

Author's Commentary on "Protection from Proposal Idea Scooping?"

Commentary On
Protection from Proposal Idea Scooping?

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Question 1

At least two levels of analysis are possible here -- legal and ethical. Legally, principal investigators and co-principal investigators must sign the following statement: "I certify to the best of my knowledge that the statements herein (excluding any scientific hypotheses and scientific opinions) are true and complete. . . . I understand that the willful provision of false information or any other communication submitted to NSF is a criminal offense." Thus, despite a possible reaction that Ness's action may be a "small murder," which is bad only in that it will lead to worse actions if it succeeds, the introduction of the error is in itself a legally prosecutable offense.

However, Ness was not caught in this deliberate act. Even if she were caught, it would be difficult to prove her guilt, due to the burden of proving intent and lack of negligence and providing expert witnesses.

That leaves open the question of whether the introduction of the error was ethical. Ness has a responsibility to herself and her co-principal investigator, Black, to be truthful so that her proposal can fairly be evaluated. She also has an ethical obligation to other proposers and the NSF peer review process. By being untruthful, Ness has jeopardized her own career and Black's career, penalized the careers of other proposers and corrupted the review process. That may seem like a strong indictment, but the entire system is built upon truth. Violations cannot be taken lightly because they bring into question the entire system.

Does it matter that Ness introduced an error in the method and not a fudging of data? An argument can be made that they differ in severity, but both are misconduct.

Do you think Ness can later claim she made an honest mistake in the method and is thus innocent of misconduct? This possibility will require a convincing explanation that is hard to express unless one is completely truthful.

Mention must also be made about the division of labor in writing the proposal. Although it is common practice to divide writing the parts of the proposal, ultimately all coauthors are responsible for the entire proposal; coauthorship of proposals is similar to coauthorship of a paper. Thus Ness and Black should have ensured that each of them completely understand the other's written contribution; specifically, Black should have understood and caught Ness's deliberate error. Black can be faulted for failing to ask Ness to explain her methods until he understood; Ness can be faulted for not giving an explanation or giving an unclear or misleading explanation.

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Question 2

Ness may or may not have good reasons to support her beliefs, but she has the right to her own opinion. I do see a problem, however, in Ness acting on her belief that the NSF peer review process is corrupt. By introducing an error in the proposal, Ness is actually contributing to corruption of the process. She may be inaccurate in her belief and the NSF peer review process may be of the highest integrity; by her actions, she is creating a self-fulfilling prophecy. If Ness is accurate in her belief, a

common response may be that anything is justified in a corrupt process -- anything you can get away with, that is, and Ness has gotten away with an error that has protected her research ideas (or at least that is what she thinks). Ness knows herself what she has done, and her deception will likely manifest itself sometime. What would Ness think if she were a future proposal peer reviewer who had detected such a deliberate error?

I state in the discussion of Question 7 that Ness has an obligation to fix any problems she encounters and not just point the finger while acting unethical herself.

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Question 3

The first thing that jumps out is that this new material or the process to create the new material may be patentable, protected under intellectual property law. There are many ways to apply for a patent (these procedures are changing rapidly), and the best advice is to consult a specialty lawyer. State University will surely have a claim (legitimate or not), and the State University legal department may be one place to start, although the counsel there will be acting on behalf of the University and not on Ness's behalf. Laboratory notebooks and other documentation become very important in patent applications. World patent law is moving toward a global "first-to file" standard (as opposed to the traditional U.S. first-to-invent standard), so time is of the essence.

Patenting the new material or the process to make the new material may conflict with Ness's desire to submit a proposal to NSF and/or publicly present her preliminary results. She may be forced to decide whether it is in her interest to patent or publish; these options may be mutually exclusive.

The best way to avoid a situation in which the researcher feels vulnerable to being "scooped" is to publish research, to build a body of work that can stand for itself. If it is good work, others will notice and possibly pursue some of the ideas. Researchers should be honored when others follow their work. Most papers are not referenced and are read only by their authors and close colleagues. Problems of proper acknowledgement of intellectual contributions may arise, but science is a self-contained community; most problems will not only be noticed and remedied but the

perpetrator's reputation will suffer severely. To a large extent, Ness has been forced into this fear of being scooped because she has not published.

One suggestion is that Ness only sketch her methods and state that the complete methodology is available upon request, but what happens if many people make requests? Ness can also be vague in her description and omit information about her methodology, but that will cause two problems: 1) It may hurt her evaluations if peer reviewers realize that she may not have a completely workable experiment. 2) It also causes ethical concerns if Ness strays close to untruthfulness (e.g., omitting vital information). A last suggestion is that Ness can use specific jargon that is truthful but cryptic and undecipherable. Using specific jargon will probably harm her chances for funding. Unfortunately, many researchers write in jargon not to protect information but because they cannot express themselves clearly in written communications.

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Question 4

The peer review process is handled differently by different organizations. One common practice is to distribute proposals under consideration to researchers at universities and other institutions so that their feedback can be incorporated in the selection process. An explicit statement of confidentiality stating that the prohibits sharing of proposal contents. Unfortunately, professors commonly discuss the proposals with students, possibly even involving students in creating the proposal feedback to be sent back as peer review. After the peer review process concludes, the funding organization notifies all reviewers that the proposals they have in their possession should be destroyed. Unfortunately, many reviewers hold proposals for later reference. Because students who are given proposals by their professors are often unaware of the context of the research material they have been provided, the scenario depicted in this case is not that far-fetched.

Other problems from student involvement in the peer review process include: 1) feedback to the proposer(s) and possibly even award selections may be partially based on student review and not peer review; 2) when students become aware of their covert involvement in the peer review process, they may come to doubt the entire proposal process, perhaps rationalizing unethical actions on the belief that

peer review cannot be trusted. On a final note, there should be an assumption of innocence until all the facts become clear. The graduate student in this case appears to be an innocent party, and the person(s) who provided him with the confidential NSF proposal appear to be guilty, but we do not know all the facts.

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Question 5

Ness can either admit her actions to the student or continue to cover-up. her actions. If she continues to try to cover up, the coverup may actually become as significant or even eclipse her original deceit. Of course, any admission will need to be complete, exhaustive and reciprocal, since Ness needs to know how the student came upon her proposal.

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Question 6

Does wrongdoing by another party ever justify wrongdoing by a researcher? In this case, does it really matter whether the NSF peer review process actually leaked confidential information? Specifically, is it introduction of the error unacceptable if the NSF peer review process has integrity and acceptable if the NSF peer review process lacks integrity? Ness must examine her own actions independent of the actions of others. A researcher cannot control the actions of others and should concentrate on her own ethical behavior. To do otherwise brings ethical behavior to the lowest common denominator.

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Question 7

I see at least two other major ethical obligations:

1. Ness has an obligation to admit to NSF that she introduced the original error into the proposal. Although it appears that the error is moot (because the proposal has concluded, the error may or may not have had any relevance to the award and the correct method has been published), the error is still significant. The story of this error may be contained to a single graduate student, but chances are that it will have a life of its own. Ness will actually be contributing to her own belief that the NSF peer review process lacks integrity, a self-fulfilling prophecy that is simply hypocritical. As for the ramifications of coming forth with such information, there may be legal actions and severe career repercussions but there also may be support for honesty. In any case, it is better for Ness to disclose her deceit earlier rather than later (i.e., in an admission in court).
2. Ness has an ethical obligation to find out specifically how her confidential proposal was compromised and ultimately an obligation to help fix any confidentiality problem she finds in the peer review process. She cannot be divorced from the NSF peer review process. By her very participation, and subsequent selection and support, Ness must take responsibility to ensure the integrity of the NSF peer review process for herself and others.

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