Author's Commentary on "Responsibilities to Undergraduate and Graduate Students"

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Responsibilities to Undergraduate and Graduate Students

Compared to industry, many demands compete for Principal Investigators' (PIs') time on college campuses: They have teaching, administrative and laboratory responsibilities. Their ability to juggle all of these responsibilities is the subject of this case study, which illustrates how a PI's various roles affect the graduate and undergraduate students working in his lab.

Professor Hopkin is swamped by academic and teaching responsibilities. He asks Ryan, a senior graduate student in the lab, to help advise Laura with her undergraduate honors thesis. This situation happens frequently in academia and can be mutually beneficial: The graduate student gains mentoring experience, and the PI is able to free some time. The situation goes awry when too much of the PI's responsibility is pushed onto the graduate student.

Although Ryan enjoyed the time he spent helping Laura, he did not feel he was getting due credit. Instead of talking things out, however, he ignored the problem. The situation blew up when he found out that Laura and Hopkin were thinking of publishing the study. One important point to note is that the time to speak up about inconsistencies in practice is sooner, rather than later. The problem might have been avoided if Ryan had raised the issue a lot sooner than he did.

The other glaring problem in the case study is Laura's taking more credit than she deserves. She might not have realized the inappropriateness of her actions. After all, she is an undergraduate with minimal lab experience. If that is the case, then Ryan could have used the opportunity to educate her on research norms. If she deliberately overstated her role in the experiment, then she needs to be educated. One of the hallmarks of good research mentors is that they are able to guide their advisees through the research process, informing them about good research

practices and norms.

The case study also brings up PIs' responsibility to their undergraduate and graduate students. Should the PI hold both classes of students to the same standards? Surely not. Undergraduates and graduate students should be held to different standards in terms of laboratory responsibilities and the extent of independent thinking expected of them, due to their different backgrounds. But how much work can a PI expect graduate students to do when it is not directly related to their own work?

This case study brings up lots of interesting questions for discussion. Is the PI being fair when he excludes Ryan from the author list? Ryan did contribute quite a lot in the early conceptualization stages and in helping to set up the experiment.

How should the PI handle a situation that pits an undergraduate's opinions against those of a graduate student? Should Hopkin take Ryan's comments at face value? What if Laura still insists that she did all the work?

Finally, should it matter that a publication would help Ryan's graduate career more than Laura's undergraduate career? Would it matter if Laura were going into business after graduation rather than academia? What if Ryan were going into business?