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Informal Discussions/Formal Authority

Year

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Description

This case demonstrates how the vagueness and uncertainty of conventions on credit and ownership create subtle but complex problems in the practice of science, also illustrating the subtleties of the authority relationship between student and professor.

Body

Characters

- Dr. Bob Black, Professor
- Dr. Lee Hong, Postdoctoral Fellow in Black's Lab
- Sean Graduate, student in Black's Lab
- Kabir Graduate, student in Black's Lab

Part 1

Lost in thought, Dr. Bob Black wanders out of his office into the small conference room between his office and the lab. He looks up and acknowledges Sean sitting at the conference table reading journals.

Sean: What's up?

Black: Just thinking. I was just revising the paper that Dr. Hong wrote. The experiments are great, but the paper still lacks a suitable interpretation for the results we got. Maybe it would make more sense to me if I could explain it to someone.

Sean: Sure, go ahead. Black reviews Hong's observations with Sean. Sean listens intently, asking questions that lead to a review of the underlying theories and techniques. After an hour or so, Black feels that the discussion has given him a better understanding of what it was he was looking for.

Sean: Well, I hope that helps.

Black: It certainly does give me a few new thoughts to consider. Thanks, Sean.

A few days later, Sean , with papers in hand, returns to Black's office.

Sean: I've been thinking about our discussion the other day concerning Dr. Hong' s experiments. I began to wonder whether these results could be explained by the flexible-hinge model that I'm proposing in my thesis. So, I did a literature search and went to the library and pulled up these articles. It appears that my hypothesis might explain the results Lee observed in addition to those from my own experiments.

Black glances over the papers.

Black: Hmmm. This is interesting. It could really give the paper the impact that we are looking for. Can you explain this model that you've developed to me?

Discussion Questions

1. Generally, what would you consider to be a "significant" contribution to an experiment? If Sean's questions provide an insight that Black had overlooked or been unable to see previously, are they a "significant" contribution?
2. Should limits or restrictions be placed on what is said, and to whom, when informally discussing scientific results? How do these limits affect the development of scientific ideas? In other words, what types of informal discussions are appropriate and what types are not?

3. With respect to Sean, Hong and himself, how should Black proceed with the information that Sean has given him?
4. Are Sean's actions appropriate? If not, what should he have done differently?

Part 2

A week after their initial conversation, Black walks into the student office and hands Sean a manuscript.

Black: Hi, Sean. I've revised Dr. Hong's paper. Would you mind reading it and giving me your input?

Sean: Sure, no problem. I'll get it back to you later today.

Later that day, Sean approaches another graduate student in the lab.

Sean: Hey, Kabir, got a minute? Do you remember when I told you that Bob and I were discussing the results of Dr. Hong's paper? Well I just read Bob's revised draft and -- as a conclusion -- they clearly state the premise of my thesis. Normally I don't think I'd care, but this is really a seminal element of my work.

Kabir: Have you talked to Bob?

Sean: Yes, I did. After I mentioned it to him he said that if I felt I deserved authorship then I could be a co-author. I don't know, I feel really uncomfortable arbitrating my own authorship decision, especially since it involves Dr. Hong. It's the idea that's important to me, not the paper.

Kabir: Did you tell this to Bob?

Sean: Yes. He said that since this situation was rather unusual, he would bring it up at group meeting and let the lab collectively decide what we should do.

Discussion Questions

1. At what point, and under what conditions, are intellectual contributions "significant" enough to warrant authorship? Does the inclusion of Sean's theory justify authorship? How else could his contributions be recognized?

2. Who should decide authorship? Is the mechanism proposed by Black to resolve the authorship issue appropriate? What other ways might be appropriate?
3. How does the issue of authorship affect your answers in Part 1? In other words, how do the issues surrounding authorship affect discussions of unpublished science with others? Is this practice good or bad for science? How could it be changed for the better?
4. Assuming Black is a co-author on the original paper, were his actions with respect to Sean and Hong appropriate? Under what conditions could these actions be appropriate? What about Sean's actions?
5. Assume that Black and Sean have an extremely good working relationship and that informal discussions such as the one above are often very productive for many projects within the lab. How does this information affect your answers to the above questions?

Notes

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