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

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Barking Up the Wrong Tree? Industry Funding of Academic Research

This story is told from the perspective of a graduate student who is disturbed because she suspects that her lab director acts with a conflict of interest in steering her away from the research she thinks she should pursue. The case effectively brings out how integral ethics is to scientific research. What it is appropriate to investigate is a central ethical concern in this situation. At the same time, the case allows focus on ethical questions about the management of a research lab; communication needs in a research group; relations between the lab director and a dissertation student; the responsibilities of each; the responsibilities of a post-doc, and others in the lab; the influence of the funding source on the research; the integrity of the researcher; and responsibilities toward the environment. The short narrative effectively presents the situation with its ambiguities.

The lab director, Dr. Thomas Katz, has won an international reputation and acquired the funding for a group of graduate students and postdocs and for a well-equipped lab. However, he comes across to students as distant and inaccessible. The graduate student at the center of this case, Nellie Shepherd, is engaged in dissertation research to determine environmental factors that have contributed to decline of fish species that have been exposed to wastewater from chemical plants. Her disagreement with her lab director centers on what possibly damaging substance in the wastewater should be the focus of her investigation. One substance, TTT, has attracted public attention, has already been investigated to some extent by this lab, and has not been implicated in damage to fish. In addition, the lab gets its funding from a consortium of chemical companies that generate wastewater containing TTT, and the funds are designated for studying the effects of TTT.

Nellie's reading of the literature has convinced her that DPP, another substance in the wastewater, may be the culprit. She designs some experiments to test her hypothesis. Katz refuses to approve Nellie's proposed experiments, saying there is no need to evaluate DPP when the funding has been given for studying TTT, and he curtly cuts off further discussion.

Katz's apparently cold and discourteous treatment of Nellie, at a sensitive juncture in determining the scope of her dissertation research, creates a highly unsettling situation for Nellie. His failure to show interest in her proposal could well undermine her self-confidence as a researcher. His unwillingness to discuss fully the rationale for rejecting research on DPP has evidently damaged Nellie's trust in Katz. She is ready to believe that his judgment is biased by dependence on the consortium for funding, and she is receptive to a post-doc's gossip supporting her belief. As she considers that DPP might be the cause of the looming disappearance of fish species and that she has on hand the materials needed to conduct the necessary experiments, her distress increases.

The control of funding needed to conduct research gives lab directors great power in carving out dissertation projects. Presumably, a process of negotiation usually occurs so that a student contributes to defining the scope of the research and comes to believe in and identify with the project. Ordinary respect for persons dictates that such a process should take place, and pedagogical considerations weigh in as well. The negative consequences of failure to show respect and discuss the rationale for the research are evident in this case. Nellie believes her own integrity may be compromised by following Katz's instructions and serious harm to the environment may come about as well. We do not know if she is correct, nor does she, but Katz has created a predicament for her.

If Katz, had discussed the funding and the scope of their research earlier (in a lab meeting, for example), he might have headed off this crisis for Nellie. By considering whether preliminary investigation of DPP might be justified under the terms of the funding or whether mention of the need to follow up on DPP might be justified in Nellie's report of the work she does complete, he might have performed better as a scientist and teacher and forestalled her suspicions. As it is, Nellie is entitled to her concern that Katz has a conflict of interest that biases his judgment in denying approval to investigate DPP. However, the situation is ambiguous; it may be that he has valid reasons but is too peremptory to convey them.

The post-doc's involvement raises additional questions about how the lab director operates, especially in communicating with the members of the research group. Is the post-doc to be trusted? Has the post-doc correctly interpreted what the lab director allegedly said? Does Katz really think the lab would serve the chemical companies well by refraining from pursuing investigation that would "open up another can of worms"? Nellie should not have to rely on the post-doc for an answer to this question. The lab should have regular channels of communication that leave less to gossip, rumor and surmise.

The lab's posture toward the consortium that supports the research should have been made explicit and explained to the members of the group when the funding came in and should be conveyed clearly to new members. These are reasonable expectations for a responsibly managed university research group. The university's commitment to the independence of university research is very valuable to society, and the university should have clear policies protecting the independence of research funded by private business organizations. Research conducted within business organizations also must meet reasonable standards of independence to be trustworthy, but business organizations do not make the same public commitment to the independence of their research that universities do.

In Scenario 1, Katz asks Nellie to include investigation of elevated water temperature on fish enzyme levels. Consideration of this factor is legitimate, but the request raises a question because it is not obvious that study of temperature is justified under the terms of the funding. Nellie's suspicions of conflict of interest are fueled, as well as, in all likelihood, a sense that her own idea of investigating DPP is not adequately appreciated. Whether Nellie's integrity is at stake is not clear, for she does not know why Katz has slighted her proposal.

If, as in Scenario 2, Nellie goes ahead with her experiments, finds that fish enzymes are indeed decreased, and does not report her findings, she is at fault on two counts. Without approval, she carries out research using funding presumably not designated for these experiments, and she holds back the results. She should not go this route.

In Scenario 2 B), Nellie reports her findings, and Katz is irritated. That reaction to her going ahead without approval is not out of line. It might not even be out of line to tell her courteously that if she wants to work on DPP, she must find other funding and another lab. However, Katz allows other students to work on other compounds.

So Nellie is owed an explanation of his refusal to approve her study of DPP. Her suspicions may be correct, but they may not be.

It seems that Nellie must either follow Katz's instructions or find another lab in which to pursue the research that seems important to her. Perhaps the fault is not entirely Katz's. We do not know how others in the lab, who think Nellie's concerns are valid, get along with Katz, and Nellie herself may not know. It would be useful to her to find out about their situations, how they deal with Katz. Could Nellie have opened a discussion about her goals and research interests with Katz (or another senior person who knows this lab) at an earlier point? She might have learned at the outset whether this lab was a good fit for her.