## Author's Commentary on "The Graduate Student Laborer"

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This case is intended to focus discussion on the responsibilities of research advisers and graduate students in regard to completing work related to research. Most graduate students will do whatever an adviser asks in the research arena. A huge power differential exists between the graduate student and the adviser, who largely decides when a student has completed enough work to graduate and will be asked to write recommendations for the duration of the student's career. In this case, an argument can be made that Joe is being taken advantage of in preparing a presentation that his adviser will be making. Whether or not Joe's perception of the situation is accurate, he is definitely left with the feeling that he is completing Smith's work over the weekend at the expense of completing his own research. If Smith had a legitimate reason for not working on Saturday, this would have been an excellent time to share it with Joe. There are certainly legitimate reasons why Smith may not be able to work over the weekend, but he needs to respect Joe's time and effort enough to explain the situation to him.

Research advisers have a responsibility to be aware of what goes on in their lab. That includes being aware of workloads students are carrying, their general schedules, etc. It is definitely acceptable to expect students to carry out work at the direct request of the research adviser, but there is a huge difference between working *for/with* an adviser, and working *instead* of the adviser. Open communication between the adviser and the students is essential to maintaining a productive research environment.

Graduate students also have a responsibility to make certain that their advisers are aware of what they are doing. The communication must be both adviser-to-student and student-to-adviser. Joe bears some responsibility for Smith's taking advantage of him: He could have told Smith that he always works on Saturdays, that he had plans that weekend to start his last set of experiments, etc.

The second large question raised by this case is the murky issue of authorship. Research advisers should have a carefully thought out idea of how authorship is established and how the order of authors is decided. It is important to make sure that graduate students and collaborators are aware of these policies as well. Authorship issues often are not discussed openly because they are awkward and uncomfortable. It is worth it to face the discomforts of openly discussing these issues, however, to avoid situations like Joe's, where the student and adviser clearly have different ideas of what authorship should be. The students who have left the program should also have an opportunity to review the presentation if their names and data are included.

Overall, the research adviser is ultimately responsible for establishing the policies and norms that will be followed in the laboratory, whether by active participation and awareness of what goes on in their labs or by the default of nonparticipation. It is impossible for research advisers to avoid this responsibility. Better to craft the environment they want than to send the default message that there are no policies or standards for conducting research in the lab.