COMMENTS

FROM "PUBLISH OR PERISH" TO "PROFIT OR PERISH": REVENUES FROM UNIVERSITY TECHNOLOGY TRANSFER AND THE § 501(c)(3) TAX EXEMPTION

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INTRODUCTION

In the fall of 1965, the University of Florida football coach enlisted a professor to develop a high-energy drink to replace the nutrients his players were perspiring away on the humid practice field.¹ The University now receives $4.5 million per year in royalty proceeds from the Quaker Oats Corporation as a result of this professor’s invention: Gatorade.² The potential for profit may be even greater for Professor Milton Torres and Florida International University ("F.I.U."). Torres and F.I.U. hold the patent for polyisocyanurate, or "Pantherskin," a polymer coating that can increase the service life of aircraft skin while also making it more fire-resistant.³ In the wake of the Valujet crash and the bombing of TWA Flight 800, the FAA is investigating the possibility of using Pantherskin in

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¹ See David Villano, Big Money on Campus, FLA. TREND, Dec. 1, 1995, at 66, available in 1995 WL 8683002 (describing the most notable technologies developed on the Florida campuses).

² See id. (noting that if the royalty-sharing arrangement were made today, the University of Florida would be receiving substantially more royalty income); see also Linda Williams, Academia Wises Up on Patents, L.A. TIMES, Mar. 16, 1990, at A1 (quoting the University of Florida's director of corporate programs in 1990 as saying "If we had done Gatorade right, we would be getting $5 or $6 million [a year]" (alteration in original)).

³ See Villano, supra note 1, at 66.
American fuselages. For F.I.U., Pantherskin may become "the proverbial pot of gold at the end of the school's research rainbow."

Not every invention need be of blockbuster proportions for a university to see income from licensing royalties. Louisiana State University, for example, has collected $65,000 from the sale of laboratory-developed fish bait. While such a sum is not significant to a university budget, no school in the country would object to the infusion of an additional $65,000.

These examples demonstrate the phenomenon of university technology transfer, through which a university makes an invention or discovery available to the for-profit sector for commercial development. One of the prevalent forms of technology transfer is patent licensing, in which a university licenses a patent or other valuable right to a corporation. In exchange for the grant of the license or right, the university receives fixed or contingent royalty payments annually or on some other negotiated basis. This marriage benefits both partners: the university develops a new revenue stream and the corporation gains access to heretofore untapped technologies that may be prohibitively expensive to develop in its own laboratories.

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5 Villano, supra note 1, at 66.
6 See Randy McClain, LSU Professor Proposes Sales of Research as Fund-Raising Tool, BATON ROUGE ADVOC., Sept. 5, 1995, at 1C. In addition, Louisiana State University is considering a proposal to expand licensing activities beyond the natural sciences to political science and economic research. See id.
7 For purposes of this Comment, I will use the phrase "technology transfer" in the same manner as the Association of University Technology Managers ("AUTM") defines "technology licensing": "Technology Licensing includes activities associated with the evaluation and marketing of technology (including trademarks but not university's insignia) and intellectual property management, and those of license administration. It does not include activities associated with industry research agreements." ASSOCIATION OF UNIV. TECH. MANAGERS, INC., AUTM LICENSING SURVEY: FY 1994 SURVEY SUMMARY AND SELECTED DATA FY 1991-FY 1994 13 (1995) [hereinafter AUTM SURVEY].
8 For purposes of this Comment, "royalty" is defined to include: [L]icense issue fees, payments under options, annual minimums, running royalties, termination payments, the amount of equity received when cashed-in, and software end user license fees equal to $1000 or more, but not research funding, patent reimbursement fees, a valuation of equity not cashed-in, software end user license fees [less than] $1000, or trademark licensing royalties from university insignia.
9 See 1 ROBERT M. MILGRIM, MILGRIM ON LICENSING § 2.57 (1996) ("Normally, patents are licensed with a view toward collection of royalties.").
Not all voices inside or outside the academy, however, express the same enthusiasm regarding technology transfer and the increasingly close relationship between universities and corporations. Former Harvard University President Derek Bok, in his final annual report to the school's Board of Overseers, warned that "[f]lashing yellow lights should appear, however, whenever the institution seeks to make a profit on basic academic functions . . . such as . . . research . . . in order to finance its other activities." Bok's remarks directly addressed the issue of research and royalty income, as he noted that greater university efforts to transform discoveries into products and services may lead to the sacrificing of "essential values." The Deputy Director of the National Institutes of Health, Daryl Chamblee, in testimony before the Senate, "acknowledged that the heightened involvement of industry in academic research has prompted concern that tech transfer might stifle the free exchange of knowledge in the academic community, promote secrecy and distort research priorities to conform with commercial aims." The fear is that in time universities will resemble nothing more than commercial research centers. As one writer has argued, "MIT looks more like a corporation engaged in the relatively profitable business of producing ideas that it licenses to the highest bidders."

Holding aside philosophical debates regarding the "mission" of the university, why should increased emphasis on technology transfer and patent licensing be of legal concern? The difficulty arises when one considers that universities are able to operate technology-transfer ventures with a considerable public subsidy—namely, their longstanding exemption from the federal income tax as well as state and local property taxes. First, academic researchers use laborato-

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11 Id. (expressing the fear that uncontrolled technology transfer will lead to conflicts of interest, secrecy and the loss of a university's reputation for objectivity).
14 See I.R.C. § 501(c)(3) (1994) (stating that corporations or foundations organized and operated for educational purposes are tax-exempt).
15 See, e.g., MO. CONST. art. X, § 6 ("[A]ll property, real and personal, not held for private or corporate profit and used exclusively for . . . schools and colleges . . . may
Second, the income derived from these discoveries, including licensing and royalty income, is exempt from federal income taxation. In each of the aforementioned examples of university technology transfer—Gatorade, Pantherskin and the L.S.U. fish bait—the universities involved paid (or would pay) no taxes on the revenue received. The same royalty payments, however, would be taxable if the recipient were a commercial enterprise.

The income tax exemption granted by § 501(c)(3) of the Federal Income Tax Code is vital to the continuing survival of the university. Currently, the value of the federal exemption and other tax breaks amounts to nearly $4 billion a year. As the university and its faculty become increasingly oriented toward promoting technology transfer and developing intellectual property with potential commercial value, the tax exemption for licensing and royalty income derived from such activity may be called into question. It is well settled that an otherwise-exempt organization that engages in an

be exempted from taxation by general law.

10 See Gilbert M. Gaul & Neill A. Borowski, A Tax Break Colleges Can Bank On, PHILA. INQUIRER, Apr. 20, 1993, at A1, A6 (noting that commercial activity is one of many income sources for universities that currently remain tax-exempt).


18 See Consuelo L. Kertz, Tax Exempt Organizations and Commercially Sponsored Scientific Research, 9 J.C. & U.L. 69, 76-77 (1982-1983) (arguing that most of the research undertaken by a university would be considered a trade or business if it were conducted by a commercial enterprise).

19 Most commentary that has dealt with the § 501(c)(3) tax exemption issue pays only passing attention to educational institutions. See John D. Colombo, Why Is Harvard Tax-Exempt? (And Other Mysteries of Tax Exemption for Private Educational Institutions), 35 ARIZ. L. REV. 841, 843 n.6 (1993) (listing articles that have discussed nonprofit organizations and the federal tax exemption and describing the amount of attention given specifically to educational institutions). The few commentators who have addressed the royalty-income question directly generally conclude that universities have little to be concerned about, arguing that current tax-code exclusions are sufficient to exempt from the income tax royalty income derived from technology transfer. See Kertz, supra note 18, at 78-79 (arguing that the income tax exclusions under I.R.C. § 512(b)(7)-(9) are sufficiently broad to encompass most research activities of a college or university).

20 See Gaul & Borowski, supra note 16, at A1 (explaining both the origin and the current effect of the university tax exemption).
"unrelated trade or business" must pay income tax on its "unrelated" income. The question, therefore, is whether changes in the manner in which technology-transfer research is conducted and emphasized are so at odds with the letter and spirit of the tax exemption that subsequent revenues should be subject to federal income taxation under the unrelated business income tax ("UBIT"). In other words: Has the increased focus on technology transfer moved the university so far from the educational and scientific missions on which the exemption was premised that the gains from patent licensing should be taxable?

This Comment will examine income generated from technology-transfer activity and determine that in certain circumstances—and contrary to the current state of the law—such revenue should be taxable as unrelated business income. Part I will examine the scope of the university-industry technology-transfer relationship as it exists today and identify the reasons for the explosive growth in these arrangements over the past fifteen years. Part II will analyze the applicable sections of the Tax Code and corresponding regulations to determine how the Internal Revenue Service ("IRS" or "the Service") has treated the § 501(c)(3) tax-exempt status of universities and unrelated business income, concentrating on income derived from research endeavors.

Part III will examine the manner in which the modern academic research environment has been affected by the promise of technology-transfer income. It will look at restrictions on publication and the public dissemination of research results, the granting of exclusive licenses, effects on teaching, conflicts of interest and the potential compromise of academic freedom. In considering each of these issues, the Comment will consider whether income from the research enterprise should be subjected to UBIT due to the failure to conform to the public interest rationale behind the university tax exemption. The Comment will conclude in Part IV that a conflict exists between the unfettered pursuit of technology-transfer revenues and the letter and spirit of higher education's tax exemption. It proposes creating two types of technology-transfer arrangements to give universities the

21 See I.R.C. § 511(a) (1994); Iowa State Univ. of Sci. and Tech. v. United States, 500 F.2d 508, 516 (Ct. Cl. 1974) (holding that revenues from the operation of a university-owned television station were unrelated business income and therefore taxable, despite the fact that such revenues were ultimately destined for educational uses); see also WILLIAM A. KAPLIN & BARBARA A. LEE, THE LAW OF HIGHER EDUCATION § 9.3.5.1 (3d ed. 1995) (explaining the unrelated business income tax and its effect on entrepreneurial activities).
choice, depending on the facts and circumstances of each individual case, whether to execute a taxable or a nontaxable agreement. As part of this proposal, the Comment will analyze the steps universities need to take to ensure that their income-generating technology-transfer activities conform with the Code's explicit and implied tax-exemption requirements.

I. The University-Industry Partnership Today

A. Scope

Until recently, research universities considered the commercialization of campus discoveries and inventions outside their mission as teaching institutions. While it is doubtful that commercial research has become so prominent as to be the primary focus of university labs, statistics demonstrate that technology transfer and patent licensing have become significant endeavors. The Association of University Technology Managers ("AUTM") reported that in 1994 royalty revenues for nonprofit universities exceeded $265 million, compared with $1 million in 1980. The income generated by certain individual universities presents a more compelling picture. M.I.T. received $4.56 million in royalty income in 1994.

For purposes of this Comment, I will define the term “research university" as those schools classified by the Carnegie Classification System as Research Universities I and II, which are those institutions that offer a full range of baccalaureate programs, provide graduate education through the doctoral degree and give high priority to research. These schools also receive at least $12.5 million of support annually from the federal government and award at least 50 Ph.D. degrees per year. See ERNEST L. BOYER, THE CARNEGIE FOUND. FOR THE ADVANCEMENT OF TEACHING, SCHOLARSHIP RECONSIDERED: PRIORITIES OF THE PROFESSORIATE app. c at 129 (1990). While the discussion is appropriate for all schools that engage in technology-transfer activities, this Comment's analysis applies most directly to research universities.

Jeffrey Miller, an American geneticist at the University of Geneva, asserted that using university laboratories simply to create private profits is "wrong, destructive, and divisive. . . . What's a university want to be? If they have to save themselves by being an arm of industry maybe they're not worth saving." MARTIN KENNEY, BIOENGINEERING: THE UNIVERSITY-INDUSTRIAL COMPLEX 31 (1986) (citation omitted).

This Comment focuses primarily on technology-transfer arrangements involving patent licensing. Patent licensing, however, is not the only mechanism for university-industry scientific collaboration. Other collaborative efforts include research contracts, joint ventures, venture capital funds, spinoff companies, jointly-owned facilities and clinical trial agreements, to name just a few. Many of the same arguments regarding taxability can be made about these arrangements.


See AUTM SURVEY, supra note 7, at 20.
and, as University President Charles Vest explained in recent Senate testimony, that income is especially attractive because, unlike traditional grant income, its subsequent use is unrestricted.27 Stanford University has garnered $23.5 million from its Cohen-Boyer patent for recombinant DNA,28 and Michigan State University has received $60 million from just one patent.29 Considering these numbers in conjunction with the current applicable corporate tax rate ranging from 15% to 35%,30 reveals why the Service might take an interest in reexamining the treatment of technology-transfer income.31 Furthermore, overall revenues from royalties are expected to grow at a rate of 25% a year,32 making taxability considerations all the more important for both the schools and the Service.

Evidence of the significance of technology-transfer activity for major research universities goes beyond the dollars involved. The potential income has also had a notable effect on the manner in which universities conduct their research enterprises. Of sixty-five schools surveyed, 75% had revised their patent policies since 1980—20% from 1990 to 1993—33 and most of these changes were driven "by a desire to promote technology transfer, or . . . to increase royalty income."34 Many universities have either estab-
lished or expanded technology-transfer offices to handle patent and licensing matters on a full-time basis. The University of Texas Medical School prints a catalog listing important discoveries available for licensing. The city of San Diego recently hosted a "technology trade show" in which universities were given the opportunity to showcase their latest marketable discoveries in a convention format.

The consumer end of this relationship—the for-profit corporation—has been no less aggressive in its approach to unearthing what the universities are offering. Some companies go so far as to send representatives to college campuses to investigate research that might prove useful. State governments have become involved as well, creating university consortia designed to complement schools’ efforts to promote technology-transfer agreements. North Carolina’s Triangle University Licensing Consortium helped broker some 270 agreements between universities and the private sector, and New York, California, Illinois, Kansas and Indiana all operate some form of a state technology-transfer program.

An increase in related litigation is, arguably, the surest sign of the importance of any legal development. University technology transfer is no exception. The University of Pennsylvania, Johns Hopkins University and the University of Colorado have each expended prodigious sums to protect royalty rights. Furthermore, the University of Arizona recently generated substantial media attention by agreeing to settle a patent infringement suit for $1.95 million, illustrating that the stakes are high in this arena.

similarities and differences)). These changes included, for example, provisions for universities to retain rights to inventions developed by faculty and staff. See id. at 9-10.

36 See Deener, supra note 32.


38 See Deener, supra note 32.


43 See Paul Schneider, U.A.: Yes to Licensing, No to Equity, ARIZ. BUS. GAZETTE, May
It is important to note that success in technology-transfer ventures is far from certain. An oft-quoted rule of thumb suggests that of ten laboratory inventions, only one will receive a patent; only one in ten patents will be licensed by a company, and only one in ten licenses results in more than $25,000 per year in income.\textsuperscript{44} Statistics from the University of Wisconsin's technology-transfer office bear this out: of 2751 discoveries by Wisconsin faculty, only seventy-three produced income greater than expenses.\textsuperscript{45} Nonetheless, the potential revenue obtainable from technology transfer clearly has a powerful impact on the manner in which universities conduct their research enterprise and structure their licensing agreements.

B. Reasons for the Recent Expansion in University-Corporate Partnerships

Before engaging in an analysis of the Tax Code to determine whether any (or all) technology-transfer income should be taxable, it is first necessary to examine briefly the developments that created such remarkable growth in licensing opportunities. Nearly all of the relevant code sections and regulations were established before these developments. Investigating these developments will be helpful in evaluating how the Code, as written, may not be well-suited to deal with the current situation. Also, an understanding of why this growth has taken place further demonstrates how much universities and corporations have at stake in maintaining their tax exemption.

1. The Bayh-Dole Act

Arguably the most important catalyst for the expansion of university technology transfer was the enactment of the Bayh-Dole Act of 1980.\textsuperscript{46} Before its passage, title to all discoveries or inventions developed in whole or in part with federal funding reverted to the federal government.\textsuperscript{47} Prior to 1980, more than two-thirds of

\textsuperscript{44} See Katherine Bouton, Academic Research and Big Business: A Delicate Balance, N.Y. TIMES, Sept. 11, 1989, § 6 (Magazine), at 62, 123. (describing the $70 million agreement between Hoechst A.G., a German chemical company, and Harvard University to set up an institute of molecular biology).

\textsuperscript{45} See Pat K. Chew, Faculty-Generated Inventions: Who Owns the Golden Egg?, 1992 Wis. L. REV. 259, 272 n.54.


\textsuperscript{47} See Bayh-Dole Act Encourages University Participation in Technology Development, EDUC.
academic research was federally funded.\textsuperscript{48} Thus, the majority of university-developed technologies became the property of the federal government. Recognizing the drastic decline in U.S. corporate expenditures for research and development in the late 1970s, Congress sought to develop a mechanism whereby the wealth of discoveries made on university campuses (and in other nonprofit laboratories) could stimulate American industry.\textsuperscript{49} The Bayh-Dole Act fundamentally altered the treatment of the university research product. Under its language, a nonprofit organization may elect to take title to inventions developed by its researchers.\textsuperscript{50} The ability to "take title" affords universities the opportunity to license patented or patentable technologies, and in most cases the school is entitled to some negotiated share of the receipts generated by the commercial product.

To say that the Bayh-Dole Act has achieved its goals would be an understatement. Before passage, "fewer than 250 patents were issued to universities annually."\textsuperscript{51} In 1992, there were 2,700 academic patents filed and 1,500 licenses granted to industry by universities.\textsuperscript{52}
The results have been so financially impressive that Senator Dennis DiConcini of Arizona has suggested allowing the federal government, which provides much of the grant money that makes university research possible, to share in the revenues generated from the sale of licensed technology.\footnote{See id.}

2. Financial Pressures on Higher Education

While the primary intent behind the Bayh-Dole Act was to benefit business and industry, an equally important consequence of the Act was revenue enhancement for research universities. The need for such enhancement has recently grown acute because the late 1980s and 1990s have been marked by either a decline in growth or a threatened absolute decline in revenues from traditional sources. Federal funding has been curtailed in recent years,\footnote{See Bok, supra note 10, at 14 (noting the decline in growth of federal outlays and its effect on the dynamism of the university); James S. Fairweather, Academic Research and Instruction: The Industrial Connection, 60 J. HIGHER EDUC. 388, 393 (1989) (documenting the reduction in funding and the effect on academic facilities and laboratory equipment); Cary H. Sherman & Steven R. Englund, When the Feds Share the Tab, LEGAL TIMES, May 15, 1995, Magazine Supplement, at 21, 22. (describing the reasons universities are seeking additional research funding from industry).} and the current climate on Capitol Hill does not suggest a reversal of that trend in the near future. State legislatures have made prodigious cuts in expenditures for their public university systems; in 1992, California slashed 10\% of its education budget, and many other states have acted similarly.\footnote{See Christina Del Valle et al., A Lot Less Moola Moola on Campus, BUS. WEEK, Oct. 5, 1992, at 114, 114 (analyzing state funding for higher education).} While annual percentage tuition increases were at or around double-digit figures throughout most of the 1980s,\footnote{See generally Why College Tuitions Are So High, ATLANTIC MONTHLY J., Mar. 1993, at 32 ("[S]ince 1980 colleges and universities have been increasing their tuition and fees at roughly twice the rate of inflation."); Michael O'Keefe, College Costs: Have They Gone Too High Too Fast?, CHANGE, May/June 1994, at 54, 54-55 (discussing the tremendous increase in college costs from 1981-1987).} such a level of growth cannot be sustained if colleges are to maintain requisite enrollment levels and keep higher education affordable for lower- and middle-income families. Finally, on the expenditure side of the equation, the cost of operating a research university has increased dramatically, due in no small part to the enormous costs of purchasing and maintaining the type of equipment necessary to conduct sophisticated modern research.\footnote{See Consuelo Lauda Kertz & James K. Hasson, Jr., University Research and}
Taking all these factors into consideration, it is clear that income from technology transfer is not so much "found money," but rather a necessary source of income to offset that which universities have either already lost or are losing. Assuming a corporate tax rate between 15% and 34% and the technology-transfer income levels described in Part I.A, the application of the federal income tax would result in a considerable loss of revenue to schools that are already cash-strapped. Consequently, the exemption of income derived from technology transfer is not a luxury; it is practically a necessity.\(^5^8\)

3. The Development of the Biotechnology and Software Industries

Changes on the corporate/industry side have also contributed to the remarkable expansion in technology-transfer opportunities. The increase in licensing agreements has been contemporaneous with the development of the biotechnology and computer software fields. When automobile manufacturing and other heavy industrial businesses dominated corporate America, university research produced little that could be practically utilized. Now that biomedical and high-technology enterprises have established a powerful presence in the U.S. and world economies, the possibilities for academic collaboration have greatly increased.\(^5^9\) Additionally, both the federal and state governments have encouraged these collaborations.\(^6^0\)

\(^5^8\) See Bok, supra note 10, at 18-19 ("There is no reason to suppose that these pressures will diminish any time soon. On the contrary, massive federal deficits and a sluggish economy are likely to make the financial outlook for academe even chillier than in the past.").

\(^5^9\) See Martin Kenney, The Ethical Dilemmas of University-Industry Collaborations, 6 J. BUS. ETHICS 127, 130 (1987) (describing the onset of genetic engineering as one of the major catalysts to university-industry collaborations).

\(^6^0\) See 15 U.S.C. § 3701(1), (3) (1994) (declaring that "[t]echnology and industrial innovation are central to the economic, environmental, and social well-being of citizens of the United States" and that "[c]ooperation among academia, Federal laboratories, labor, and industry, in such forms as technology transfer, personnel exchange, joint research projects, and others, should be renewed, expanded, and strengthened"); see also Chew, supra note 45, at 271-72 (describing how both the federal and state governments have legislated programs to encourage university collaboration with business and specifically mentioning the University of Pennsylvania's Ben Franklin Partnership Program, which advises and funds university-industry
4. Faculty Impetus for Technology Transfer

Finally, one cannot ignore the tangible and intangible benefits that professors and other researchers derive from seeing their work put to practical use. First, researchers stand to make a personal profit from commercially successful inventions and discoveries. Generally, the professor-inventor receives a portion of the technology-transfer revenue. The Bayh-Dole Act mandates that a professor-inventor receive some share, albeit an indeterminate one, of the royalties under agreements to which the Act applies. Second, technology-transfer successes often increase the personal satisfaction of an academic in seeing a discovery realize a practical application. As Elihu Thomson stated to the M.I.T. graduating class in 1920: "Publish an invention freely, and it will almost surely die from lack of interest in its development. It will not be developed and the world will not be benefitted. Patent it, and it will be taken up and developed into a business." Professors' personal motivations are critical, not only because of their effect on the growth of technology transfer, but also because they touch upon many of the issues affecting the university tax exemption.

II. THE CURRENT TAX STRUCTURE FOR UNIVERSITIES AND INCOME FROM LICENSED INVENTIONS

A. The § 501(c)(3) Tax Exemption

1. Generally

Under I.R.C. § 501(a), an organization that is described under § 501(c) is granted an exemption from the income tax on corporations. Provided that an institution is both organized and operated exclusively for one or more of the purposes listed in the section, it will be classified as an exempt organization. Section 501(c)(3)
specifically exempts "[c]orporations . . . organized . . . exclusively for . . . charitable, scientific . . . or educational purposes." Since most research universities engage in both scientific and educational activities, they qualify for exempt status, and consequently the majority of their revenues are not subject to taxation.

The philosophy behind granting a tax exemption to institutions organized for scientific, educational or other charitable purposes is that their operation confers a public benefit on society. This historic rationale has been codified in the Treasury regulations, which state that "[a]n organization is not organized or operated exclusively for one or more of the purposes specified in subdivision (i) of this subparagraph [which includes educational and scientific purposes] unless it serves a public rather than a private interest." The exemption rests upon the concept that the government should subsidize those enterprises that society values as a public good but that the market might not create in the absence of government support. However, it is questionable whether such a subsidy mandates organization and operation exclusively for an exempt purpose, it is permissible for some portion of an institution’s revenue to be derived from activities unrelated to the exemption. See St. Louis Union Trust Co. v. United States, 374 F.2d 427, 431-32 (8th Cir. 1967) (noting that, to qualify for exemption, an organization’s primary purpose must meet the Code’s exclusivity requirement, but that the performance of incidental activities that do not qualify for exempt status will not automatically result in the loss of exempt status). Therefore, even if royalty income were subject to taxation, it would present no threat to the general university exemption.


See James T.Y. Yang, Collaboration Between Nonprofit Universities and Commercial Enterprises: The Rationale for Exempting Nonprofit Universities from Federal Income Taxation, 95 YALE L.J. 1857, 1862 n.37 (1986) (“Research universities, in particular, will have several bases for tax exemption, including charitable, educational, and scientific purposes.”).

See Charles O. Galvin & Neal Devins, A Tax Policy Analysis of Bob Jones University v. United States, 36 VAND. L. REV. 1353, 1365-66 (1983) (noting that “[i]n the floor debate over the Tariff Act of 1894, which provided tax exemptions for organizations ‘organized and conducted solely for charitable, religious, or educational purposes,’” Congress made clear that these tax benefits were available because the organizations served desirable public purposes” (citations omitted)).

For a brief but enlightening discussion of the history of university tax exemptions, see Colombo, supra note 19, at 844-45.


See Yang, supra note 66, at 1864 (“The exemption from taxation . . . is based on the theory that the government is compensated for the loss of revenue by its relief from financial burdens which would otherwise have to be met by appropriations from other public funds . . . .” (quoting H.R. REP. NO. 1860, 75th Cong., 2d Sess. 19 (1938))).
should be extended to activities that the market does support—a point addressed in Part III.

The Supreme Court, in Bob Jones University v. United States, has confirmed that a "public purpose" is the basis for the federal tax exemption. Chief Justice Burger, writing for the majority, explained that "in enacting \( \ldots \) § 501(c)(3), Congress sought to provide tax benefits to charitable organizations, to encourage the development of private institutions that serve a useful public purpose or supplement or take the place of public institutions of the same kind."

He continued: "Charitable exemptions are justified on the basis that the exempt entity confers a public benefit—a benefit which the society or the community may not itself choose or be able to provide, or which supplements or advances the work of public institutions already supported by tax revenues." The concept of conferring a "public benefit" is critical in determining whether a given activity of an otherwise-exempt institution is inconsistent with its exempt public purpose, and therefore should be subject to UBIT.

Those within the academy have also recognized the centrality of this public purpose. President Bok's final address to the Harvard Board of Overseers explained:

Universities attract the loyalty of faculty and alumni and, to a degree, the respect of the public precisely because they act for reasons other than money and will not compromise certain values to gain immediate monetary rewards. As universities grow more aggressive in finding ways to turn their activities into cash, their image subtly changes. They appear less and less as a charitable institution seeking truth and serving students and more and more as a huge commercial operation that differs from corporations only because there are no shareholders and no dividends.

Bok's recognition of the fragility of the public's acceptance of the traditional tax exemption for universities is well-founded. Consider the following:

According to the myth created by that traditional vision, scholars pursue research wherever their drive to knowledge takes them, and colleges and universities transmit the fruits of that research to

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71 461 U.S. 574, 575 (1983) (determining that it would be incompatible with the purpose of the § 501(c)(3) exemption to allow a racially discriminatory private school to enjoy the benefits of the tax exemption).
72 461 U.S. at 587-88.
73 461 U.S. at 591.
74 See infra Part II.B.
75 Bok, supra note 10, at 17-18.
contemporary and future generations as the accumulated wisdom of the ages.

... Institutions of higher education use the myth to justify a tax-exempt status ... .

These statements suggest that, if universities continue to engage in activities that resemble commercial enterprises, their historical exemption from corporate taxation may be called into question. While this Comment does not call for the revocation of the overall exemption granted to universities, the applicability of UBIT to technology-transfer activities draws analogously upon this criticism of university activity.

2. Educational and Scientific Organizations

a. Educational

Precisely what is the public function of a research university such that its income deserves exemption from taxation under I.R.C. § 501(a)? The answer to this question lies in the Treasury regulations' definitions of "educational" and "scientific." An educational institution is one that engages in "[t]he instruction or training of the individual for the purpose of improving or developing his capabilities" or "[t]he instruction of the public on subjects useful to the individual and beneficial to the community." Therefore, the concept that both enrolled students and the taxpaying public will gain a tangible benefit from colleges and universities grounds the exemption for educational institutions. When an otherwise-exempt university chooses to engage in revenue-producing activities that neither provide a benefit to enrolled students nor instruct the public, the public-function element is missing. As will be discussed in Part III, orienting the university research enterprise in a manner that

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70 Robison & Sanders, supra note 13, at 227.

77 Treas. Reg. § 1.501(c)(3)-1(d)(3)(i)(a), (b) (as amended in 1990). In 1980, a federal court of appeals found portions of this regulation to be unconstitutionally vague. See Big Mama Rag, Inc. v. United States, 631 F.2d 1030, 1034-35 (D.C. Cir. 1980) (finding the Regulation's definition of "educational" to be "so vague as to violate the First Amendment and to defy [the court's] attempts to review its application in this case"), cited in HOPKINS, supra note 17, at 177. This regulation, however, is still part of Title 26 of the Code of Federal Regulations and is still utilized by the courts and the Service. See, e.g., Rev. Proc. 86-43, 1986-2 C.B. 729, 729 (considering the result in Big Mama Rag, Inc. and determining "the circumstances under which advocacy of a particular viewpoint or position by an organization is considered educational ... within the meaning of section 1.501(c)(3)-1(d)(3) of the Income Tax Regulations.").
encourages technology transfer has arguably had a negative impact on the educational mission of the university.

b. Scientific

A research university could also qualify for the § 501(c)(3) tax exemption as a "scientific" organization, with the word "scientific" again having a specific meaning under the Treasury regulations. First, because an organization only meets the requirements of the § 501(c)(3) exemption if it serves a public purpose, "a scientific organization must be organized and operated in the public interest . . . . Therefore, the term scientific, as used in section 501(c)(3), includes the carrying on of scientific research in the public interest." The Treasury regulations go on to define precisely what constitutes the public interest for tax-exemption purposes under the scientific prong: First, if the results of the research are made available to the public on a nondiscriminatory basis; second, if the research is performed for the United States or other political subdivision; or third, if the research is directed toward benefiting the public.

The regulations elaborate further upon exactly what constitutes "[s]cientific research . . . benefiting the public." The definition of scientific research carried on in the public interest includes: (1) the scientific education of college or university students; (2) publication in a treatise, thesis or trade publication; (3) research carried on for the purpose of discovering a cure for a disease; and (4) research oriented toward the development of a geographic area. As will be discussed in Part III, much of the technology-transfer royalty income that is currently designated as tax-exempt is generated from research endeavors that satisfy neither the statutory nor the regulatory criteria.

The other term in the regulations that takes on special meaning for purposes of determining the tax-exempt status of scientific activities is the word "research." Not all activities that are commonly thought of as research qualify for the tax exemption. First, the regulations explain that "[s]cientific research does not include

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78 See Kertz & Hasson, supra note 57, at 115 (including "scientific" among a university's exempt purposes).
80 Treas. Reg. § 1.501(c)(3)-1(d)(5)(iii)(a) to (e) (as amended in 1990).
activities of a type ordinarily carried on as an incident to commercial or industrial operations. The regulations, however, do not categorically exclude all research in furtherance of a commercial purpose, or that might ultimately prove to have commercial value, as they state "[t]he determination as to whether research is scientific does not depend on whether such research is classified as fundamental or basic as contrasted with applied or practical." Therefore, research that is geared toward applied or practical ends is not per se taxable. Since the type of research performed is not determinative for taxability purposes, the proper inquiry as to whether income from scientific research should be exempt from taxation must focus on whether the particular research is performed for the "public benefit" as defined by the Code and regulations.

3. The Private Benefit Rule

The other aspect of the § 501(c)(3) exemption that requires consideration in terms of the potential taxability of technology-transfer income is the private benefit rule. The Code mandates that in order to qualify for exempt status, no part of the net earnings of

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83 Treas. Reg. § 1.501(c)(3)-1(d)(5)(ii) (as amended in 1990) (emphasis added). This regulation is often invoked when an exempt organization engages in products-testing activities. See Rev. Rul. 85-110, 1985-2 C.B. 166, 168 (finding that diagnostic laboratory testing by a tax-exempt hospital of specimens from private patients of the hospital's staff constituted an unrelated trade or business if such testing was otherwise available in the community); Rev. Rul. 68-373, 1968-2 C.B. 206, 207 (determining that a nonprofit organization that tested drugs for commercial drug companies was not entitled to exemption under § 501(c)(3)); Priv. Ltr. Rul. 78-52-007 (Sept. 13, 1978) (determining that the testing of dental specimens and hydraulic and mechanical devices was not scientific research and therefore the income received for these activities was not exempt from taxation); see also infra note 116.


85 This is the case provided that the institution is not operated merely as an adjunct to a for-profit enterprise. See Treas. Reg. 1.501(c)(3)-1(d)(5)(ii) (as amended in 1990) ("Scientific research does not include activities of a type ordinarily carried on as an incident to commercial or industrial operations . . . .").

86 See supra notes 67 & 71-74 and accompanying text (delineating the requirements for an organization to qualify for "educational" or "scientific" tax exemption).

It can be argued that the development of commercial products does benefit the public by increasing the overall welfare of a market economy. Under this conception, however, all corporate activity would be tax exempt, since corporate research products are no different from university research products in terms of potential economic benefit. See infra notes 239-42 and accompanying text (arguing that university activities that are identical to commercial enterprises should not be tax-exempt). Consequently, the phrase "public benefit" is properly confined to the Treasury definition.
an organization may inure to the benefit of a private individual. This private inurement rule "refers to a situation in which the exempt entity's economic benefits are diverted from the charitable class the entity is supposed to serve and into the hands of 'insiders' such as officers, directors, employees and the like." Faculty researchers are often able to supplement their salaries through a contracted-for share of subsequent licensing, royalty and other technology-transfer income. In fact, the Bayh-Dole Act requires that if a university intends to take title to and license an invention, the professor-inventor must receive some portion of the proceeds. An issue that has arisen over the last several years is whether compensation in the university might reach a level such that the Service would characterize it as unreasonable and therefore taxable. What constitutes "unreasonable compensation" is still an open question, as the Service has no "definitive instruction to determine when compensation is unreasonable." One could certainly envision a private benefit inquiry, however, if the Service were to determine that the compensation of the professoriate so closely resembled that of researchers in the private sector that there existed no discernible difference between the compensation of, for example, a Harvard professor and a for-profit researcher. If technology-transfer growth were to result in such identical compensation levels, the Service might find a violation of the private benefit rule and potentially could revoke the school's general tax-exempt status.

88 Colombo, supra note 19, at 850 (citing Boris I. Bittker & Lawrence Lokken, Federal Taxation of Income, Estates and Gifts ¶ 100.4 (2d ed. 1992)).
89 See supra notes 61-63 and accompanying text (discussing incentive compensation for professor-inventors).
92 Id. at 114.
93 See Harding & McClellan, supra note 91, at 114-15 (explaining that "the only sanction that can be imposed against a college or university (or any other tax-exempt organization) that has paid unreasonable compensation ... is to revoke the
The recently proposed IRS auditing guidelines for universities suggest that the Service is seriously considering the private benefit question in regard to scientific research income. As a report on the guidelines determined, "[t]he main focus of the research section of the guidelines is whether the conduct of a research activity by a college or a university may result in impermissible private benefit." If the Service determined that a professor's share of royalty income constituted a private benefit similar to that received in a commercial setting, it might also determine that the initial research generating such income was not "scientific research" within the § 501(c)(3) exemption. This might consequently create UBIT problems for the professor's institution on its share of the royalty income.

B. The Doctrine of Unrelated Business Income

1. Generally

The income tax exemption for organizations that qualify under § 501(c)(3) does not automatically exempt income derived from all activities in which such organizations may participate. If a university (or any exempt organization) engages in activities that are unrelated to the charitable purposes for which the initial tax exemption was granted, the Service will impose the appropriate corporate income tax through the unrelated business income tax ("UBIT"). The most commonly recognized purpose of UBIT is to place for-profit and nonprofit organizations on the same footing when they are engaging in the same activities.
One of the most well-known applications of UBIT in the university setting occurred in *Iowa State University of Science and Technology v. United States.* In that case, Iowa State University operated a revenue-generating television station affiliated with the American Broadcasting Corporation. Only 14% of the station's programming was "educational"; the balance consisted of network and syndicated programming. The Court of Claims noted that "[t]he presence of an income tax exemption for the University, however, does not automatically exempt all activities in which it may participate." While the court recognized that the station may have provided some educational benefits, it ultimately concluded that "the commercial aspects and the emphasis on revenue maximization were the overwhelming goals of the operation of the station; and, thus, the business was not substantially related to the educational purposes of the University." The court held the station to be an unrelated trade or business of the university and its income taxable under UBIT.

Higher education's attempt to find collateral sources of income by engaging in activities that are arguably unrelated to its educational or scientific purpose has generated considerable media attention. No single source of income has been more hotly debated than the revenues—still largely tax-exempt—derived from participation in

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99 500 F.2d 508 (Ct. Cl. 1974).
100 See id. at 511.
101 See id. at 515.
102 Id. at 516.
103 Id. at 520.
104 See id. But see C.F. Mueller Co. v. Commissioner, 190 F.2d 120, 123 (3d Cir. 1951) (holding that income accruing to the New York University Law School from the manufacture and sale of macaroni products was exempt from taxation). It was in response to perceived abuses such as the N.Y.U. macaroni factory that the IRS decided to tax income from the unrelated activities of otherwise-exempt entities. For a discussion of the genesis of UBIT, see Note, *The Macaroni Monopoly: The Developing Concept of Unrelated Business Income of Exempt Organizations,* 81 HARV. L. REV. 1280, 1280-85 (1968).
105 See, e.g., Battling "Nonprofits" for Profit: New Tax Proposals Aim at Curbing Commercial Activity, CHI. TRIB., Apr. 16, 1989, § 8 (Business), at 14, available in 1989 WL 4577529 (listing areas where nonprofits compete with commercial businesses, including food service, testing laboratories, travel services, day care, medical equipment supplies and bus operations); Edward B. Fiske, *Competition in Business Pits Town Versus Gown,* N.Y. TIMES, June 15, 1987, at A12 (noting that four states have already enacted laws limiting the commercial activities of colleges, and that similar bills are pending in at least 30 other states); Gaul & Borowski, supra note 16, at A6 (noting that some schools have expanded the definition of "education" to include such commercial activities as catering, trips abroad, executive seminars and video sales).
major college athletics. The Service has recently ruled on other, less high-profile revenue sources. Income from the rental of university facilities to outside parties has been declared taxable, as has income from university operation of hotels and motels. Income from university-operated parking lots and travel tours, on the other hand, has been declared exempt. Some of these dispositions, however, were "easy cases" in the sense that the activity had only the most attenuated relationship to an educational or other charitable purpose. Furthermore, the amount of money generated by these activities is not so great that the institution sustains a tremendous loss from being subject to taxation. Making a determination on research income, however, does not present an easy resolution, because an obvious relationship exists between the activity and the university's exempt purposes, and the amount of money at issue is considerable for both the institution and the Service.

2. UBIT Explained

Internal Revenue Code § 512(a)(1) provides the definition of unrelated business taxable income: "[T]he term 'unrelated business taxable income' means the gross income derived by any organization from any unrelated trade or business . . . regularly carried on by it . . . ." Section 513(a) then proceeds to define the term "unrelated trade or business" as "any trade or business the conduct of which is not substantially related . . . to the exercise or performance by such

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106 See Richard L. Kaplan, Intercollegiate Athletics and the Unrelated Business Income Tax, 80 COLUM. L. REV. 1430, 1471 (1980) (noting that "a great many athletic programs probably do have the characteristics of an 'unrelated trade or business'"); Ed Sherman, College Sports Face Tax, Antitrust Peril: IRS, FTC Could Cause Upheaval, CHI. TRIB., July 9, 1991, § 4, at 1 (noting that "recent actions by the IRS and FTC suggest that athletic departments have crossed the fine line from existing for educational purposes to being . . . commercial enterprises").

107 See Rev. Rul. 80-298, 1980-2 C.B. 197, 198 (determining that a university that leased its stadium to a professional football team was engaged in an unrelated trade or business because the activity did not have a substantial causal relationship to the achievement of the university's exempt purpose).

108 See Gen. Couns. Mem. 38,060 (Aug. 22, 1979) (disagreeing with a proposed revenue ruling and concluding that the operation of a hotel and restaurant constitutes an unrelated trade or business).


110 See Gen. Couns. Mem. 38,949 (Jan. 6, 1983) (concluding that the sponsorship of travel study tours furthered the educational purpose of a museum).

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organization of its charitable, educational, or other purpose or function constituting the basis for its exemption under section 501." Therefore, the determination whether a research endeavor is substantially related to the exempt purpose of the university lies at the heart of the inquiry as to whether subsequent income generated by the project should be taxable. As will be discussed in Part III, if research subject to a technology-transfer agreement is never published, cannot be disclosed to other professors, does not provide an educational benefit to students, creates conflicts of interest and otherwise is damaging to the concept of academic freedom, the Service should treat income from such research as taxable.

At this juncture, it is important to examine briefly the three main elements of the Code's definition of an unrelated trade or business: (1) a trade or business; (2) regularly carried on; (3) having no substantial relation to the exempt purpose.

a. Trade or Business

It is assumed that exempt organizations perform a public function that otherwise would not be carried on in the for-profit sector. The "trade or business" prong of the unrelated business income test ensures that exempt organizations do not use this exemption in pursuance of activities that are being performed by the commercial sector, which must price its services to include the additional cost of taxation. The relevant Treasury Regulation states that "[t]he primary objective of adoption of the unrelated business income tax was to eliminate a source of unfair competition by placing the unrelated business activities of certain exempt organizations upon the same tax basis as the nonexempt business endeavors with which they compete." In the context of research activities, this element of UBIT has most often been cited when a university or other nonprofit research institute is acting in a products-testing

112 I.R.C. § 513(a) (emphasis added).
113 See I.R.C. §§ 512(a)(1), 513(a); see also Disabled Am. Veterans v. United States, 650 F.2d 1178, 1185 (Ct. Cl. 1981) (listing the three requirements).
114 See Colombo, supra note 19, at 861-62 (noting that institutions should receive a tax exemption when they perform a function that society should support, but which is not supported by the private market); see also supra note 70 and accompanying text.
115 Treas. Reg. § 1.513-1(b) (as amended in 1983); see also Disabled American Veterans, 650 F.2d at 1187 ("It is concluded that what is necessary to constitute a trade or business for UBIT purposes is that an activity be operated in a competitive commercial manner.")
capacity similar or identical to a commercial lab, giving the nonprofit organization an unfair advantage over competitors.116

It is debatable whether technology-transfer activity constitutes a true trade or business. On the one hand, it can be argued that it does not, in that many of the discoveries that lead to patents, licenses and revenue-generating arrangements are made in the course of research that would be conducted whether or not the university had a financial interest in its results. Inventions and discoveries are the normal byproducts of a successful academic research enterprise. As will be discussed in Part III, however, university interest in research with profit potential is fundamentally changing the mode of operation of the university laboratory. An increased focus on "the bottom line" encourages faculty to orient efforts toward projects that may generate pecuniary rewards,117 just like a commercial enterprise. If the difference between the two evaporates because the university ignores its public function, the unfair competition problem that UBIT was enacted to address becomes even more important.

b. Regularly Carried On

The requirement that a trade or business be "regularly carried on" calls for an inquiry into the frequency and continuity of engagement in a given activity, as well as the manner in which the activity is pursued.118 Similar to the "trade or business" requirement, this element is designed to ensure that exempt organizations are treated in the same manner as nonexempt organizations when the two engage in similar activities. The Treasury regulations define activities as being regularly carried on if they "manifest a frequency and continuity, and are pursued in a manner, generally similar to comparable commercial activities of nonexempt organizations."119 For example, in Disabled American Veterans v. United States, the Court

116 See Tech. Adv. Mem. 78-52-007 (Sept. 13, 1978), available in 1978 WL 7852007 (determining that the testing of oral pathology specimens was a trade or business and that it constituted research normally carried on as a part of a commercial operation); see also Kertz, supra note 18, at 81 ("Colleges, universities and hospitals are taxed on income from ordinary 'testing' of materials or products."); Gaul & Borowski, supra note 16, at A6 (noting that there is an unfair advantage in having testing performed by university labs since for-profit organizations have to pay taxes and nonprofit organizations do not).

117 See infra notes 210-12 and accompanying text (discussing university decisions that allow professor-inventors to focus on lucrative research).


119 Id.
of Claims considered whether Disabled American Veterans' ("DAV") semiannual Special Solicitation letters constituted an activity "regularly carried on."\textsuperscript{120} In concluding that the "regularly carried on" test was satisfied, the court compared DAV's mailings to the commercial direct-mail business.\textsuperscript{121}

The fact that a nonprofit institute frequently engages in for-profit activities, however, does not necessarily trigger the "regularly carried on" test. In \textit{Midwest Research Institute v. United States},\textsuperscript{122} the Western District of Missouri determined that although the Institute performed many revenue-generating research projects, each was a "discrete activity taking place over a discrete period of time," and therefore did not generally rise to the level of a trade or business.\textsuperscript{123} The court did conclude, however, that certain research projects of the Institute—those that were conducted for private sponsors—did satisfy the "regularly carried on" element of I.R.C. § 512.\textsuperscript{124} The court found that "[p]laintiff conducted some types of projects . . . so as to satisfy the 'regularly carried on' requirement of § 512. These groups of similar, regularly conducted projects may be regarded, in our view, as trades or businesses for purposes of the unrelated-business tax."\textsuperscript{125} \textit{Midwest Research Institute}, therefore, appears to leave open the question whether university technology-transfer activity satisfies the "regularly carried on" test. Some commentators presume that the test would be satisfied.\textsuperscript{126} Even if the activities were not ultimately characterized as regularly carried on, \textit{Midwest Research Institute} suggests that individual projects may be analyzed on a case-by-case basis for taxability, with the critical difference being the manner in which the research endeavors are conducted.\textsuperscript{127}

\textsuperscript{120} 554 F.2d 1178, 1188 (Ct. Cl. 1981).
\textsuperscript{121} See id. (concluding that "there exists sufficient similarity to a commercial endeavor to conclude that the activity was regularly carried on").
\textsuperscript{122} 554 F. Supp. 1879 (W.D. Mo. 1985).
\textsuperscript{123} Id. at 1884.
\textsuperscript{124} See id. at 1385 ("[P]laintiff's private sponsor projects were, with exceptions to be noted, scientific research carried on for the required purpose." (emphasis in original)).
\textsuperscript{125} Id.
\textsuperscript{126} See Kertz, \textit{supra} note 18, at 76-77 (assuming that most university research would be considered to be a business "regularly carried on" if it were conducted by a commercial enterprise).
\textsuperscript{127} See Midwest Research Inst., 554 F. Supp. at 1885 ("[P]rojects must be examined to determine whether the total satisfies the requirements of the statute.").
c. No Substantial Relation to Exempt Purpose

University technology-transfer activities are most likely to be found suspect if they fail to manifest a substantial relation to an exempt purpose. If the Service does not consider the purpose or conduct of an activity to be substantially related to the § 501(c)(3) exempt purposes of a university—as in the operation of a network television station or a hotel—the income derived will be subject to the § 511 unrelated business income tax.128

First, it is necessary to determine exactly how the Service interprets the term “substantial relation.” The corresponding Treasury regulations provide some assistance, but are inconclusive: “The presence of this requirement necessitates an examination of the relationship between the business activities which generate the particular income in question . . . and the accomplishment of the organization’s exempt purposes.”129 This statement requires a fact-specific examination of the activity in question to determine its relationship to the organization’s exempt purpose.130 Furthermore, the Treasury regulations note that the activity must have a causal relationship with the achievement of exempt purposes and that the causal relationship must be a substantial one.131 This means that an attempt by a university to offer some merely attenuated relationship between the activity that generated the income and the original exempt purpose of the institution will likely be unsuccessful.

Finally, the UBIT regulations call for an inquiry into the overall scope of the activities: “In determining whether activities contribute importantly to the accomplishment of an exempt purpose, the size and extent of the activities involved must be considered in relation to the nature and extent of the exempt function which they purport to serve.”132 Consequently, if the extent (or degree) to which

128 See, e.g., Rensselaer Polytechnic Inst. v. Commissioner, 732 F.2d 1058, 1059 (2d Cir. 1984) (explaining that “the net income from commercial use of the fieldhouse constituted ‘unrelated business taxable income’ which was subject to taxation under I.R.C. § 511(a)(1)”); Iowa State Univ. of Sci. and Tech. v. United States, 500 F.2d 508, 516 (Ct. Cl. 1974) (holding that revenues from the operation of a university-owned television station were unrelated business income).
130 See, e.g., Priv. Ltr. Rul. 79-56-006 (May 23, 1979) (determining that, although the university was engaged in the testing of pharmaceutical products, the fact that the results were published in scholarly journals and presented at conferences related the activity to the exempt purposes of the university and rendered income from the activity nontaxable).
suspect activity is carried on is greater than that which is necessary either for the education of students, the dissemination of knowledge beneficial to the public or some other public function, the resultant income may be classified as unrelated to the exempt purpose and thus taxable.

3. *IIT Research Institute v. United States*133

The seminal case in support of the proposition that income from scientific research does not constitute unrelated trade or business income, provided that such research is related to an institution's exempt purpose, is *IIT Research Institute v. United States*. 134 While this case involved a research institute instead of a university and while most of the revenue at issue was derived from research contracts rather than licensing and royalty proceeds, the court's holding is still illustrative. The Claims Court utilized the three-prong test for defining unrelated business income for an otherwise tax-exempt institution. It analyzed whether the income was from a trade or business, whether that trade or business was regularly carried on by the organization and whether the trade or business was or was not substantially related to the original exempt purpose of the organization. 135 Because IIT was claiming its exemption as a scientific organization, the court announced a working definition of the word "scientific" in order to characterize the original exempt purpose of the Institute. 136 Having determined that IIT's research contracts were "scientific" in nature, 137 the court stated that, in order for the research to qualify as "carried on in the public interest," the Institute

134 For a related analysis, see Midwest Research Inst. v. United States, 544 F. Supp. 1379, 1391 (W.D. Mo. 1983) (determining that research performed for the purpose of aiding industrial development is substantially related to a public purpose such that income from the research is tax-exempt).
135 See id. at 18 (citing Treas. Reg. § 1.513-1(a) (as amended in 1983)).
136 See id. at 21. The court defined research as "scientific" if it:

1) involved the use of observation or experimentation to formulate or verify facts or natural laws; 2) could only have been performed by an individual with advanced scientific or technical expertise; 3) added to knowledge within a particular scientific field; 4) involved the application of mathematical reasoning; and/or, 5) was an attempt to systematize or classify a body of scientific knowledge by collecting information and presenting it in a useful form.

137 See id. at 21-25.
was required either to make the results of the research available to the public on a nondiscriminatory basis, to perform the research for the United States government or a state government, or otherwise to direct the research toward "benefiting the public." The court noted that the publication of results was "a way of life" for the Institute and that therefore the research was made available to the public on a nondiscriminatory basis. The court held that IIT "had not engaged in a trade or business substantially unrelated to its organization and operation for scientific purposes." In considering whether income derived from university patent-licensing activities should be classified as unrelated business income, courts would likely perform an analysis similar to that used in IIT Research Institute. This analysis will be explained in greater detail in Part III of this Comment.

C. Relevant Exceptions to the Tax on Unrelated Business Income

1. Research Performed for Any Person

While the case for the taxability of research income derived from patent licensing appears plausible in cases in which the research enterprise is not in conformity with the original exempt purpose of the university, two notable exceptions within the Code still place the income out of the reach of the IRS. The first is contained in I.R.C. § 512(b)(8), which states that "[i]n the case of a college, university, or hospital, there shall be excluded all income derived from research performed for any person . . . ." This exception would appear

138 Id. at 25-26 (citing Treas. Reg. § 1.501(c)(3)-1(d)(5) (as amended in 1990)). The court, relying upon Treas. Reg. § 1.501(c)(3)-1(d)(5)(c)(J) to (J), described research directed toward "benefiting the public" to include: aiding in the education of students; publishing research results in any form available to the public; seeking a cure for disease; and aiding in the addition, retention or development of new industry in a community or geographical area. See id. at 26.

139 See IIT Research Inst., 9 Cl. Ct. at 26 ("In practice, substantially all of the information derived from scientific research is published or made available to the public through presentations at research conferences and symposia."). The court also noted that IIT had acted in accordance with Rev. Rul. 76-296, see id. at 26-27, which requires the publication of "substantially all of the information concerning the results of the research which would be useful or beneficial to the interested public," 1976-2 C.B. 142, 142.

140 See IIT Research Inst., 9 Cl. Ct. at 31.

141 I.R.C. § 512(b)(8) (1994). "Person," used in the Treasury regulations, refers to any legal entity, which includes individuals, corporations and the like. See I.R.C. § 7701(a)(1) (1994) ("The term 'person' shall be construed to mean and include an individual, a trust, estate, partnership, association, company or corporation.").
to be an ironclad exemption for most university research income, no matter how attenuated the relationship between the research and the original rationale behind the tax exemption. The Service’s view of the legislative intent behind this exemption, however, compels a different conclusion.

In General Counsel Memorandum 39,196, the Service opined that “Congress, in excluding university research from taxation anticipated that the purpose of such research . . . would be related to the primary exempt purpose of a university (i.e., teaching students).” Congress was, through the inclusion of § 512(b)(8), operating under the then-valid assumption that a university would only engage in research oriented toward exempt purposes. At least one analysis of this General Counsel Memorandum has contended that the opposite assumption—that Congress was unconcerned with whether research was related to an exempt function—would contravene congressional intent. Therefore, the plain meaning of § 512(b)-(8) may not be dispositive as to whether royalty income earned by a university will be taxable. If the purpose for and/or the conduct of the research enterprise fail to reflect either the scientific or educational purposes that underlie the university’s tax exempt mission, the “for any person” exemption may be unavailable. Another commentator has described the “for any person” exemption as “inconsistent even with the Code’s vague purpose of exemption.” The presence of the § 512(b)(8) exemption was predicat-

142 See Kertz, supra note 18, at 79-80 (asserting that “Congress intended for income from even ‘unrelated’ research to be exempt from tax in the case of a college [or] university”); see also Exempt Organizations Handbook [Handbook 7751], in 4 IRS Manual-Administration (CCH), pt. VII, ch. (37-89-(4), at 20,777-3 (1988) [hereinafter Exempt Organizations Handbook] (“Under this provision, income from research conducted by a college, university, or hospital will not be subject to tax on unrelated business income, regardless of whether the research activities further an exempt purpose of such organization.”).


144 See id. (explaining that private contracts that concerned research endeavors did not have to be separated out on the basis of those that would be subject to UBIT and those that would not).

145 See Louthian & Harper, supra note 95 (“This was not a result that Congress could have intended.”). This is especially true given the fact that Congress could not have anticipated the changes in the university environment outlined in Part I of this Comment.

146 Yang, supra note 66, at 1873. Yang notes two grounds of inconsistency: “First, the singular requirement that research cannot be incident to commercial or industrial operations exempts from taxation research that is not ‘carried on in the public interest.’ Second, the modifications exempt income generated by ‘unrelated’
ed on a particular vision of the university’s research enterprise. As the manner in which research universities conduct that enterprise changes (based on the promise of technology-transfer revenue), a reconsideration of that subsection becomes more appropriate.

2. Royalty Revenues

The other relevant Code exclusion from the unrelated business income tax concerns royalty income. I.R.C. § 512(b)(2) excludes “all royalties . . . whether measured by production or by gross or taxable income.” One would assume, therefore, that universities should not be concerned about technology-transfer income when the source of the revenue is from royalty payments. Revenue Ruling 76-297 addressed this Code subsection directly. The question for the Service was whether amounts received by an otherwise-exempt organization pursuant to a licensing agreement constituted royalty income that was excludable in computing unrelated business taxable income. The Service determined that such income was excludable under § 512(b)(2).

The Service is currently embroiled in a controversy over the royalty exemption, the outcome of which may be dispositive of the patent-licensing income issue. In Sierra Club, Inc. v. Commissioner the Tax Court held that income derived from “affinity” credit cards was exempt from UBIT because it constituted a royalty under § 512(b)(2). The Service, naturally, had argued against exemption.

The result of Sierra Club would appear to be the death of research.”

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147 See infra Part III.
149 See Kertz, supra note 18, at 78 (noting that § 512(b) excludes interest, dividends, rents and royalties from UBIT even when these items are unrelated to exempt functions); see also Disabled Am. Veterans v. United States, 650 F.2d 1178, 1189 (Ct. Cl. 1981) (explaining that royalties received by a patent licensor from a patent licensee are the type of “passive” income that § 512(b) was meant to exclude from taxation).
151 See id. at 179.
152 103 T.C. 307, 344 (1994). An “affinity” credit card arrangement results when an organization enters into an agreement with a credit card provider allowing and encouraging the solicitation of the organization’s members. The credit card provider pays the organization a percentage of the monthly sales volume resulting from transactions made with the cards. See James S. Halpern, Sierra Club Wins Again; Income from “Affinity Card” Is Not UBTI, But Exempt Royalties, 64 TAX NOTES 1181, 1181 (Aug. 29, 1994).
153 See Sierra Club, 103 T.C. at 321.
knell for UBIT, since credit card services are clearly commercial ventures that have nothing to do with the exempt purposes of the Sierra Club. Recently, the Service has attempted to rectify this situation by attempting to redraw the line between passive and active royalty income. As one commentator has noted, "the IRS has argued that 'active' really means that the organization is energetically engaged in business activities and merely calls its return, derived from a joint venture or agency relationship, a royalty." This issue has not yet been resolved; an affirmation of Sierra Club on appeal would create a circuit split that may ultimately be resolved by the Supreme Court. Therefore, the ability of universities to utilize the royalty exception to UBIT may be seriously in doubt; technology-transfer royalties could fall into the redefined "active" category, given how universities and professors are gearing the university research enterprise to maximize income at the expense of educational, scientific and charitable purposes.

In addition to this argument, there is also a strong argument that the royalty exception to UBIT should be conditioned upon the activity that generated the revenue. One commentator, responding to the Sierra Club decision, has suggested an accountability-focused approach to the royalty exception. Under this approach, non-profit organizations must be held accountable to the public for the subsidy provided by tax-exempt status; otherwise, the organization "violates its agreement with the public to undertake activities related to its exempt purpose in exchange for exemption from taxation." When the organization fails to further an exempt purpose, "it should be made to account for the misuse of the subsidy by paying a tax." This resolution of the Sierra Club UBIT-royalty-exception problem is consistent with the argument advanced in Part III of this Comment: In order for a university to benefit from the royalty exception to UBIT, the research endeavor that generated the

154 Paul Streckfus, Sierra Club: Latest Nail in the UBIT Coffin, 64 TAX NOTES 1365, 1365 (Sept. 5, 1994) (discussing how Sierra Club further weakens the effectiveness of the UBIT).
155 See Marlis L. Carson, Exempt Organizations Still Waiting for Significant Guidance, 66 TAX NOTES 30, 32 (Jan. 2, 1995) ("A Ninth Circuit decision in favor of Sierra Club would seemingly conflict with the Sixth Circuit, setting up the possibility of Supreme Court review.").
156 See infra Part III.
158 Id. at 1734.
revenue must be consistent with the rationale behind the university’s tax-exempt status.¹⁶⁰

III. UNIVERSITY TECHNOLOGY TRANSFER AND THE TAXABILITY OF THE RESULTANT INCOME

While the above analysis demonstrates that income from technology-transfer activity could be taxable, the central question of this Comment is whether it should be taxable. This Part will examine some attributes of university patent-licensing activity that may so conflict with the requirement of a “substantial relation to a public purpose” that UBIT treatment would be appropriate. First, this Part will consider the question of restrictions on publication, concluding that such restrictions make research activity neither “educational” nor “scientific” as defined by the regulations. Second, this Part will address exclusive licensing, which creates many of the same public access problems as do publication restrictions. Third, a consideration of the effect of technology transfer on teaching will conclude that universities may be drawing income from activities that do not provide an educational benefit for enrolled students. Finally, this Part will address the issue of academic freedom, determining that the rewards promised by technology transfer may compromise the pursuit of basic (non-revenue-producing) science that the exemption was intended to foster. In sum, technology-transfer activity may be so attenuated from the original exempt purposes of the university that it could be treated as unrelated business income for tax purposes.

A. Restrictions on Publication and the Public Dissemination of Research Findings

1. The Question: To Publish or Not to Publish?

Publication and dissemination of research results lie at the heart of the research university.¹⁶¹ The faculty reward structure—particu-

¹⁶⁰ See discussion infra Part III.
¹⁶¹ See Michael S. Gilliland, Joint Venturing University Research: Negotiating Cooperative Agreements, 40 BUS. L. 971, 981 (1985) (noting that private companies “should not underestimate the importance to scholars of publishing research results” and that most universities follow a “publish or perish” policy); see also Donald R. Fowler, University-Industry Research Relationships: The Research Agreement, 9 J.C. & U.L. 515, 523 (1982-1983) (explaining that the freedom to publish is a matter of principle to most universities).
larly the granting of tenure—is in large part based upon both the quantity and the quality of a faculty member's laboratory work. The importance of the freedom to publish is demonstrated by the fact that of forty-nine universities surveyed, thirty-two had developed written policies concerning this right and responsibility. The policy of Harvard University includes a blanket prohibition against the performance of any research done on the University's time or utilizing its facilities that cannot be published, maintaining that such a restriction would be contrary to the mission of higher education.

At the 1982 Pajaro Dunes Conference, university presidents and administrators met to discuss common concerns arising from industry support of the burgeoning biotechnology-research field. The draft statement emerging from the conference addressed the importance of publication. In discussing the development of research agreements, the conferees concluded that the relationship between industry and the academy "should not result in a secrecy that would harm the progress of science," and also that prompt publication of research results should remain of paramount importance.

The for-profit corporate licensees—those who ultimately benefit from the technologies and make royalty payments to the universities—have a different set of priorities and motivations when confronted with questions of publication and the dissemination of research results. A corporation seeking to maintain a competi-

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162 See DAVID A. DITTS ET AL., ASSESSING WHAT PROFESSORS DO: AN INTRODUCTION TO ACADEMIC PERFORMANCE APPRAISAL IN HIGHER EDUCATION 65 (1994) ("Over the past several decades, the efforts of college and university professors have been increasingly devoted to research... The greater weight assigned to research in personnel evaluations reflects the trend and has led to increased scrutiny of methods by which scholarly productivity is measured."); see also HENRY ROSOVSKY, THE UNIVERSITY: AN OWNER'S MANUAL 189-212 (1990) (describing the process by which Harvard University determines the award of tenure, which includes a careful study of the professor's research accomplishments).

163 See April Burke, University Policies on Conflict of Interest and Delay of Publication, 12 J.C. & U.L. 175, 187 (1985) (noting that most of the statements regarding publication were admonitions that the institution is committed to the publication and open dissemination of ideas).

164 See Robison & Sanders, supra note 13, at 233 (contending that many universities are straying from their commitment to the open dissemination of research results and citing Harvard's policy as an exception).


166 Id.

167 See Burke, supra note 163, at 184-85 (noting, through an example, that a
tive edge against its competitors may endeavor to keep discoveries and advances secret for as long as possible. While some businesses may wish to keep information secret only for the time it takes to obtain a patent, some would prefer an even longer period, and some would prefer no publication whatsoever. The conflict in priorities is apparent. As one writer has commented, "[o]ne rather mercenary solution in the development of technology-transfer agreements is to encourage university personnel to waive the right to publish in exchange for a share of license fees and royalties." Those within the academy are troubled by such arrangements: eighty-seven percent of university administrators polled find a publication delay to be problematic if it extends beyond the time needed to obtain a patent.

Some compromise on this matter is necessary if technology transfer is to be fostered. Without any delay in the publication of research findings, new discoveries might be released to the public before there has been an opportunity to obtain a patent. This would effectively eliminate any corporate incentive to engage in economically beneficial patent-licensing arrangements. Consequently, there is a general consensus that a limited delay in publication—generally from thirty days to one year—does not conflict with the fundamental mission of the research university. The IRS has confirmed the validity of this publication delay, determining that a "reasonab[le]" delay in the publication of research results does not transform subsequent proceeds from that research into unrelated business income. The Bayh-Dole Act provides further reinforce-

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166 Gilliland, supra note 161, at 982 (explaining that a monetary incentive may be insufficient because academic values generally emphasize peer recognition over monetary success).

169 See Fowler, supra note 161, at 524-25.

170 See Burke, supra note 163, at App. F. (listing the permissible publication-delay periods for different schools); see also Rebecca S. Eisenberg, Academic Freedom and Academic Values in Sponsored Research, 66 TEX. L. REV. 1363, 1396-97 (1988) (noting that typical university policies allow for publication delays ranging from 90 days to one year in order to file a patent application).

171 See Fowler, supra note 161, at 524 (reporting that 82% of researchers believe that it is permissible to delay publication for the time necessary to achieve patent protection).

172 Rev. Rul. 76-296, 1976-2 C.B. 142, 143. The Service concluded:
ment for the proposition that a reasonable delay in publication is permissible; it declares that "[f]ederal agencies are authorized to withhold from disclosure to the public information disclosing any invention in which the Federal Government owns or may own a right, title, or interest . . . for a reasonable time in order for a patent application to be filed." The conferees from the Pajaro Dunes meeting similarly concluded that brief delays in publication for patent coverage should be permissible. If publication is "adequate and timely," taxability will not be at issue.

2. Tax Consequences of Substantial Delays in Publication or the Suspension of Publication Rights

As discussed in Part II, in order to qualify as an institution organized and operated for educational purposes, one of the requirements under the Treasury regulations is that the organization "instruct[] . . . the public on subjects useful to the individual and beneficial to the community." Therefore, the requirement to publish or otherwise make available research results is not only of philosophical importance but also lies at the heart of the § 501(c)(3) general tax exemption granted to educational institutions. In the absence of publication, it becomes difficult for an institution to claim that a research endeavor is truly serving an educational purpose.

Since the regulations recognize the right of the sponsor to obtain patents ... resulting from the research, publication is not required in advance of the time at which it can be made public without jeopardy to the sponsor's right by reasonably diligent action to secure any patents ... resulting from the research.


See Pajaro Dunes, supra note 165, at 535.


Treas. Reg. § 1.501(c)(3)-1(d)(3)(i)(B) (as amended in 1990); see also Phi Delta Theta Fraternity v. Commissioner, 90 T.C. 1033, 1039 (1988) (citing Treas. Reg. § 1.501(c)(3)-1(d)(3)(i) and asserting that "[w]hether a purpose is educational has been interpreted to imply more than the conveying of information or the providing of instruction, especially where the activity is conducted for a substantial nonexempt purpose" (citation omitted)); cf. United States v. American College of Physicians, 475 U.S. 834, 849 (1986) (holding that advertisements in a physicians' journal do not "contribute importantly to the journal's educational purposes" and that, consequently, the journal must pay taxes on profits earned from selling advertising space).

For example, in Rev. Rul. 68-498, the IRS concluded that an organization formed to lessen racial and religious discrimination was operated for educational purposes and was thus exempt from the income tax because it disseminated information through a publication program and a speakers' bureau. See 1968-2 C.B. 209, 209-10.
purpose and, consequently, difficult to argue that the activity is not an unrelated business.

Far more attention has been paid to the necessity of publication for an institution to claim exemption from UBIT as a scientific activity.\textsuperscript{178} For an organization to gain exemption as a "scientific' organization," its research activity must serve a public rather than a private interest.\textsuperscript{179} An organization satisfies this requirement if it makes research results available to the public on a nondiscriminatory basis or publishes the results in a treatise, thesis or other publication available to the public.\textsuperscript{180}

The Service derives its current stance on the importance of publication from Revenue Ruling 76-296.\textsuperscript{181} This Revenue Ruling considered two different activities conducted by an exempt scientific organization. In the first situation, the organization regularly published the results of its commercially sponsored research in a form that was available to the public.\textsuperscript{182} In the second situation, the organization either significantly delayed publication or failed altogether to publish research results in order to protect information that the corporate sponsor wished to keep secret.\textsuperscript{183} The Service maintained that research would only be regarded as directed toward the public, and therefore carried on in the public interest, "if it is carried on for the purpose of obtaining scientific information, which is published in a treatise, thesis, trade publication, or in any other form that is available to the interested public."\textsuperscript{184} Therefore, in the first situation, because the information was published in an adequate and timely manner (generally defined as no longer than needed to obtain a patent\textsuperscript{185}), the IRS considered the activity to be carried on in the public interest and thus exempt. The Service continued:

With respect to [the second situation], however, in which publication of the results of commercially sponsored scientific research is withheld

\textsuperscript{178} The all-encompassing nature of the "for any person" exception for university research, see I.R.C. § 512(b)(8) (1994); see also supra Part II.C.1, is perhaps the best explanation for the dearth of cases and IRS determinations regarding the research income of colleges and universities. Much of the analysis in this subsection, therefore, focuses on examples concerning exempt research institutes.

\textsuperscript{179} Treas. Reg. § 1.501(c)(3)-1(d)(5)(i) (as amended in 1990).


\textsuperscript{181} 1976-2 C.B. 142.

\textsuperscript{182} See id. at 142.

\textsuperscript{183} See id.

\textsuperscript{184} Id. at 142; see also Treas. Reg. § 1.501(c)(3)-1(d)(5)(iii)(c)(2) (as amended in 1990).

entirely or delayed significantly beyond the time reasonably necessary to establish patent or other ownership rights in the results of the research in order to accommodate the sponsor's business interest in maintaining the secrecy of certain processes or to control the timing of public disclosure of the results, the requirements of the publication test are not met. The research connected with such projects, therefore, is not scientific research carried on in the public interest within the meaning of section 501(c)(3) of the Code.\textsuperscript{186}

While this Revenue Ruling concerned income from a research contract, the analysis for patent licensing should be practically identical. Consequently, when licensing agreements are made pursuant to a clause that impermissibly interferes with the duty to publish, the Service should no longer characterize the research that led to the agreement as "scientific" and therefore should declare the income taxable under UBIT.

In a sense, unpublished research presents the same problem as does university operation of hotels or television stations. The university tax exemption should only be applicable when the university is producing a "product" that the public has expressed a desire to subsidize. Section 501(c)(3) and the corresponding regulations governing educational and scientific activities specifically define this exempt "product" as research to which the public will have access via publication. Unpublished research does not serve this exempt purpose, and therefore the subsequent revenues should be subject to UBIT.

When a commercial laboratory discovers a new technology, it converts that technology to for-profit use, and the public generally has no access to the research. When a university discovers a technology, engages in technology transfer and refuses to publish the results of the research, the university, like the commercial laboratory, has engaged in the development of a technology solely for profit. If there is no difference between the activity of a commercial laboratory and that of a university, there should be no difference in the tax treatment given to the activities. The "product" that the public is subsidizing is \textit{publication}, not technology transfer, and the federal tax regime should reflect that fact.

\textsuperscript{186} Id. at 143.
3. Additional Considerations: Editorial Rights for Businesses and Trade Secret Protection

Two additional issues merit brief consideration. The first is that, occasionally, a corporation reserves the right to review a preliminary or final draft of an article and make editorial changes to the text of that piece prior to publication in order to protect a corporate interest. Most often this type of arrangement occurs in sponsored research arrangements, under which a corporation provides up-front money to a university or research institute in exchange for exclusive or preferred access to any discoveries that may result. Similarly, a patent-licensing agreement could contain a clause providing the licensor-corporation with the right to review and edit forthcoming publications of the licensee-university (or professor). Placing a potential limitation on the content of an article, treatise or thesis is no less problematic than placing a restriction on when or if it may be published at all. After all, the deleted material may be precisely that which would be most interesting to the public and that which most deserves subsidization. Arguably, the public's need or right to know increases in direct proportion to the licensor-corporation's perceived need to suppress the information. Are research results that are published only upon the review and edit of a corporate entity truly serving a "public purpose" such that subsequent revenue should receive preferential treatment under the § 501(c)(3) exemption and the unrelated business income tax? The answer to this question should be no.

The second issue relates to the possibility of obtaining trade secret protection for university research discoveries. Trade secret protection allows any information "used in a trade or business that lends a competitive advantage and is not generally known within the trade or industry" to be kept confidential from competitors, even in the face of evidentiary requests. While trade secrets are vital to industry, they are difficult to maintain. If competitors obtain the

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187 See Burke, supra note 168, at 187 (noting that some agreements permit a sponsor of research to review the manuscript prior to publication); Gilliland, supra note 161, at 982 (explaining that some companies have the right to delete sensitive information from works about to be published).
188 For an excellent discussion of sponsored research agreements and the issues that companies and universities should consider prior to entering into such arrangements, see Gilliland, supra note 161.
189 Gilliland, supra note 161, at 979.
190 See id. at 978.
protected information through any legitimate means, the trade secret protection is destroyed.\textsuperscript{191} Since trade secret law prohibits \textit{any and all} disclosure or sharing of protected information, it is clearly and fundamentally incompatible with the publication-oriented mission of the university.\textsuperscript{192} As long as a university adheres to a policy of prohibiting the absolute secrecy of research results by encouraging or mandating publication, trade secret protection for university research products is not realistic.\textsuperscript{193} Were a university to adjust its policies,\textsuperscript{194} however, to allow discoveries to be treated as trade secrets in cooperation with a corporate sponsor, a taxability issue would arise. The categorical bar to any publication or dissemination of results required to maintain trade secret protection\textsuperscript{195} would violate the regulatory definitions of educational and scientific activity. Consistent with Revenue Ruling 76-296, any revenues derived from the unpublished trade secret would be classified as unrelated business income.\textsuperscript{196} Therefore, before a university considers granting trade secret protection as part of a technology-transfer arrangement, it should consider the potential tax ramifications of that choice.

\textsuperscript{191} \textit{See} 1 ROGER M. MILGRIM, MILGRIM ON TRADE SECRETS § 1.05[1] (1996) ("Since secrecy is a requisite element of a trade secret, it follows that unprotected disclosure of the secret will terminate that element and, at least prospectively, forfeit the trade secret status." (citation omitted)).

\textsuperscript{192} \textit{See} Pat Shockley, \textit{The Availability of "Trade Secret" Protection for University Research}, 20 J.C. & U.L. 309, 315 (1994) ("Although no courts have determined whether university research could be protected as a trade secret, it would not be possible for both publication of and trade secret protection for university research.").

\textsuperscript{193} \textit{See id.} at 316 (explaining that universities may have to adjust their rules on publication if they wish to obtain additional research funding).

\textsuperscript{194} Certain states have changed their trade secret laws to allow state-run institutions to engage in trade secret protection for university research. \textit{See}, e.g., COLO. REV. STAT. § 7-74-102(3) (1986); GA. CODE ANN. § 10-1-761(3) (1994); ILL. ANN. STAT. ch. 765, para. 1065/2(c) (Smith/Hurd 1993). \textit{See generally} Shockley, supra note 192, at 316-22 (examining state variations of the Uniform Trade Secrets Act).

\textsuperscript{195} \textit{See} MILGRIM, supra note 191, at § 1.05[2] ("Disclosure of a trade secret in a technical publication of sufficient detail and sequence as to permit one skilled in the art to devise the subject matter would appear to terminate secrecy." (citation omitted)).

\textsuperscript{196} Research that obtains trade secret protection may not even be "research" at all as defined by Treas. Reg. § 1.512(b)-1(f)(4) (as amended in 1992), which does not include "activities of a type ordinarily carried on as an incident to commercial or industrial operations." Generally, this issue arises when a university is merely testing or inspecting materials or products. Yet, the Service could invoke this subsection if trade secret protection were at issue, under the theory that by protecting the trade secret, the university is in actuality a participant in the commercial enterprise and is acting in a manner incident to the company's operations.
B. The Problem of Exclusive Licensing Agreements

Exclusive licensing arrangements present many of the same concerns as limitations on publication. Once a university has obtained a patent, it has the option either to license that patent to one corporation exclusively or to many corporations (nonexclusive licensing). It is in the best interests of a business to possess an exclusive license, since it gives that company sole access to the valuable invention or technology. Furthermore, the university may have a financial incentive to enter into exclusive licensing, since the negotiated royalty rate may be more favorable. There is a legitimate question, however, as to whether exclusive (or even nonexclusive) licenses are actually in the public interest.\(^{197}\) One commentator has asserted that "[b]ecause universities have a general commitment to the public interest through their educational and research programs and research in universities is heavily supported by public funds, university licensing's principal goal always is serving the public interest."\(^{198}\) All taxpayers (including corporate taxpayers) have subsidized the research leading to the patent by allowing the university to operate as a tax-exempt entity. Yet, with exclusive licensing, the university possesses the ability to grant a monopoly over the invention or technology.

The restriction of access through exclusive licensing has proven problematic for universities from a philosophical standpoint.\(^{199}\) Historically, universities have endeavored not to engage in exclusive licensing arrangements, but there are indications that a more permissive attitude is emerging.\(^{200}\) Participants at the Pajaro Dunes Conference noted that "universities should be able to negotiate exclusive licenses provided that exclusivity seems important to allow prompt, vigorous development of the patent to occur. The desirability of exclusivity in certain cases is recognized under current federal law."\(^{201}\)

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\(^{197}\) See Joyce Brinton, Biotechnology Licensing: Issues from the University Perspective 16 AIPLA Q.J. 479, 483-84 (1989) (noting a consensus of opinion that the public interest will not be served if a license-holder "is unable or unwilling to pursue development diligently").

\(^{198}\) Id. at 483.

\(^{199}\) See Nannerl O. Keohane, The Mission of the Research University, DÆDALUS, Fall 1993, at 101, 122 ("Proprietary knowledge is sometimes important for corporate success, but it is in principle antithetical to the openness in sharing knowledge that is at the heart of the university's mission.").

\(^{200}\) See Gilliland, supra note 161, at 976.

\(^{201}\) Pajaro Dunes, supra note 165, at 596.
The granting of an exclusive license, debatable on philosophical grounds, is also problematic in terms of the federal tax exemption for universities. The Treasury regulations state:

An organization will not be regarded as organized and operated for the purpose of carrying on scientific research in the public interest . . . if . . . [s]uch organization retains (directly or indirectly) the ownership (or control) of more than an insubstantial portion of the patents . . . resulting from its research and does not make such patents . . . available to the public. ²⁰²

The Regulation makes it clear that technologies developed by exempt institutions should be public goods made available to the public without restrictions on their consumption. ²⁰³ In an exclusive licensing setting, the university's ability to control and/or ration the benefits of its taxpayer-subsidized effort violates the regulatory provision. When a university establishes an exclusive licensing arrangement, the public is thereby denied access to its public property.

Such a situation is contrary to the philosophy behind the § 501(c)(3) tax exemption. Assume Corporation A obtains an exclusive license from University Y. Only A is permitted to use the technology; Corporations B, C and D are shut out. The result is identical to one in which Corporation A developed the new technology in its own laboratory and obtained its own patent. Corporations A, B, C and D, however, all bear equally the burden of University Y's tax exemption: all pay the same corporate tax rate. Clearly such an arrangement is inequitable because the benefit of the technology inures to just one corporation. The fact that such exclusive licenses may be granted for only a short term is an unavailing solution because, as explained in Part I, most university technologies are in the rapidly changing biomedical and genetics fields and do not have a long useful life. ²⁰⁴ Because exclusive licensing arrangements

²⁰³ This was recognized during the congressional debates on the Bayh-Dole Act. In remarks critical of the legislation, the Honorable Jack Brooks noted that the intellectual products of nonprofits, which are funded both directly (grant money) and indirectly (tax exemption) by the taxpayers, are undeniably "public property." See H.R. REP. No. 1307, 96th Cong., 2d Sess. 29 (1980), reprinted in 1980 U.S.C.C.A.N. 6460, 6487 (dissenting views of Hon. Jack Brooks) (arguing that the "assigning [of] automatic patent rights and exclusive licenses to companies and organizations for inventions developed at government expense is a pure giveaway of rights that properly belong to the people").
²⁰⁴ See supra Part I.B.3.
violate the Regulation's requirement that an exempt scientific organization make patents "available to the public,"\textsuperscript{205} the tax treatment of income derived from such agreements should recognize this private benefit. Restated, the Service should treat the income as if it were earned in a business distinct from the university's educational and scientific exempt purposes and therefore subject to I.R.C. § 511.

C. Effects on the Educational Mission of the University

1. The University's Emphasis on Research and the Effect of Technology Transfer

While the importance of research and the advancement of scientific knowledge are vital to the operation of the research university, teaching is still the central mission of the American university.\textsuperscript{206} In the words of Nannerl O. Keohane, President of Duke University, "Educating . . . is part of our distinctive contribution to improving the human condition, one of the ways in which we carry out our responsibility to serve society. The most distinctive and effective way we do this is by sharing knowledge with new generations of students, both graduate and undergraduate."\textsuperscript{207}

There is a prevalent argument that the increasing emphasis on technology transfer—and on university ties with business and industry generally—is exacting a toll on the pedagogical aspect of the university mission. First, faculty time is a zero-sum game, and the more time spent on research with commercial potential, the less time spent on basic science and scientific education. This "dilemma" has been described by James Fairweather of the Center for the Study of Higher Education at Penn State University as follows:

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\textsuperscript{206}It is the special function of the university to combine education with research, and knowledgeable observers believe that this combination has distinct advantages both for teaching and for science and scholarship. . . . Without the marriage of teaching and research that universities uniquely provide, the conduct of scholarly inquiry and scientific investigation, as well as the progress of graduate training, would be unlikely to continue at the level of quality achieved over the past two generations.
\textsuperscript{207}Derek Bok, Beyond the Ivory Tower: Social Responsibilities of the Modern University 19-20 (1982) [hereinafter BEYOND THE IVORY TOWER].
\textsuperscript{207}Keohane, supra note 199, at 109 (discussing the modern university and responding to some of the contemporary critiques of its mission and direction).
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On the one hand, concern over declining national competitiveness has led government and industry to ask universities to play a stronger role in economic development. . . . It also has led them [academic institutions] to consider stronger ties with nonacademic organizations, especially those in business and industry. On the other hand, increasing concern about the quality of American education has led a variety of groups to push for reforms and improvements in undergraduate instruction. This social agenda would require academic institutions to place increased emphasis on their instructional mission.

Professor Fairweather concluded that "[t]he type of activities carried out by faculty working in business-university partnerships are potentially harmful to instructional quality. The almost exclusive focus on research in business-university liaisons reinforces the tendency of faculty to devote more of their workload to research at the expense of instruction." While these comments were specifically addressed to university-industry collaborative projects, the logic holds for all technology-transfer endeavors. Universities and professors are now actively gearing institutional and professional energies toward research with potential commercial application, rather than relying on merely serendipitous outcomes stemming from basic research.

In further evidence of this change of emphasis, universities are permitting professors to dedicate more time to potentially lucrative research and consequently have lightened teaching loads. Some

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209 Id. at 401. Critiques of the university's increasing orientation toward potentially profitable research are growing louder. In a hearing before the House Select Committee on Children, Youth and Families, Congresswoman Patricia Schroeder declared that "[t]he focus in higher education today is on research, not teaching." College Education: Paying More and Getting Less: Hearing Before the House Select Comm. on Children, Youth and Families, 102d Cong., 2d Sess. 3 (1993) [hereinafter College Education Hearing] (opening statement of Hon. Patricia Schroeder, Chairwoman). For a description of how universities have emphasized lucrative research projects to the exclusion of basic pedagogical responsibilities, see Gaul & Borowski, supra note 16, at A7. Congresswoman Schroeder fired a particularly stinging shot at university research when she elsewhere asserted that "[h]igher education has lost sight of its purpose to educate the public." Del Valle et al., supra note 55, at 114.

210 See Robison & Sanders, supra note 13, at 228 (noting that "technology no longer waits for serendipitous theoretical discovery"); John T. Sanders & Wade L. Robison, Research Funding and the Value-Dependence of Science, BUS. & PROF. ETHICS J., Spring 1992, at 43 ("Whereas it may once have been true that the development of theory was almost solely motivated by theoretical problems set by theoreticians . . . one measure of the success of science has been that this is no longer the case.").

211 See Fairweather, supra note 208, at 398 (explaining that in order to compete
faculty have even been permitted to "buy[] out their teaching [responsibilities] with the proceeds from research grants or outside consulting." The result of this has been "a visible decline in the quality of undergraduate education in science and engineering disciplines."

The consequences of such changes are clear: larger classes, more part-time instruction and less one-on-one interaction with faculty. To blame all of this on patent-licensing activities would be unfair. Other university-industry collaborations have devalued teaching and have magnified the emphasis on research success as the primary criterion for awarding tenure, endowed professorships and other faculty rewards. The potential rewards available through patent-licensing activity, however, represent yet another factor in the decline of pedagogy in the research university.

The possibility of enhanced revenue not only affects a research university's emphasis on teaching, it may also change the nature of what is taught. The types of projects that students—particularly graduate students—may be compelled to work on in the laboratory are those that have greater financial than educational potential. Additionally, projects of a sensitive nature may result in limitations on student participation or a denial of access altogether. The draft statement from the Pajaro Dunes Conference recognized this potential problem, contending that "[a]greements should be constructed . . . in ways that do not promote a secrecy that will . . . impair the education of students." It also admonished institu-

212 College Education Hearing, supra note 209, at 4.
213 Fairweather, supra note 208, at 391 (citing NATIONAL SCIENCE BOARD, UNDERGRADUATE SCIENCE, MATHEMATICS AND ENGINEERING EDUCATION (1986)).
214 There has been an ongoing debate in the academic community over how teaching should be valued in making tenure determinations and in the granting of other faculty rewards. For a general discussion of the topic and one proposed reform to the status quo, see ERNEST L. BOYER, SCHOLARSHIP RECONSIDERED 27-41 (1990).
215 See Brinton, supra note 197, at 482 (expressing concern that faculty with financial interests or stakes might "exploit students . . . by directing their work toward corporate rather than educational ends"); see also Bok, supra note 10, at 15 (asserting that graduate students may be drawn into the process of developing commercially useful products and services, and claiming that this is a sacrifice of "essential values"); Richard Florida & Martin Kenney, It Is a Mistake to Push Universities into Becoming Research-and-Development Units of Corporations, CHRON. HIGHER EDUC., July 10, 1991, at B1, B1 ("Further, the emphasis on university-industry relations in this country has created a climate ripe for problems and abuse. Graduate students may be channeled into applied fields, where ready support is available, and away from more basic scientific endeavors.").
216 See Fairweather, supra note 208, at 396.
217 Pajaro Dunes, supra note 165, at 535 (concluding that "universities and
tions to conduct patent-licensing programs so as to promote the universities' "primary responsibilities of teaching and research."218

2. Tax Consequences of the De-emphasis on Education

Whether or not one acknowledges this change in emphasis and whether or not remedial steps are being taken, one must nevertheless question whether faculty who ignore or manipulate their pedagogical responsibilities are engaged in an educational or scientific enterprise such that the resultant income should be exempt from taxation. The university is acting in a nonexempt or commercial capacity when it allows individual faculty members to dedicate most or all of their time to commercial interests while either ignoring teaching or using students as one would use paid assistants in a for-profit lab. The Treasury regulations recognize the "training of the individual for the purpose of improving or developing his capabilities" as one of the public functions of an institution claiming an educational exemption.219 Furthermore, the regulatory definition of a scientific institution includes "aiding in the scientific education of college or university students" as one of the elements that will qualify an institution as operating in the public interest.220

When a university removes the pedagogical aspect from its research endeavors, it is no longer acting in a capacity that merits a public subsidy through special treatment under the Code. If faculty, aiming for licensing and royalty revenues, are permitted to conduct their research affairs in a manner that ignores their teaching responsibilities, then the university's research enterprise becomes identical to that which would be found in a commercial setting. The purpose of the § 501(c)(3) exemption is to support activities, such as scientific education, that the free market does not support; the recipient of such an exemption cannot abandon that activity and expect to retain the benefits. Under such circumstances, income from research activities that do not sufficiently contribute to the education of college or university students and/or the tax-paying public should be subject to UBIT.

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218 Id. at 538 (emphasis added). The Draft Statement also explained that while patent licensing provides excellent opportunities to turn inventions into useful products, university patent programs must be conducted in a manner that conforms with the public interest. See id. at 536.


D. Academic Freedom and Research in the "Public Interest"

One of the hallmarks of university research and of professorial life in general is the concept of academic freedom—the idea that a researcher may pursue whatever projects she wishes, free from economic or professional pressures. This ideal is inextricably intertwined with the public purpose for which the university was initially established and granted a protected tax status. As Derek Bok has stated: "One of the reasons that society accepts the policies of tenure and academic freedom is because it has been persuaded that the public will benefit in the long run if professors are insulated from pressures that could compromise their impartial search for knowledge." It follows, therefore, that academic freedom—the freedom to pursue science for science's sake—constitutes a public benefit. For this reason, the preservation of academic freedom is an important consideration in keeping research revenues tax-exempt. One commentator has noted that the public provides direct funds to public universities and indirect subsidies to private universities, and that the government recognizes them as tax-exempt, nonprofit institutions under § 501(c)(3). In exchange, the public sets "high ethical standards for the university . . . to provide society with dispassionate and disinterested education and research."

It should therefore be apparent that research that does not comport with the concept of academic freedom could be characterized as "not substantially related to an exempt purpose." The following discussion offers evidence that traditional academic freedom and unrestricted basic research may be increasingly compromised as both the research university and its faculty recognize the remarkable potential for financial gain from technology transfer.

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221 See Gilliland, supra note 161, at 984 ("Those who remain at universities rather than marketing their skills do so to remain free of commercial bias. Limiting this freedom will jeopardize the quality of the long-term research effort.").
222 Bok, supra note 10, at 17.
223 See Kenney, supra note 59, at 129-30 (discussing the need for universities to hold higher ethical standards than commercial researchers).
224 Id. at 130 (emphasis added).
1. University Pressures

It has been hypothesized that universities, in search of new sources of income, are either directly or indirectly placing pressure on their faculty to pursue projects with commercial, rather than academic, potential. Of particular concern is the possibility that the faculty-reward structure—the granting of tenure, the awarding of endowed professorships, the receipt of larger offices, laboratory spaces and the like—may ultimately be tied to the profitability, rather than the academic merit, of a faculty member’s research. Universities favorably view faculty who are better able to obtain outside funding (which includes technology-transfer revenue). Such a shift in research priorities creates ethical problems for academic institutions. The participants at the Pajaro Dunes Conference concluded that universities should develop appropriate rules and procedures “to insure that faculty members fulfill their responsibilities to teaching and research, and to avoid conflicts of interest.”

Beyond ethical considerations, the absence of traditional academic freedom also conflicts with the rationale for exempting university research income. Among the reasons that university research has been granted a favorable tax status is the assumption that academic research is fundamentally different from commercial research. As one commentator has noted: “The differences

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225 See, e.g., Chew, supra note 45, at 306 (explaining that in order to encourage sponsored research agreements, universities encourage faculty members to structure their research interests to fit the agenda of the sponsoring entities).

226 See Tom L. Beauchamp, Ethical Issues in Funding and Monitoring University Research, 11 BUS. & PROF. ETHICS J. 5, 8 (1992) (describing the predication of tenure decisions on the ability to raise money as an increasing trend in the modern university research environment); Chew, supra note 45, at 306 (explaining that while some pressures on faculty may be subtle, the pressures may also take the form of the granting or denial of tenure, promotions or salary increases (citing Federal Response to Misconduct in Science: Are Conflicts of Interest Hazardous to Our Health?: Hearing Before the Subcomm. on Intergovernmental Relations of the House Comm. on Government Operations, 100th Cong., 2d Sess. 27 (1989))).

227 See Fairweather, supra note 208, at 399-94 (explaining that when teaching and research are in conflict, research usually prevails and that “[the university] reward structure is reinforced by the university’s desire for faculty to obtain external research funding”); Katherine S. Mangan, Hahnemann U. Angers Faculty with Threat to Fire Those Who Don’t Attract Grant Money, CHRON. HIGHER EDUC., Oct. 5, 1994, at A20.

228 Pajaro Dunes, supra note 165, at 538. But see generally Sanders & Robison, supra note 210, at 33 (citation omitted) (explaining that science historically has never been free from extrascientific considerations).

229 See Yang, supra note 66, at 1855 (“By exempting universities from tax, the Internal Revenue Service in effect spurs them to produce a product mix distinct from
between the university and industry relate very closely to their very
different roles in society. University scientists must be expected to
have very different standards than industry scientists and traditionally
this has been expressed by the fact that university faculty have
focused on 'basic' or 'pure' research. University research, in
theory, should consist primarily of basic research, which is "undirected
research pursued solely for satisfying human curiosity and with
no direct practical application intended or in mind." Commercial
research, on the other hand, narrowly targets particularized uses
that will lead to present or subsequent profits. It does not require
subsidization. If universities are producing the same research
product as the nonexempt commercial sector, the rationale for a
university exemption is less clear. When schools elect to reward their
most productive professors, rather than those who make the most
noteworthy contributions to the advancement of science, they fail to
recognize that their different tax posture is based primarily on their
pursuit of a different set of research goals. Only the aforementioned
"dispassionate and disinterested research" merits public support, not
endeavors primarily intended to raise revenues. As such, if a
university's internal reward structure discourages the pursuit of basic
science or otherwise compromises academic freedom, the university
should not be able to shield its revenues from UBIT.

2. A Change in Professorial Priorities—Conflicts of Interest

It would be a misstatement to assert that any shift in research
priorities from academic to commercial originate solely from
pressure exerted by the university. Professors, like universities, are
rational market actors and seek to maximize their income when the
opportunity is presented. The chance to parlay laboratory findings
into personal gain makes potential "conflicts of interest" between
academic purity and financial rewards a topic of considerable
discussion among those within and without the academy."

that of commercial enterprises.

230 Kenney, supra note 59, at 128.
231 Id. at 1865 (citing Hearings Before Ways and Means Comm., 85th Cong., 2d Sess.
1152 (1956) (statement of Dr. Clifford Furnas, Chancellor of the University of
Buffalo) (further citation omitted)).
232 See, e.g., Brinton, supra note 197, at 481-83; Burke, supra note 168, at 175-85;
Colleen Cordes, U.S. Explores Conflict of Interest in Federal Research at Universities,
CHRON.
HIGHER EDUC., Sept. 2, 1992, at A28; Michael D. Witt & Lawrence O. Gostin, Conflict
of Interest Dilemmas in Biomedical Research, JAMA, Feb. 16, 1994, at 547.
Generally speaking, a conflict of interest in academia arises when a scientist has a significant financial interest in the outcome of a research endeavor.\textsuperscript{223} As one commentator described the problem:

[A conflict of interest] arises when objectivity, truth telling, and disclosing results of research, all essential to scientific rigor and integrity, are compromised by the desire for greater reward. When the enrichment of scientists is directly related to the "success" of the scientific endeavor, society runs the risk that researchers will knowingly influence the outcome of "neutral" scientific inquiries.\textsuperscript{224}

A university scientist who ceases to conduct basic research of academic value in order to focus on projects that may be personally lucrative may have a conflict of interest.\textsuperscript{225} Another commentator queried: "Will the reward from the company's consulting fee or the value of its stock cause the inventor/faculty member to follow a course different than ideal for an academic scientist, for example, to skew future research toward improving the licensed invention instead of pursuing more important basic science questions . . . ?"\textsuperscript{226} When a professor receives money prior to developing a licensable technology, a conflict exists. Traditionally, the potential or actual receipt of royalty income by a professor has not been viewed as a "conflict of interest."\textsuperscript{227} This presumption probably arose, however, due to the fact that, prior to the enactment of the Bayh-Dole Act and the increase in university technology-transfer opportunities, royalties were not considered to be a source of professorial income considerable

\textsuperscript{223} See, e.g., 59 Fed. Reg. 33,243 (1994) (defining a significant financial interest as one of monetary value exceeding $5,000 and listing significant financial interest as ownership of stock, stock options or any equity, debt, security, capital holding, salary or other remuneration or thing of value for services). Note that these conflicts are especially prominent when a professor is paid in stock or stock options, since she then possesses a vested interest in the profitability of the product and the corporation. See Beauchamp, supra note 226, at 9 (stating that medical researchers' purchase of stock in corporations for whom they have made discoveries constitutes a "sophisticated form of insider trading if the knowledge is both accurate and non-public").

\textsuperscript{224} Witt & Gostin, supra note 232, at 548.

\textsuperscript{225} See id. (noting the potential problems that arise when researchers have a financial stake in the outcome of projects); see also Bok, supra note 10, at 15 (expressing concern that research conducted with an eye toward profit may lure investigators into conflicts of interest or secrecy that may hamper scientific progress).

\textsuperscript{226} Brinton, supra note 197, at 481-82 (discussing both the problems that arise from conflicts of interest and the difficulties of discovering and preventing them).

\textsuperscript{227} See Witt & Gostin, supra note 232, at 549 (questioning whether royalty income under the Bayh-Dole Act presents a conflict of interest).
enough to create a conflict of interest. In light of the course of events traced in Part I of this Comment, the substantial financial rewards that royalty revenues now offer should be cause for a reconsideration of the conflict-of-interest/royalty-income issue.

The problems associated with conflicts of interest extend beyond the shifting of research priorities from academic to commercial projects. Some commentators have expressed a fear that a professor may be inclined to alter, or "cook" laboratory results in order to create findings that might enhance technology-transfer opportunities. Further, it is possible that a professor, in the interests of satisfying a potential licensor, would be willing to delay or forego publication of her research results if "the price was right." When financial incentives were small, the impetus for this type of behavior was negligible; in the new research era, the incentives are far greater, as is the cause for concern.

The aforementioned public ownership of tax-subsidized university research has bearing on the tax consequences of faculty conflicts of interest. A professor faced with a conflict of interest may select his projects and conduct his research with an eye toward personal enrichment rather than academic merit. Such a professor is clearly acting in self-interest rather than in the public interest. The university may be doing nothing to violate its public mission; it may merely be providing laboratory space, equipment and assistance in the form of graduate and postdoctoral students. Although the university may do nothing to encourage a professor to engage in research projects that fail to conform to educational or scientific purposes, the fact that the institution is "innocent" does not change the fact that the income it receives from conflicted professors may not be substantially related to an exempt purpose. When the researcher is unilaterally not something that the public has agreed to subsidize, it is still appropriate to deny the university exemption

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238 See id.
239 See BEYOND THE IVORY TOWER, supra note 206, at 142 ("With stakes of this size, the nature and direction of academic science could be transmuted into something quite unlike the disinterested search for knowledge that has long been thought to animate university professors.").
240 See Beauchamp, supra note 226, at 8-9 (enumerating some of the ethical issues that arise when faculty receive funding from corporate sources); Witt & Gostin, supra note 232, at 548 (hypothesizing that researchers may influence the outcome of neutral scientific inquiries when substantial financial rewards are at stake).
241 See Witt & Gostin, supra note 232, at 548 ("Scientists may be diverted from conducting research of public health or societal value to conducting research of commercial value . . . ").
under I.R.C. § 512(b)(8) or § 512(b)(2) for the share of royalty revenue that accrues to the university. It does not matter whether the failure to conform to the public purpose derives from the professor or the institution; such revenue should be taxed as unrelated business income.242

IV. SUGGESTIONS FOR UNIVERSITIES AND FACULTY ON HOW TO CONDUCT TECHNOLOGY-TRANSFER ACTIVITY TO AVOID FUTURE TAX CONSEQUENCES

To review the previous discussion and conclude that universities should abandon technology-transfer activities altogether would be an attempt to return to a bygone era. Such a conclusion also fails to recognize the positive benefits that technology-transfer activities have on corporate access to new technologies. Those who were instrumental in passing the Bayh-Dole Act hoped that the availability of more inventions and discoveries for commercial development would spur economic growth. Given that universities executed over 2,000 licenses in fiscal year 1994, it is hard to challenge the benefits of these relationships.243 Nor is it entirely fair to assume that commercial success is completely antithetical to the university mission; there have been a number of well-reasoned arguments that a university environment is strengthened, rather than compromised, by extrascientific values.244

It is also possible, however, that one could reach the conclusion that the status quo should be maintained with a blanket exemption for all technology-transfer activity no matter how conducted, no matter how the agreements are structured and no matter how attenuated the research is from the rationale behind charitable exemptions.245 After all, technology transfer is wealth-maximizing.

242 Such a conclusion is not novel, as this problem was addressed in the proposed IRS examination guidelines. They called for an inquiry into the management of professorial conflicts of interest to ensure that agreements create no private benefit. See IRS Guidelines, supra note 31, at 49-50 (calling for IRS personnel to “[r]eview the university’s safeguards on managing and reporting conflicts of interest” and to review disclosures made by scientists concerning relationships with research sponsors or licensees).

243 See AUTM SURVEY, supra note 7, at 23.

244 See, e.g., Sanders & Robison, supra note 210, at 38 (arguing that extrascientific values “highlight[ ] the value of science within human communities”); see also supra text accompanying note 61.

245 See, e.g., Exempt Organizations Handbook, supra note 142, ch. (37)89, at 20,777-3 to 20,777-4 (asserting that amounts derived from an organization’s research activities that do not meet the Treasury regulations’ requirements for scientific research might
Corporations gain access to new technologies; consumers gain access to new products; and universities develop new income streams. Furthermore, the university reinvests its share of these royalty revenues in further research, scholarships, financial aid and physical-plant improvements. Given the fact that other income sources are either stagnant or declining, it may seem reasonable to allow universities to take full tax-exempt advantage of technology-transfer receipts, as they do with tuition, alumni donations and other income sources.

The problem with this line of reasoning is that it encourages every university in the country to operate a macaroni factory, as did the New York University Law School prior to 1950. Schools would claim that as long as they reinvest profits from noncharitable activities, revenues from these activities should remain tax-exempt. It is clear that the proper way to analyze taxability questions is to focus on the source, rather than the destination, of the revenue. Therefore, when technology-transfer income results in restrictions on publication, exclusive licensing, the downgrading of education, the de-emphasis of basic research, and profiteering by the professoriate, the destination of the revenue should not matter—the income should be taxable because it is income unrelated to an exempt purpose. As the research enterprise evolves and encourages further patent-licensing opportunities, it will be more difficult to argue against UBIT treatment. As for the contention that consumers and corporations benefit from the new technologies universities develop, the private sector could perform that function just as well if the Code placed the private sector on an equal footing with universities.

This conclusion makes sense when we consider that a tax code is also a "policy code," designed to encourage certain activities. Universities enjoy their tax exemption because of a belief that they are producing research that no other market actor would produce absent a public subsidy: basic research, publishable research, research that educates students and research that is usable by the

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still be excluded from unrelated business taxable income if the provisions of I.R.C. § 512(b)(7), (8) or (9) are applicable).

246 See supra Part I.B.2.

247 See Iowa State Univ. of Sci. and Tech. v. United States, 500 F.2d 508, 518-19 (Ct. Cl. 1974) (noting the change in focus from "destination of income" to "source" of income in UBIT analysis).

248 But see Rose-Ackerman, supra note 98, at 1020-21 (calling for the repeal of UBIT, arguing that it does not truly create equity between taxable and tax-exempt entities).
whole society. Projects performed strictly with an eye toward commercial applications and profitability do not require tax-code encouragement. If we allow universities to engage in for-profit activity unchecked, what incentive would there be for universities to engage in the educational, scientific and charitable activities for which Congress granted the exemption? For example, if both exclusive and nonexclusive licensing endeavors receive equal tax treatment, what is the incentive to offer the less lucrative nonexclusive license?

The solution is for universities to make certain that, in electing to engage in technology-transfer activity, they remember that they are benefiting from a public subsidy. If they wish to maintain a different tax posture from the for-profit sector, research universities must act in a manner consistent with Congress's intent in granting the exemption and the letter and spirit of the Internal Revenue Code. To do otherwise would create a manifest injustice that, given the current political climate, could lead to a closer examination of other tax exemptions currently enjoyed by higher education. Absent a change in their mode of operation, U.S. universities may lose approximately $90 million in annual revenue, money sorely needed to balance institutional budgets.

This Comment, therefore, calls for the development of two distinct types of patent-licensing agreements—taxable and nontaxable. If the manner in which the university conducts its technology-transfer activity is in substantial conformity with the letter and spirit

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249 The state and local property tax exemptions of colleges and universities have recently generated substantial media attention. Many cities and towns which serve as homes for colleges and universities have negotiated PILOT (Payment in Lieu of Taxes) programs to replace some of the real estate tax income that would be generated if taxpaying tenants occupied the land. See Cornell Increases Payments to Ithaca for City Services, N.Y. TIMES, Nov. 1, 1995, at B9 (reporting Cornell University's agreement to increase annual payments to the City of Ithaca to $1 million); Harvard Will Pay More to Cambridge in Accord, N.Y. TIMES, Nov. 28, 1990, at B9 (describing Harvard University's 10-year agreement with the City of Cambridge); Stephanie Simon, Yale Pledges $1.5 Million to City, Easing Town-Gown Tensions, BOSTON GLOBE, Apr. 8, 1990, at 74 (covering Yale University's agreement to put its golf course on the city tax rolls, make voluntary payments to the fire department and convert four city blocks to pedestrian walkways). One municipality—Evanston, Illinois—proposed placing a "tuition tax" on the tuition receipts of Northwestern University and other schools located in the town. See Bob Secter, Colleges Fear Proposed Tax on Students, L.A. TIMES, June 2, 1990, at A1.

250 This number was calculated using the fiscal year 1994 figure for royalties received by all U.S. universities (approximately $266 million) while assuming a corporate tax rate of approximately 34%. See AUTM SURVEY, supra note 7, at 19.

251 See supra Part I.B.2.
of the Code and Treasury regulations, the licensing and royalty revenue should be nontaxable. If the research enterprise or the licensing agreement does not reflect the exemption requirements of the Code and regulations, then the income should be subject to corporate taxation under UBIT. Universities would be able to choose which type of agreement they wished to enter into, depending on the facts and circumstances surrounding each invention or discovery. The following constitutes a basic, though by no means exhaustive, list of prerequisites for engaging in technology-transfer arrangements while still conforming to the § 501(c)(3) tax exemption and exemptions from UBIT. Conformity with these conditions would be determinative of whether the licensing and royalty income would be treated as taxable or nontaxable.

1. No licensing agreement should call for either a suspension of or a substantial delay in publication rights beyond that which is necessary to obtain patent rights. Nor should an agreement contain a provision stating that professors may not share research results with their peers after patent rights have been secured. A policy similar to Princeton University's provides a good model:

In order to fulfill our educational objectives, and with our status as a tax-exempt institution, research at [the University] aims to serve a public rather than a private purpose. Results are disseminated broadly and on a non-discriminatory basis. Thus [the University] will not undertake studies whose results cannot be freely published. We will, however, recognize legitimate proprietary concerns of sponsors where appropriate. Publications may be deferred for an agreed-upon limited period of time to protect patent rights, and sponsors may review our publications before release so they are aware of the contents.252

This policy balances many of the concerns with technology transfer: it makes publication the highest priority, but recognizes that deferral to protect patent rights is also a necessity from the corporate standpoint. Furthermore, compliance with the Princeton standard would appear to be in accord with regulations underlying the § 501(c)(3) scientific and educational exemptions. On the other hand, it is possible that circumstances could arise which require an even greater delay in publication. Some inventions or technologies may never be utilized by the private sector unless there is a greater delay in publication than is necessary to obtain a patent. In such a

252 Research Relationships with Industry, Princeton University, quoted in Burke, supra note 163, at 187 (surveying delay-of-publication policies).
case, a university should still be able to license the technology, provided it pays the appropriate UBIT. In this manner, the corporate sector can continue to benefit from university efforts in cases where exigencies require a suspension of or substantial delay in publication. At the same time, the Code can function as intended—providing a benefit when a school acts in a manner consistent with its exempt purpose and putting it on an equal footing with commercial enterprises when it does not.

Ultimately, this proposed system allows a university to make rational choices when it wishes to execute a patent-licensing agreement. A university can examine the terms of an agreement that call for a substantial delay or suspension in publication. If it appears that the extra royalty income would more than compensate for the tax burden such an agreement would bring, the university could choose to engage in the agreement; if not, it could try to renegotiate the agreement to make it comply with the Code and regulations or it could reject it altogether.

It is unlikely that the above suggestion would result in a large number of agreements calling for suspension of publication. Professors, even if wealth maximizers, are also "publication maximizers," since it is largely by the number and quality of their published materials that their institution and their peers judge them.253 While a lucrative, nonexempt agreement might occasionally be executed, a university that routinely allowed for suspension of publication would have a difficult time attracting quality faculty to its campus. Furthermore, a widespread practice of failing to publish results would not only raise UBIT concerns but also concerns regarding that institution's § 501(c)(3) exemption generally.

2. Income from inventions or discoveries by faculty members who elect not to engage in the educational aspects of the school should be taxable. This rule recognizes that one of the public purposes of an exempt university is to educate its students. Consequently, the technology-transfer income derived from professors who do not participate in that public function in a meaningful manner should receive different tax treatment from that of true educators.254 Requiring a professor

253 See DITTS ET AL., supra note 162, at 65-76 (noting the importance of scholarship and suggesting a method to evaluate faculty publications).
254 See Barbara J. Bird & David N. Allen, Faculty Entrepreneurship in Research University Environments, 60 J. HIGHER EDUC. 583, 584 (1989) (recognizing that professors who are engaged in lucrative enterprises have different agendas and that "[s]uccess in technology-driven new ventures seems to require that faculty entrepreneurs leave their university positions").
to be an educator to qualify for an exemption would not only recognize the critical difference between a commercial and an academic researcher; it would also encourage universities to compel more faculty members to reenter the classroom. At present, universities have little incentive to change the behavior of profit-seeking professors. If the taxability of royalty revenues were made dependent upon whether the professor-inventor actually taught students, the university might develop a heightened vigilance regarding whether professors are teaching classes and advising graduate students. The Code could thereby help to achieve a goal that is eluding many universities: getting reluctant faculty back into the classroom.

Admittedly, the above rule might create potentially overbearing interference into the operations of a university by the Internal Revenue Service. Once a professor was issued a patent, auditors would need to inquire into how many courses a that professor taught, or how many Ph.D. students she supervised. Increased scrutiny of faculty and their research activities, however, is already becoming a reality for many schools.\textsuperscript{255}

Since this Comment calls for the coexistence of taxable and nontaxable agreements, this pedagogical requirement does not prevent a university from marketing to corporations technologies invented or discovered by a nonteaching faculty member. Rather, it means that licensing and royalty revenues from such discoveries would be taxable. Since the public is only willing to subsidize university research to the extent that it benefits college and university students, applying UBIT to revenues generated from nonteaching faculty is, in a sense, nothing more than repaying the unused public subsidy.

3. No tax-exempt agreement should allow for exclusive licensing. Again, this requirement allows the university to tailor the agreement to the economics of the situation. Consistent with general university philosophy and the requirements of the Bayh-Dole Act, nonexclusive licensing would constitute the standard arrangement in patent-licensing agreements, and the subsequent royalty revenues would be

\textsuperscript{255}See Carolyn J. Mooney, \textit{Critics Within and Without Academe Assail Professors at Research Universities}, CHRON. OF HIGHER EDUC., Oct. 28, 1992, at A17 (quoting University of Minnesota professor Karen Seashore Louis as saying that, "[t]raditionally at a research university, faculty have said, 'Trust us' . . . . But when times are tough, people don't feel that's an adequate response. . . . The issue is individual autonomy versus the university's autonomy").
tax-exempt. There may be cases, however, in which an exclusive licensing arrangement would be far more lucrative for the university. In circumstances in which the revenue stream created by an exclusive licensing agreement would be so substantial as to offset the tax burden, however, the university would be able to make the rational financial choice. Again, by paying the taxes, the university is simply returning its unused subsidy.

Additionally, a situation may arise where, in the absence of exclusive licensing, a promising technology would not be developed at all by the private sector. To deal with such a situation, the Service could create a procedure whereby a university could petition for a UBIT waiver. Such a waiver would allow for the university to enter into an exclusive licensing agreement but still remain exempt from taxation on the subsequent licensing and royalty revenues. The determination whether an exclusive licensing arrangement was the only practicable means for a discovery to realize a practical application—making a UBIT waiver appropriate—would be a question for either the Service or an independent panel composed of academic and corporate researchers.

4. The Service or universities should require disclosure of all technology-transfer agreements in order to determine whether they present faculty conflicts of interest. In an era in which professors may earn substantial amounts through technology transfer, conflicts between academic and financial interests are certain to arise. Almost all commentators on the question of conflicts of interest agree that disclosure is the first important step in preserving the integrity of the university research endeavor. Compelling public disclosure would itself serve a public purpose; it would also allow observers to examine whether an individual professor was so steeped in licensing arrangements that her role as an objective academic might be compromised. If it were determined that a professor’s pecuniary interest in an agreement presented a conflict of interest, that agreement would be taxable under UBIT.

This suggestion may be the most controversial, because it may appear overly intrusive on the personal and financial life of a

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256 See, e.g., Beauchamp, supra note 226, at 11 (arguing that institutional rules should require disclosure even though such rules sometimes create further problems); Burke, supra note 163, at 186 (“A key feature of most of the [technology-transfer] policies is reliance on disclosure as a mechanism to deal with conflicts. Perhaps this reflects a conclusion that disclosure will inhibit the formation of inappropriate relationships at the outset.”); Witt & Gostin, supra note 232, at 550-51 (suggesting solutions to the conflict-of-interest dilemma).
professor. The granting of a tax exemption, however, carries with it the expectation that those benefiting from it are performing the type of research that the public has elected to subsidize. Just as with other aspects of public funding, the public has a right to be informed about that which they are supporting.\(^{257}\) Disclosing potential conflicts of interest would serve this purpose, allowing both the Service and the public to know whether scientific or educational goals are being compromised. Furthermore, the fact that conflicts of interest will be made public may affect their prevalence. Faculty members may be less apt to compromise their academic values when such compromise will be subject to the scrutiny of their peers and the public. Many universities already voluntarily engage in this accounting of faculty conflicts of interest.\(^{258}\) The beneficial effects of such disclosure on the conduct of academic (tax-subsidized) research would exceed any resultant costs. And, in cases where a professor fails to disclose conflicts, a taxable patent-licensing agreement could still be executed.

**CONCLUSION**

The tax-exempt status of the university is predicated on its serving a public purpose. When a university engages in activity that is separate and distinct from this public purpose (such as the operation of a hotel or restaurant), the Tax Code has an appropriate solution—the unrelated business income tax. Revenues from university technology-transfer activities present a hard case: while scientific research is clearly inseparable from the mission of the research university, it is equally clear that research activities can be of such a type or conducted in such a manner that they bear little or no relation to the educational and scientific public purposes which originally justified the exemption. Certain aspects of the technology-transfer research enterprise—publication, exclusive licensing, student involvement, diminishment of academic freedom and basic research,

\(^{257}\) See Witt & Gostin, *supra* note 232, at 551 (stressing that “[t]he public must have confidence that all conflicts [of interest] will be disclosed”).

\(^{258}\) See Burke, *supra* note 163, at 181 (explaining that of 56 universities surveyed, 46 have developed conflict of interest policies); Witt & Gostin, *supra* note 232, at 548 (noting that “in anticipation of more specific regulations from the NIH, many institutions have adopted their own guidelines” (citations omitted)); cf. id. at 548-49 (describing the conflict of interest guidelines of, *inter alia*, the American Medical Association, the American Federation for Clinical Research and the Harvard Medical School).
and conflicts of interest—raise the question of whether such income should be subject to UBIT.

While such revenues are not currently taxed, this Comment has investigated the possibility of such taxation. The Service may soon take a closer look at what has become an increasingly appealing target; the treatment of these issues in the 1993 Proposed Guidelines are a harbinger that change may be on the horizon. As such, universities should carefully monitor their technology-transfer enterprises to ensure that their conduct is consistent with the public purpose and philosophy behind § 501(c)(3). Absent the ability to do so on a consistent basis, universities should consider the development of exempt and nonexempt agreements as outlined in Part IV. Such a system would maximize corporate access to new technologies while at the same time preserving the exemption for those activities "substantially related to an exempt purpose."