


Applying the “Ethics Framework”



Each physicist is a citizen of the community of science. Each shares responsibility for the welfare of this community.

—Statement by the APS
<http://www.aps.org/statements/02.2.html>

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Fellowship application to a federal agency*

Nelson, a first-year physics graduate student at Big U., is applying to the U.S. Department of Energy for a graduate research fellowship. He recently joined Professor Railings’ group and has been assigned a research project in collaboration with a more senior student.

The Railings group is working on a manuscript reporting recent research results in a related project, and as a new member of the lab, Nelson expects that he will be a co-author on the paper. However, the fellowship deadline is June 1. Nelson decides that his CV, which is part of the application, would be stronger if the paper is shown as “submitted” rather than “in preparation.”

Without consulting Professor Railings or other members of the lab, Nelson makes up a title and author list for this future paper and shows it on his CV as submitted to *PRL*.

*adapted from “Fabrication in a Grant Proposal,” *On Being a Scientist: A Guide to Responsible Conduct in Research*, 3rd ed. (National Academies Press, Washington DC, 2009).

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Fellowship application to a federal agency*

After the application has been submitted to DOE, the senior student sees a copy of Nelson’s CV that was left in the copier and goes to Professor Railings to ask about the “submitted” manuscript. Professor Railings calls Nelson to account for this fictitious paper.

Nelson admits to fabricating the information about the paper in his fellowship application but excuses his actions by saying that he thought the practice was common in physics.

Professor Railings demands that Nelson withdraw his application to DOE, terminates his appointment in the research group, and initiates his dismissal from the university for academic misconduct.

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What are the issues?

- a) authorship
- b) misrepresentation of scientific work
- c) fabrication of data
- d) conflict of interest
- e) not sure



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What rules and regulations apply?

- a) representation of credentials
- b) federal policies on research misconduct
- c) University policies on responsible conduct of research
- d) federal laws on fraud
- e) not sure



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Did Nelson commit actionable academic misconduct?

- a) yes
- b) no
- c) not sure



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Do researchers routinely misrepresent or exaggerate the publication status of their papers?

- a) yes, if the paper is expected to be published anyway
- b) no
- c) don't know



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Accepted descriptions for the status of scientific publications

- In preparation—manuscript (ms.) is being written; authors have been designated and have started work
- Submitted—article has been submitted to a journal but has not yet been sent out for review (the editor could still reject the paper without review)
- Under review—ms. has been assigned to referees
- Accepted—ms. has been accepted by the journal and will be published at an unknown future date
- In press—ms. has been scheduled for printing in a specific volume and issue



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Who does not have a stake in the outcome?

- a) Prof. Railings
- b) other students in Railings' group
- c) Big U.
- d) DOE
- e) not sure

Hint: It's not all about Nelson



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What is Prof. Railings primary obligation?

- a) to insist on honesty from all his lab members
- b) to appropriately mentor younger scientists
- c) to ensure federal laws are followed
- d) to protect the financial resources of the DOE, which funds part of his research
- e) not sure



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Should Nelson have had Prof. Railings review his application before submission?

- a) yes, the PI should review everything that comes out of the lab
- b) no, the fellowship was for Nelson alone, based on his own original work
- c) not sure



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Were Prof. Railings' actions appropriate?

- a) no—he should have taken the incident as a “teachable moment” and mentored Nelson on ethical authorship practices
- b) no—he should have waited to see if Nelson got the fellowship before taking action; if Nelson didn't get the fellowship, nobody was hurt
- c) no—he should have made Nelson withdraw the application but not kicked him out of the group
- d) no—he should have kicked Nelson out of the group because he couldn't trust him, but he should not have had him dismissed from the university
- e) not sure



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Nelson is an international student. He grew up in and attended his undergraduate university in a very different culture from the United States'. What effect does knowing those circumstances have on your thinking about Nelson's conduct and Railings' actions?



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After being dismissed from Big U., Nelson still wants to be a physicist and applies to another grad school

- a) does the new grad school have the right to know about Nelson's fabrication**
- b) does Nelson have an obligation to disclose in his application/statement of purpose why he left Big U.**
- c) does Prof. Railings have an obligation to inform the new grad school about Nelson's misconduct**
- d) can Nelson submit a new application for the DOE fellowship from the new school**
- e) not sure**



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