In 1988, Harvard University unveiled plans for Medical Science Partners (MSP), a venture capital fund intended to invest in and commercialize faculty biomedical projects. Critical of what is perceived as a "15 year long trend" wherein Harvard has "forged deeper a... more extensive ties with the biomedical industry," the document asserts that MSP will give Harvard a role and interest in the marketing of its faculty's research plus a vested interest in the health of the biomedical industry. Most of the fund will be for facilitating patenting, federal approval, commercial development, and marketing, with little monies going into laboratory research. Unlike the Ptashne case of 1980 squelched by President Bok as an "improper relationship," the MSP plan does not give Harvard equity in companies that result from its faculty's research. However, the authors argue against the MSP as currently conceived, addressing issues of structure; investors and investments; and patents, licenses, and profits. Six recommendations are proffered: the university must directly address the issues raised by the Ptashne case before embracing the MSP; the university must demonstrate the value and worthiness of the arrangement on its own terms; Harvard must demonstrate that any research project taken on by MSP falls into the development gap; the internal documents of the Academic Review Committee and Board of Directors of ION, Inc. should be made public; restructure the MSP proposal so it receives none of the partnership's profits; and no MSP funds should be invested in non-Harvard ventures. (JC)
STILL A BAD IDEA

A CRITIQUE OF HARVARD UNIVERSITY'S MEDICAL SCIENCE PARTNERS PROPOSAL

A HARVARD WATCH REPORT

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I. Introduction

In September, 1988, Harvard University publicly unveiled plans for Medical Science Partners (MSP), a venture capital fund intended to invest in faculty biomedical projects and commercialize them. Unlike previous forms of funding relationships with the biomedical industry, Medical Science Partners will give Harvard University a role and interest in the marketing of its faculty's research. It will also give the University an interest in the health of the biomedical industry as a whole which it has not previously had.

The Medical Science Partners proposal fits generally into a 15 year long trend during which time Harvard University has forged deeper and more extensive ties with the biomedical industry. MSP is more specifically a modification of the Genetics Institute joint venture proposal of 1980. In that year, Harvard University considered entering into a joint venture with one of its faculty, Mark Ptashne, to create a start-up biotechnology firm. Both Harvard's own faculty and students, and the national media criticized the plan harshly. Critics from within the University warned of the potential danger to tenure decisions, fearing that the profitability of a researcher's work would supplant its academic merit as a criterion for tenure. Critics outside the University deplored the prospect of Harvard holding equity in companies devoted to commercializing its faculty's research. In the face of strong criticism, Harvard's president, Derek Bok, cancelled plans for the joint venture. In his 1979-80 President's Report to the Board of Overseers, Bok considered the "Ptashne case" in great detail, and concluded that it was an improper relationship for the University to enter into. However, President Bok endorsed the growing trend of university-industry ties in biomedical technology and did not rule out the possibility of ventures similar to the "Ptashne case" in the future: "Consulting arrangements, industry-associate programs, patent licensing research..."
agreements with individual firms or groups of companies -- all of these afford useful opportunities to stimulate technological innovation... The same cannot be said of efforts to join the university with its professors to launch new entrepreneurial ventures." In a footnote, Bok intimated, "Conceivably, a university might also establish an independent foundation to finance new enterprises created by its faculty members to develop and market their discoveries."1

The MSP proposal shares the goals of the Ptashne proposal, though it is structured somewhat differently. Like the Ptashne plan, MSP emphasizes the commercialization of professors' research. The majority of the fund will be used to facilitate patenting, federal approval, commercial development, and marketing of that research. Faculty researchers will receive only minimal laboratory funding from the Partnership. Unlike the Ptashne plan, however, Harvard University will not directly hold equity in companies that result from its faculty's research. Stephen Atkinson, director of the Office of Technology Licensing and Industry-Sponsored Research at Harvard Medical School, said, "the Ptashne case is the whole policy basis for this thing [Medical Science Partners]... but the 1980 fiasco left a strong impression on all of us [the Harvard administration]: 'Don't do it again.'"2 The University has attempted to address the issues which plagued the Ptashne plan in a three page memorandum, "Comparison of the 1980 Ptashne Case and the HMS Venture Fund Proposal," but it does so inadequately. Indeed, there are differences between the Ptashne plan and MSP, and a number of concerns about the 1980 plan do not apply to


2 All quotations from Stephen Atkinson are taken from interviews conducted on the following dates: October 6, 12, and 18, 1988.
MSP. Most, however, remain relevant. The memo is written in the most general terms, addresses only some of the points President Bok raised eight years ago, and fails even to satisfy the concerns it does address.
II. Profile of Medical Science Partners

A. Structure

Medical Science Partners will be a venture capital fund of $30 million and will be active for a period of twelve years. While Harvard will receive a share of MSP's profits and will be a member of the Partnership, Harvard is not investing any money in MSP; the $30 million will be provided by a group of outside investors. Harvard University has appointed Dr. Andre Lamotte, former executive with the U.S. affiliate of the French drug concern Merieux, to be managing general partner, and he will make all investment decisions. However, the academic integrity of the projects in which Lamotte invests and the profitability of those decisions will be evaluated by two overseers: Ion, Inc., a wholly-owned subsidiary of Harvard University, and the Limited Partners. Ion, Inc. will consist of University administrators and will have no voting rights in any investment decisions. But Ion, Inc. will enforce the University's academic research principles as outlined in the Medical School faculty's "Statement on Conflicts of Interest and Commitment" and "Statement on Research Sponsored by Industry" by means of an academic review committee. The committee, primarily consisting of faculty from the Harvard Medical School, will evaluate the academic integrity of each project before it receives funding from the Partnership. The Committee will make non-binding recommendations to Ion, Inc.'s Board of Directors, who have the power to dismiss Dr. Lamotte.

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A second overseeing body will consist of representatives from all the Limited Partners. These Limited Partners will be "passive," meaning that they will not take an active role in the operations of the Fund. Atkinson says that the Board will occasionally evaluate the profitability of the fund's investments.

Central to MSP's structure is Dr. Lamotte's independent status. He is solely responsible for making investment decisions, and will run the Partnership as an "independent, arms-length, third-party entity." In principle, this independence will require him to negotiate with Harvard Medical School's Atkinson and Technology Transfer officers from the affiliated hospitals over the issuance of licenses and other commercial considerations. But Lamotte's "independence" deserves skepticism. He is currently paid consulting fees by Harvard Medical School, works out of Atkinson's office and refused to be interviewed for this report because Harvard Medical School had not "approved him to speak about the Partnership."

B. Investors and Investments

The fund will seek its capital from "unconventional investors" in biotechnology, as Atkinson calls them: insurance companies, pension funds, private philanthropic foundations, established venture capital firms, and companies whose business is not primarily biotechnology. Harvard University will not invest any money in MSP. At this time, Harvard has received a promise of $10 million from an undisclosed source. More conventional sources of funding--pharmaceutical and chemical companies--will not be restricted from investing in the fund but are only capital sources of "last resort." Atkinson believes that "if you give one [pharmaceutical company] access to the fund over

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all the others, they'll be mad." He said that University favoritism would constitute a breach of "trust."

Dr. Lamotte will employ four financial managers to invest the capital in projects he selects from among those currently going on at the Harvard Medical School and affiliated hospitals. Eighty-five percent of the fund's capital will be invested in or relating to projects originating at Harvard. However, the Fund does permit up to fifteen percent to be invested in established biotechnology firms outside of Harvard. Atkinson justifies the option to invest in established biotechnology ventures in explaining that it "frees Lamotte to make a wider variety of investment decisions" and "to diminish the overall risk" of Medical Science Partners since the profitability of these established ventures has already been proven. According to Atkinson, MSP's investments in Harvard will be considered "very high risk" since they fall into a category he calls a "development gap"--projects that are "too basic" to attract corporate money but "too applied" to receive federal funding. According to Atkinson, these are projects which have not received substantial corporate funding but in whose potential for attracting corporate money the University believes: "You can't expect corporations to fund every project. That assumes an efficient marketplace. But the reality is quite different." Atkinson believes that conventional sources of industry sponsorship do not recognize the profitability of some projects. These projects fall into the so-called "development gap" and remain without corporate funding. "MSP is filling in the gap created by inefficiency." Atkinson foresees investing in forty projects over the twelve year life of the Partnership.

Harvard hopes that MSP's investment in these projects will enable the Partnership either 1) to license them to industry, or 2) to create new biotechnology companies which will use these projects to establish themselves
in the market. This latter possibility is particularly desired. Harvard would "like to see spin-off companies if the technology in question is important enough."\(^5\) MSP may invest in these start-up companies, although it "does not intend to invest beyond the early financing stage."\(^6\) Harvard will not retain equity in the projects' commercial development. Acknowledging that the sum of $30 million is not significant by biotechnology research standards, Atkinson claims that the Fund's importance derives from the strategic use of these funds. Most of the Fund's money will not go to the faculty researcher. Rather, the money will go to paying outside consultants to expedite the commercialization of projects. These consultants will "evaluate technology, estimate FDA regulations and the possibilities for patenting."

The Fund will emphasize attracting further capital for commercialization purposes rather than sponsoring directly laboratory research. This emphasis is manifested in the creation of a "Working Business Group."\(^7\) Dr. Lamotte is putting together this network of "friendly contacts" -- prospective investors -- whose capital may be tapped to spin-off companies. Running throughout the MSP plan is a new intimacy between Harvard University and venture capital establishments.

C. Patents, Licenses and Profits

Harvard University will hold the title to all patents resulting from the research in which MSP invests, a practice common at Harvard since the University revised its patent policy in 1975. Exclusive licenses will be issued to

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\(^5\) Interview with Stephen Atkinson.

\(^6\) "Medical Science Partners, L.P." p. 1.

\(^7\) Ibid., p. 1.
MSP, which will in turn license either to another corporation or to spin-off companies.

In addition to the royalties the University earns as the holder of a patent, Harvard will also earn profits from the investments MSP makes. These profits will be divided among Harvard, Dr. Lamotte and the group of investors as follows: Harvard, as represented by Ion, Inc., will receive ten percent of net profits, Dr. Lamotte will receive another ten percent, and the remaining eighty percent will be divided among investors. Harvard will "reinvest" its profits in laboratory research at the Medical School in an effort to make the creation of spin-off biotechnology companies a viable and perpetuating source of income.
1. Harvard University initiated Medical Science Partners (MSP), and is currently seeking investors for the partnership. Harvard will license patented inventions to MSP, including any MSP may have (partially) funded in University laboratories. MSP will invest in Harvard professors' biomedical research projects, attempting to develop them so that they can either be licensed to other companies or can form the basis for start-up companies.

2. Harvard hired Dr. Andre Lamotte. The University is currently paying him consulting fees.

3. Harvard University created Ion, Inc. as a non-profit subsidiary. Ion, Inc.'s board of directors consists of members of the Harvard Corporation, Harvard administrators, and members of Harvard's investment company, the Harvard Management Corporation.

4. Ion, Inc. is the mechanism by which Harvard will have input into and interact with Medical Science Partners. Ion, Inc.'s board of directors have the power to remove Lamotte if it determines he is violating or contributing to the violation of University regulations. The directors do not evaluate MSP's financial success or failure. Ion, Inc. will receive ten percent of MSP's profits, which it will channel back to the University.

5. Harvard has created the academic review committee, which will be made up of professors from Harvard Medical School and other institutions involved in biomedical research.

6. The academic review committee will review the activities of MSP, to assure that it is adhering to Harvard's academic standards and regulations. It will not review financial matters.

7. Based on its findings, the academic review committee will make non-binding recommendations to the board of directors of Ion, Inc. concerning the University's relationship with MSP.

8. Dr. Andre Lamotte, a former executive with the American subsidiary of the French drug company Merieux, will run MSP, directing its investments and operations. He will receive ten percent of the profits earned by MSP.

9. The Limited Partners invest in MSP, providing all of its capital. The Limited Partners cannot direct or otherwise influence MSP's investment decisions.

10. The Limited Partners have limited powers to review Lamotte's financial success, and can fire him for poor performance.

11. MSP can invest up to fifteen percent of its capital in outside biomedical concerns.
III. Recommendations

1. Before Entering into the Medical Science Partners Arrangement, the University Must Directly and Thoroughly Address the Issues Raised by the Ptashne Case.

- Will involvement in MSP "impose upon the university unwelcome responsibilities it does not have as merely a tiny shareholder in a large established company?"  
  A memorandum prepared by the University, "Comparison of the 1980 'Ptashne Case' and the HMS Venture Fund Proposal," responds that the University has relinquished all of these responsibilities: "Dr. Lamotte will at all times be responsible for exercising voting and other ownership rights with respect to the partnership's investments." In this case, however, is it appropriate for the University to relinquish the responsibilities associated with partnership in a money-making venture? The academic review committee will attempt to monitor the activities of MSP as they relate to various academic standards and regulations, but they will not evaluate the general operations of the partnership. Does MSP adhere to the standards of social responsibility the University would like to uphold? Is it pursuing the development of biomedical products based on their potential social usefulness or commercial success? How does it treat its workers? Does the Partnership deal with the government and other institutions in a satisfactory way? These are crucial questions over which the Harvard seems to have lost domain in giving Dr. Lamotte almost complete control of its voting and other ownership rights.

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• How will investors respond if the University decides to pull out of MSP?10 The project would essentially collapse were Harvard to pull out; will the University be able to do so in the face of investor pressure to stay in the partnership? Should the University feel an obligation to maintain the partnership it created, even if it does not meet its expectations or standards, if the other partners so desire?

• Will professors involved in MSP and subsequently with start-up companies in which they own a substantial amount of stock “find it difficult to confine their involvement to the single day a week customarily allowed for outside activities?”11 The Medical School’s memorandum “Policies and Procedures for Agreements with Medical Science Partners, L.P.” cites the “Statement on Conflicts of Interest and Commitment,” which prohibits faculty members from devoting more than 20% of their professional time or one day a week to outside work.12 Even if professors involved with MSP adhere to this guideline, they may devote far more than 20% of their time to MSP-related activities. In addition to spending 20% of his or her time working with MSP outside the University, a professor could -- and probably would -- work in his or her laboratory on research questions involving their venture with MSP. Supposing faculty time to be divided equally between research, and teaching and administrative work, a professor could easily spend 60% of his or her time working for MSP, or on a MSP-related project. What sort of “conflict” results when a faculty member

10 Bok raised the issue of University-investor relations and potential complications in “President’s Report, 1979-80,” p. 7.

11 Ibid., p. 7.

works mainly on a commercial venture for his or her and the University's private gain?

• To what extent will research secrecy increase? The "Policies and Procedures" memorandum refers to the "Statement on Research Sponsored by Industry," which prohibits secret research in Harvard laboratories and restrictions on publication rights. Nevertheless, many restrictions on the free flow of information resulting from the various activities of MSP may be self-imposed by involved professors. In 1980, Bok wrote:

  Participation in such a firm will likewise increase the risk of secrecy, for every professor committed to the welfare of a business will be aware of the need to protect its commercial interests by avoiding premature disclosures. Graduate students may be influenced by habits of secrecy foreign to academic science and may otherwise be diverted from their normal academic work to join in projects that may be more useful to the company than educationally valuable.13

He acknowledged that "conscientious professors may succeed in avoiding such practices," but noted that "even so, they may be suspected of compromising academic pursuits for commercial reasons, and these suspicions will contribute to an erosion of trust and a corresponding decline in academic standards."14

2. Before Entering Into the Medical Science Partnership, the University Must Demonstrate the Value and Worthiness of the Arrangement on Its Own Terms

The University cannot claim, as justification for the MSP project, that various difficulties associated with MSP "happen anyway" as a consequence of corporate-sponsored research, outside consulting arrangements, or other institutional or individual relationships. If problems which MSP might create -- for example, faculty spending far more than 20% of their time on corporate-


14 Ibid., p. 7.
related activities -- already exist, then they should be addressed where they already exist. The University should not create additional structures which perpetuate or deepen the problems, and it should not enter into the Partnership before it can demonstrate that these acknowledged dangers will not be realized by MSP.

For the same reason, it is not legitimate for the University to justify the MSP project by claiming that the same problems associated with corporate-sponsored research and consulting will occur with MSP, but to a lesser extent.

John Shattuck, Vice President for Government, Community, and Public Affairs explicitly conveyed such an impression in an interview with the Harvard Crimson:

Shattuck said that [MSP] represents a substantial improvement over the current situation at the Medical School, "where individual professors go out seeking private corporate funding." Shattuck said that this current procedure "is fraught with danger -- this is all an improvement on that," since the University will be able to monitor more closely professors' relationships with private industry.15

President Bok has provided good reasons why University involvement in commercial ventures with faculty members is detrimental to the integrity of academic standards. That universities should seek to participate in ventures such as MSP in an attempt to minimize the dangers to academic science, Bok wrote,

is intriguing but probably unsound. To begin with, one wonders whether university administrators can be trusted to take strict precautions to protect the interests of science if proper safeguards threaten to reduce potential profits...Nor is it likely that an administration could acquire the knowledge to guard against the dangers of excessive secrecy or undue diversion of faculty effort.

without involving itself quite deeply in the daily affairs of these companies."\(^{16}\)

3. Harvard Must Demonstrate that any Research Project Taken on by MSP Falls Into the "Development Gap."

The very existence of the "development gap" is a somewhat questionable proposition. Existing venture capital companies seek high risk, high return investments, and survey the work of academic scientists for possible investment outlets. Yet the University claims that much of professors' work which could be profitably commercialized currently remains undeveloped. Steve Atkinson insists the "development gap" is real, and claims numerous examples to support his assertion.

Even if the "development gap" exists, and Medical Science Partners is a necessary tool to develop valuable biomedical products, because of the numerous dangers surrounding MSP, it is a tool that should only be used when other development alternatives do not exist. Yet the structure of MSP creates numerous incentives for Harvard to steer professors to MSP when their inventions could be developed through other channels and for the partnership to invest in inventions that would otherwise be brought to market. First, Harvard maintains greater control of inventions developed through MSP, where Dr. Lamotte, its appointee, directs the development process. Second, Harvard stands to make more money from inventions developed through MSP. If a professor patents an invention and licenses it to a company, Harvard and the professor split the royalties from that license. If, however, a professor works with MSP and patents an invention, Harvard receives not only its share of the royalties, but also ten percent of the profits MSP is able to glean from the development process. Third, the Partnership has a strong incentive to invest in

\(^{16}\) Derek Bok, Beyond the Ivory Tower: Social Responsibilities of the Modern University, Cambridge, Massachusetts: Harvard University Press, 1982, p. 164.
and support inventions and discoveries which do not fall into the "development gap," but which are clearly commercializable. Every member of the partnership -- the investors, Harvard, and Dr. Lamotte -- has a strong interest in MSP profiting, and it is self-evident that it is clearly commercializable inventions, not those which fall in the "development gap," which carry the least risk and which are likely to be the most profitable.

4. The Internal Documents of the Academic Review Committee and the Board of Directors of Ion, Inc. Should Be Made Public

Public disclosure of the documents of the academic review committee and Ion, Inc. will help earn public confidence in the propriety of the MSP venture and provide a check against committee oversights or potential abuses of academic standards. If public disclosure is not possible, then the MSP proposal does not satisfy academic requirements for preserving the free flow of information.

Documents made public should include the reports submitted by professors participating in MSP to the academic review committee, the findings of the academic review committee, and almost all documents produced or examined by the board of directors of Ion, Inc. Certain justifiable exceptions to a general rule of disclosure could be made for material relating to MSP's financial operations; these affairs are supposedly kept at an "arms length" from the University, however, and thus neither the directors of Ion, Inc. nor the members of the academic review board should regularly come into contact with information of a proprietary nature. If the possible necessity of restrictions on a disclosure rule does exist, the exceptions to the prevailing rule should be carefully spelled out at the beginning of the operations of MSP.

5. The University Should Restructure the MSP Proposal So That It Receives None of the Partnership's Profits
The gravest dangers of the Ptashne proposal came not from the University exercising control over a company in partnership with a faculty member, but from its having a substantial interest in profiting from the successful creation and start-up of a new company in which a professor was a key player. This most fundamental problem has not been rectified by the MSP plan.

The "Comparison of the 1980 'Ptashne Case' and the HMS Venture Fund Proposal" memorandum assures those concerned that Harvard will not be "'going into business with members of its faculty.'" Dr. Lamotte, the memorandum states, "will at all times be responsible for exercising voting and other ownership rights with respect to the partnership's investments." The memo continues: "Harvard's economic and other interest is restricted to a cash return from the realization of profits from successful investments." By virtue of the structure of MSP, "an independent, arms-length, third-party entity," the memorandum further argues, there will be no "continuous and direct participation by the University in the creation and start-up of a new company."17

None of these assurances deal with the essential problems of the Ptashne case, nor of the MSP proposal. The primary danger is not that that the University will manipulate a company in a certain way -- this is the potential abuse from Harvard participating in the start-up a new company, in conjunction with a faculty member or not. Rather, the danger is that the internal affairs of the University will be contorted and the University's function as an independent social critic will be lost. These problems stem not only from Harvard's participation in the corporate decision-making process of a spin-off company, but in receiving a substantial share of the company's profits. President Bok has recognized the crucial significance of having a financial interest in a company:

"Whatever the administration does and however hard it tries, it will surely compromise its credibility and moral authority by agreeing to join faculty members in funding new enterprises and sharing in the commercial rewards" (emphasis added).\textsuperscript{18}

Once Harvard enters Medical Science Partners with an interest (10\%) in its profitability, it threatens its academic integrity and institutional independence in at least two ways. First, it becomes materially interested in the success and perpetuation of MSP. Withdrawing from the partnership simultaneously means foregoing a continual source of income. The University will thus inevitably develop a tendency to try to work within the partnership to solve problems, even when they are severe enough to justify withdrawal. Additionally, the desire to cultivate a source of income and the need for financial success for the perpetuation (and potential expansion) of MSP will lead the University to bend internal rules to aid MSP and encourage professors whose inventions could be developed in other ways to make use of MSP. Second, in maintaining a financial interest in a partnership which hopes to spin off biomedical companies, Harvard develops a special interest in the financial success of the entire industry.

In these ways, then, Harvard stands to lose its academic integrity and credibility and effectiveness as an independent social critic. The university's function as independent evaluator is especially important with respect to the fledgling and rapidly growing biotechnology industry. In such a new industry, a broad array of options exist for its future, and independent critics become especially necessary. Moreover, outside of industry, experts in the field reside almost exclusively in universities; if the university slips out of its monitoring role,

\textsuperscript{18} Beyond the Ivory Tower, p. 165.
no other social actor will fill it. The fact that many faculty members are already working closely with industry only accentuates the need for the University to preserve its institutional integrity and independence. Indeed, as President Bok has noted:

If academic leaders serve any important purpose in the university, apart from raising money, they serve to articulate and preserve its essential intellectual values. How can they possibly discharge this function once they are perceived to have jumped into partnerships with their professors in order to profit from the very enterprises that create the dangers they are seeking to counteract?19

6. None of Medical Science Partner's Funds Should Be Invested in Ventures Not Related to Harvard.

MSP exists solely to bridge the "development gap," and is not justifiable, from the University's perspective, on any other grounds. If MSP cannot earn a satisfactory profit working to fulfill its mission, this should indicate that the "development gap," at least as the University has conceived it, does not exist, and MSP should dissolve.

Certainly there is no reason for Harvard to share in the profits earned by MSP on investments outside of Harvard. First, while the outside investors can claim they are taking a high risk by investing in MSP and therefore need the security of fifteen percent "safe" investment, MSP offers Harvard no such financial risk. Second, since the University is providing neither the capital nor the expertise necessary for investments in non-Harvard-related projects, it has no legitimate right to share in the return on these investments.

Further, because of the "arms length" nature of MSP, it will be impossible for Harvard to direct the investments to make sure they are in conformity with its stated guidelines, and it will be similarly impossible for members of the Harvard

19 Ibid., p. 165.
community and the public to check that these investments adhere to the University's ethical standards.