UNIVERSITY PATENT POLIC

PHYLLIS S. LACHS*

This paper presents an analysis of problems relating tc patents today, and suggests a policy for the institution whicl the issued that these problems present. It argues that patentin of university research would not unreasonably delay the pul dissemination of that research, and yet would provide a neede funding. A model university patent policy, balancing the int ventors, universities, the public, and the research sponsor is

I. RATIONALE

The university should devise a patent policy and assert p to inventions made by its researchers in order to increase revenues and to bring the results of scientific inquiry to t public. Until recently, many universities abstained from dev institutional patent policy,[1] or explicitly renounced patenting to the university's mission,[2] or adopted a patent policy whi profit-making in certain fields, such as public health.[3] Secti paper argues that university patent rights should be vigorous within the limits of the policy set forth in Section II. An aggres policy will increase the university's links to the world of con industry. Issues which confront the academic community as

* College Counsel, Bryn Mawr College; B.A., 1952, University of Ph.D., 1963, Bryn Mawr College; J.D., 1982, University of Pennsylvania.

[1] Three surveys, WILSON, PATENT AND COPYRIGHT POLICIES IN FORTY-FIVE UNIVERSITIES (1967), SOCIETY OF THE UNIVERSITY PATENT ADMINISTRATORS SURVEY O TY PATENT POLICIES AND PATENT ADMINISTRATION (1977), PATENT AND COPYRIC SELECTED UNIVERSITIES, (National Association of College and University ministrators) (1978) all show a marked trend (developing from the early sixtie publication) toward the development of an institutional policy and the asser

[2] A. PALMER, UNIVERSITY RESEARCH AND PATENT POLICIES PRACTICES AN (1962) (based on a survey of 915 institutions).

[3] For example, at the University of Pennsylvania, until 1966, any dis might affect public health was not to be patented for profit. In 1966, policy w allow patenting of such inventions with or without profit. L. SCHWARTZ and TITRUST AND REGULATORY ALTERNATIVES, 1175, 5th ed. (1977), University of Manual of Policies and Procedures (1957); Palmer, *Patents and University Res* AND CONTEMP. PROB. 680, 691 (1974).

individual and institutional ties to corporate sponsors are addressed in Section III.

A. Patenting the Results of University Research is Compatible with the University's Role as a Center of Investigation and Dissemination of Knowledge.

1. *Patenting Does Not Prevent the Disclosure of Research Results.*

One argument against the assertion of patent rights by an educational institution is potential conflict between the patent system, which confers exclusive rights to the manufacture, sale, and use of a discovery for seventeen years,[4] and the goals of academic science. Critics claim that patenting is a restraint on the free dissemination of knowledge, leading to secrecy in the laboratory and classroom in lieu of collegial exchange and openness in teaching. The patent system however, as authorized by the Constitution,[5] has as its purpose the disclosure of the invention to the public, and stands in contrast to withholding useful information indefinitely in the form of trade secrets. Patents restrict the use and sale of the invention, not its disclosure.

2. *Patenting Does Not Delay Publication for More than a Few Months.*

A more serious concern to the academic community is that the process of patenting has the effect of long delay of publishing the results of research. Full understanding by the faculty of the patenting process should keep this delay to a minimum. To patent, care must be taken to avoid disclosure (as by publishing in a scientific or technical journal) lest the invention be placed in the public domain. In the United States a patent may be obtained if a patent application is filed within one year after public disclosure or commercial use. Mere submission of an article to a journal does not constitute public disclosure so as to bar further patent rights.[6] Scientists should understand that they may publish when their

[4] The 1952 Patent Act, *codified at* 35 U.S.C. § 100-293. Riesenfeld, *The New American Patent Act in the Light of Comparative Law*, 102 U. PA. L. REV. 291 (1954) discusses the extent to which the Patent Act is consistent with legislation in other industrial powers as well as significant differences, especially in compulsory licensing. *See infra*, note 80.

[5] U.S. CONST. art. 1, § 8.

[6] Application of Schlitter, 234 F.2d 882 (C.C.P.A. 1956) rev'd held that a manuscript submitted for publication does not constitute a reduction to practice of a claimed invention, but only evidence of prior conception. Application of Borst, 345 F.2d 851 (C.C.P.A. 1965) held, however, that for purposes of 35 U.S.C. § 102(a), an invention described in an unpublished manuscript under government secrecy classification was unpatentable on the grounds of prior knowledge. Foreign rights cannot be obtained if there has been any disclosure of an invention prior to filing the patent application. However, under international convention, a patent application in the United States will generally preserve for one year

research has reached the point where it is ready to proceed wit
application, and that protection may require some postpo
publication when the investigations are in a more incipient st
publication need not wait until the Patent Office reviews t
publication should be delayed until application within or
assured. University patent management should help individu
reduce the time and effort necessary for filing. In the case of
faculty who experience any delay in the publication of their
and whose reappointment depends upon evidence of scholarl
(usually shown by publication) the university appointment p
should give consideration to the patent application itself in
stances where manuscript preparations has been postponed.

3. *Availability of Patent Rights Should Not Deflect the Course of Scientific Inquiry From Its Natural Goal*

The danger (to the academic community and the nation) o
university investigators from basic research projects to short-t
which promise immediate commercial reward is the most seri
ment advanced against patenting university-made discoveries.
fear that scientists, lured by the promise of excessive person
which have no place in the academic environment, will e
research of little intrinsic interest just to obtain patentable in
This danger can be minimized by a division of patent proceeds
the inventor and the institution which does not allow the inven
fit large enough to take him away from projects of greater intell
terests. Many university scientists have already opted for the a
(rather than commercial) laboratory because they enjoy the a
(rather than commercial) freedom which a university offers, and
they value a life of scholarly pursuit more than material reward
faculty will always find their research too interesting to compr
for financial profit. In addition to self-enforced intellectual st
strictly enforced rules on conflict of interest can act as a control
ty behavior. Moreover, the risk of committing university perso
facilities to projects of questionable academic merit can be mini
not eliminated by subjecting sponsored research projects to a pee
committee that is charged with maintaining university standard

Patent rights alone do not divert research from pure to
science. In an area of shrinking revenues and escalating costs,
sities are dependent for their existence on extra-mural funding.
ment contracts and subsidies, the alternative to private commerci
sorship (to the extent that such government money is still availa

the right to file abroad, even where there has been publication of the invention su
to the United States patent application but before foreign filing. (See note 85 an
panying text on the question of foreign rights.)

since the mid 1970's been moving from support of "pure" science to "applied" projects such as energy conservation and the prevention and cure of specific diseases. In 1976, National Science Foundation acting director Richard T. Atkinson lamented the change of emphasis in government-sponsored science programs, charging that basic research at American universitites and colleges was being undermined.[7] Thus, even government-sponsored research raises the question of influence on the direction of the university's overall research program,[8] and is not an issue which can legitimately be attributed to a decision to patent university inventions.

Concurrent with the shift in government-sponsored research, large United States corporations as well as foreign business enterprises have increased their investment in the kind of basic research that such firms shunned in the past.[9] The National Science Foundation reports that in 1980, basic research accounted for 13.6 percent of the nation's industrial research and development, the highest proportion in fifteen years. This change of emphasis in commercial research projects has occurred precisely at the time that universities have been strengthening their ties to private industry and have become more interested in assertion of patent rights. Finally, although it is true that at one time academic scientists were characterized by their commitment to "pure" rather than "applied" research, professors today are less willing to draw a line between the two areas. Gerald Holton observed in a keynote address delivered at the 1980 University of Houston Conference on Psychology and Society, that scientific research today is most frequently stimulated by "perceiving an area of basic scientific ignorance that seems to be at the heart of a social problem."[10]

4. *Patenting Speeds Development, and Brings the University's Discoveries to the Public in Useful Form More Rapidly.*

The Supreme Court enunciated a threefold purpose for the federal patent system in *Kewanee Oil Co. v. Bicron Corp.*[11]: to reward invention;

[7] N.Y. Times, Nov. 11, 1976, 40, col. 3.

[8] See comments by Dr. Jerome D. Wiesner, President of M.I.T. in N.Y. Times, Apr. 20, 1976 12, col 1; and by Michael I. Sovern, President of Columbia University, N.Y. Times, Oct. 4, 1981, 59, col 1. An extended discussion of the extent of government influence on past university programs is Markham, *Government Controls and the Legal Environment*, in RATE AND DIRECTION OF INVENTIVE ACTIVITY: ECONOMIC AND SOCIAL FACTORS 589 (1962). *See also* Dienner, *Government Policies Relating to Research and Patents*, 13 LAW & CONTEMP. PROB. 320 (1948).

[9] The *Wall Street Journal* of Sept. 3, 1981 reports an increased commitment of resources to "basic" research by, *inter alia*, Exxon, IBM, Intel Corporation, Goodrich, G.M., Eastman-Kodak Co., G.E., Monsanto. *See also* Bouton, "Academic Research and Big Business: A Delicate Balance," N.Y. Times Magazine, Sept. 11, 1983, § VI, at 62.

[10] Holton, "Science, Technology and the Fourth Discontinuity," p. 15, *reprinted* in 83 *Harvard Magazine* 29 (1981).

[11] 416 U.S. 470 (1974). The *Kewanee Oil* Court noted the "ripeness of time" concept

to promote disclosure and stimulate public practice of the inve
to assure that ideas in the public domain are free to all. The
justifications of the patent system are frequently advanced. Ke
row, for example, has argued that a free enterprise economy un
in reasearch because it is risky, and because it is unrewarded
monopoly rights creates incentives to invent.[12] Against this p
stands an impressive list of inventions which came about beca
instincts of the inventor, by accident, or as a result of i
speculation.[13] In the contemporary world, invention is usually
of intensive research by many individuals working together
laboratories, rather than the result of a "flash of genius" of an
scientist. As Judge Frank expressed it in a forward looking
opinion in *Picard v. United Aircraft Corp.*[14] "We may not need
rewards to inventors . . . . The patent laws are no more resp
great inventions than are copyright laws for great poems." B
still room, Judge Frank wrote, for patent reward to encourage i
risk large sums in new ideas.

Most inventions require extensive capital investment b
become socially useful or commercially available. This paper
today, the principal justification for the patent system has sh
reward to the inventor to protection for the developers. Co
recently recognized the importance of patent rights as an ince
vestment in development by enacting legislation[15] which all
businesses and universities to own patents made as a
government-funded contracts. Criticized on the grounds tha
and universities should not derive benefits from research
public taxes,[16] the declared intention of the Act is to remedy
ailures in United States productivity and the nation's competit
technological advance.[17] Following an exhaustive study of the
tent rights as incentives to development,[18] the explicit legis

of invention: "[If] Watson . . . had not discovered the structure of DNA, it
Linus Pauling would have made the discovery soon" at 479.

[12] Arrow, *Economic Welfare and the Allocation of Resources for Inve*
RATE AND DIRECTION OF INVENTIVE ACTIVITY, *supra* note 8, at 619-24.

[13] F. VAUGHAN, THE UNITED STATES PATENT SYSTEM LEGAL AND ECONOMI
AMERICAN PATENT HISTORY 3-13 (1956).

[14] 128 F.2d 632 (2d Cir. 1942), *cert. denied*, 317 U.S. 651.

[15] Pub. L. No. 96-517, The Patent and Trademark Amendments of 198

[16] For example, the Hon. Jack Brooks argued that the Act violates a basi
the contract between the citizens of the country and their government. Ass
rights to inventions made in research paid for by public taxes is a give-away o
to the people. H.R. REP. NO. 1307, p. 29.

[17] S. REP. NO. 96-480, setting forth the purposes of the amendments.

[18] *Government Patent Policy Study for the Federal Council for Science*
logy, 4 vols. (Harbridge House, Boston, Mass., 1968), known popularly as t
House" Report. The study concluded that permitted universities to retain ex
to patents from government contracts would more effectively promote util

pose is to promote development and utilization of inventions for productive purposes. Prior to the Act, the government had a poor record in the utilization of patents on a non-exclusive licensing basis. Less than four percent of the 28,000 patents held by the federal government were developed.[19] Without commercial development, a large number of the scientific advances that are now in practical application and use in our daily lives would have remained in books, or known only to a small number of investigators. As Yandall Henderson of Yale University expressed it, "It is properly the business of the creative scholar to see to it that, if possible, his ideas serve mankind in his own generation."[20]

B. Patenting Inventions Provides a Needed Source of Revenue, Preferable to Dependence on Government Subisdy.

1. *Government Support is Inadequate, and Leads to Excessive Regulatory Controls.*

Following World War II, the federal government's rapid expansion of support for academic science led many universities to neglect private sources of funds and become increasingly dependent on subsidy from Washington.[21] By the middle 1970's, it was clear that dependence on government funding was short-sighted, because monies for universities declined rapidly in the face of other perceived national priorities.[22] At the same time that the government was reducing its support, the cost of scientific research escalated rapidly. As Derek Bok, President of Harvard University, wrote in his 1981 report, the cost of equipping a science laboratory has increased much more steeply than the cost of living, while the government has reduced its support for such purposes by more than eighty percent since 1967. As a result, the quality of instruments and facilities in American universities has fallen below the level of laboratory equipment in Germany and Japan. The current estimated shortfall in university science equipment alone exceeds $300 million.[23] Today, the National Science Foundation views the alarming obsolescence of

following circumstances: (1) where the invention is not directly applicable to commercial use and (2) where the invention is commercially oriented but requires substantial private development, or applies to a small market, or its market potential alone is not sufficient to bring about utilization. McCaffrey, *Patent Policy in Federal Government Contracts and Grants*, 1 J. COLL. & U. L. 230 (1974) describes the conditions that the "Harbridge House" Report sought to correct.

[19] S. REP. NO. 96-480, p. 18.

[20] *Patents are Ethical*, 77 SCIENCE 324-25 (March, 1933).

[21] Dienner, *supra* note 8 at 328-30; Prager and Omenn, *Research, Innovation, and University-Industry Linkages*, 207 SCIENCE 379 (1980).

[22] *See* N.S.F. statistics reported in the N.Y. Times for 1979: 2 January § III 1, col. 4; March § 12:2; 11 March § IV 7:2; 18 April 21:4; 24 April 18:1 (all documenting drop in federal support to university scientific research).

[23] Bok, *Business and the Academy*, 83 HARV. MAG. 23, at 26 (May-June 1981).

research equipment in university laboratories as an acceleratin crisis.[24]

Government subsidies to universities, to the extent that th available, are accompanied by a plethora of regulations which sive to implement and lead to duplicative efforts. Richard Lyr dent of Stanford University, reflecting on the impact of federa at his institution, with particular attention to the regulations i Stanford's medical school in return for federal funds, wro university "ought to try, once in a while to look a gift h mouth. . . . [T]he closer the federal government gets to direct the core of our activities, the greater the danger that we shall escapably dependent upon that support, in which case our fight back when the regulatory going gets rough will be min

One of the difficulties accompanying federal subsidy and Richard Sproull, President of the University of Rochester, has is intrusion into the control of investigative reseach. The pro tensified by the fact that the work of the principal investig usually supported by more than one government agency, cases by as many as five or six. As federal funds decrease (constant dollars) and as the number of able and hungry inves creases, basic research becomes increasingly directed by feder managers. Resulting tension between the government and the u in matters such as pooled costs and accounting methods l ploitation of university resources.[26] In 1979-1982, accountin between federal auditors and colleges amounted to over $21 Richard J. McGowan, spokesman for the Inspector General of ment of Health and Human Services, explained that the gover trying to recover interest earned on funds that schools deposit before disbursing.[27]

Bok of Harvard sees other disadvantages. In addition to and cumbersome regulations, government subsidies impose on universities, depriving them of freedom to innovate. C regulations with elaborate reporting procedures incur high i costs, which (unlike expenses in the private sector) cannot along to consumers. Many scientists today prefer to obtain

[24] Branscomb, *National Science Budgets: Fiscal Years 1981, 1982 and* SCIENCE 514 (May 1981).

[25] Lyman, *Federal Regulation and Institutional Autonomy: A Universi View*, BUREAUCRATS AND BRAINPOWER: GOVERNMENT REGULATION OF UNIVERSITIES 4 ed. 1979).

[26] Sproull, *Federal Regulation and the Natural Sciences*, in SEABURY su 77.

[27] N.Y. Times, Oct. 19, 1979, 52:3, col. 3, May 9, 1979 § II, 6 col. 2; Fe II, 2, col. 1. The most recent "float" disclosures raised new objections from s sities, including Harvard, about government audits of universities which, th claim, fail to take into account the complex and decentralized structures of

funding which offers support with less control than they have experienced under government grants.[28]

2. *Government subsidy does not promote academic collegiality and free pursuit of knowledge in a better way than commerical sponsorship.*

A frequently voiced objection to university patenting of research is that it leads to rivalry among faculty, with secrecy and distrust replacing open exchange of scientific information.[29] The alternatives may be as bad or worse. To the extent that scientists are competing for inadequate funding, rivalry will exist in the laboratories. To the extent that individual scientists are seeking recognition for their achievements, there will be secrecy surrounding the progress of research. James Watson has given a vivid picture of the secrecy and intense rivalry between scientific teams in the investigations that led to the discovery of the double helix, in which rights to patents were not in issue.[30]

Nor is reliance on government subsidy (assuming, *arguendo*, that such money will be available for the support of university science) a guarantee of greater honesty and integrity in the drafting of research grant proposals or the supervision of contract performance.[31] Examples of the unfortunate results of cutthroat competition to obtain shrinking federal dollars abound. In 1981 alone, fraudulent reporting of research results which had been supported by federal funds were exposed at Massachusetts General Hospital ($750,000), at Yale University

[28] Bok, *The Federal Government and the University*, 58 PUB. INTEREST 80 (1980). Bok's view is supported by Richard B. Morse's article, describing bureaucratic entanglements and controls imposed by the federal government on colleges and universities. N.Y. Times, Dec. 19, § 3, at 14, col. 3.

[29] The AAAS Report on Patents raised this objection to university patenting, but concluded nevertheless that the benefits from patents outweighed the disadvantages. See Palmer supra note 3, at 682.

[30] J. WATSON, THE DOUBLE HELIX: A PERSONAL ACCOUNT OF THE DISCOVERY OF THE STRUCTURE OF DNA (1980); *see also* H. JUDSON, THE EIGHTH DAY OF CREATION (1979), F. PORTUGAL and J. COHEN, A CENTURY OF DNA (1978) for a story of secrecy, competitive haste, reluctance to share findings with fellow investigators (including personal animosities against women scientists).

[31] In 1982 Stanford University scientist Leonard Hayflick settled a suit against the government in response to charges which came close to ruining his scientific career. Hayflick had identified microorganisms that cause human pneumonia, and had made significant discoveries in the knowledge of aging of human cells. He also developed several vaccines used in treatement and research on humans and animals. He was a leading candidate to become head of the National Institute of Aging, when he became the target of investigations directed by James W. Schriver, the head of the National Institutes of Health. Attendant bad publicity cost Hayflick his government job and he resigned from his Stanford professorship. After some time spent living on unemployment relief, he obtained a tenured position at the University of Florida. Several distinguished scientists have signed a public protest lamenting the near destruction of an outstanding scientific career, and condemning the pro-[illegible] which allow release of unsubstantiated charges. N.Y. Times, Jan. 19, 1982

($1,000,000) and at Boston University ($1,000,000). Robert former Dean of Harvard Medical School, attributes these develo a "spirit of intense, often fierce competition . . . intense p publish, not only to obtain research grant renewals but in order for promotion."[32] Competition, as much as collegiality, is a fac the laboratories. The patent process should not be made the sca aberrant academic behavior.

II. POLICY

An effective patent policy requires the balancing of cor potentially conflicting equities: (1) the inventor; (2) the univ the general public; (4) the sponsor of research; and occasional developer of inventions, although frequently this is the same p sponsor. The wide variety of American colleges and universi large state institutions to small private colleges, affects the br ture and the details of individual institutional policies. The policy objectives should be applicable to all.

A. THE UNIVERSITY SHOULD CONSTRUE THE SCOPE OF PATENTABLE SUBJECT MATTER STRICTLY.

1. *The university should not act to patent inventions in that are ambiguous under current law.*

Patent law excludes some subjects from patentability. The ed categories are theories, methods, plans of action, and disc laws of nature. On the other hand, the Patent Act expressly patenting of a new and useful "process."[33] The practical disti tween what is patentable and what is not is a difficult one, given the courts trouble in the past. "The line between a paten cess' and an unpatentable 'principle' is not always clear. Bot ceptions of the mind, seen only by [their] effect wh performed.'"[34] the inherent difficulty in deciding when an in patentable and when it is not reveals the tension between would extend patentability when the law does not specificall and those who would restrict patentability to what is s authorized by Congress.

In *Parker v. Flook*[35] the Supreme Court, in a five to fou denied a patent to an alarm device whose novelty depen

[32] Broad, *Fraud and the Structure of Science*, 212 SCIENCE 137 (April 19

[33] 35 U.S.C. § 101.

[34] Parker v. Flook, 437 U.S. 584, 589 (1978). Justice Stevens was quoting Proctor, 102 U.S. 707, 728 (1880).

[35] A strong criticism of Flook, suggesting that its cautionary approach i portance of utility, is given by Dunner and Lipsey, *The Patentability of Life Technologies and Other Flooks of Nature*, 7 APLA Q.J. 190 (1979).

algorithm which updated the alarm limits so as to respond to changes in temperature, pressure, and similar variables, because all that was new was the mathematical formula. The majority reasoned that they had a duty to construe the patent statutes cautiously when asked to extend rights into areas wholly unforeseen by Congress. The Court relied on Justice White's opinion in *Deepsouth Packing Co. v. Laitram Corp.*:[36] "We would require a clear and certain signal from Congress before approving the position . . . that the beachhead of privilege is wider, and the area of public use narrower, than courts had previously thought." *Flook*, decided in 1978, rested on *Gottschalk v. Benson*,[37] in which Justice Douglas wrote that a mathematical expression for converting binary-coded decimals into pure binary numerals for use with digital computers was not a "process" within the meaning of 100(b). Douglas, as if anticipating criticism of the Court's interpretation, wrote: "It is said we freeze patents to old technologies, leaving no room for the revelations of the new, onrushing technology. Such is not our purpose."[38] In retrospect, *Flook* now appears to be the latest in a line of cases going back to *Graham et al. v. John Deere Co.*[39] in which the Court interpreted 35 U.S.C. § 103[40] to mean that the new test of "nonobviousness" did not lower the standard of inventiveness (e.g., the "flash of genius" standard) first enunciated in *Hotchkiss v. Greenwood* in 1850.[41]

While the *Graham*, *Deepsouth*, and *Flook* line of cases expressed this nation's historic antipathy to monopolies by construing the patent laws narrowly, since 1978 the Court has been moving in the opposite direction. In 1980, the Court again divided five to four in *Diamond v. Chakrabarty*[42] in upholding the patentability of some bacteria of the genus *Pseudonomus* produced by genetic engineering. Rejecting the dictum in *Flook* that patents should not issue in areas unforseen by Congress, Chief Justice Burger's majority opinion read the patent laws broadly, reasoning that the statutory language "process" and "manufacture" should be understood to include life forms, since Congress did not specifically bar such patents. *Chakrabarty* presents the current trend of the Court. In other developments, *Aronson v. Quick Point Pencil Co.*[43] restricted the reach of the federal patent laws to keep them from preempting state contract law in the protecton of royalty rights of a putative invention, even after the patent was held invalid. *Dawson Chemical Co. v.*

[36] 406 U.S. 518 (1972).

[37] 409 U.S. 63 (1972).

[38] Gottschalk v. Benson, at 71.

[39] 383 U.S. 1 (1966) (a spring clamp for plows and a liquid dispenser held "obvious" in relation to the prior art).

[40] Added to 35 U.S.C. by the Patent Act of 1952.

[41] 11 How. 247.

[42] 447 U.S. 303 (1980). A view of the change of direction effected by *Chakrabarty* is given in *The Supreme Court, 1979 Term*, 94 HARV. L. REV. 261 (1980).

[43] 440 U.S. 257 (1979).

Rohm and Haas Co.[44] held that congressional intent in 35 U.S. and (d) was to expand significantly the ability of patentees their rights against contributory infringement. Simultaneously *v. Diehr*[45] and *Diamond v. Bradley*[46] resolved a decade of con the patentability of computer software programs by a reversal in favor of patentability. As a result, the Patent and Trade began formulating new guidelines to determine which categor puter programs inventions are patentable.[47]

In an era of developing technologies in several fields, the will inevitably be faced with instances in which the patenta invention or discovery lies in an ambiguous area. Given t stance of the Supreme Court, the university should not initiate to extend monopoly rights over intellectual property that may belong to mankind. On a philosophical level, such a positio with the university's primary role as a center of teaching an Since patents are granted only pursuant to express statutory tion, it is sound legal doctrine to exercise restraint in the pate limiting activity to subjects and classes specifically enumer statute, or on which the courts have spoken with finality.[48] C practical level, this approach may save the institution time a in defending patent rights that should never have been exerc decision as to whether to proceed with the patenting process o because of questionable subject matter shall rest with the Pate tee of the university.

2. *All research and patenting in the field of biogenetic en should be governed by federal safety guidelines, whether by law or not.*

When the *Chakrabarty* Court held that there was no fu

[44] 448 U.S. 176 (1980).

[45] 450 U.S. 175 (1981).

[46] 450 U.S. 381 (per curiam) (1981).

[47] Moskowitz, *The Patentability of Software Related Inventions after Di* ley, 63 J. PAT. OFF. SOC'Y. 222 (1981).

[48] A. Dellar, DELLER'S WALKER ON PATENTS § 14 at 100 (2d ed. 1964). "[T] is statutory. . . [W]e should take care to fill the Holmesian interstices of th judge-made law only under the gravest and most impelling circumstances." I 529 F.2d 1324, 1333 (C.C.P.A. 1976).

[49] "The Sunshine Vitamin Case" concerned a discovery by Professor o Biochemistry Harry Steenbock at the University of Wisconsin, who patented ducing Vitamin D with ultra-violet rays. Steenbock's patent produced $7,00 enues for WARF. In action for infringement, the court ruled that the patent w cause ultra-violet rays are like the sun and the sun's energy cannot be pate Technologists v. Wisconisn Alumni Research Found. 146 F.2d 941 (9th Cir.19 is of additional interest because it discusses the idea of invalidation of exclu the sake of the public good. The process had been kept from manufacture garine, whose customers are less affluent than the customers of butter, and ably needed more Vitamin D than butter consumers.

distinction between living and non-living matter with respect to patent law, the patenting of various new life forms became possible (provided the genes had been modified). At the same time, however, the Court invited Congress to review the decision with specific reference to a possible amendment to 35 U.S.C. § 101 "so as to exclude from patent protection organisms prodcued by genetic engineering."[50] The opinion recalls that Congress has, in the past, determined that changes in the patent law are desirable as a means of regulating research and development. For example, in 1976 Congress exempted from patent protection inventions "useful soley in the utilization of special nuclear material or atomic energy in an atomic weapon."[51] At this writing, since Congress has not acted to exclude biogenetic engineering discoveries from the patent system, the university should proceed to patent in this area. Gene-splitting techniques yield products such an interferon with great potential as a remedy for certain virus disease and treatment for cancer.[52]

Two arguments which do not rely on statutory interpretation are made for eliminating new forms of living matter from the patent process.[53] The first is that it is too hazardous. The organization of carbon into living organisms is qualitatively different from organizing elements into chemical compounds. Organisms, unlike compounds, reproduce themselves. Therefore, any mistake, or danger, that results from experimental research runs the risk of being difficult or impossible to remove from the environment. The counter-argument is that even if Congress acts to eliminate new genetic material from patentable subject matter, university and industrial research can and will continue in this field of science. Thus, while the denial of patentability will not prevent hazard, it will curtail investment and commercial development. More-

[50] *Chakrabarty*, 447 U.S. at 318. An argument that patentability of life forms should be settled by statute is given in The Patentability of Living Organisms under 35 U.S.C. § 101: *In Re Bergy*, 91 HARV. L. REV. 1357 (1978). Two articles by Behringer (*Germ Warfare in the Patent Courts*, 31 HASTINGS L. J. 883 [1980] and *Microorganism Patents*, 63 J. PAT. OFF. SOC'Y 128 [1981]) take the position that *Chakrabarty* was correctly decided, i.e., there is no legal significance between dead and living compounds.

[51] 42 U.S.C. § 2181(a) (1976).

[52] Interferon, first isolated in 1957, is now produced by new techniques devised by Dr. Charles Weismann, Professor of Molecular Biology at the University of Zurich, and Dr. Walter Gilbert of Harvard. Patent rights are held by Biogen, S.A. of Geneva, Switzerland and Cambridge, Massachusetts and the Schering-Plough Corporation, the world-wide licensee.

[53] I am indebted to Professor Jonathan King, Department of Biology at Massachusetts Institute of Technology, for sharing two unpublished papers with me: Against Patenting Modified Life Forms (1980) (sponsored by the American Society for Microbiology in cooperation with the Committee on Science and Technology, U.S. House of Representatives) and Protection of Publicly Funded, Publicly Available University Biomedical Research is Essential to the Nation's Health (1981) (Testimony presented to the Subcommittee on Investigations and Oversight, Committee on Science and Technology). The arguments discussed in the body of the paper are derived in large part from these two papers, although my conclusions are different from Dr. King's.

over, the control of science for purposes of safety is not pro responsibility of patent law. As articulated in *In re Anthony*,[54] sideration of safety is one element of the concept of utility. For a compound that is unsafe for use because of extreme toxicity w be "useful" within the meaning of § 101. The presence of some a degree of risk, however, does not exclude the subject from pat under § 101. Federal regulatory agencies such as the Food and ministration, not the Patent Office, have responsibility for the products in the marketplace.

The second argument against the patenting of life form patents in the field of genetic engineering represent the pr propriation of a public resource. Biogenetic and biomedical re opposed to other scientific inquiry has been financed almost e government funds, beginning with the Public Health Servic 1944, and continuing through the support of the National In Health and the National Science Foundation. The public shoul to buy back what it has already paid for, simply because privat have taken the last steps in bringing the fundamental work to th obtaining patent rights. This argument, unlike the argument o of hazards, does not address itself specifically to the patent forms. It applies equally to other products of biological and b research (e.g., new processes of manufacturing insulin, and th tion of new vaccines). The response to the public funds argum Congress has recently chosen to entrust patent rights in invent on government contracts to universities and small businesses, ly because Congress determined that, without such incentive ment lags and the results of scientific inquiry do not becon useful.[55]

In recognition of the fact that genetic research presents the general environment and to specific strains of plant and a N.I.H. guidelines have been written to impose safety measu recombinant DNA research which is supported by government The university should observe these guidelines in *all* its r genetic engineering, *whether or not* supported by the governm a precaution contributes to the general safety of the univers community at large. The self-imposed restraint will not b limitation on freedom of action. The N.I.H. and the Departme

[54] 414 F.2d 1383 (C.C.P.A. 1969). The idea of safety as a component of u in dictum in Funk Bros. Seed Co. v. Kalo Inoculant Co., 333 U.S. 127 (1948

[55] Similar legislation for inventions made on other government contra sored by Rep. Allen E. Ertel (D. Pa.) and Sen. Harrison Schmitt (R. N.M.) (S bills received support from George Keyworth, Director of the Office of Scienc logy. See *Chemical and Engineering News*, Oct. 19, 1981, at 24f. The measur by Hyman G. Rickover who suggested, in lieu of the legislation as written, c tent rights at public sale through competitive bidding.

[56] 43 Fed. Reg 33,042; 33,087; 33,126 (1978).

and Human Services have simplified the rules by reducing the number of prohibited activities and eliminating the N.I.H. review requirements for certain kinds of experiments.[57] The new rules entrust certain decisions on genetic research to local "bio-safety" committees at the institutions proposing the research. The university's bio-safety committee should be distinct in membership from its Patent Committee.

B. The University's Assertion of Rights to Title in Inventions will Depend on Source of Funding and Other Subject Matter.

1. *The university should assert title to government sponsored research.*

Until 1981, patents resulting from research funded by the government belonged to the government, and the government's policy was to license on a royalty-free, non-exclusive basis. The conceptual arguments in favor of this arrangement include: (1) the government should not be in a position to play favorites with private interests; (2) unfairness results from charging users for publicly held information; (3) the government should not be in a position to compete with private parties.[58] After many years of public debate on means to increase the utilization of the results of government-funded research, the Patent and Trademark Amendments of 1980[59] provided universities and small businesses the right of first refusal to title in inventions made in performance of government grants and contracts. The Act takes precedence over approximately twenty-six conflicting statutory and administrative policies that came into force following World War II.

The university, of course, is not required to assert its right to title for such inventions. Theoretically, the argument that what the people have paid for belongs to the people could operate to inhibit the assertion of these rights. The university should, however, assert title to and license its inventions made with government funds so that the congressional purpose of fostering the development of United States industry will be furthered.[60] For the first time in the history of government-university

[57] 46 Fed. Reg 59,734 (1981); N.Y. Times, Feb. 9, 1982 § III, 1.

[58] Schwartz and Flynn supra note 3, at 1211. These positions are developed by Kreeger, *The Control of Patent Rights Resulting from Federal Research*, 12 Law and Contemporary Problems 714 (1947) and Leontief, *On Assignment of Patent Rights on Inventions Made Under Government Research Contracts*, 77 Harv. L. Rev. 492 (1964).

[59] 96-517: An Act to Amend the Patent and Trademark Laws, chapter 38, §§ 200 ff. An explication of the new law's principal changes is in Smith, *Uniform Patent Legislation*, 8 J. Coll. & U.L. 1 (1981). Prior to 1981, some "title" agencies always retained title to inventions; others granted blanket waivers allowing title to vest in the contractor; others allowed universities which could prove "technology transfer capability" to take title by Institutional Patent Agreements (IPAs) which themselves varied widely among agencies who used them.

[60] 35 U.S.C. § 200 (Supplementary Pamphlet 1955 to 1982).

relations, the patent system is being used to effectuate a part transfer the products of university research to the public.

On a practical level, it could be argued that the 1980 Act p many obstacles and difficulties to make assertion of univer worthwhile. However, an analysis of the potential difficulties by the new Act leads to the conclusion that they are outweig benefits. First, the Act requires that university contractors disc tially patentable inventions to the funding agency "within a time after it [the invention] is made."[61] From the institution view, the difficulty is that the university patent committee management firm may not become aware of an invention as s made. This clause of the Act requires that the university est cient reporting procedures so that disclosure by the inventor propriate university office take place promptly in order to co the reporting requirements of the Act. Some concern that th requirements will generate too much paperwork by investigat stitutions has been met with a disclaimer by Charles Lowe, a N.I.H., who assured concerned academic groups that paperwo proliferate and that "not every new cell need by reported."[62]

Temporary draft regulations issued in the summer of 1981 individual funding agencies to insert an additional clause in t requiring universities to notify the agency of an invention at months before a manuscript was submitted for publication o made available to the public.[63] The optional requirement was i the regulations at the insistence of the Departments of E Defense. James Denny, assistant general counsel for patents at Department and chairman of the inter-agency committee tha the draft regulations, claimed that even oral presentation at a constitutes public disclosure sufficient to bar foreign patent r

Vociferous objections to the requirement by several u organizations such as the American Council on Education, the Graduate Schools and the American Association of Universiti Research Council[65] led to a modification in the new regulatio ed in February 1982.[66] The present requirement is notifica agency within two months after the inventor discloses the i the contractor. The disclosure must identify any publicati

[61] 35 U.S.C. § 202 (c)(1).

[62] 213 Science 1234 (September 1981).

[63] O.M.B. Bulletin 81-22 (1 July 1981).

[64] 213 Science.

[65] In letters to the Office of Federal Procurement Policy from Sheld General Council, A.C.E. (August, 1981); Harold Bremer, Patent Counsel, W 1981; McCartney, President of SUPA; (August, 1981) and Willard Marcy, of R dation (August, 1981).

[66] O.M.B. Circular A-124.

public use of the invention, and state whether any manuscript describing the invention has been submitted for publication. Where there has been submission for publication, prompt additional notification is required if the manuscript is accepted for publication.[67] The new regulations, while an improvement over the old requirement of pre-notification before submission, now impose a second notification requirement on contractors and an additional responsibility of communication with inventors who are awaiting notice of action on submitted manuscripts. The new regulations simply side-step the question of loss of foreign patent rights.[68] If the university does wish to protect foreign rights, caution would dictate filing of the patent application before any manuscript is submitted for publication.

A third potential difficulty under the new Act conerns the march-in rights rights retained by the funding agency.[69] As in the past, the government reserves the right to require contractors to grant licenses to third parties on reasonable terms where it has been determined that the contractor has not taken effective steps to promote its utilization. The present Act's march-in rights are different in two respects. Prior law allowed an agency to march in if a contractor has done nothing to utilize an invention within three years. Now there is no time limit in the Act or in the regulations. The second difference is that prior march-in rights did not consider field of use, so that a contractor who had granted a license in one field of use might or might not experience march-in rights in another field.[70] Now, the regulations explicitly consider each field of use separately. As before, they may be exercised for reasons of health, safety, or public need. Additionally, under the new Act, they may be exercised when there has been failure to comply with the section giving preference to United States industry.[71]

The difficulty with the new march-in rules is that they may diminish the potential value of the patent to investors, because they merely specify a march-in after a "reasonable time."[72] The need of an explicit time limit has been urged by many university patent attorneys, patent management firms, and by Peter Barton Hutt, former general counsel for the Food and Drug Administration.[73] While the new legislation imposes reporting burdens on universities that are internal (communications with inventors) and external (filing notices with the funding agency), a

[67] *Id.* at Attachment A, c.(1).

[68] *Id.* at f.(1) imposes an obligation on the contractor to protect the interests of the United States in the invention "throughout the world." Foreign rights are an unsettled area in the law. *See*, Page, *Commentaria: Certain Relationships between Situations Taking Place in the United States and Rights to Patents in Other Countries*, 54 J. PAT. OFF. SOC. 278 (1972) on unanswered questions concerning foreign rights.

[69] 35 U.S.C. § 203.

[70] Smith, *supra* note 59, at 37-41.

[71] 35 U.S.C. § 204.

[72] O.M.B. Circular A-124, j.(1).

[73] 213 Science 1234-5.

answered questions such as protection of foreign patent right time within which march-in rights will be exercised, these pr not constitute sufficient reason for the university to disclaim i patent inventions made on government-funded research.

2. *In commercially-sponsored research, rights to inventions governed by a contract between the sponsor and the univers without the establishment of a separate research founda*

The contract between a commercial sponsor and a universi ly always provides that the sponsor acquires patent rights to that result. These rights may be in the form of title or exclusiv As universities come to be more dependent on funds from the p tor in the face of declining government support, it is essenti stitutions retain their traditions of self-governance and freedom.

Currently, two basic patterns are emerging in the arrang tween education institutions and industrial sponsorship. familiar pattern of direct support to the university, governed tract providing for scientific investigation carried on at the un faculty. The other is a "research institute" organizationally di the university, concluding its own arrangements with outsid and sharing in the investment and financial rewards of the cess.[74] An early outstanding example of the research institut the Wisconsin Alumni Research Foundation (WARF), esta 1925 by a group of alumni who were outraged at the universi of a gift of "tainted" money from the General Education Boar by John D. Rockefeller. Since its founding, WARF has e distributed to the university about $100,000,000 from royalties valuable patents. Other financially successful research founda made money from patents for the universities of Indiana and F more recent example of such an arrangement is Washington Technology Associates (WUTA) in St. Louis, an off-campus f uses Washington University faculty members for research sulting, has the university treasurer as its chairman, and the dean as president. WUTA functions as a research and develop sharing patent revenues with sponsors.[76]

Despite the financial success that some research institut

[74] Lepkowski, *Research Universities Face New Fiscal Realities*, Chem gineering News (Nov. 23 1981), pp. 23ff.

[75] Omenn, University-Industrial Research Linkages: Arrangements Bet Members and Their Universities (unpublished paper presented at AAAS Symp pacts of Commercial Genetic Engineering on Universities and Non-Profit Washington D.C., January 1982).

[76] Lepkowski, *supra* note 74.

there are strong arguments favoring the University's direct contractual relationship with outside sponsors, rather than the indirect relationship possible through a separately established institute. Management of an institute would be, in part, in the hands of non-faculty professionals. This separation makes possible the implementation of policies with which the university faculty do not agree. If, on the other hand, faculty themselves becomes involved in the running of the institute, time away from campus laboratories increases and peer review of research may diminish. Yale University, which does not have a separately organized research institute, announced in 1982 a three year, $1,100,000 research contract with Celanese Corporation under which Yale will conduct research for Celanese Corporation on the composition and synthesis of enzymes.[77] The contract differs from many such agreements because it mandates that Yale conduct specific research for the company. Approval for the project came from Yale's faculty patent committee, and was given only after much debate and negotiation. An important compromise was reached with the Celanese Corporation, which desired to keep research findings secret. Yale agreed to forty-five days, after which unlimited publication is permitted. If the agreement had been concluded with a research institute under the aegis of Yale, faculty control over the terms of the contract would have been reduced.

3. *Patent rights to inventions made without extramural sponsorship should vest in the university in the fields of medicine and health; in the inventor in all other areas.*

University reporting procedures should require that notice of all inventions and discoveries be sent to the Patent Committee. One of the responsibilities of the Committee should be to determine whether the research that produced the invention had outside sponsorship. Another responsibility should be to decide whether the discovery or invention relates primarily to medical or pharmaceutical therapeutics or public health. The decision should be made without regard to the division of the university in which the research took place. If, in the determination of the Committee, the invention has value for medicine, pharmacy or public health, the university should assert right to title in the invention.

Entrusting inventions in these fields to individual dispositions would generally not serve the public good. There are, of course, great scientific investigators who are also selfless individuals. Jonas Salk, who perfected the vaccine against polio, chose not to assert patent rights, granting the formula without charge to any manufacturer who was capable of producing it.[78] Similarly, Selman Waksman, who discovered the technique of screening oil samples to produce streptomycin at

[77] N.Y. Times, Feb. 18, 1982, § II, at 1, col. 1; Feb. 21, 1982, § IV, at 7, col. 1.

[78] R. CARTER, BREAKTHROUGH: THE SAGA OF JONAS SALK, 233-34 (1966).

Rutgers University was able to convince Merck to manufactu
on a unrestricted basis, while the patent rights remained with

United States patent law does not provide for compulsory
and it would be unrealistic to expect all inventors to be as selfl
and Waksman. Justice Douglas' dissent in *Special Equipm*
Coe[80] expresses a common fear: "Take the case of an in
discovery which unlocks the doors of science and reveals the
dread disease. Is it possible that a patentee could be permitt
press that invention for seventeen years . . . and withhold from
the benefits of the cure?"[81] Therefore, to prevent either the e
of inventions in these fields for private profit or the suppressi
tent without development, the university should take title to
tion. The university's purpose in doing so should be (1)
development and delivery to the public as rapidly as possible;
use university resources to ensure quality control of the new

In order to implement its assertion to patent title, the
should include a patent rights clause in employment cont
faculty. Absent such an agreement, the university would ha
shopright in the patent, that is, a free and indefeasible license
invention in the course of the university's regular program c
and research. The only exception would be where the
employer could show beyond question that the employment w
specific purpose of making the invention. An invention i
general employment cannot be claimed.[83] It is highly doubtful

[79] P. TEMIN, TAKING YOUR MEDICINE: DRUG REGULATION IN THE UNITED STAT
Temin gives a good account of the pharmaceutical industry practice of pate
molecular changes to create new protected products. The book also has an a
position of Senator Estes Kefauver's unsuccessful attempts to curtail exploitati
pharmaceutical concerns, in part through compulsory licenses, in part by speci
to increase FDA surveillance of industry practices.

[80] 324 U.S. 370 (1945). A full discussion of compulsory licenses is n
scope of this paper, although certainly relevant to the issue of preventing the s
inventions and discoveries which have value for medicine and health. With
tions, such as the Clean Air Act (42 U.S.C. § 7608 (Supp. I 1977)), the United
conspicuously alone among major industrial countries in not having a compu
ing statute. The extent to which the judicial process provides something like t
of relief (by denying patentees injunctive relief in cases of misuse or antitrust
discussed by Arnold and Janicke, *Compulsory Licensing Anyone?* 55 J. PAT. O
(1973) and Sease, *Common Sense, Nonsense and the Compulsory License*, (19
OFF. SOC'Y 233. BOWMAN, PATENT AND ANTITRUST LAW 244 (1973) calls compulsc
"vastly overrated remedy"

[81] 324 U.S. at 383.

[82] For example, the University of Toronto imposed strict quality control
facture of insulin, discovered by F.G. Banning at the University in the early 1
supra note 79, at 55-56

[83] Pure Oil Co. v. Hyman, 95 F.2d 22 (7th Cir. 1938). United States v. L
denser Corp., 289 U.S. 178 (1933) established that the government, as empl
more than a shop-right to employee's inventions absent a contract to the contra
fic employment to invent. *See also* Board of Educ. v. Bourne, 7 So.2d 838 (Fl

paid to a faculty member is sufficient consideration to be the basis of assertion of patent rights, and the offer of continuing employment is no consideration to a faculty member who is already tenured.[84]

If the patent committee determines that the invention falls in an area in which the inventor has right to title, the inventor will then realistically have a choice of three options: (1) he can dedicate his invention to the public by publishing his findings and taking no action to patent; (2) he can assign the invention to the university, and receive in proceeds the usual share given an inventor; (3) he can, on his own initiative, patent the invention and dispose of the patent rights himself. An inventor following the third plan incurs a double obligation. First, any assignment of license, or agreement to assign or license an invention developed in the course of university employment, using university facilities, must be submitted to a committee for a ruling on possible conflicts of interest arising from the disposition of the patent rights and employment at the university. Second, the inventor will owe the university a rental fee for the use of laboratories and instruments. It will be the responsibility of the university to place a valuation on the funds, space, and facilities that the scientist used to produce the invention. Ordinarily this calculation will *not* include payment of salary from unrestricted funds of the university, nor the inventor's use of office and libraries.

Student inventors (graduate and undergraduate) who are supported by scholarships, fellowships or assistantships paid for by the sponsor's funds will be covered by the same policy as faculty. If a student generates a patent independently, without extramural funding, she or he will have the same options as faculty.

C. Patent Management Should be Entrusted to an Outside Patent Management Firm.

The process of applying for patents is time-consuming and technical, requiring legal expertise. It cannot be accomplished unaided by the regular academic and administrative personnel of the university. Four alternatives are available for getting the work done.

1. *"In-house" patent management.*

The university could engage its own staff for patent management, thus obviating the need of any outside assistance. This "in-house" alternative has been chose by a few large universities such as Stanford,

[84] T. Blackwell, College Law: A Guide for Administrators 175-80 (1961). For a discussion of university copyright and faculty scholarly writing, see Simon, *Faculty Writings: Are They "Works Made for Hire" under the 1976 Copyright Act?*, 9 J. Coll & U.L. 485 (1982-83).

California Institute of Technology, and Massachusetts In Technology. This solution would not be worth the added adm cost in most institutions, where patent revenues would be con the additional overhead.

2. *Management by an affiliated research institute.*

A university-affiliated foundation or institute could do t management for the university. This option offers greater fl employ commercial methods in development and promotion than the "in-house" approach. It is used by the University of V Washington University, and Cornell University's Cornell Resea dation, Inc. (CRF). At Cornell, officers and directors of CRF from the faculty, administration, trustees, and alumni. CRF's f to manage patenting, to protect inventions after patenting, an tain the licensing program. CRF employs Research Corporati vide patent analysis.[85] The disadvantages of this model separate institute removes control from the rest of the universi in less income for the university because the institute expects the proceeds, and still requires an outside patent manageme some of the work.

3. *Private legal representation.*

The university could engage a private law firm to handl business of patenting and assume the other responsibili Although this model may initially appear to be less expensive, may be more apparent than real. Services provided by priva would not include the variety of services (patent salesman sulting with faculty, aid with institutional reporting) that pare ment firms offer. The university would have to incur the c viding those other services itself. The combination of privat and "in-house" management appears to be less efficient, and less costly, than entrusting the entire operation to a specializ firm, in which all activities are under unified direction and c

4. *Patent management firm.*

Patent development and marketing by a specialized firm distinct advantages. It permits the university to maintain an ac ting program with minimum capital outlay. It provides the w of services at no immediate cost. The advantages and disad non-profit and for-profit management firms require individual tion.

Non-profit: The foremost example of non-profit patent m

[85] ... Copyright Policies at Selected Universities, *supra* note 1

is Research Corporation, created in 1912 by Frederick Gardner Cottrell, a professor of physical chemistry, inventor, and philanthropist. The general purposes of Research Corporation are to advance scientific knowledge and technology, to support scholarly research in the sciences, and to make patented inventions more available and effective for the public good. Research Corporation operates two grants programs, the Cottrell Research Program for the support of physical science at graduate universities and public undergraduate institutions, and the Cottrell College Science Program, to aid scientific research at private undergraduate institutions. In addition, Research Corporation maintains an Invention Administration Program (IAP) for the purpose of making university inventions available to the business community and ultimately to the general public. Research Corporation's services typically include the preparation and prosecution of its patent applications. Once the patent is assigned, Research Corporation attempts to interest industry in licensing it, usually on a nonexclusive basis, but occasionally on a short-term exclusive basis if the licensee faces large-scale development costs. Although arrangements with institutions vary, Research Corporation usually keeps forty-two to forty-seven percent of the proceeds. The balance goes to the institution, which shares its revenue with the inventor according to institutional policy. Research Corporation uses what it makes in the IAP to support its grants programs which over the years have yielded more than $18,000,000 in awards to colleges and universities.[86]

Research Corporation offers two advantages: it uses its net income to support education programs, and it is willing to maintain a nonexclusive contractual agreement with a university, leaving the institution free to make other disposition of patent rights when it is profitable to do so. Thus the university would be free to contract with a commercial sponsor, arranging for licensing rights on an individual basis, at the same time that Research Corporation agreements were in effect.

For-profit: Patent management services are available from private enterprise on a profit-making basis. An example is University Patents, Inc. (UPI), a young and relatively aggressive firm which presently has about ten universities as clients. UPI provides the same services as Research Corporation in filing and prosecuting patent applications, as well as licensing to commercial companies and patent defense. It also undertakes to maintain on-going communications with science faculty to educate them about possible patentability of their findings and in evaluating the novelty and marketability of their discoveries. The advantages of UPI for the university are (1) provision of a wide range of services; and (2) an eagerness to maximize profits, which are shared with the university on a contractual basis.

[86] Information derived from *Research and Invention*, (newsletter of the Research Corporation); telephone interview with W. Stevenson Bacon, Research Corporation Director of Communications (Sept. 1, 1981).

The virtue of a for-profit firm lies in its greater potential as earner for the institution. The risk is that the firm may not shov or it may go bankrupt. Ultimately, the choice becomes a busir ment of the university. One possibility is for the university tc risk with a for-profit patent management firm for a trial period o than five years. At the end of that period, it would be in a p evaluate the amount that has been earned and to determine w continue the working agreement. In negotiating the first cor university should try to provide for an opportunity to term agreement prior to the end of the five-year period, upon notic

D. Proceeds Should be Allocated with Priority Given to S the University's Research and Institutional Program, wi Reward to the Inventor.

1. *The university's share of patent revenues should be calcu net proceeds on a rising scale.*

Colleges and universities vary widely in the proportion revenues that they retain. The 1977 survey conducted by the University Patent Administrators revealed more variety on this any other.[87] The median answer (from forty-eight respondir tions) was two-thirds to the university and one-third to the Although exact comparisons with earlier surveys cannot be m pears that in the last fifteen years royalty shares retained by t tions have tended to decrease. The adoption of a sliding relatively new development which may help reverse the trend. sliding scale, as income from the patented invention increase the university's share, while the inventor's share decreases. T scale plan fosters the primary purpose of the university pate cess, which is increasing institutional income in period o distress for higher education. Also, it recognizes that a relati percentage of the proceeds may be a meaningful sum to an ind ventor, compared to the substantial amount of money which is maintain a university science program.

Some institutions have decided that cooperation between r will be more likely if the potential rewards to a single inventor high. President Bok of Harvard has also pointed out that the should not take too high a share or professors will either igr possibilities or find some way to circumvent the system.[88] H M.I.T. have identical scales: in each case the university retain percent of the second $50,000, and eighty-five percent of all excess of $100,000. The remainder goes to the inventor. The of Pennsylvania retains less for the institution: fifty percent

[87] Survey, supra note 1, at 9-11.

[88] Bok, supra note 23, at 31.

$200,000, seventy-five percent of the next $800,000, and eighty-five percent of the next $4,000,000, again with the balance to the inventor. The University of Wisconsin (more properly WARF) retains eighty-five percent of all patent income, allowing fifteen percent to the inventor. This scheme appears atypical. Princeton University is an example of a small institution which gives the inventor somewhat more: the university takes fifty percent of the first $50,000, sixty percent of the second $50,000 and thirty percent of any excess amount. At Princeton, an inventor who has the right to title in a patent and chooses to assign the patent to the University gets eighty-five percent of all proceeds.[89]

Balancing support to the institution and reward to inventors on a sliding scale is compatible with general university policy objectives and also with the new Act's provisions for patents developed on government contracts. Section 202(c)(7)(C) requires that the university share royalties with the inventor (a fixed amount is not specified) and use its own share to support scientific research and instruction. For these purposes, the Harvard-M.I.T. allocation of proceeds appears equitable.

2. *The university should use its share of patent revenues primarily for the support of scientific research.*

The university's distribution of its proceeds should recognize the accomplishments of the inventor and his department but should also, in the interests of fairness to the rest of the university, be used to support other science departments and divisions of the institution. By maintaining the general level of all the science programs the university will be in a better position to attract research contracts and a healthier intellectual environment will benefit both faculty and students. One-third of the university's net share should be allocated to the general support of research at the university, and two-thirds should be awarded on a competitive basis, after reviewing submitted research proposals, with preference going first to the inventor's department, and next to the inventor's division or school. University-wide participation in the submission of proposals should be encouraged. The review and allocation procedure should allow patent revenues to be awarded to any investigator in any of the science departments on the basis of intellectual merit.

3. *Part of the proceeds should be used to reward faculty in disciplines outside the sciences.*

The one-third of the proceeds that the university retains for the general support of university research should not be restricted to the support of science. It is true that science is expensive, but it is the area of the university that receives the most from government and industry. It is also

[89] Information obtained from Jean A. Mahoney, Assistant to the Director of the Office of Research and Project Administration at Princeton. (February, 1982).

the only division of the university which is in a position to ben
the Economic Recovery Tax Act of 1981,[90] which provides a cre
payers who support science, at American universities. M
members of science faculties, particularly those with patente
tions, have the opportunity to do consulting for outside firms,
earn additional income.

Faculty disciplines which do not provide opportunity for ea
ditional income nevertheless make essential contributions to th
tion of the university, a reputation which generates support fo
and opportunities for well-paid consulting jobs.[91] While unive
not egalitarian institutions, gross inequalities in faculty ea
necessarily impair the idea of collegiality. Disparities are al
since faculty who are off-campus consulting impose a burde
colleagues by their absence. The university should, therefore,
to time use part of the proceeds retained in the general researc
award grants to faculty in the social sciences and humaniti
grants should be made on the basis of the academic merit of
research proposals. Awards should be restricted to faculty w
have consulting opportunities or other extraordinary income
with their university employment.[92] At least one such resea
should be made per year.

E. THE ADMINISTRATION OF PATENT POLICY AT THE UNIVERSITY BE ENTRUSTED TO A BROADLY-BASED REPRESENTATIVE COMM

1. *The faculty component of the committee should include science and non-science members.*

The faculty (or faculty senate) should elect five members t
mittee. Science faculty do the creative work that produces pa
are most immediately affected by university patent procedu
should, therefore, have the largest representation on the com
least one scientist should be from the medical school. Ne
balance, objectivity, and expertise in other areas are needed. T
would be desireable to have at least two faculty members on th
tee who respresent disciplines that can contribute to enlighte

[90] 26 U.S.C. § 44 (West Supp. 1967-1982).

[91] For the ideas in this paragraph I am indebted to Ackerman, The
Ideas, 90 YALE LAW J. 1131 (1981). Among Ackerman's proposals with which
a progressive tax should be imposed on faculty consulting fees, to effect a
with non-consulting faculty, who suffer "damages" in the form of loss of co
increased committee responsibilities, which in turn impair their own scholar
ness.

[92] For example, Professor John Chowning of Stanford University's Musi
who sold his copyright on a software chip used in music synthesizers to Ya
for $700,000 would not be qualified to submit a proposal for these awards S
supra note 74.

trepreneurial and consulting activities of the faculty. The state's Fair Political Practices Commission is considering regulations that would require the university to disclose all its financial links with private industry. Among the concerns are: that faculty members directed their research to the needs of private industry and failed to publish their findings; that faculty members held stock in firms with patents developed in university laboratories; and that faculty members testified before government agencies and legislative panels as "impartial" witnesses, even though they had a financial interest in the outcome of the hearings. Ultimately, the University of California responded to national concern over conflict of interest. The university required some professors who held research contracts with private corporations as well as executive positions in these corporations either to end or change their relationship with the companies.

Robert Linnell, Director of the Division of Institutional Studies at the University of Southern California, a Professor of Chemistry and a former Senior Science Administrator at the National Science Foundation, has concluded that conflict of interest problems are pervasive at American universities, "right down to the two-year community colleges." Also at the University of California, Raymond C. Valentine, Professor Agronomy, after trying unsuccessfully to get the university to establish an institute for genetic engineering in agriculture, established his own company, Calgene, in which Allied Chemical has purchased a twenty percent interest. At Harvard, molecular biologist and Nobel Laureate Walter Gilbert is the Chief Executive Officer of Biogen, a biotechnology firm with offices in Switzerland and Cambridge, Massachusetts. Harvard has asked Gilbert to take a year's leave of absence while it reviews current policy on the question of whether faculty should be operating officers of commercial companies. At Harvard and Stanford, where outside employment is allowed, there are reports of rivalries between laboratories led by professors with different business interests, working on competing commercial projects. Graduate students have been sworn to secrecy about their work.[94]

Developments such as these, raise questions in the areas of intellectual conflict (attention given to business affairs rather than teaching and scholarship) and time conflict (hours spent as consultants off-campus instead in the classroom and the laboratory). These problems require university-wide rules. The patent committee, while being expected to call any infringement of university policy to the attention of the administrative officer charged with its implementation, would not determine the university's conflict of interest policy.

[94] Information in these paragraphs is drawn from Omenn, *supra* note 75; Lepkowski, *supra* note 74; Fox, *Can Academia Adapt to Biotechnology's Lure?*, *Chemical and Engineering News* Oct. 12, 1981, pp. 39ff.; N.Y. Times, Aug. 21, 1983, § I, at 22, Col. 1 *Wall Street Journal*, 24 November 1980, 31 December 1981; and the *National Law Journal*, 2 November 1981 (source of Linnell's quote). Linnell's study was funded by a grant from the Carnegie Foundation.

B. UNIVERSITY RULES SHOULD REQUIRE THAT PRIOR PERMISSION BE OBTAINED FOR ACTIVITIES THAT MIGHT PRESENT A POTENTIAL CONFLICT OF INTEREST, EVEN IF A CONFLICT IS NOT IMMEDIATELY APPARENT.

1. *Time off-campus must be strictly limited.*

Time and creative activity spent away from the campus diminishes faculty-student exchange and the quality of instruction. Therefore, without special consent, faculty should not spend more than one day per week (or twenty percent of the academic year) in off-campus work. This limit should be strictly observed when a faculty member is doing consulting work for a firm which is sponsoring research at the university. Since the Economic Recovery Tax Act[95] gives a greater tax credit for research at the taxpayer's place of business than for research grants to universities, the university will have to be vigilant in guarding the expenditure of faculty time. Each faculty member should file a periodic report documenting hours spent in off-campus work.

2. *Financial investments must be revealed.*

A financial investment in an enterprise that does business with or receives support from the university should be revealed. Such investments could exert a subtle influence in the skewing of scholarly research, even without the researcher becoming aware of it. It might also result in directing graduate students into research areas from which the faculty member expects personal profit. The Committee on Conflict of Interest will decide whether a conflict exists, and make appropriate recommendations to the president on the matter.

C. CERTAIN EMPLOYMENT AND NONDISCLOSURE OF RESEARCH RESULTS ARE UNACCEPTABLE WITHIN THE CONTEXT OF UNIVERSITY EMPLOYMENT.

1. *No full-time faculty may hold an executive position in an outside business.*

An officer's dedication to the profit-making activities of the commercial enterprise diverts attention and creates conflicts of loyalty.

2. *No faculty shall use unpublished research results for personal profit.*

The university imposes an affirmative obligation to publish the results of research carried on at the university. Therefore, the use of unpublished information, or the giving of unpublished information to any outside interest, is forbidden. University research results may not be used for trade secrets rather than as part of the patent process.

[95] 26 U.S.C. § 44(f) (West Supp. 1967-1982); 26 U.S.C. § 174(a); 174(b)(i), (ii) (West).

The concepts and rules on conflict of interest respond to the concerns raised in Section I, which argues that patenting is compatible with the university's traditional mission. An independent conflict of interest policy, diligently implemented by the university administration, should enable the university to exploit patenting as a source of revenue without the loss of academic integrity.

BRADLEY CENTER, INC. v. WESSNER: THE PSYCHOTHERAPIST'S DUTY TO PROTECT

GERALD W. WOODS*
CLAYTON D. STEADMAN**

On October 27, 1982, the Supreme Court of Georgia affirmed the decision of the Court of Appeals of Georgia in *Bradley Center, Inc. v. Wessner*,[1] deciding that a private mental hospital and its psychotherapists owed a legal duty to the public at large to exercise reasonable control over a potentially violent mental patient. Issues raised in this case included the nature of the duty, to whom the duty is owed, and forseeability of the harm. The importance of the decisions of both Georgia courts, however, goes well beyond the actual holdings. Strong language, especially *dicta* in the court of appeals decision, has far broader implications regarding the psychotherapist's duty to protect. After reviewing the facts and holdings of *Bradley* and similar cases in other jurisdictions, this note will comment upon what *Bradley* may mean for the therapist.

I. BRADLEY

A. FACTS

In *Bradley Center, Inc., v. Wessner, et al.*,[2] the Wessner children brought an action against the Bradley Center, located in Columbus, Georgia, claiming the Center was negligent for failing to control their father, resulting in the death of their mother. Bradley Center, a private mental health hospital, admits patients only on a voluntary basis. However, under the hospital's voluntary commitment program, patients

* B.S., 1968, University of North Carolina at Chapel Hill, J.D., 1973, Emory University; Assistant Professor, Educational Research and Development and Assistant to the President, Medical College of Georgia.

** B.A., 1978, Clemson University; J.D., 1982, Emory University; Administrative Specialist/Legal, Medical College of Georgia.

[1] Bradley Center, Inc. v. Wessner, 250 Ga. 199, 296 S.E.2d 693 (1982).

[2] *Id.* The recitation of the facts in this article is drawn from the Georgia Court of Appeals' decision, 161 Ga. App. 576, 287 S.E.2d 716, *aff'd*, 250 Ga. 199, 246 S.E.2d 69 (1982), because of the paucity of relevant factual details in the supreme court's decision

non-federally funded athletic program; and (iv) award the University its costs and reasonable attorney fees.

Respectfully submitted

UNIVERSITY OF RICHMOND

BY: _____

Of Counsel

Robert H. Patterson, Jr.
W. Carter Younger
Eva S. Tashjian-Brown
Scott S. Cairns
McGUIRE, WOODS & BATTLE
1400 Ross Building
Richmond, Virginia 23219

PROTECTION AND ENFORCEMENT OF COLLEGE AND UNIVERSITY TRADEMARKS

SHEILA TRICE BELL*
MARTIN F. MAJESTIC**

I. INTRODUCTION

Irrespective of institutional size or location, increasing numbers of higher educational institutions are implementing trademark protection and enforcement programs. Protection of potential financial gain from the sale of goods with the college or university seal or the emblem for a winning sports team is the major motivation for such interest. However, a trademark protection and enforcement program is also a means of curtailing the misrepresentation of the purpose, policies or actions of schools through the unauthorized sale of goods which identify a school with items which are antithetical to its educational purpose. Furthermore, the misrepresentative use of an emblem, name or service associated with an educational institution may subject it to ridicule eventually tarnishing its reputation as an institution of higher education in the minds of potential students and supporters. This article is designed to acquaint college and university general counsel with the major components of a trademark protection program, particularly as it affects colleges and universities.

II. WHAT IS A "MARK"?

The Lanham Act[1] refers to four kinds of marks and they are distinguished by their uses. A trademark[2] is a "word, name, symbol or device or any combination thereof" which is used by someone in commerce "to identify his goods and distinguish them from those manufactured or sold by others,"[3] and which is generally affixed to the

* B.A., Wellesley College, 1971; J.D., Harvard University, 1974; Member Massachusetts and Tennessee Bars; University Counsel, Fisk University.

** B.S., University of California, Berkley, 1962; J.D., U.C.L.A., 1967; Member California and District of Columbia Bars; Retained Trademark Counsel to The Regents of the University of California; Partner in the law firm of Majestic, Gallagher, Parsons & Siebert, San Francisco.

[1] 15 U.S.C. §§ 1051-1127 (1976).

[2] 15 U.S.C. § 1127 (1976).

[3] *Id.*

goods.[4] For example, the university's or college's name found affixed to a mug, hat or notebook is a trademark. When the school's name is affixed to a good, it is a means of differentating that good from others of the same type which are also in commerce. Furthermore, the school's name may also be a trademark. The term "service mark"[5] refers to a mark used in the sale or advertising of services, such as transportation, insurance, entertainment or education. The terms "trademark" and "service mark" are often used interchangeably because of a general unfamiliarity with the criteria by which these two marks are distinguished. This difficulty in differentiation is exascerbated by the fact that both terms may apply accurately to the same mark, such as a school seal, which may indeed be used as both a trademark and a service mark.

Under the Lanham Act, the third kind of mark is a "certification mark" which is "a mark used upon, or in connection with the products or services of one or more persons other than the owner of the mark to certify regional or other origin, material, mode of manufacture, quality, accuracy, or other characteristics of such goods or services or that the work or labor on the goods or services was performed by members of a union or other organization."[6] "Seals of approval" granted by magazines, the seals of testing laboratories, professional societies and trade unions are examples of certification marks.

A "collective mark" is the fourth classification of mark under the Lanham Act, and it is a "trademark or service mark used by the members of a cooperative, an association or other collective group or organization. . . ."[7] The collective mark classification includes marks used to indicate membership in an association, a union or other organization. A collective mark differs from both a trademark and service mark because it is used solely to indicate membership. Therefore trademarks and service marks are applied to goods or services that an association may sell or perform while that same association's collective mark could be used to indicate membership in the organization by being on organization lapel pins or on letterheads. Nevertheless, use of a mark on letterheads, lapel pins or the like can also be classified as a servicemark, as it is also used in furtherance of the rendering of services.

The term "trade name"[8] refers to a company or business name. It cannot be registered as such under the Lanham Act, but it is defined there. It may be an individual name or a surname. Whatever the form of the name, it is used to identify an organization or individual engaged in

[4] A trademark need not be affixed directly to a good. It may be placed on packaging for a good. *Id.*

[5] *Id.*

[6] *Id.*

[7] *Id.*

[8] The terms "trade name" and "commercial name" are used interchangeably in the Lanham Act. *Id.*

trade or commerce capable of being party to legal action.[9] A school's name simultaneously may be its trademark and service mark as well as a trade name. It is unlikely that it would be a certification mark. Some educational institutions, such as the University of California, have the benefit of state statute for protecting their names.[10]

III. METHODS OF PROTECTING TRADEMARKS

A. General Discussion

The common law and state, federal and international statutes offer protection to trademark owners in a variety of ways. The law of unfair competition and common law trademark infringement applies without registration of the mark. Relief under state and federal trademark registration statutes requires registration of a trademark. Although international trademark protection methods vary from country to country, as a general rule, registration is the best method to attain international protection. In fact in some countries it is the only method of attaining protection for a mark.

From a domestic perspective, if a school's trademark has attained interstate prominence or if one foresees such prominence for a mark, it would be prudent to obtain a federal registration under the Lanham Act. However, if one has a mark whose current and anticipated use is intrastate, there is no basis for a federal registration. A critical prerequisite for federal registration is interstate use of the trademark.

One should always remember that a trademark, whether registered or not, will remain the exclusive property of its owner so long as it is not abandoned. To assist in the process of preventing any imputation of abandonment of a mark, colleges and universities should consider using a trademark notice, not only on their registered trademarks, but also on their unregistered trademarks when they are used in labeling or advertising.

Notice of registration for federally registered marks takes three prescribed forms. One may use "Registered in U. S. Patent and Trademark Office," "Reg. U. S. Pat. & Tm. Off." or simply the letter "R" surrounded by a circle as ® .[11] For those marks which are not federally registered, these three forms of notice are not available; one may use, however, the letters TM in small capital letters as notice for an unregistered trademark. Furthermore, one may use a footnote, such as "Trademark of XYZ University" or "Trademark."[12]

[9] *Id.*

[10] Cal. Educ. Code § 92000 (Deering 1978).

[11] 15 U.S.C. § 1111 (1976).

[12] The United States Trademark Association, *Trademark Management, A Guide for Executives*, pp. 73, 74 (1981); S. Diamond, "Properly Used, Trademarks are Forever," 68 A.B.A.J. 1575, 1577 (1982).

If one has filed an application for federal registration, one may so indicate by using a notice such as "TM registration pending" or "Trademark Registration Pending."[13] In the case of state, rather than federal registration, the terms "Registered", "Trademark Registered" or "Registered Trademark" are all considered proper.[14]

The advantages of registration of a trademark have been alluded to above, but they can be synopsized and compared as follows:

1. *State Registration*
   a. Allows the registration of intrastate trademarks.
   b. Provides a record which may be found during a trademark search to warn others against adoption and use of the mark.
   c. Provides some constructive notice and has evidentiary value in certain states.
   d. Is usually time efficient when compared with federal registration and can be more cost efficient if use in only a very few states is anticipated and registration is secured in only those few states. However, cost efficiencies swing in favor of federal registration if substantial interstate use is foreseen because, of course, federal registration covers all of the 50 states.
   e. Is usually issued more readily than federal registration. In most states registration is simply a formality and the process does not entail a substantive investigation as does federal registration.
2. *Federal Registration*[15]
   a. Provides *prima facie* evidence of i) the validity of the registration, ii) registrant's ownership and exclusive right to use the mark in commerce in connection with the products and the services specified in the registration,[16] and iii) incontestability after five years of registration, provided certain conditions are met.[17]
   b. Grants federal court jurisdiction for an infringement suit regardless of the amount in controversy or diversity of citizenship of the parties.[18]
   c. Enables recording of the registration with the U. S. Customs Service so that customs officials may stop the importation of goods into the United States which are infringing the trademark.[19]
   d. Enables the owner to use the federal trademark notices " ®," "Registered in the U. S. Patent and Trademark Office" or "Reg. U. S. Pat & Tm Off."[20]
   e. Constitutes constructive use of the mark in all 50 states regardless of whether actual use has occurred in all states.
   f. Provides service mark registration. Some states have no provision for service mark registration.

[13] *Id.*

[14] *Id.*

[15] This section discusses the advantages of federal registration; the federal registration process is discussed *infra*, pp. 71-72, § 111(c)(4).

[16] 15 U.S.C. § 1115(a) (1976).

[17] 15 U.S.C. § 1115(b) (1976).

[18] 15 U.S.C. § 1121 (1976).

[19] 15 U.S.C. § 1124 (Supp. II 1978), 19 C.F.R. § 11.13(a) & (c) (1982).

[20] 15 U.S.C. § 1111 (1976).

B. Common Law Protection

To qualify for common law protection in an action for unfair competition[21] or for trademark infringement (available regardless of whether a trademark has been registered) the plaintiff must generally prove confusion resulting from use of a similar mark and establish the exclusive right to use his or her mark in a specific geographic trading area. Furthermore, the plaintiff must prove prior continuous use of the mark and its validity as a protectible mark.

Unfair competition is generally defined as a form of unlawful business injury which consists in the passing off or the attempt to pass off on the public the goods or business of one individual as the goods or business of another.[22] However, the courts may in some instances give relief under the theory of unfair competition, from trade practices which are unethical and constitute an infringement of the plaintiff's property rights, even though they do not involve a representation that the goods or business of the defendant are the goods or business of another. These actions are subject to the vicissitudes of state law for their requirements and remedies.

The major advantage of seeking redress under the theory of unfair competition is that the broadness of its definition gives one more flexibility in applying it to various factual patterns. The law of trademarks and their infringements is merely a branch of the law of unfair competition. The principal differentiation between these two bases for protection of one's interest in goods or services is that in the case of unfair competition, no exclusive proprietary interest in the names or marks used to deceive is necessary for relief. In trademark infringement cases, an exclusive right to use the infringing name is essential.

C. The Registration Process

1. *Trademark Searches*[23]

As a general rule, a trademark search should be conducted prior to adoption and use of a mark. The reason for this is fairly obvious. If one adopts and uses a mark in ignorance of someone else's prior use or registration, one may later have to abandon its use under threat of an action for infringement.

[21] See 15 U.S.C. § 1125 (1976), which gives federal protection akin to common law unfair competition of unregistered marks. *See also*, 15 U.S.C. 1126(h) (1976), for federal protection of nationals against unfair competition.

[22] *See generally* Boston Professional Hockey Ass'n, Inc. v. Dallas Cap & Emblem Mfg., 510 F.2d 1004 (5th Cir.), *cert. denied*, 423 U.S. 868, *rehearing denied*, 423 U.S. 991 (1974). Polo Fashions, Inc. v. Extra Special Products (D.C. N.Y. 1978) 200 U.S.P.Q. 161.

[23] See generally, A. Seidel, *What the General Practitioner Should Know About Trademarks and Copyrights* (4th ed. 1979) pp. 31-43.

Trademark rights accrue through use, and priority of use is controlling. Accordingly, the purpose of a trademark search is to attempt to find prior registration, application and/or use of a particular mark or of confusingly similar marks. Marks may be confusingly similar in (1) sound, (2) appearance or (3) meaning.[24] Furthermore, confusion can exist between goods which travel in the same channels of trade. Beyond these basic tests for confusing similarity, the goods and/or services associated with a mark should also be found similar to be considered as a possible infringement.

For colleges and universities a domestic trademark search may or may not prove to be useful. If one is considering a mark which has been in use for many years, the search is not as valuable as when one is merely attempting to clear a new mark for potential or prospective use. As a practical matter, it is extremely unlikely that any person or organization in the United States will have succeeded or even have attempted to register a college's or university's institutional name in its long standing, original, undiluted form. However, for trademark protection outside of the United States, a trademark search is imperative, particularly for well recognized names of colleges and universities. If the search shows a conflicting mark or marks for a proposed new mark which a school is considering, another mark can be chosen very easily with a minimum of expense before there has been a large investment in terms of goodwill or creation of the product or of the service associated therewith.

Should one decide to conduct a domestic trademark search, the cost is relatively low and the search can be conducted quickly, thereby affirming that there are no other prior registrations of the proposed mark. Then the college or university can decide if a proposed mark which does not conflict with any registered mark is worth the cost and time involved for federal registration. Typically, federal trademark applications, inclusive of filing fees and legal services, cost in the range of $500 to $1,000 to achieve registration and often take, at the very least, one year to complete. Preparatory to international registration, trademark searches may be conducted in any number of foreign countries using local counsel or a centralized service.

One can also do a preliminary screening of the mark by referring to trade directories and books such as *Thomas' Register*[25] and *The Trademark Register of the United States*,[26] which is an annual publication. However, none of these methods substitutes for doing a comprehensive search; they merely alert one to the more obvious conflicting marks and take less time and money to conduct.

[24] See generally, 2 J. Thomas McCarthy, *Trademarks and Unfair Competition* § 22:4; General Foods Corporation v. General Mills, Inc. (T.T.A.B. 1970) 167 U.S.P.Q. 638.

[25] *Thomas' Register of American Manufacturers*, Thomas Register Catalogue File (2nd ed. 1982).

[26] *The Trademark Register*, Washington, D.C., annually.

In the usual case, a complete search report, which should include a computer search, does not locate a mark which conflicts with the identical proposed mark in its proposed use. It is more likely that a number of marks will be uncovered which are *similar* both in a comparison of the marks and relative to the goods or services for which the marks are used. The very difficult question is whether or not they are confusingly similar. Again, the test is similarity of sound, appearance, meaning, and market. The standard is that of the ordinary purchaser. Would an ordinary purchaser be confused into believing a product or service associated with one mark came from another source? Unless confusing similarity is glaringly obvious, one must consider various individuals' opinions concerning similarity, weigh the risk of confusion and make a business decision whether or not to use a proposed mark.

Again, for colleges or universities most marks have been in use for many years. Therefore, instead of an extensive search program, the next steps in the protection process is notice and a decision whether or not to register the mark.

2. *Registration*

In the context of registration, one's thoughts first turn to state, then federal, and then possibly international registration. As far as state registration is concerned, each of the fifty states has its own trademark registration statutes. Under such statutes, the trademark application is usually filed with the Secretary of State of the state in which the mark will be used. Some states use other agencies of government, and frequently use a simple application form.

In the United States, use of the mark must precede federal registration. In this sense, the United States is a "use" country as opposed to a "registration" country. The federal registration process is discussed in greater detail later in this article.

Most individuals or companies stop with state and federal registration. It usually takes a multinational corporation or trademark owner with substantial resources to consider international or foreign registration. However, if a college or university plans to license its mark in foreign countries in the foreseeable future, foreign applications should be made immediately because the registration process is quite long in some countries. Another reason to register in foreign countries is to obtain rights in the mark by being the first to file its registration.

3. *Use in Commerce*

How is federal registration accomplished? Since the primary requisite for federal registration is use in interstate commerce, the first step should be to establish interstate use of the mark.[27] In the case of goods, products

[27] See text *infra* p. 70.

can be shipped across state lines. Relative to service, they should either be rendered by an entity or entities in separate states or to an interstate clientele. A single restaurant, service station, or a university or college may federally register its service mark as long as it is within the stream of interstate commerce. A university which draws from an interstate and international student body already qualifies. Colleges and universities should be able to, and have in fact been able to, register their service marks federally, but most have not done so. The colleges and universities which do so have concentrated on the educational services aspects of their operation and generally have not registered in the goods classes. One should note that federal law provides for various goods and services classes. A trademark owner can register the mark in as many classes of goods and services for which it has been able to establish use.[28]

Not long ago very few colleges or universities had registered their valuable trademarks in the goods classes. One early registrant was the University of Houston with its seal registered in 1971, in the publications class for catalogs, bulletins, reports, brochures, books, directories, and the like. More recently, however, colleges and universities have begun to apply for and register their famous marks in goods classes involving emblematic merchandise such as clothing, mugs, pins and banners. Clothing classes are probably the most important. The UCLA mark was recently federally registered in the clothing class.

Ideally, an educational institution should register its name as a service mark in the educational services class. Consideration should also be given to its seal or symbol. Names of sports teams such as *Trojans* and *Bulldogs* should be considered. Strong consideration should be given to registering in the clothing class for "T" shirts, sweaters, and other clothing considered appropriate. Registration of novelties or emblematic

[28] Examples of colleges and universities that have registered their service marks are:
California Institute of Technology: CALTECH
Florida Institute of Technology: FLORIDA INSTITUTE OF TECHNOLOGY
Fisk University: JUBILEE SINGERS
University of Houston: UNIVERSITY OF HOUSTON
Most colleges and universities that have registered their marks have registered their great seal or symbol in the educational services class. These institutions include:
Florida Atlantic University
University of Miami
New Mexico State University
Northeastern University
Northwestern University
Southern Methodist University
Springfield College
The Stephens Institute of Technology
The University of Detroit
The University of Houston
Washington State University
Kent State University
University of Santa Clara

merchandise should also be considered. A multi-class application could be filed, but it is usually preferable to file single class applications, since difficulty in one class can delay registration of all classes of marks.

If a college or university intends to promote a new mark, an initial token use might be accomplished. For example, a "T" shirt bearing a new mark could be sold across state lines. But the sale must be bona fide. Recent decisions would indicate that anyone relying only on token use without subsequent full commercial use for purposes of obtaining trademark rights may be disappointed.[29] Accordingly, caution should be employed to see that full-scale commercial use follows initial token use as soon as possible. Nevertheless, initial token use is useful to enable the filing of the mark and to obtain clear priority over others. It is not worthwhile merely to wait for commercial use if this will not occur for a long period of time.

4. *The Federal Registration Process*

The preparation of the application is thought by some to be a mere formality—a simple filling out of a form. This is not the case. A great deal of decision-making is involved in the trademark application process. Accordingly, often the preparation, filing, and prosecution for federal trademark registration is best left to trademark specialists. The U.S. Patent and Trademark Office, "PTO," is itself staffed by a number of examiners, many of whom are attorneys who have specialized in this area of practice.

The first issue is to decide just what the mark or marks of the educational institution are. An inventory will produce surprising results. On which goods or in conjunction with which services are the marks going to be used? Could the mark be registered in its entirety or should only a salient portion of the mark be registered? Normally, for maximum protection, one will want to register each element separately that conveys a unique commercial impression. For example, if a university name and seal both appear on a "T" shirt, one would file separate clothing class applications for each.

Marks may be registered in the principal register or a supplemental register.[30] The latter registration is for those marks that are not yet capable of the full status as marks registered in the principal register because they are not inherently distinctive. It is usually preferable to take the position that one's mark is inherently distinctive and apply for the mark on the principal register.

After filing the registration application, it takes about six months to reach the examination stage. At this point, the attorney examiner

[29] Proctor & Gamble Co. v. Johnson & Johnson, Inc., 205 U.S.P.Q. 697 (S.D.N.Y. 1979), *aff'd mem.*, 636 F.2d 1203 (2d Cir. 1980). *See also*, Lever Brothers Co. v. Shaklee Corp. 214 U.S.P.Q. 654 (T.T.A.B. 1982).

[30] 15 U.S.C. § 1095 (1976).

scrutinizes the application and notes any formal deficiencies. If the application has no apparent deficiencies, the attorney examiner searches the files of the PTO to locate confusingly similar marks. The application may be rejected one or more times based on form, descriptiveness, unregisterability due to a closely similar prior registration, or for a myriad of other reasons.[31]

At some point the application is either deemed ready for publication and published in the Official Gazette of the U.S. Patent and Trademark Office, or it is finally rejected. There is an avenue of appeal to the Trademark Trial and Appeal Board which is an administrative body within the PTO.[32] Usually, trademark applications mature into registration.

As far as publication is concerned, anyone who feels he would be damaged by the registration, may oppose it within thirty days of publication or any extended period which is provided by the PTO.[33] Unopposed, the registration will be published in due course, and the registration document issued. Opposed, an opposition proceeding will be undertaken.

5. *International Protection and Registration*

Each country of the world potentially has its own trademark law. As a matter of fact, not all countries of the world have yet established a trademark law. However, over one hundred have. Accordingly, trademarks may be registered widely in foreign countries.

Foreign trademark registration will not be discussed in any great detail in this article. Most colleges and universities will be well-served by federal service mark registration covering the entire United States for their educational services. Possibly, some colleges and universities in foreign countries may have foreign campuses. In such cases, consideration should be given to a foreign protection of the respective schools' service marks.

As far as goods are concerned, most colleges and universities again would benefit from a U.S. Trademark Registration for their clothing and other emblematic goods. The international fame of a college and university may not be such that anyone in foreign countries would be interested in making pirate goods bearing its mark. However, for some colleges and universities international pirating of goods bearing their trademark is a substantial problem. The UCLA mark, for example, is well-known worldwide. There are over fifty licensees of UCLA emblematic merchandise. UCLA merchandise has also been sold by catalogs to purchasers across the United States, Western Europe, Scandanavia, many countries of Asia and Africa, Australia, Canada, and Mexico. Most of the licenses are for clothing. Sales in Japan between 1976 and 1981 alone totaled almost

[31] 15 U.S.C. § 1052 (1976).
[32] 15 U.S.C. § 1070 (1976).
[33] 15 U.S.C. § 1063 (1976).

$64,000,000. Domestic license royalties in 1981 exceeded $100,000 in the United States and $400,000 in foreign countries for a total of about $500,000 during 1981.

These kinds of revenues can and do support an international trademark program. Again, using the UCLA mark as an example, it is now registered in Denmark, France, Japan, Norway, Thailand and the United Kingdom. Applications are currently on file in many other foreign countries including the People's Republic of China, where it is now possible to obtain trademark registrations. As mentioned above, the procedure for obtaining registration is basically to work through a foreign associate attorney or patent agent, insofar as the trademark laws are purely local. For example, prior use is not a requirement in many countries, as it is in the United States. Countries which do not require prior use are referred to generally as "registration countries" and have registration systems. They may or may not have other requirements.

In some countries, no examination takes place. The registration is merely issued. However, other countries have a formal examination process followed by application and opposition procedure similar to that in the United States. For example, West Germany has such a procedure.

Countries which permit registration by the mere filing of a form and payment of a registration fee are generally called "pirate" countries. The name comes from the practice that has existed for many years of so-called pirates who registered the famous and well-known marks of others in an attempt to extract compensation from the true owner of the mark so that the true owner might have a right to profit from the mark's use in the pirate country. Usually the pirate will accept a sum of money to sell the mark back to the owner and then allow that individual or company to enter the country with his or her goods. If the true owner does not purchase the mark and does enter the country, he or she is subject to suit for trademark infringement by the pirate and may be prevented by an injunction from using the mark in that country. The trademark laws of these countries are usually quite absolute. No equitable considerations are entertained. This is perhaps the most compelling reason for early filing and registration if the trademark owner has any foreseeable intention of expanding into foreign markets.

IV. LICENSING

In addition to direct sales of trademarked goods or service by a college or university, licensing a trademark or service mark is a planned method by which a school can bring in revenues from the use of its trademark. Infringement or unfair competition suits also may bring in revenue, but they are much less reliable for doing so.

Simply put, a license is an agreement between the trademark owner and a second party which allows the second party, referred to hereafter as the licensee, to use the trademark for his or her financial benefit. In consideration for the licensee's financial benefit accruing from use of the

trademark, the licensee usually agrees to pay a license fee and royalties to the trademark owner licensor.

The license owner must maintain control over the licensee's use of the mark or the mark will become unenforceable. Control is maintained by having the license agreement clearly describe the specifications under which the licensee must make the product or perform the service which is trademarked. For college and university trademark owners this means that a license agreement must clearly delineate the kinds of goods upon which the mark will appear, such as sweaters or mugs, or, as in the case of a performing group, the nature and location of the performances. Furthermore, the school should require periodic submission of samples of the goods to be sold by the licensees as well as submission of new advertisements and lines of goods prior to advertisement and sale. It is also wise if someone representing the school conducts random spot checks of licensee's services and/or goods and advertisements. Licenses understandably must be customized to the client's specific requirements.

One will be particularly concerned about the method for calculating compensation for the school from the licensee. Understandably, it will be generally what the market can bear. But as a general rule of thumb, a licensee fee or royalty of five to ten percent of net selling price is reasonable.

V. CONFLICTS AND ENFORCEMENT

A. *General*

Once a college or university has decided to embark upon a trademark protection program it must also commit itself to a strong enforcement program. Obviously, this includes assigning someone the responsibility of being alert for possible misuse of the trademark by the school or its agents. Misuse may endanger the trademark's registration or, in the case of an unregistered trademark, create arguments against its distinctness and general protectability. Alertness for possible infringement is also imperative. One may find possible infringers by checking merchants' catalogues which may be sent regularly to school alumni, checking the goods in shopping centers near the school or checking the stores on the list provided by a licensee and which have ceased buying trademarked goods from the licensee, but which may have begun to sell cheaper counterfeit goods. The person charged with this responsibility must use his or her imagination to find sophisticated infringers.

After a potential infringer has been identified, the college or university needs to notify the party of the school's trademark and of its intent to protect it through the courts, if necessary. Preparation of a standard letter of notice which will be modified for the particular circumstances will help save time.

If the infringer acknowledges the infringement but expresses a wish to receive the college's or university's permission to use the mark, a licensing agreement between the school and the trademark user may be appropriate. Needless to say, at this stage, the school requires the services of a skilled negotiator—whether internal or external to the school.

B. *Administrative and Court Procedures*

1. *United States*

a. U.S. Patent and Trademark Office

Once the U.S. trademark application has been published for opposition in the Official Gazette of the PTO, which is issued weekly, anyone who objects to the registration of the trademark and believes he would be damaged by the registration may, within the thirty-day statutory period or extended period, file an opposition.[34] This is a formal paper or pleading which may raise issues of alleged deficiency in any of the statutory requirements.[35]

Parenthetically, an opponent to a mark may file a cancellation action within the first five years of registration by means of a petition to cancel.[36] After five years, the registration is uncontestable, and the grounds for cancellation are fraud, misrepresentation, or if the mark has become generic.[37] Both of these actions are highly specialized and are conducted before the Trademark Trial and Appeal Board of the PTO.

b. Court Enforcement

Enforcement of trademark rights and related unfair competition rights may be accomplished in state or federal court.[38] As discussed earlier in this article, a primary advantage of a federal registration is that it gives a basis for obtaining relief in federal court. The suit may be based primarily on the Lanham Trademark Act which provides a variety of remedies including injunctive relief,[39] recovery of profits, damages and costs,[40] and destruction of infringing property.[41] Pendant claims may be added, such as state trademark infringement and unfair competition. Whether one considers suing in state or federal court, one must of course consider the cost, logistics, and various other factors attendant to such litigations.

There are a number of interesting decisions and pending trademark cases which involve trademark rights asserted by colleges or universities.[42]

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[34] *Id.*
[35] *Id.*
[36] 15 U.S.C. § 1064 (1976).
[37] 15 U.S.C. § 1064(c) (1976).
[38] 15 U.S.C. § 1051 (1976).
[39] 15 U.S.C. § 1116 (1976).
[40] 15 U.S.C. § 1117 (1976).
[41] 15 U.S.C. § 1118 (1976).
[42] *See*, John Roberts Mfg. Co. v. University of Notre Dame du Lac, 152 F. Supp. 269, (N.D. Ind. 1957), *aff'd*, 258 F.2d 256 (7th Cir. 1958); The University of Notre Dame du Lac

The existence of infringement is often obvious in cases which involve educational institutions.[43] For example, the offending "T" shirts use identical or confusingly similar marks. The two major defenses are laches and aesthetic functionality. As far as laches is concerned, the case of the *University of Pittsburgh v. Champion Products, Inc.*,[44] is the most recently reported case involving a university. As far as aesthetic functionality is concerned, a number of cases have treated the point relative to emblematic goods.[45]

A trademark infringement suit usually moves very quickly. Normally, a preliminary injunction is requested, and sometimes even an antecedent temporary restraining order. The cases frequently do not go past the injunctive stage.

If an injunction is awarded, the defendant is stripped of the ability to use the mark for the time that it takes to reach trial. Though trial may be expedited, inability to use the mark is usually fatal, and the parties settle the case.

If an injunction is not granted, very frequently a negotiated settlement will be reached. Damages are very difficult to prove because they are highly speculative. It is difficult to prove which portion of a plaintiff's lost profits or defendant's profits are attributable to the mark as opposed to other money earning ventures. However, the estimation of reasonable royalties is a common measure of damages.

2. *Foreign*

As mentioned above, some foreign patent and trademark offices are merely registration offices. France is an example of a country with such a procedure. Conflicting marks can and are registered side by side. It takes a court adjudication to determine who really owns rights on the mark. Other countries like West Germany are more closely akin to the United States. In Germany, there is a rigid examination followed by publication and an opposition procedure. Oppositions are routinely encountered in countries like West Germany, and mark owners tend to be rather protective. Appeals are made to the appropriate German court.

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v. J.C. Food Imports Co., 213 U.S.P.Q. 594 (T.T.A.B.), *aff'd* ____ F.2d ____ (5th Cir. 1983). The University of Pittsburgh v. Champion Products, Inc., 529 F. Supp. 464 (W.D. Pa.), *cert. denied, modified*, 686 F.2d 1040 (3d Cir. 1982).

[43] *Id.*

[44] 529 F. Supp. 464 (W.D. Pa. 1982), cert. denied, modified, 686 F.2d 1040 (3d Cir. 1982).

[45] See, Pagliero v. Wallace China Co., 198 F.2d 339 (9th Cir. 1952), 95 U.S.P.Q. 45; International Order of Job's Daughters v. Lindeburg & Co., 633 F.2d 912 (9th Cir. 1980), 208 U.S.P.Q. 718; Vuitton et Fils S.A. v. J. Young Enterprises, Inc., 644 F.2d 769 (9th Cir. 1981), 210 U.S.P.Q. 351; National Football League Properties, Inc. v. Wichita Falls Sportswear, Inc., 532 F. Supp. 651 (W.D. Wash. 1982), 215 U.S.P.Q. 175; The Supreme Assembly, Order of Rainbow for Girls v. J. H. Ray Jewelry Co., 676 F.2d 1079. *See also, In*

Financial considerations are extremely important. The losses to infringers in any given country may well not be worth supporting litigation in that country.

VI. CONCLUSION

An effective trademark protection program may well be worth the allocation of university resources. An important consideration is protection of a college's or university's reputation through preemption of the use of its name in a manner which subjects it to misrepresentation or ridicule. Protection of school profits from the use of its trademarks or tradename is another extremely important consideration. A very marketable trademark may bring in badly needed revenues to support college or university programs.

However, one must always bear in mind that trademark protection programs can be extremely costly. The school's governing board and administrators should consider the direct and indirect costs which the school may incur from such a program as compared with its expected benefits before embarking on a trademark protection program.

Conclusion

In counterpoint to Professor Weiner's Technology Review article "Universities, Professors and Patents: A Continuing Controversy", this paper has presented a viewpoint supportive of direct and active university involvement with patents and industry. Following are key points:

- Close university-industry involvement is important to national industrial competitiveness
- There are pitfalls in such close involvement, but sensitive attention to the basic values of the academy and conflict of interest can overcome such pitfalls.
- The objective of technology transfer is a critical factor in conflict of interest reviews.
- Conflict potential cannot be escaped in any human endeavor; conflict reviews must consider the totality of the proposed arrangement rather than be in the nature of a check-off procedure with denial or approval based on checks in one column.
- However, no compromise can be made on matters central to the academy such as restrictions on publication.
- Conflict issues which deserve more careful attention than others are those which may lead to to diversion of research at the university.
- A direct an active participation by the university, its faculty and students, is most effective in achieving successful technology transfers with industry