

Commentary

Managing Potential Conflicts of Interest in University-Industrial Partnerships^{1,2}

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The issue before us is the nature of the partnership between the industry and the university and how we can manage that partnership to maintain the mission of both entities and at the same time gain the advantages that the partnership can provide.

I do not use the term partnership lightly because there is a long history of a strong mutually beneficial relationship between faculty members and their industrial counterparts in many disciplines and certainly in the pharmaceutical sciences. In recent years, however, new levels of relationships involving large sums of money have emerged that go beyond the one-on-one basis and on which companies and universities, or individual colleges, are developing agreements or contracts. These have caused many universities to examine more closely the nature of their industrial relationships and have awakened the industry to look more closely at the problems they may encounter in their dealings with academia.

Let me first present a brief philosophical background to this subject and then take up some of the practical issues that I think need the most attention in dealing with these partnerships, concentrating on some specific areas which are of most concern.

Both the university and the industry can gain a great deal and can help meet their respective missions through mutual interaction. For the industry the major advantage is the flow of new ideas that emanates from the active research programs of the university. For academia the funding of research and other forms of financial assistance are among the major incentives for strengthening ties with industry.

The mission of the industry is to return a profit to its investors and at the same time provide a societal benefit which helps generate that profit. The university exists to protect and foster an environment conducive to free and open inquiry, to the search for truth. Its primary goals are the advancement of knowledge and the dissemination of that

knowledge through free, unfettered exchange of ideas. The university works generally on a set of principles governing scholarly inquiry:

- (a) open and unimpeded objective pursuit of ideas,
- (b) full and wide dissemination through teaching and publication, and
- (c) critical peer scrutiny.

The lifeblood of research and scholarly inquiry in the university today is external support, and faculty members devote a considerable fraction of their time to competing for that support. Further, support at the federal level has been at a plateau over the past several years, and faculty and university administrations are turning increasingly to the private sector to gain the financial support needed to progress and grow.

It should be clear to even the average person that the differences in the fundamental missions of the university and industry can create difficulties for both in establishing partnership agreements. Conflicts of interest can develop for the faculty, and even for students; incentives for profit can influence approaches to research; dissemination of new ideas can be delayed; commitment by faculty members to the basic university mission can be compromised. The fact that these problems can arise should not be a deterrent to the partnership but should be viewed as a new challenge to both partners to bring about the appropriate environment in which the partnership can flourish. With this in mind let me touch on some of the current problem areas that have the potential to generate conflicts of interest.

Intellectual Property. A question that often arises when a new patentable invention comes out of university research is who owns it. Generally it is clear that ownership remains with the university when the work was done on university property by an employee during his/her working hours. This general rule holds even if the work was supported by a grant from a company. There are areas of conflict, however. When a faculty member acts as a consultant for a company, any ideas arising from that work should legitimately be company property. Sometimes, however, it is difficult to ascertain whether the invention resulted from work by the faculty member in carrying out his/her university duties or in consulting. This is more likely to occur when the university allows faculty to use university facilities in carrying out consulting activities. In such cases there should be full disclosure required by the faculty member as to the borders of his/her university work and consulting areas and full and open agreement between the university and the company regarding the disposition of any inventions that

¹ A number of the views presented with which the author agrees are taken from the proceedings of a conference on this subject held in 1982 at the University of Pennsylvania [T. W. Langfitt, J. Hackney, A. P. Fishman, and A. V. Glowasky (eds.), *Partners in the Research Enterprise*, University of Pennsylvania Press, Philadelphia, 1983].

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arise. A mutually acceptable means of resolving differences, such as some independent committee or agency, could be agreed upon as well.

At most universities faculty now have a good monetary incentive to pursue patents. At our university the inventor will receive 30–50% of the university's net gain on a patent, for example. This incentive could shift the direction of university research from more basic areas to more applied. Little can be done directly about this, and I believe that the university must rely on the integrity of the faculty to pursue fundamental knowledge. Industry should also be concerned since it must rely generally on academic research to enhance continually the fund of basic knowledge upon which it will create new products and services.

Another potential conflict area arises when an agreement has been worked out on the basis of a faculty member's patent, and a company is given an exclusive license to exploit this patent commercially. Often, continued research by the faculty member produces new patents in the same general area as the one licensed. What happens to these? Agreements regarding licensing of patents or copyrights should be specific and take into account all the possible problem areas so that they may be more easily dealt with when they arise. Then both parties are fully informed and understand their respective positions. As universities gain more experience in dealing with these issues, these problems will tend to disappear.

Delay in Publishing. Major conflicts can arise from two sources when a faculty member wishes to publish a paper dealing with a new idea. First, the university may wish a delay in order that a patent may be sought prior to public disclosure. Second, if an agreement exists with a company the latter may wish to delay publication indefinitely, not only to allow time to apply for the patent application by the university from which it has exclusive rights to a license, but also to prevent competitors from gaining helpful knowledge in the area of the work. Any delay, of course, constitutes an infringement on the academic freedom of the faculty member and is antithetic to the basic mission of the university. However, this is one of those areas in which compromises must be reached in order to foster the university–industry partnership. It is generally suggested that agreements provide for a reasonable time in which to file for a patent, 6 months, for example, following which the faculty member may submit the work for publication. In any case there should be no total restriction against publication of any work done at the university. The industry should understand this clearly and, indeed, should not seek such restrictions if we are to keep the university as the bastion of free inquiry.

Time Spent by Faculty in Consulting. Traditionally many faculty members spend some time in consulting with the industry and receive additional compensation for that work. Most universities allow, and even encourage, this type of activity. It has value to the faculty member even beyond the compensation received in keeping him/her in contact with the “real world” and, often, in gaining research support. Most universities place some limit, formally or informally, on the amount of time a faculty member may spend in such consulting, 20% being a commonly quoted figure. Some companies wish faculty consulting to extend beyond

advising, to the performance of laboratory work, for example, which can require much more time than generally allowed. Where such work can be financially lucrative, the opportunity poses a conflict for the faculty member. Such additional research should be done through a contract with the university, which can gain its rightful overhead and be compensated for the faculty member's extra time devoted to the project.

A similar problem arises when venture capital is used to form a company to exploit a faculty member's patent through a contract with the university. This is happening quite often these days, with faculty members frequently becoming involved as principals in such companies. Usually the progress of the company depends upon continued involvement by the faculty member. Here again, the time spent by the faculty member can detract from his/her regular university duties. Agreements between universities and companies must spell out such arrangements very clearly in order to minimize conflicts, and again, we must depend in large measure upon the integrity of the faculty member to maintain his/her obligation to the university mission.

Stock Ownership by Faculty. A related problem for the university is equity ownership in companies by faculty members where the faculty member owns a significant share in the company. In some cases a “significant” share has been defined to be more than 5% or some similar amount. This is especially a problem when the company is one that has been formed to exploit that faculty member's patent owned by the university. Some feel that it is a clear conflict of interest for a faculty member to own any equity share if that ownership can influence the direction of his/her research or time spent in activities for the company.

Some also feel that it is a conflict of interest for a faculty member to accept research grants from a company from which he/she holds a significant equity interest. One might question for whom the research is really being done, the role of students in such research, or whether the faculty member can be objective in its conduct.

These are especially difficult issues for universities today. My personal view is that in the long run we will have to continue to depend upon the integrity of the faculty member, both as a person and as a scientist, to see that the basic mission of the university is carried out. However, it is incumbent upon the universities to establish clear guidelines for their faculty members in order to aid in the process. I might note that the latter is being made more difficult for state universities today because of the zeal of the state's economic development agencies to attract industry to the state. Often these agencies even encourage faculty to establish companies themselves or otherwise act in a direction tending away from the fundamental interest of the university.

Ownership of Companies by Faculty and University or Both. Some universities are beginning to form their own companies to exploit new ideas or take strong equity positions in such companies formed by others, such as venture capitalists. One may question the wisdom of such actions. Although the potentially larger share of the profits may be attractive, these moves place the university in competition with the very private industry they are seeking to attract for

support of various kinds and, in my view, create a conflict of interest. How can such a university encourage its faculty to maintain the standards of free inquiry and dissemination of knowledge which may decrease its own profits?

I have presented here only a few of the many issues that can arise. For each type of problem there is a solution. Finding it will depend upon open and full discussion between the parties involved. Each must understand the moti-

vation and needs of the other and work toward agreements in which appropriate compromises are made that do not infringe upon the fundamental missions of either party. The issues are difficult and require continuous discussion in many forums among university and industrial scientists and administrators on developing and disseminating models for others to emulate and in sensitizing all of us to the need to communicate openly and honestly.