Cooper
October 16, 2015

Physics 596 – Fall 2015

Scientific Ethics Case Study #7*

Penelope Brighton is a second year graduate student in Dr. David Gilligan's cell biology lab. As part of Brighton's thesis, she has begun to characterize the localization of a newly discovered protein within cells. In her first, quick experiments, Brighton found some potentially interesting results. Gilligan is quite excited about Brighton's project and is in the process of writing a grant using Brighton's results as preliminary data.

Brighton followed up the initial experiments by performing more in-depth, well-controlled experiments. As Brighton collected more data, she was surprised to find that her new results did not look like the initial results. Brighton realized that the earlier results may not be as straightforward as originally expected. Brighton attempted to discuss her new results with Gilligan. However, Gilligan said that they would deal with the new details later, but that they need to get the grant application out now. Gilligan asked Brighton to create a figure for the grant using her earlier results that fit with the proposed hypothesis. In the grant application, Gilligan suggested that all of the data from these experiments completely support the hypothesis.

Brighton read a draft of the grant and was shocked by the spin Gilligan had put on the data. When discussing the draft with Gilligan, she stressed that most of the localization data did not agree with the hypothesis. Gilligan insisted that the figure in the grant certainly supports the hypothesis. He said that the standards for presenting data as preliminary results in a grant application are not as stringent as those for publishing data in a journal article. Gilligan stated that it is better to present the data his way. Mentioning the unexpected results would only create doubt among the grant reviewers and decrease the likelihood of funding for the project.

***Before discussing the case:** Identify people in the group for the following presentation duties: (i) A person to present the 'case' in their own words to the rest of the class; (ii) a person to present one point of view in this study; (iii) a person to present the opposing point of view; and (iv) a person to lead a class discussion of the case. Feel free to take notes as necessary to present your discussions to the class.

Take 15-20 minutes to discuss this case study and prepare to relate your discussions to the rest of the class. Consider the following questions: How well-supported must a result be before it is presented at a seminar, a proposal, or a published paper? Is Gilligan's behavior warranted? What should Brighton do?