



**Supplemental Materials**  
**for**  
**An Evidence-Based Guide for Ethics Instruction**

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## Appendix 1: Developing abilities using cases.

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### DEVELOPING ABILITIES USING CASES

Michael Zigmond, University of Pittsburgh  
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Presented here are a set of circumstances to show how stimulus materials can be used to elicit the development of each of the ethical decision making abilities reflected in Rest's Four Component Model of Morality. The basics of the situation are these: A female postdoc (Michele Tyler) has just published an article in which she reports on a genetically engineered mouse that she has produced as a result of several years of hard work. She is about to move to her first job at a research university when she receives a phone call from a senior scientist (Max Myer), who heads up a large research group. Dr. Meyer asks her to send a dozen mice from her colony.

#### Ethical Sensitivity

The objective in an ethical sensitivity assessment is to present clues to a problem for the protagonist (i.e., Michele Tyler) without actually signaling what the problem is. The task of the trainee is to identify the issues and relate them to professional norms. In this instance, a dialog format is used that could be audio or videotaped, or simply presented as a script that can be acted out by the participants.

#### The Michele Tyler Case

- Meyer: *(In his office, sitting at a large desk.)* Hello, is this Dr. Tyler?
- Tyler: *(Standing in the lab, one hand holding a sample she was processing.)* Yes?
- M: This is Professor Maxwell Meyer from the Institute of Psychiatry at the State University. You probably know my work.
- T: Oh yes, I have read many of your papers.
- M: Well, I just read your very excellent paper in the recent issue of *Research*. You have done some very, very clever work for such a young scientist. You must be very proud.
- T: *(Hesitating)* Thank you very much. I guess, yes, I think it was a good paper.
- M: What are your plans for the future? I am sure you had many job offers.
- T: Well, I didn't get *that* many offers. But in the end, I did get a nice position at City University.
- M: City University! Great. That is an excellent place. And they are lucky too that you will be joining them.
- T: (silence)
- M: . . . Yes, very lucky. You probably already have met my good friend, Professor Jones, then.
- T: No, I haven't.
- M: Oh, you really must. I will immediately write you a letter of introduction. When will you be going there?
- T: Actually I leave next month.
- M: Wonderful. And that way you will get there before the snow starts.

T: Oh, I think it is already snowing.

M: I see . . . Well, I know you will really like it there. By the way, we are interested in replicating some of your excellent work. Replication is really important for a young person just starting out, you know. Please send us a dozen of the mice and let us know if you would like us to cover the shipping cost.

Take on the role of Dr. Tyler. What would you say to Dr. Meyer at this point? Speak directly to him.

To explore the student's thinking, ask these follow-up questions:

1. Explain why you said what you did.
2. Tell how you would expect Dr. Meyer to understand and react to what you said.
3. What would you say are the issues in this situation?
4. What arguments could be made against the position you took?
5. What information about the situation entered into your decision about what you would do? What is in the best interest of the science, all things considered? Why?
6. What do you think a researcher should do in a case like this?
7. While it's true as a researcher you will face situations like this, you will also be a researcher in the "real world."
8. How do you think that what you actually will do in the future compares with what you have stated you will do here? Why?

### **Ethical Reasoning**

To ensure that learners engage in reasoning about moral issues rather than problem solving, a case description is followed by a force choice: "Should the protagonist \_\_\_\_\_?" (e.g., take the data from the research setting or add an author to a manuscript) rather than "What should the protagonist do?" Learners are asked to take a tentative position in favor or against the proposed action, and to provide the best possible arguments. The facilitator is encouraged to have students explore the criteria for judging moral arguments<sup>1</sup> before engaging in discussion and then to use the criteria to critique each other's verbal or written arguments.

### **The Michele Tyler Case**

Michele Tyler is happy. She has just completed three years of hard work as a postdoc and has a great deal to show for it: she's developed a "knockout" mouse (a mouse lacking a particular gene) that seems to be a model for schizophrenia, published a paper on that mouse in the highly prestigious journal *Research*, and secured an assistant professorship at City University. She knows that the new mouse and the paper were critical in getting her the job, and she's ready to show the search committee that they did the right thing—she will set up her new lab and begin to reap the benefits of her hard work by exploring the neurobiology of this mouse. However, no sooner had she arrived at City University, she received an e-mail message from Dr. Max Meyer asking her to provide a dozen mice from her knockout colony. It is clear from the e-mail that Dr. Meyer understands the potential of the mouse line and will have no trouble figuring out and completing the very experiments that Dr. Tyler had plans to pursue.

Should Dr. Tyler provide the mice?

Take a tentative position, yes or no, and tell why. List as many reasons as you can to support your position.

### **Moral Motivation and Commitment**

Using either formulation of the case, ask the learner to think about their future as a scientist. Ask the following:

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<sup>1</sup> Bebeau, Pimple, Muskavitch, Borden, & Smith (1995) designed cases for assessing moral reasoning in research. <http://poynter.indiana.edu/teaching-research-ethics/tre-resources/moral-reasoning/>. For access to a downloadable paper describing criteria for judging the adequacy of a moral argument, see: <http://poynter.indiana.edu/files/8313/4739/5147/mr-developing.pdf>.

What are the conflicts in the case about?  
What do you, personally, plan to do when such conflicts arise?  
What role models have you observed?  
What do you think someone that you admire as a role model, might do? Why?  
If you have read the story of Irwin Mandel<sup>2</sup>, what do you think he would do?  
What did you learn from reading his personal story that might apply?  
What have you learned from observing what other researchers, whom you admire, do about this kind of problem?

Relate the discussion to any general discussion you have had with students about the norms and rules that govern the responsible conduct of research.

### **Moral Character and Competence**

Here the concern is with execution of an action plan that honestly and fairly balances competing interest. Equally important to a good action plan is the ability to apply principles of effective communication and negotiation as one role plays an interaction with Dr. Meyer. To provide practice in problem solving and social interaction, either of the situations presented above could be used as a stimulus for problem solving, but the question following the case will change. Instead of asking the student to defend one of two choices, provide the mice or don't provide the mice, the emphasis now is on brainstorming different courses of action that do not compromise conflicting interests or obligations, that would attend to the interests of affected parties and would minimize negative consequences. Students would offer several courses of action and then try to decide which is most defensible, given the norms and values that govern such decisions. Once a defensible course of action is proposed, students either role play or write out what is consistent with the rules and regulations. What one might ask here is to develop an action plan for dealing with the Tyler case and work out a dialog as to what to say. This could be role played or scripted for evaluation.

### **The Michele Tyler Case**

*Using either version of the cases presented above, ask the following:*

***What courses of action are open to Dr. Tyler?***

Most students will feel that Dr. Tyler has only two choices—to share or not to share. The cynic might add that she could say she would share and then stall. Press them. In a problem solving exercise, effort is made to find a solution that compromises none of the protagonist's obligations or interests. The experienced researcher will be able to help students consider collaboration, as well as to help students examine the variety of ways that such a conflict might be managed. Following the development of a defensible action plan, students can explore the wide range of agreements that have been worked out between collaborators. Yet, having a defensible plan does not assure that the plan will be carried out effectively. Good intentions are often undermined with ineffectual communication skills. At this point, students can be encouraged to:

***Develop an action plan. Create a dialog to respond to Dr. Meyer.***

Students and their facilitator can critique a role play exercise for effective interpersonal interaction. One resource that is often useful for developing and critiquing negotiation and interpersonal skills is Fisher and Ury's (1981; 1991; 2011) *Getting to Yes: Negotiating Agreement Without Giving In*. Penguin Books: New York, NY.

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<sup>2</sup> **Rule, J.T., and M. J. Bebeau.** 2001. Integrity and mentoring in research: the story of Irwin D. Mandel. *Quintessence International* 32(1):61-75.