Author's Commentary on "Barking Up the Wrong Tree? Industry Funding of Academic Research"

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The underlying issue in this case study is the conflict of interest that arises from the impact of private industry funding on Katz's behavior as an academic researcher. The basis for this conflict of interest, as described by Pritchard (1996), is the influence that one position (affiliation with private industry) has on another position (a scientist's behavior and judgment). This case is presented from the perspective of a graduate student to illustrate some of the problems conflict of interest can create for students and to generate discussion about some of the less commonly considered aspects of conflict of interest.

Discussions of conflict of interest typically address issues of data falsification or bias and financial gain rather than influences on experimental design or, in this case, selection of experiments. Whereas falsification or bias of data can be discovered by duplication of experiments, it is more difficult to detect the influence conflict of interest may have on experimental design.

Some university researchers have turned to private industry as a funding source because availability of funds from many government sources has decreased and competition for remaining funds has correspondingly increased. Industry stands to benefit from such funding arrangements in that research conducted by academic institutions is generally perceived by the public as more objective than similar work performed by consultants or done in-house. It may also be less expensive for industry to fund universities than to hire consultants. Whether or not industry expects recipients of funds to have the allegiance expected of hired consultants, a researcher's perception of such expectations could affect his or her objectivity.

Conflict of interest is not obvious in this case. Had it not been for Katz's comment to the post-doc, it would appear that Nellie's proposed work would deviate from that of

the lab and possibly from Katz's area of expertise. Thus, the primary problem would arise from Nellie's work being inappropriate for Katz's lab. However, in addition to his comment to the post-doc, Katz's conflict of interest is made apparent by his suggestion that Nellie evaluate effects of water temperature in addition to those of TTT (Scenario 1). By including elevated water temperature (a potential problem not associated with the chemical industry) and excluding DPP (which is associated with the chemical industry) from Nellie's study, Katz shows a bias in favor of the study of factors that could vindicate (or at least not implicate) the chemical industry in the decline of fish species. If indeed funding has been designated solely for research involving TTT, Katz could be considered to have misused funds by having Nellie evaluate the effects of water temperature (Scenario 1) and having other students work on compounds other than TTT (Scenario 2). Thus, rather than misusing funds for research involving compounds or factors other than TTT, Katz's choice of what to study appears to be influenced by his concern for the interests of the chemical consortium. Concerns of this nature would be expected of consultants hired by the chemical consortium, but they are not generally expected of university-based researchers.

None of the information provided in this case indicates that the chemical consortium expects the research conducted by Katz's lab to be less than totally objective. However, because the lab's primary source of funding is the chemical consortium and funding is renewed annually, Katz's concern about continued funding is understandable. Perhaps he can justify denying Nellie funding to evaluate DPP because he has been able to support the majority of his lab's research without any such conflicts. Thus, one could rationalize that much more good than bad has resulted from the chemical consortium funding.

The funding arrangement with the chemical consortium is lucrative, as indicated by Katz's well-equipped lab, which can make it difficult for Katz to be objective about the potential for conflicts of interest. Because of the financial advantages offered by industrial funding, it's important for academic institutions to establish an external (nondepartmental) review system to evaluate appropriateness of funding. Requiring longer-term funding arrangements (perhaps three to five years) would also provide increased financial stability and perhaps lessen perceived pressures.

Secondary issues in this case include Katz's responsibilities to his student Nellie and her responsibilities to Katz, as well as the general responsibilities of scientists. As this case is written, Katz has allowed Nellie to get into a difficult situation.

Regardless of what she does, she loses either her enjoyment of science, her integrity or her funding. Perhaps by restricting her choice of dissertation topics, Katz could have avoided many of the problems presented in this case. However, it seems inevitable that at some point, a seemingly uncontroversial topic would take on a direction that could be perceived as being potentially deleterious to members of the chemical consortium.

In addition to being contrary to basic principles of science, a significant concern, particularly over the long term, is the potential effect of Katz's biased behavior on public perception of science. Blumenthal (1996) describes the importance of public trust to the scientific enterprise. Similarly, Frankel (1996) writes that the public perceives and characterizes present-day science as objective and disinterested. Actions of scientists that undermine these principles and perceptions could result in loss of public trust and ultimately diminished government funding.

Environmental concerns are another issue in this case. The potential loss of species is a significant concern, perhaps a greater concern than obtaining a degree or renewed funding. If indeed DPP is adversely affecting native fish, and based on information in the case, it is incumbent on Nellie (as well as upon Katz) to express her concerns about DPP to someone who can (or will) do the necessary research.

Environmental concerns could well take precedence over any others. Nellie could change schools or live her life without an advanced degree; Katz could find other funding if the chemical consortium opted to discontinue his funding; and lab employees could find other jobs. Once gone, however, a species cannot be recreated.

References

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