Author's Commentary on "Jack Fry's Interview"

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Jack Fry's Interview

This case raises two primary issues: data sharing and recognition of the contributions of others. The first issue concerns when it is appropriate to share the work of one's colleagues. Jack has procured Bob's work, integrated it with his own material, and presented it as one cohesive unit. Whether that is appropriate depends on the standards within Hill's lab as well as on the standards throughout the scientific community, in particular the standards that the interviewers expect their job candidates to adhere to. If the standards for sharing the work of a colleague are not explicitly stated, the door is open for abuse. It could be argued that Hill has an obligation to set explicit standards within his lab for data sharing to prevent problems such as the one that has arisen in Jack Fry's case.

Another point to consider is the power disparity between Jack and Bob. Jack is a post-doctoral fellow, and Bob is a graduate student. Because Jack is in many ways Bob's superior, Bob may have felt he had to comply with Jack's request for his materials. If Bob didn't comply, he may have been ostracized by other members of the lab as disloyal, and, ultimately, his career prospects could have been jeopardized. It is unethical for Jack to impose the arrangement on Bob if Bob was complying simply because he felt he had to show his loyalty to the lab. Again, it is worth pointing out that if Hill had explicit rules for sharing work amongst colleagues within his lab, these problems could have been avoided. It is particularly important to establish such criteria in a highly interdisciplinary lab such as Hill's, where every project is conducted with the help of several people.

The lack of explicit rules for sharing data, both in Hill's lab and throughout the profession in general, raises another interesting question: What are the expectations of Jack's interviewers? They are from a chemical engineering department where interdisciplinary work is probably much less common. Are they aware of how Hill's lab is run? Are they aware that each project is the work of several people, or do they

expect Jack to present only his own work, unless otherwise explicitly stated? In the absence of explicit standards for data sharing, Jack has an obligation to the interviewers, Bob and the other candidates for the job, to clearly define his contributions and the contributions of others to the work he presented. In addition, the interviewers have an obligation to Jack, Bob, the department, the university and the other candidates for the job, to determine Jack's contribution to the work presented in his talk.

If Jack does not explicitly declare Bob's contribution, he is deceiving the interviewers. If his deception is found out, Jack risks a marred reputation and a loss of his colleagues' trust. Even if he is not found out, he will have to live with himself as a deceiver, which may erode his sense of integrity and self-confidence. Alternatively, he may decide that his behavior was acceptable, and may repeat his deception later or extend it to more serious breaches of integrity. He may spread his tactics throughout the engineering profession by training his students to adopt the same strategy in their presentations.

If the interviewers fail to determine the degree of Jack's contribution to the work he presented, they may hire Jack and not a more capable candidate who did not embellish his talk with the work of others. This would rob future students, the university and the scientific community of the best possible professor and researcher for their money. To clarify this point, suppose the interviewers only really liked the mathematical model portion of the talk, or suppose the department only had the resources for mathematical modeling and not for biological studies. In this case, they would have hired Jack specifically for work he had no direct role in producing.

The other issue raised by this case is proper recognition. Again, if explicit norms existed, problems would be less likely to occur. Recognition requires both permission and citation. Jack apparently had permission, since Bob helped him prepare for the talk and loaned Jack his slides. It is possible, however, that Bob was coerced into providing Jack with permission, in light of his vulnerable position as a graduate student in Hill's lab.

The question of permission aside, did Jack properly recognize Bob's contribution? One way of answering this question is to consider whether Bob would have been satisfied with Jack's acknowledgment slide if he had been in the audience during Jack's presentation.

Added insight into this case can be gleaned by considering various paradigm cases. First, consider the level of Bob's permission. If Bob were in a higher power position than Jack and had given Jack permission to use his materials, Jack's use of the materials could be considered completely ethical. Alternatively, if Jack had taken Bob's materials without his knowledge (for example while Bob was on vacation), then Jack would have been using the material without Bob's permission and therefore would have been acting unethically.

A second set of paradigm cases concerns the level of Jack's contribution to Bob's mathematical model. If Jack was so involved in deriving the mathematical model that he was a co-author of the paper, then his use of the mathematical model in his talk would be ethical, because much of the work would have been his own. Alternatively, if Jack had never helped Bob with the mathematical model, then Jack's use of the mathematical model would be unethical, unless he clearly stated that he had not been involved in its development.

Finally, it is useful to consider the adequacy of Jacks recognition of Bob's contribution to the mathematical model. If Jack clearly stated that Bob derived the mathematical model when the first slide discussing the mathematical model was brought up, than Jack would have acted ethically. If Jack did not acknowledge Bob's contribution at all, even in a final acknowledgment slide, than Jack would have acted unethically.

Considering the arguments and comments above, a creative solution to Jack's problem can be offered. Jack clearly wishes to come across to his interviewers as a competent engineer. He has already established his competence in his graduate studies, in which he had extensive mathematical modeling experience. If he desires, Jack could provide the interviewers with copies of his graduate school work to demonstrate his mathematical modeling capabilities. Jack should use Bob's mathematical model to illustrate the application of engineering principles to the DDS problem. Jack should explicitly state that Bob developed the mathematical model. By demonstrating his fluency with modeling, Jack will show his capabilities as an engineer and demonstrate how engineering can be applied to the DDS problem. Most important, he can emphasize his ability to work with others in a multidisciplinary environment to provide a complete understanding of a complex problem, by conducting both mathematical and experimental analyses. By being forthright and honest in his representation of his skills and accomplishments, Jack can satisfy his obligations to himself for career advancement, to Bob for proper

recognition of his work, and to his interviewers and the other candidates for the faculty position.