THE ORGANIZATION OF ACADEMIC WORK 237 (1994).

the grant or other funding supporting the faculty member's research. While a university rarely instructs faculty what and when to write nor how and when to express their ideas, the university incentive structure of dismissal, promotion, tenure, compensation, and post-tenure review assures effective if not day-to-day control over faculty scholarship.[86] Consequently, most faculty scholarly production, especially those tied to sponsored research are likely to be considered work-for-hire and authored by the university.[87]

3. 1976 Copyright Act and Assignment of the Copyright

Assuming that the university is not the author under the work-for-hire doctrine then the copyright in the work can be assigned by the author to his or her employer in a clear written document signed by the employee or his agent.[88] An individually and negotiated and signed agreement between a faculty member and the university clearly meet the requirements of § 204. The agreement is best signed at the point where the faculty member becomes a new employee of the university. However, some universities may need to establish new copyright assignment policies. Applying such a new copyright assignment policy to existing faculty members raises a significant question of whether new consideration is required for contacts with existing employees, especially tenured ones, is complex question so the better practice in an absence of clear law is to provide new consideration.[89] The simplest and best way to arrange a university copyright policy is through individually signed agreements rather than through purporting a transfer of copyright ownership through a university policy manual or employee handbook whether adopted unilaterally by the university or through a collaborative process with the faculty union or faculty senate.

Whether a faculty union or the faculty senate can be the agent of the employee for the purposes of the 1976 Copyright Act is doubtful.[90] The 1976 Copyright Act does not define the term "agent." The United States Supreme Court in *Community for Creative Non-Violence v. Reid*, looked to the Restatement of Agency to define common law terms used in the 1976 Copyright Act.[91] Under Restatement of Agency, the elements of agency are: 1) a manifestation of consent by the principal that the agent will act for it; 2) a consent to act by the agent; and 3) subjection to the control of the principal.[92] The first and third factors are most problematic. Whether individual faculty members manifest consent that either a union or the faculty senate (or similar governing body) act for him or her in the matter of copyright assignments is doubtful.[93] Further, individual

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86 So, faculty research done pursuant or supported by to a university grant, sponsorship, release time, or similar incentives may more clearly fall within the scope of employment element under the work-for-hire doctrine.

87 This raises serious questions about whether in the future faculty will have a free and robust range to engage in research. See Townsend, supra note xx, at

88 17 U.S.C, § 204(a); *Radio Television Espanola S.A. v. New World Entertainment, Ltd*., 183 F.3d 922, 929 (9th Cir.1999). Lape, supra note xx. at 248-49.

89 See Hogan v. Bergen Brunswig Corp., 378 A.2d 1164, 1167 (N.J. Super. A.D. 1977))(in the case of an at-will employee, NJ does not require new consideration for post-employment contracts "where the supporting consideration is at least, in part, the continuation of employment."); Credit Bureau Management Co. v. Huie, 254 F.Supp. 547, 554 (D. Ark 1966) (same Arkansas and Texas); but see, Mary J. Hackett and Patricia E. Antezana, 2002-2003 Update: Non-Compete Agreements And Consideration--What's An Employer To Do?, 74 Pa. B.A. Q. 47, 48 n.2 & n.4 (2003)(citing cases for and against a requirement for new consideration in different jurisdictions).

90 See Manning, 109 F. Supp.2d at 980 (provision in collective bargaining agreement insufficient to assign copyright under Copyright Act's "statute of frauds" provisions).

91 490 U.S. 730, 740-41 (1989).

92 Restatement (Second) Agency § 1(1).

93 But see, Margit Livingston, *Inspiration Or Imitation: Copyright Protection For Stage Directions*, 50 B.C. L. Rev. 427, 451 (2009) ("Ultimately, however, the directors' membership in the SSDC may dictate

faculty members *at best* have only the most tenuous control over these bodies, such control usually being limited to periodic elections. It is unlikely at a court will find that either a union or a faculty governing body or both acting in unison is an agent of an individual faculty member may convey an individual faculty member's copyright. Therefore, the most conservative interpretation of the 1976 Copyright Act is that neither a faculty union nor faculty representative bodies can convey the assignment of a copyright.

Finally, the author (faculty employee) can grant a non-exclusive license to the employer through his or her conduct.[94] Conduct by the author that demonstrates acquiescence is necessary because Copyright law unlike Patent law does not have a shop right. Merely because the employer's facilities and resources were used in the creation of the work, is not sufficient to grant the employer a right to use the work in violation of 17 U.S.C.§ 106.[95] Universities that have copyright policies that exist apart from their employment policies should incorporate the two into one document or incorporate the copyright policy into the employment policy by reference.[96] Of course, this could just result in a case-by-case intense fact specific analysis as to when, if ever, under state laws these university policies or employment manuals arise to the level of an enforceable contract. Upon determining that there was a contract, did it then comply with federal copyright law? It may then be argued that by continuing to work for the university under these policies the faculty member has acquiesced to a non-exclusive license for use of the copyrighted work.[97] There is one even more troublesome problem for universities that are exploiting faculty copyrighted works subject to an implicit, unwritten, non-exclusive license, such a license cannot be either assigned or further sub-licensed.[98] So, the university must carefully consider the potential scope of the implied license or it may find itself as a defendant in a copyright infringement action. An implied license for example in software may be sufficiently broad to use the software at the university or to demonstrate it to potential licensees, including licenses whose interest may be only in the patented or trade secret protected aspects of the software. But, it may be not be broad enough to transfer or licensee a working copy of the software to a potential

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that they be regarded as employees for copyright purposes. To participate in collective bargaining agreements with the various theatrical organizations, the directors belonging to the union must have employee status. Independent contractors are not entitled to participate in collective bargaining agreements. Thus, the SSDC has always insisted that union directors are employees of the producer." (internal citations omitted).

94 See 17 U.S.C. § 204(a); Effects Associates, Inc. v. Cohen, 908 F.2d 555, 557 (9th Cir.1990) (explaining the copyright act's "statute of frauds" § 204(a) writing requirement);3 M. NIMMER & D. NIMMER, NIMMER ON COPYRIGHT § 10.03[A][7]("When the totality of the parties' conduct indicates an intent to grant such permission, the result is a nonexclusive license.").

95 See Baltimore Orioles, Inc. v. Major League Baseball Players Ass'n, 805 F.2d 663, 672 n. 14 (7th Cir. 1986).

96 Lape, supra note xx, at 248; 3 Pat. L. Fundamentals § 17:27 (2d ed.)("Unilaterally promulgated employment manuals or policies do not become part of the employment contract unless expressly included in it."); but see E.I. Du Pont de Nemours & Co. v. Okuley, 344 F.3d 578, 585 (6th Cir. 2003)("According to the Faculty Manual, WSU holds "ownership in patents and other non-patentable intellectual products ... developed by its employees as a result of their employment." The parties do not dispute that this manual was a legally binding part of Okuley's employment contract with WSU. *See Thompson v. St. Regis Paper Co.*, 102 Wash.2d 219, 685 P.2d 1081, 1087 (1984) (recognizing that under Washington law employment manuals can give rise to contractual claims).").

97 Id., 3 Pat. L. Fundamentals § 17:27 (2d ed.) ("key consideration in determining whether an employment manual gives rise to contractual obligations is the reasonable expectations of the employees").

98 In re Golden Books Family Entertainment, Inc., 269 B.R. 300, 309 (Bkrtcy. D.Del. 2001)(Under copyright law, "a nonexclusive licensee ... has only a personal and not a property interest in the [intellectual property]," which "cannot be assigned unless the [intellectual property] owner authorizes the assignment....")(internal citations omitted).

licensee for further research. Since the non-exclusive license in unwritten and based on the faculty members acquiesce, it will be difficult to determine *ex ante* the scope of the license.

The first choice of any university should be to create a scope of employment so that the university is the author of copyrighted works that relate to commercializeable university created innovation. The second choice should be individual written and signed agreements with faculty members. A third and definitely last choice is that in the absence of such agreements, to create written published policies may be sufficient to grant at least a non-exclusive license to the university which may then grant sufficient rights for the university to protect its interest in other university owned forms of intellectual property.

V. Conclusion

This article concludes that a university must have a carefully nuanced intellectual property policy that promotes a myriad of goals from those of the university as trustee of our intellectual heritage of open publication and debate, to the university as a not-for-profit revenue generating self-sustaining research institution, to the duties of the university as a corporate body of independent self-governing scholars. Fortunately or unfortunately, depending on your perspective the Bayh-Dole Act did not remain in the United States. It is serving as a questionable legal model that many other countries to govern the relationship between government sponsored research and recipient research institutions. In the United States, there is a robust and healthy debate among scholars, technology transfer specialists, and other stakeholders as to whether the Bayh-Dole Act is a success. Please remember this debate exists in the country who created this model and for whom this model was uniquely adapted. So, it is even more problematic when other nations not sharing a similar history of regarding the relevant roles of government, research institutions, and researchers and all of whom promoting commercialization with access to capital and a stable intellectual property rights regime in a developed market economy. Consequently, government attempts to impose the Bayh-Dole Act model on academic institutions which may lack the administrative infrastructure and the economic wherewithal to support the requirements of the Bayh-Dole Model in concert with an economic or social environment not yet ready to support commercialization of university research may result in more hard than good. Finally, while the Bayh-Dole Act Model creates a fetish out of patent rights, it does not adequately account for other equally important intellectual property rights that may be necessary to the commercialization of government sponsored research. Copyrights and trade secrets may be necessary for the commercialization of the university owned patents, and a rejection of a university claim to trade secret protection merely places ownership of the trade secret with the individual faculty member who may have little or no incentive to publish. Modern national versions of the Bayh-Dole Act Model most consider other forms of intellectual property and allocate them appropriately if the newer and more significant forms of innovation are to flourish.