Author's Commentary on "Richard's Radioactive Risk"

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Difficult interactions are not unique to science, but the dynamic of the research setting provides a distinct context for such relationships to develop. Care should be taken, however, to underscore that this case is an example of commendable action on Richard's part. The good practice enveloped within the case should not be overshadowed by the shocking nature of the situation; rather, Richard's laudable actions should be made even more praiseworthy by the remarkable circumstances surrounding his decision.

The case is broken by a decision point for discussion to underscore the critical ethical juncture for Richard and permit the best practice to be examined. Later, the case addresses the contributory roles of all persons involved in a concluding discussion. This commentary will evaluate 1) Richard's decision point and risks, 2) proper or improper actions of Monson, Lisa, Paul and the institution and their roles in potential resolution points in avoiding the situation, 3) assignment of responsibility, and 4) some suggestions on the effective presentation of the case.

Richard's decision Richard is an undergraduate whose introduction to the scientific research endeavor has been appalling. Certainly Richard's perception of laboratory research has been tainted by the deteriorating dynamics of the relationships in Monson's laboratory. From the case, it is unclear to what extent Richard's view of the scientific enterprise has been compromised; however, given the initiation he has received, it appears that Richard may have little incentive to get involved. The case does not comment on whether this is Richard's first research experience or whether he has had previous experience, but it is unlikely that any previous experience would have prepared him for this extreme situation. Richard's subservient role as an undergraduate placed in a situation with a post-graduate researcher and a seasoned technician, however, is indicated. The case reveals that Richard has been affected by the poor relationship between Lisa and Paul. That is why it is interesting to place

Richard as the character who must make the ethical decision.

In discussing what Richard should do, an evaluation of the responsibilities and risks posed by each option available to him may provide a richer discussion of the decision point. These choices may not be exhaust the options open to Richard, but they provide an adequate framework for the discussion.

Richard could do nothing.

Richard might assume that no one knows that he has witnessed Paul's actions. That may or may not be a wise assumption. This option may be more justified if Lisa's chair is not contaminated. Remember, Richard could not see what Paul was doing in Lisa's cubicle. If he concludes that Paul was not doing anything wrong in Lisa's cubicle, doing nothing may expose Richard to the least amount of direct risk. He may justify keeping silent based upon his desire to avoid getting involved in Lisa and Paul's squabble. However, Richard does not know whether Lisa's chair is contaminated.

If Richard decides not to tell Lisa, and her chair is contaminated with radioactive residue, Richard may be partly responsible for the health risk presented to Lisa. Richard may argue that only he knows that he saw Paul in Lisa's cubicle and, therefore, he can ignore his responsibility to inform Lisa. This argument, however, may be erroneous. Someone else may have observed Richard in the lab with Paul. In that case, Richard may be suspected as an accessory to the incident. If he does not tell Lisa, Richard would have to live with his conscience (if he believes that informing Lisa is the "right" thing to do ethically, regardless of the consequences) and with the possibility that Lisa's cubicle is contaminated. What if, in the future, he is asked to work in Lisa's cubicle? He could be endangering himself. The status of Lisa's cubicle remains uncertain.

Richard could inform Lisa.

If Richard informs Lisa, it may be concluded that he has become involved in the feud. Thus, Richard assumes some risks. If there is no detectable contamination in Lisa's cubicle, Richard could be accused of fabricating the incident to make Paul look bad. Lisa may contaminate her cubicle herself to make Paul look guilty. If Paul learns of Richard's suspicions, that could dramatically affect Richard's working conditions.

Furthermore, Richard's reputation may be damaged. By informing Lisa, Richard will appear to have taken sides. Lisa might suspect Richard is collaborating with Paul in a practical joke to scare and worry her, especially if she finds no trace of contamination in her cubicle. The risks associated with this outcome may seem remote; however, they might be thoughts that Richard should consider. If he chooses this option, Richard will have satisfied the moral responsibility he may feel to notify Lisa of the potential health hazard.

If Lisa's cubicle has been contaminated, this option would be the most responsible action for Richard; however, the status of Lisa's cubicle remains uncertain. This option would present the least negative implications for Richard, and his actions in this instance might even be considered commendable. Should Richard get involved? What is the most ethical action he could take with the least liability?

Next, the discussion should evaluate the actions of Monson, Lisa, Paul and the institution. The potential resolution points to avoid this situation are briefly considered for each individual. This discussion is presented after Richard's decision point and good practice have been evaluated. Considering the role of each person involved allows the reader to consider how the situation could have been avoided. The points presented here are intended to start a discussion and are not intended to be a complete analysis of each role.

Monson It might be argued that Monson should beware of taking on too many administrative duties. He should not jeopardize the safety of his laboratory because of limited oversight time. Certainly, Monson should be more open about Paul's new responsibilities and the way in which Monson envisions the laboratory functioning while he attends to the additional responsibilities he has accepted. Although Lisa and Paul put on "a convincing facade," if Monson were more involved in the laboratory it would be more difficult for Lisa and Paul to cloak the problem. Monson should be meeting regularly with all of the lab members to discuss their research, lab experience and the operations of the laboratory. Clear communication and a trusting relationship among Monson and all members of the lab could have helped to flag the problems between Lisa and Paul.

Lisa The earliest resolution point in this case would have been for Lisa to address her concerns in a more mature fashion. Much difficulty could have been avoided if Lisa had spoken with Monson about her feelings regardless of the negative response she may have feared. At any point in the deteriorating relationship, Lisa could have

stopped the cycle and notified Monson. If she had fostered a relationship of trust with Monson and Paul, the problems would have been easier to resolve.

Paul Undoubtedly, Paul should have spoken with either Lisa or Monson about the developing destructive relationship. It appears that he did not speak with Lisa because he felt that his authority was threatened; he may have not spoken with Monson because he did not want to appear incompetent to fulfill his new responsibilities. It appears, however, that speaking up would have been much better than his final action. Because the case is not written from Paul's perspective, it is unclear what caused Paul to take this rash action. Irrational behavior is not uncommon in working environments, although this case may be extreme. What can be concluded is that Paul, like Lisa, had numerous points when he could have tried to solve the problem or sought counseling rather than exacerbating the situation for the sake of his authority.

The institution The role of the institution should not be overlooked. It appears that the institution should be more sensitive to the constraints placed upon Monson in trying to run an active research laboratory and attend to secondary administrative duties. The institution certainly should take greater responsibility for educating its staff and students on the responsible conduct of research and for undergraduates' research/laboratory educational experiences. Too often, undergraduates are underlings who are unsupervised and without mentors in contributing to meaningful science and denied educational interaction with the principal investigator. Undergraduate dishwashers can hardly be satisfied with their exposure to the scientific enterprise that the university promised in recruiting them. The institution should, however, be commended for its rapid response to Lisa's request for radioactivity testing. It is also positive to note that Lisa knew whom to contact in the Office of Laboratory Safety to address the situation. These are indications of positive elements in the institution's response.

Third, the element of responsibility is assigned. It is clear that Paul should take the majority of the responsibility for his actions; however, it might be unfair to assign all of the blame to Paul. As outlined above Monson, Lisa and the institution could have acted to ease the conflict and avert Paul's criminal action. When examining this case, discussion of responsibility will focus on Paul, but a second responsibility should not be overlooked. Each of the contributors had a responsibility to Richard (and to each other, but, since Richard is at the heart of the ethical decision, the focus will be on Richard). He has been affected by the incident. His view of research

may have been negatively influenced. All parties share, to some extent, in this disservice to Richard and to science. In discussing responsibility, it might be valuable to consider this element.

This commentary attempts to focus on the key decision point presented to Richard and is intended to underscore the central issue of laboratory relationships and what to do when things go wrong. The case features a variety of roles that must interact in a laboratory setting (professor, post-doc, technician and undergraduate). In this case each character's role and status contribute to the conflict. This case draws upon the interpersonal dynamics of a laboratory setting to demonstrate good practice when those dynamics begin to deteriorate.

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