Ethical Issues in Graduate Research*

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Based on *Graduate Education in Research Ethics for Scientists and Engineers: Graduate Awareness Wo*

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Abstract

(Caution! This module is being published in an incomplete, preliminary version. Later edited and fuller versions will follow.) "Graduate Education in Research Ethics for Scientists and Engineers" is a project funded by the National Science Foundation (SES 0629377) to design a pilot program in research ethics for graduate students in science and engineering. This project is built around three workshops: (1) a Graduate Awareness Workshop introduces students to fundamental ethical issues in research, (2) a Moral Deliberation Workshop acquaints students with the skills of moral deliberation, (3) a Case Analysis Workshop uses realistic scenarios to allow students to practice decision-making an problem-solving in research ethics, and (4) students present their decision-making and problem-solving skills in a capstone activity, an Ethics Banquet, that consists of poster presentations on cases in research ethics. This module is a derived copy of the first workshop, the Graduate Awareness Workshop, written for business administration students or students in the professional and occupational areas who will be doing research in a market-driven environment. It links to the Open Seminar project, also funded by the NSF, which provides exercises, modules, activities, and resources pertinent to the study and teaching of research ethics. It also works closely with the Belmont Report, a wonderfully concise document that offers principles and practical applications designed to undercut the paralyzing theoretical and ideological debates that often accompany an area like research ethics. This module has been developed through Connexions as a part of the EAC Toolkit project, NSF SES 0551779.

1 Module Introduction

Graduate Awareness Module

This module presents the ethical issues and concepts associated with research in graduate school. Its content and exercises focus on business research, that is, research carried out in business organizations and research carried out in graduate programs in business schools. You begin with three cases: Tuskegee, Enron, and Baltimore. The first establishes the need for research ethics. The second introduces complexities that

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market-driven activities bring to research. The Baltimore case poses the question, not of whether market forces distort and deflect scientific research, but of whether government and legal forces conspire to distort and deflect the exercise of scientific research skills. After looking at these cases, you will examine the Belmont Report and the basic moral principles and responsibilities in research ethics that it clearly outlines. These principles stand up remarkably well when carried to the realm of business; but there is still a sense in which they need reformulation and clarification to become operative in the context of the different moral ecologies provided by business. Third, you will apply the principles of the Belmont Report to famous (and notorious) research carried out in social psychology on obedience to authority. In a role-playing activity, you will imagine that you are a member of an IRB (Institutional Review Board) charged with evaluating Milgram's research proposal that justifies the experiments he is about to carry out to generate information on how far normal individuals will go, against conscience, on the basis of authority. Someone role-playing as Milgram will present the experiment's protocol, estimate the damage it will bring to the participating human subjects, and outline the expected results. You will use the principles of respect, beneficence, and justice as outlined in the Belmont Report to evaluate Milgram's proposal and decide if the experiment, as outlined, should take place. Finally, you will have a chance to reflect on a series of issues that arise in research carried out in the area where markets, technology, and government intersect. How does competition drive, direct, and even detect research? Does the profit motive distort or corrupt research results? Do markets motivate, filter, or deflect research and progress in scientific and technological research? Can undue or excessive interference by the government undo research efforts?

Get Started–Take the Pre-Test

This pre-test in research ethics—not really a test—consists of short scenarios accompanied by three questions: (1) Is it ethical? (2) Is it common or realistic? (3) Is it controversial? Answering these will help you to start thinking about research ethics issues. On some scenarios you will agree with your classmates and teacher. On others you won't. Try using three simple ethics tests (reversibility, harm-benefits, and publicity) to provide more common ground upon which to build consensus. And don't despair. Coming to a thoughtful agreement on ethical issues is difficult but well worth the effort.

Research Ethics Pre Test

This media object is a downloadable file. Please view or download it at
<http://cnx.org/content/m31972/1.3/Research Ethics Pre Test.docx>

Figure 1: Clicking on this figure will open the Research Ethics Pre Test. It consists of a series of short scenarios designed to get you thinking about some of the ethical issues you will encounter during your graduate studies.

GERESE Research Ethics Pre Test

[Media Object][1]

Issues Table

[Media Object][2]

Syllabus for Business Government Society

[Media Object][3]

[1] This media object is a downloadable file. Please view or download it at <http://cnx.org/content/m31972/1.3/RE_PT_GERESE.docx>

[2] This media object is a downloadable file. Please view or download it at <http://cnx.org/content/m31972/1.3/Issue Table.docx>

[3] This media object is a downloadable file. Please view or download it at <http://cnx.org/content/m31972/1.3/GERE6055_F11.docx>

2 What you need to know

The Tuskegee Study

- Those horrified by the experiments carried out by Nazi scientists and doctors on defenseless concentration camp prisoners were placated only by the reassurance that "it couldn't happen here." ("Here" for the purpose of this module would be the United States, including Puerto Rico.)
- News stories published in 1972 detailing the Tuskegee experiments carried out in Mississippi soon displaced this consoling belief. As it turned out, not only could these things "happen here" but had been happening here for forty years.
- Inaugurated in 1932, the Tuskegee study examined the long terms effects of the disease syphilis in Black men. Even though penicillin was widely used (and successfully used) as a treatment for this disease, such treatment was withheld from the experiment's subjects to allow it to go to its logical and biological conclusion.
- The experiment continued until 1972, when Peter Buxtin with the U.S. Public Health Service (the agency sponsoring the experiment) blew the whistle on the experiment to reporter Jean Heller. According to Wikipedia, "[B]y the end of the study in 1972, only 74 of the test subjects were alive. 28 of the original 399 men had died of syphilis, 100 were dead of related complications, 40 of their wives had been infected, and 19 of their children had been born with congenital syphilis.
- The outrage generated by this study led to the formation of the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research. This commission wrote the widely known and respected Belmont Report, summarized below, that outlined the moral status, considerability and rights of human subjects in the context of scientific research. It developed protocols to recognize and respect these moral considerations and rights by requiring that those conducting publicly funded research have their research proposals reviewed by Institutional Review Boards.

This short profile on Tuskegee has been compiled with materials taken from Wikipedia (http://en.wikipedia.org/wiki/Tuskegee and the Western Michigan Website on ethics linked above (http://www.wmich.edu/ethics/old-site/ESC/cs3.html) both accessed March 15, 2011. Jorge Ferrer also discusses the Tuskegee case in **Deber Y Deliberacion: Una Invitacion a la Bioetica**, Mayaguez, PR:CePA.

The Enron Case

- Enron hardly seems appropriate for a module in research ethics. It has been presented as a cautionary tale of what happens to Harvard Business School Graduates who give smart alec remarks during student interviews. (Jeffrey Skilling, when asked if he was smart, supposedly replied, "I am f___ing smart." The moral of this cautionary tale: don't be arrogant and hubristic or you will be brought down and humbled like Enron's "smartest guys in the room.")
- This is good advice but it only gets us started toward a more profound appreciation of the moral complexity of this case. For example, Malcolm Gladwel distinguishes between a puzzle and a mystery and asks which one applies to Enron.
- A puzzle requires more information if it is to be solved. If a puzzle cannot be solved, then it is because someone is withholding crucial information. In determining Skilling's punishment and jail sentence, many testified that Skilling withheld crucial financial information from them pertinent to Enron's pending failure. He sold Enron stock but they didn't because they didn't have the inside perspective. They could have solved the Enron puzzle (and sold their stock before it crashed) had they been able to access the same information available to Skilling.
- But if Enron is a mystery, and Gladwell more than hints at this possibility, then it doesn't require more information to be solved. Rather, it requires intelligent and skilled financial experts to study, structure and frame the information already out and turn it into a coherent story. (Intelligence experts are trained to do this by interpreting the chatter that goes on between terrorists to try to build a picture of whether they are planning an attack.) The students at Cornell university studied information publicly available on Enron. On the basis of this (and not cloak-and-dagger investigative reporting),

they recommend selling Enron stock because it was overvalued. For them Enron was a mystery. All it needed was for someone to pour over all the information available and tell a coherent story.

- This is important to research ethics because much of research in business falls in one or the other of these categories. Furthermore, responsibility is assigned differently depending on whether the situation offers a puzzle or a mystery. If Enron was a puzzle, then Skilling, Lay, and Fastow were likely guilty of a cover-up. If Enron was a mystery, then the blame falls on those who should have been able to put together the story of Enron's failure based on the information already available.

Enron Exercise

1. Give an argument on why the Enron Case is primarily a puzzle. How did Skilling, Fastow, Lay go about covering up the vital information?
2. Given an argument on why the Enron is primarily a mystery. If the information was already out there, why were financial experts unable to see it? What was the story they should have put together to make sense of the information already publicized?
3. In working toward your answers to 1 or 2, consider whether energy futures, mark-to-market accounting, and Special Purpose Entities were financial devices or tools that were be put to good use. (Could they be treated, for example, as value-neutral technologies?)

Eight Important Points to Enron Case

1. Houston Natural Gas merges with InterNorth to become Enron. This takes place in 1985.
2. The Valhalla Scandals nearly did Enron in early in the career of both Lay and the corporation. Enron. Maverick traders risked everything on a series of shaky deals. Muckleroy, former Enron official, outbluffed the market to ride out the financial crises.
3. Lay formulated an exciting new idea: trading energy futures, that is, deregulating the energy market and trading energy futures in the same way that agriculture futures are traded. To bring about deregulation in the energy market, Kenneth Lay became a formidable Washington lobbyist who benefitted from close ties to the Bush family (President George H. W. Bush and President George W. Bush). (Take some time to think about some of the free-market arguments that Lay made to convince government agencies to de-regulate the energy market.)
4. Lay hires Skilling who at the time was an adviser for the McKinsey group. Skilling was brilliant (called "incandescently brilliant by admirers), a Social Darwinist (distinguish Darwinist from Social Darwinist), and a risk taker. While these were admiral qualities in some contexts they ultimately failed Skilling in his work with Enron? (Why? What does Bethany McLean mean by characterizing Enron and Skilling's role in the events that unfolded, as a tragedy? How does this compare with Greek tragedies like Oedipus and Antigone?)
5. Enron develops "creative" accounting methods. Mark-to-market allows them to declare future earnings expected from a project at the moment the deal is made. While good in the short term, this method quickly put Enron on an accelerating treadmill: to maintain the illusion of profitability they had to keep making deals and declaring up front expected profits. Enron also used Special Purpose Entities to distribute risk and secure needed loans at low interest rates. SPEs were artificial corporations endowed with Enron assets like gas pipelines and energy contracts. These assets made it possible for Enron to get low interest loans and generate need cash flow. The problem was that Enron used its stock to guarantee the loans given to the SPEs. Thus, Enron had to continually make deals to appear profitable to keep its stock value rising, and we're back to the accelerating treadmill.
6. Enron took on the identity of an "idea" company. They saw themselves as a laboratory where ideas were generated by creative and brilliant people and then realized in the real world through deals made by deal-makers like Cliff Baxter and Rebecca Mark (who made the Dahbol power plant deal). Examples of ideas include Enron Broadband, the Dahbol, India Power Plant, and energy futures.
7. It is now common knowledge that the California energy crises (which led to the recall of governor Gray Davis and the election of Arnold Schwarzenegger) was created by Enron traders. (The book and

documentary, "The Smartest Guys in the Room," provides a convincing case for this including scary conversations between Enron traders that were tape recorded and later replayed before Congressional Committees.) Matters were worsened when Jeffry Skilling compared California to the sinking ship, Titanic; they were the same (both disasters), except for the fact that the Titanic's lights were still on when it went down. (His punishment: a pie in the face thrown by an angry California energy consumer.)

8. While Enron's rise took place gradually over fifteen years, its fall was spectacular and rapid. This lends credence to the claim that Enron was a house of cards, more appearance than solid reality.

Enron Cautionary Tales

- Enron Broadband (as well as the Dot.Com corporations that failed at around the same time): Promising technological projects turn out bad when the values embedded in the technology conflicts with those embedded in the surround socio-technical system. (See the module on socio-technical systems for more information.)
- Why did Dahbol work? (Dahbol, the failed India power plant, is the second cautionary tale.) Local opposition, misfit of technology with surround STS, and poorly thought-out transfer of technology all contributed. A commentator in the documentary remarked how India is a bad place to build good technology. But another case detailed in the article, "People's Science in Action," shows how another energy projected succeeded through a participatory design strategy. Those in Puerto Rico may reflect on whether there are lessons to be learned both from the failed Dahbol plant and the successful Uchangi dam in the Maharashtra state. (Witness current opposition to building a windmill farm in Guanica.)
- Are financial and accounting tools like mark-to-market, financial risk distribution tools, (collateralized debt obligations and credit default swaps), and SPEs inherently bad or harmful? Can we treat financial and accounting tools as technologies? (Not value-neutral, fit or don't fit with underlying STS, exhibit a trajectory...).
- These cautionary tales show how Enron issues overlap with research ethics and ethics of technology issues.

Materials and profiles on Enron are based on McLean and Elkind, **The Smartest Guys in the Room**. Complete reference below. Malcolm Gladwell's **New Yorker** article on Enron (see complete reference below) provides a full discussion of the relevance of the distinction between puzzle and mystery to this and other cases.

2.1 Baltimore Case

The Baltimore Case: A Rasamon Approach

- **When Margot O'Toole was unable to duplicate research scientist Thereza Imanishi-Kari's observations, she first supposed that it was due to her lack of expertise. But repeated failures (and brusque treatment by Imanishi-Kari) led her to think otherwise. O'Toole blew the whistle on Imanishi-Kari and on the project leader, David Baltimore (a Nobel prize winner) leading to an NIH investigation and a Congressional hearing led by Representative John Dingell. Initially found guilty of fabrication by the National Institute for Health, Imanishi-Kari was cleared of all charges of fraud in the form of fabrication in 1996.**
- You are **David Baltimore**, a Nobel Prize winner in biology in 1975 for groundbreaking work in virology. Now your interests have turned to immunology. The study of the production of antibodies (substances in the body which defend against disease) in mice have led you to partner with promising young researcher Theresa Imanishi-Kari, an expert in serology. Together with David Weaver and Imanishi-Kari, you have co-authored a paper published in the well-known journal, **Cell**. Now Imanishi-Kari stands accused by one of heer post-doctorates of fabricating some of the data used in this article.

You stand by her research; she may have been sloppy in some of the documentation but her work has always been solid in the past. Outline and defend your intention to stand by Imanishi-Kari and the conclusisons you, her, and Weaver have published in **Cell**. How do you respond to those who accuse you of bullying O'Toole?

- Your name is **Margot O'Toole**. You are a post-doc researcher in biology and have been working in a laboratory supervised by Teresa Imanishi-Kari. Recently you and Imanishi-Kari have become more and more estranged. First, she makes unrealistic demands of you in terms of devotion to research. You are a mother and a wife and don't want to sacrifice these responsibilities to your academic career. You also have a Ph.D. in biology with good recommendations from past teachers and mentors, you are unable to duplicate Imanishi-Kari's experimental results. Because she grew up in Brazil and her family is Japanese, English is her third language; at times you find it difficult to understand her and follow her directions. She is also blunt to a fault. She has told you that you don't have the skills to make it as a researcher. You disagree. The problem is not with your research skills but with Imanishi-Kari's sloppy methods and documentation. Furthermore, you suspect her of having fabricated some of her data, especially when you see discrepancies between the data you found in her notebooks and the data she reports in the Cell article. Taking these concerns to Imanishi-Kari is out of the question given your recent estrangement. But other team members, including Baltimore, have also proven unreceptive to your concerns. In fact, MIT's investigation has been nothing if not perfunctory. Should you blow the whistle? To whom? Outline your concerns, develop a course of action, and justify it. How do you respond to those who have labeled you as a trouble-maker on the basis of their interpretation of your past work and studies?
- Your name is **Theresa Imanishi-Kari**. You are a promising young researcher born in Brazil of Japanese parents. English is your third language; sometimes those who work under you have trouble understanding your instructions and even your supervisor and mentor, David Baltimore, has to take pains to make sure he has successfully communicated with you. You have been asked by Baltimore, a Nobel Prize winning biologist, to work with him on a study into how the immune system produces antibodies. Your specialty is serology. Your work is difficult, painstaking, requires extensive documentation, but years of hard work have begun to pay off with interesting–even surprising–results. Now you find out that one of the post-doctorates under your supervision has accused you of fabricating data. MIT, your home institution, has just completed an internal investigation and has found nothing improper. But the NIH has begun a much more intensive investigation where they have asked you for your laboratory notebooks and have begun to question you on discrepancies between what you have recorded there and what you report in the Cell article. While Baltimore has stood by you so far, he is under increasing pressure to denounce you and your research. The situation with O'Toole, the Post-Doc accusing you, is incomprehensible. She understands the basic concepts of your research but lacks the practical skills required by a good researcher. She has been unable to duplicate your results because she lacks the necessary skills; her accusations arise out of her refusal to acknowledge her own limitations. You have made her aware of this, bluntly to be sure, but you believe it is better to be open and direct with people. Now you have to defend your actions in the context of an increasingly politicized investigation. Outline your position. Defend your research against the accusations of O'Toole and the NIH. Discuss the demands of research documentation, the complexity of your experiments, and the need for science (and scientists) to function without undue public and government scrutiny.
- You are **John Dingell**, Congressman from the state of Michigan. You see yourself as a crusader, a defender of the little-guy, and upholder of justice in the face of corrupted and powerful vested interests. The community of practicing scientists is your next target. Scientists compete ruthlessly for millions of tax dollars to set up their labs and carry out their research. They have a responsibility for conducting their research and upholding the pubic trust while maintaining the highest standards. Now you have become aware of a specific case of scientific fraud, a case of fabrication of data to maintain a well-funded scientific project. A brave young woman, Margot O'Toole, has tried to bring this problem to the attention to the faculty at MIT but they have closed ranks. In the center of this case is Nobel Prize winner, David Baltimore, who, when brought news of fraud committed by a researcher under

his supervision, responded by shooting the messenger (O'Toole) instead of responding to the message. You are holding hearings into O'Toole's accusations. You are determined to use the power of Congress to stand up to the cronyism rampant within the scientific community.

Rashamon-Type Cases

- **Rashamon** is a Japanese movie about a killing and a sexual encounter. These events are inserted into three different narratives by the three different participants. The killing may be a murder or a suicide, depending on the story-teller. The sexual encounter may be a tryst or a rape, depending, again, on the narrative point of view.
- In this assignment, the class will recreate the Baltimore case from the standpoint of the different perspectives of the case's participants. Margaret O'Toole is the heroine-whistle-blower, false accuser, incompetent researcher, or trouble maker depending on who is telling the story. David Baltimore is a Nobel Prize winning biologist who is either exemplary of scientific virtue or an arrogant insider. John Dingell is a Congressional representative holding hearings into scientific integrity; he is either a McCarthy-type figure engaged in a witch hunt or a genuine crusader placing the public spotlight on an internally corrupt scientific community. Theresa Imanishi-Kari is either a ruthless investigator playing the publish or perish game or the innocent victim of the accusations of a disgruntled former subordinate.
- Your job is to argue sympathetically from within each of these participant perspective. Then as a class, we will see if we can construct an overarching narrative or story that reconciles these conflicting perspectives.

Kelves provides the most comprehensive reporting on this case. Sismondo and Whitbeck provide shorter sketches. These exercises are built out of materials from each and where there are conflicts the author has given priority to Kelves's comprehensive study. Readers should consult all three to get an idea of the range of different views.

The notion of a Rashamon case comes from looking at the Swift case delivered by the research ethics team from Oklahoma State University and from the reflections on this issue by Patricia Werhane in her book, **Moral Imagination and Management Decision-Making** (1999), Oxford University Press.

2.2 The Belmont Report

- The **Belmont Report** was written, in part, in response to the abuse of those involved in the Tuskegee study. It identifies three fundamental ethical principles, respect for persons, beneficence, and justice.
- The report then uses these principles as a framework for making sense of concerns that arise in experiments involving human experiments: the informed consent of those participating in the experiment, assessing the risks and benefits associated with a given experiment, and outlining the ethical issues involved in selecting subjects to participate in experiments.
- The Belmont Report was also influence in setting up and structuring what have come to be known as Institutional Review Boards or IRBs. More information on IRBs can be found by reading Van Kloempken's short piece (accessed through the Open Seminar link above) and the Office of Research Integrity's "Introduction to the Responsible Conduct of Research" especially pages 35-47.
- In this section, you will view a quick summary of the report's principles and research ethics concerns. Then you will apply these concepts by role-playing as a member of an IRB hearing a research proposal.

Principles

- **Respect for Persons**: "Individuals should be treated as autonomous agents." "Persons with diminished autonomy are entitled to protection." the Intro to RCR characterizes respect for persons as "their right to make decisions for and about themselves without undue influence or coercion from someone else (the researcher in most cases).
- **Beneficence**: "[D]o not harm" and "maximize possible benefits and minimize possible harms."

- **Justice**: "Who ought to receive the benefits of reseach and bear its burdens?" The introduction to RCR characterizes it as "the obligation to distribute benefits and risks equally without prejudice to particular individuals or groups, such as the mentally disadvantaged or members of a particular race or gender." This concentrates primarily on distributive justice and what Nozick calls the patterns of distribution include equal shares, need, effort, societal controls, and merit.

Applications in Research

- **Informed Consent**: **"Respect for persons requires that subjects, to the degree that they are capable, be given the opportunity to choose what shall or shall not happen to them. This opportunity is provided when adequate standards for informed consent are satisfied."** This is unpacked in terms of information (receiving information pertinent to consenting to participate), comprehension (understanding and appreciating the information communicated), and voluntariness (which excludes participation obrained through coercion or compulsion.)
- **Assessment of the risks and benefits**: "The assessment of risks and benefits requires a careful arrayal of relevant data, including, in some cases, alternative ways of obtaining the benefits sought in the research. Thus, the assessment presents both an opportunity and a responsibility to gather systematic and comprehensive information about proposed research. For the investigator, it is a means to examine whether the proposed research is properly designed. For a review committee, it is a method for determining whether the risks that will be presented to subjects are justified. For prospective subjects, the assessment will assist the determination whether or not to participate." Sub-issues concern the nature and scope of consequences considered and what the report terms "systematic assessment." Other issues included under assessment of risks and benefits: brutal and inhumane consequences, necessary risk, serious impairment, vulnerable populations and documentation of informed consent procedures.
- **Selection of Subjects**: This touches most on the principle of justice. **"Just as the principle of respect for persons finds expression in the requirements for consent, and the principle of beneficence in risk/benefit assessment, the principle of justice gives rise to moral requirements that there be fair procedures and outcomes in the selection of research subjects."**

2.3

3 What you are going to do

3.1 Exercise 1: Take Research Ethics Pre-Test

1. Click on the Media File above to take the Research Ethics Pre-Test
2. This exercise is not a formal test. Instead, it is designed to help you begin to recognize how ethical issues permeate research. Of special importance are the cases in this exercise that look at research as it is constrained by the business environment. Ask yourself two questions. First, does competition distort or deflect research? How? Second, does money (and operating under market-driven conditions) distort or deflect research? How?
3. There are three ethics tests that are frequently taught in corporate ethics training programs: reversibility, harm, and publicity. Check out m13757 (Three Frameworks for Ethical Decision-Making and Good Computing Reports) for more information on the tests. Or look up the description given of these tests at Computingcases.org. Does the use of these tests limit the range of disagreement you have with your classmates on these issues? Why or why not?

3.1.1 Exercise 2: Enron–A Puzzle or Mystery?

- Reread the summary of Malcolm Gladwell's distinction between a mystery and a puzzle.

- Was Enron a puzzle? Explain your answer. Was Enron a mystery? Explain why or why not.
- If Enron is a puzzle, then who do we blame? What do we blame them for? (How does moral responsibility function under a puzzle versus a mystery?)
- Pretend you are Jeffry Skilling, and you are testifying before the U.S. Congress on your role in the Enron disaster. How would you try to present Enron? As a puzzle or mystery? In other words, which framing of the case does the most to mitigate your blame?
- Now, think about this further question. Enron financial tools such as energy futures, mark-to-market accounting, and Special Purpose Entities function differently in the context of a puzzle than in the context of a mystery. Were these tools (say mark-to-market accounting) used to cover up crucial information and prevent experts and the public from solving the Enron puzzle?
- Or were these tools elements in a mystery where, properly interpreted by financial experts, could lead to the telling of the story of Enron's collapse.
- To re-frame the question slightly, are financial tools like mark-to-market accounting, energy futures, and SPEs value-neutral in that they become good or bad only the context of the use to which we put them? Or are these tools, themselves, value-laden so that they channel us in certain directions to realize some values and not realize others?
- Try thinking of financial tools as technologies. (John Dewey starts this process by thinking of operations of logic as tools for conducting inquiry. See Hickman's book cited below.)

3.1.2 Exercise 3: Baltimore Case Role-Play

- **Rashamon** is a Japanese movie about a killing and a sexual encounter. These events are inserted into three different narratives by the three different participants. The killing may be a murder or a suicide, depending on the story-teller. The sexual encounter may be a tryst or a rape, depending, again, on the narrative point of view.
- In this assignment, the class will recreate the Baltimore case from the standpoint of the different perspectives of the case's participants. Margaret O'Toole is the heroine-whistle-blower, false accuser, incompetent researcher, or trouble maker depending on who is telling the story. David Baltimore is a Nobel Prize winning biologist who is either exemplary of scientific virtue or an arrogant insider. John Dingell is a Congressional representative holding hearings into scientific integrity; he is either a McCarthy-type figure engaged in a witch hunt or a genuine crusader placing the public spotlight on an internally corrupt scientific community. Theresa Imanishi-Kari is either a ruthless investigator playing the publish or perish game or the innocent victim of the accusations of a disgruntled former subordinate.
- Your job is to argue sympathetically from within each of these participant perspective. Then as a class, we will see if we can construct an overarching narrative or story that reconciles these conflicting perspectives.

3.1.2.1 Exercise 4: Milgram Role-Play

- You are different members of the Institutional Review Board of a prominent east-coast U.S. university. Your job is to evaluate the research proposal presented by your instructor who is role-playing as famous social psychologist, Stanley Milgram.
- Read Kloempkin's short article on IRBs. You can access it by the URL provided in the second reference section. Study, also, the principles and applications set forth in the Belmont Report as summarized above. (You can also access the report which is fairly short through the URL provided below.)
- Then read Milgram's research proposal (actually a pretend proposal since the original experiment did not go through an IRB.) Evaluate this proposal using the Belmont criteria as well as the IRB criteria outlined by Kloempkin.

- You will look at videos made of some of the actual subjects of the Milgram experiments. View these and assess the actual impacts of the experience for them.
- Milgram (your teacher role-playing) will make a new proposal before you as an IRB member for a second phase of his experiment. Given what you have learned about the actual results of the experiment and what you have seen from the videos made of the experiments and using the Belmont principles and IRB criteria, should you allow Milgram to continue with his experiments.

4 What did you learn?

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6 References for Milgram Role Play

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- Svara, J. Milgram Consent Form at http://openseminar.org/ethics/courses/79/modules/2376/index/screen.do. Accessed 9/16/09.
- Svara, J. Milgram Request for Approval at http://openseminar.org/ethics/courses/79/modules/2376/index/screen.do. Accessed 9/16/09.

- Kloempken, V. The Institutional Review Board at http://openseminar.org/ethics/courses/79/modules/2376/index/scre Accessed 9/16/09.

Insert paragraph text here.

7 Presentations for Graduate Awareness Workshop

Below are two presentations upon which different variations of the Graduate Awareness Workshop will be built. They both explore basic and intermediate moral concepts such as rights, duties, plagiarism, and integrity. They also contain material and exercises designed to help capstone design courses in engineering and science effectively integrate ethical issues. In addition to the presentations, the last media file contains a document that provides the Pre-Test, Post-Test, and GAW evaluation forms in Word format.

Presentation: Integridad Academica y Etica de la Investigacion by Luis Jimenez, Efrain O'Neill, and Eddie Marrero

This media object is a downloadable file. Please view or download it at
<http://cnx.org/content/m31972/1.3/GAW_Long.ppt>

Figure 2: This Spanish presentation provides a general introduction to academic integrity and research ethics. It has been tested with graduate students in a Graduate Awareness Workshop various times in the spring and summer of 2007 in connection with NSF grant 0629377, Graduate Education in Research Ethics for Scientists and Engineers.

Presentation: La actividad academica como empresa moral by Jorge Ferrer and Efrain O'Neill

This media object is a downloadable file. Please view or download it at
<http://cnx.org/content/m31972/1.3/GAW_Short.ppt>

Figure 3: This presentation developed for incoming graduate students is designed to develop a preliminary basis of ethical awareness upon which moral deliberation and case analysis skills will be built. Written in Spanish, this presentation was developed by Dr. Jorge Ferrer and Dr. Efrain O'Neill

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September 29 2007 Presentation

This media object is a downloadable file. Please view or download it at
<http://cnx.org/content/m31972/1.3/GAWSept292007.ppt>

Figure 4: This figure contains the Power Point presentation given for the GAW on September 29, 2007. To date it is the most recent version of the workshop.

Graduate Awareness Workshop Pre and Post Test Exercises

This media object is a downloadable file. Please view or download it at
<http://cnx.org/content/m31972/1.3/AssessGAW.doc>

Figure 5: This presentation, developed by Efrain O'Neill and Luis Jimenez, has been used to introduce research ethics to incoming graduate students in Electrical Engineering. Eddie Marrero and Jorge Ferrer also contributed material.

Issue Identification Workshop Presentation

This media object is a downloadable file. Please view or download it at
<http://cnx.org/content/m31972/1.3/RE_Issues_Nov07_V3.ppt>

Figure 6: Clicking on this figure will open the powerpoint presentation used in a faculty issue identification activity held at the University of Puerto Rico at Mayaguez on November 29, 2007.