

9-1-2009

Professional Ethics-Responsible Conduct of Research Training: Making Sense of Complex Problems

Michael D. Mumford
University of Oklahoma Norman Campus

Shane Connelly
University of Oklahoma Norman Campus

Ryan P. Brown
University of Oklahoma Norman Campus

Lynn D. Devenport
University of Oklahoma Norman Campus

Stephen T. Murphy
University of Oklahoma Norman Campus

See next page for additional authors

Follow this and additional works at: <http://scholarworks.umass.edu/esence>

 Part of the [Engineering Commons](#), [Life Sciences Commons](#), [Medicine and Health Sciences Commons](#), [Physical Sciences and Mathematics Commons](#), and the [Social and Behavioral Sciences Commons](#)

Recommended Citation

Mumford, Michael D.; Connelly, Shane; Brown, Ryan P.; Devenport, Lynn D.; Murphy, Stephen T.; and Antes, Alison L., "Professional Ethics-Responsible Conduct of Research Training: Making Sense of Complex Problems" (2009). *Ethics in Science and Engineering National Clearinghouse*. 308.

<http://scholarworks.umass.edu/esence/308>

This Teaching Module is brought to you for free and open access by the Science, Technology and Society Initiative at ScholarWorks@UMass Amherst. It has been accepted for inclusion in Ethics in Science and Engineering National Clearinghouse by an authorized administrator of ScholarWorks@UMass Amherst. For more information, please contact scholarworks@library.umass.edu.

Authors

Michael D. Mumford, Shane Connelly, Ryan P. Brown, Lynn D. Devenport, Stephen T. Murphy, and Alison L. Antes

Professional Ethics-Responsible Conduct of Research Training:
Making Sense of Complex Problems

Michael D. Mumford, Shane Connelly, Ryan P. Brown, Lynn D. Devenport,
Stephen T. Murphy & Alison L. Antes

University of Oklahoma
Center for Applied Social Research

September 2009

Acknowledgements

We would like to thank our colleagues who helped design, deliver, and improve this course. We especially would like to thank T. H. Lee Williams, Fred Carr, Ingo Schlupp, Angie DeRosa, Dan Bye, Jason Hill, & Chase Thiel. Research supporting this course was sponsored, in part, by the National Institutes of Health/ Office of Research Integrity, National Science Foundation, and Council of Graduate Schools, Michael D. Mumford, Principal Investigator.

Note: Correspondence concerning this course may be addressed to Dr. Michael D. Mumford, Center for Applied Social Research, University of Oklahoma, 3100 Monitor Ave, Suite 100, Norman, OK 73072, mmumford@ou.edu.

Table of Contents

Abstract	iv
Course Outline	v-vi
Course Slides	1-17

Abstract

General Course Abstract

This two-day seminar format course exposes students to the complexities involved in real-world ethical decision-making. It provides students with strategies, or tools, for understanding and thinking through ethical problems to arrive at a decision. Students practice working with these strategies by applying them to realistic, complex cases.

Day 1 Abstract

During the first day of the course, guidelines and principles for ethical research practices are discussed. It is emphasized that students must apply guidelines in a context to arrive at a decision, and the course provides guidance on this decision-making process. Next, students learn about the personal biases and other internal and external constraints that place limits on, and even undermine, their ethical decision-making.

Day 2 Abstract

The second day of the course focuses heavily on working through complex cases, including one role-play scenario. Students learn more about the complexities involved in making ethical decisions, for instance individuals have both personal and professional goals, values, and experiences, which influence the way that they frame and understand problems. Students also practice thinking about problems for the perspectives of others. The second day also introduces the notion that field-specific differences in ethical decision-making are likely to exist, and students discuss these differences.

COURSE OUTLINE

Key Course Objectives

- Develop understanding of the complex nature of the problems encountered in academic work
- Learn ethical decision-making strategies that facilitate analyzing and solving ethical problems

Uniqueness of Course

- Emphasis on decision-making and its complexity, rather than rule-based guidelines
- Recognition of the “gray areas”; ethics are not black-and-white
- Recognition and discussion of field-specific differences
- Awareness of one’s own biases when interpreting situations and making decisions
- Practical, problem-solving approach focusing on day-to-day issues faced by graduate students and professionals
- Interactive activities, cases, role-play, and discussion

Example Issues Covered

- Determining how to assign authorship and credit for work
- Social nature of work; dealing with mentor-mentee and workgroup relationships
- Handling lab and workgroup leadership and management issues, such as setting expectations
- Determining how to respond to observed or suspected misconduct
- Importance of objectivity and fairness when working in professional fields
- Pressure often applied by leaders and work environments that leads to stress and conflict

Day 1 Training Modules

Module I: Fundamental Ethical Guidelines (Pre-training work before training session)

- Review research rules and principles for conducting ethical research (e.g., Declaration of Helsinki, Belmont Report, Nine ORI Guidelines)
- Complete 4 short cases

Module II: Complexity in Ethical Decision Making

- Explain that training will mostly focus on the “gray” areas
- Explain that guidelines provide a basis, but are not complete for making ethical decisions
- Complete Reflection Exercise (“What is an ethical decision?” “What is a good ethical decision?”)
- Take Ethical Decision-Making Pre-Test
- Discuss the use of principles and review cases from Module 1

Module III: Situational Influences and Personal Biases in Judgments and Decisions

- Learn about the powerful nature of situational pressures and their influence on ethical decision-making
- Learn about the influence of personal biases on making ethical decisions

Module IV: Internal and External Constraints on Ethical Decision Making

- Review common black-and-white assumptions about ethical decision-making
- Discuss specific situational and internal constraints influencing ethical problems and ethical decision-making (e.g., poor communication and hasty decision-making)
- Practice identifying constraints in a complex case
- Complete an activity to generate additional constraints that may be encountered while conducting research

Module V: Ethical Decision Making Model and Strategies for Ethical Decision-Making

- Learn about 5 component Ethical Decision-Making Model
- Discuss strategies, tools that help researchers avoid mistakes and make better decisions (e.g., anticipating consequences and considering others)
- Generate strategies using a complex case

Module VI: Apply Ethical Model to Cases and Find Field-Specific Principles (Homework)

- Practice using the EDM model and strategies to solve complex cases
- Search Web for one's own field-specific principles

Day 2 Training Modules

Module VII: Sensemaking

- Review cases completed between the training sessions
- Learn about more complex “Sensemaking” model of ethical decision-making
- Participate in role play activity about assigning authorship credit

Module VIII: Complex Field Differences

- Learn about differences in research and ethics across disciplines
- Discuss field-specific principles in a group
- Discuss field-specific differences across fields as large group

Module IX: Differing Viewpoints

- Analyze a case with different groups being different characters
- Complete Reflection Exercise to examine changes from day 1

Module X: Post Training Assessment

- Review the training modules and key points
- Revisit case from Block 5 and engage in elaborated discussion of strategy use
- Complete Ethical Decision-Making Post-Test

Professional Ethics- Responsible Conduct of Research Training: *Making Sense of Complex Problems*

University of Oklahoma

WELCOME!
Thank you for participating!

Training Objectives

- Exposure to problems that researchers encounter
- Improve ethical decision-making (EDM) skills in complex situations
- Learn about:
 - Professional, institutional, and government guidelines
 - Common constraints encountered in decision-making
 - Strategies for ethical decision-making (EDM)
 - Model of ethical decision-making (EDM)
 - "Sensemaking" approach for assimilating components of an ethical dilemma
- This training will not solve your ethical problems
 - Training provides strategies which you can apply to a broad range of future ethical problems to make better decisions
- Case-based approach

Block 2: Slide 1 of 9

Reflection Activity

- What distinguishes a decision involving ethical choices from the other types of decisions we make in the research process?
- What makes an ethical decision a "good" decision? (What are the criteria for a good ethical decision?)

Block 2: Slide 2 of 9

Scientific Decision-Making (PreTest)

- Experience the complexity of decision-making in research
- Reflect on your knowledge of how you would resolve situations
- 45 minutes to complete exercise
- Before beginning, please follow these instructions...

Block 2: Slide 3 of 9

Introduction

Scientific misconduct has been, and continues to be, a challenge across all disciplines of scientific research

Type	1994-1998		1999-2003		Total	
	N	%	N	%	N	%
Fabrication	18	25	11	19	29	22
Falsification	26	35	27	46	53	40
Plagiarism	6	8	2	3	8	6
Fab/Fals	22	30	14	24	36	27
Other Combo	2	2	5	8	7	5

Source: Office of Research Integrity Newsletter, March 2005

Block 2: Slide 4 of 9

Introduction

- Until recently, the bulk of ethics research has focused on 3 types of misconduct: Fabrication, Falsification & Plagiarism (FFP)
- 33% of scientists admitted to engaging in unethical behavior such as:
 - Changing the design, method, or results of a study in response to pressure from a funding source
 - Overlooking others' use of flawed data
 - Circumventing aspects of human-subject requirements
 - Failing to present data that contradicts one's research

Block 2: Slide 5 of 9

Introduction

- Serious consequences of not maintaining a high level of scientific integrity include:
 - Undermining public confidence in results of scientific research
 - Inhibiting open communication among scientists
- The National Institutes of Health (NIH) and the National Science Foundation (NSF) disperse millions of dollars to fund research
- Government institutions lead the way in promoting ethical research

Block 2: Slide 6 of 9

Guidelines

What are research guidelines and why do we need them?

- Professional codes of conduct, rules, and principles are designed to protect participants and accuracy of research
- Guidelines help us understand the scientific enterprise and standards that researchers must adhere to while conducting research

Block 2: Slide 7 of 9

Case Review

Case 1: Maria's Advice

- Guidelines: Collaboration and Authorship/Publication
Best multiple choice item...
Rationale....

Case 2: New Equipment

- Guidelines: Collaboration and Authorship/Publication
Best Multiple Choice Item...
Rationale...

Block 2: Slide 8 of 9

Case Review

Case 3: The Agreement

- Guidelines: Mentor-Trainee Relationships, Collaboration
Best Multiple Choice Item...
Rationale...

Case 4: Sample Misunderstanding

- Guidelines: Collaboration, Data management
Best Multiple Choice Item...
Rationale...

Block 2: Slide 9 of 9

Break!

Ethical Dilemmas Questionnaire

- Please complete your questionnaire (Handout 3.1)
- When you have completed the questionnaire, set it aside (we will return to it later).

Block 3: Slide 1 of 16

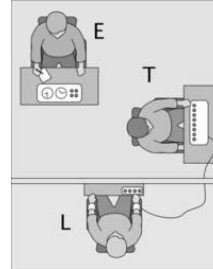
Stanley Milgram Research

- Example of the powerful nature of the situation
 - People engage in behaviors that they never would expect
- Classic psychological experiment
- Research purpose was to study people's obedience to authority

Block 3: Slide 2 of 16

Milgram Study Set-up

- Teacher, Learner, & Experimenter



Block 3: Slide 3 of 16

Video Clip

Block 3: Slide 4 of 16

Contemporary Replication

- Would the same results be found today?
- Changes to the procedure to protect participants
 - Highest shock voltage only 150 volts
 - Participants were pre-screened by trained psychologists

Block 3: Slide 5 of 16

Milgram Study Discussion

- Do you believe that you would continue to obey the experimenter all the way to the end of the experiment?
- What percentage of participants do you think would continue to obey the experimenter all the way to the end of the experiment?
- The Results...

Block 3: Slide 6 of 16

“Take-Home” Point

- The power of the situation is very strong
- You are vulnerable to situational pressures just like everyone else
- Without this understanding, you will be biased in your thinking about how you might behave

Block 3: Slide 7 of 16

Ethical Decisions Research

- Handout 3.2: “What Would You Do?”
 - Read the short scenario
 - Predict what you would do

Block 3: Slide 8 of 16

Ethical Decisions Research

- “**Predictors**” – predicted how they would behave in the scenario
- “**Experiencers**” – actually participated in the scenario
- The “Experiencers” provide a reality-check on the predictions of their colleagues who thought of this experience only hypothetically

Block 3: Slide 9 of 16

The Results: Self vs. Others Bias

	Selfish	Unselfish	Fair
Experiencers	64%	13%	22%
Predictors: Self	35%	6.5%	58.5%
Predictors: Others	85%	0%	15%

- “Selfish” = people who chose the good task for themselves
- “Unselfish” = people who gave the good task to others
- “Fair” = people who chose to flip the coin to assign the tasks

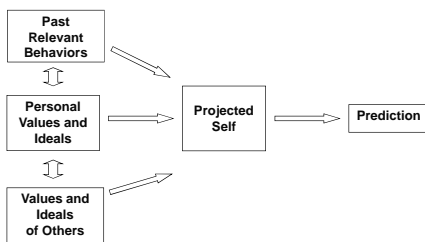
Block 3: Slide 10 of 16

Predicting Your Own Behavior

- “**Projected-Self Model**”
 - How people predict their behavior
 - 3 primary sources of information
 1. **Past behaviors** in related situations
 2. **Their values** which suggest how they should behave
 3. **Values of other people** who are important to them

Block 3: Slide 11 of 16

Projected-Self Model



Block 3: Slide 12 of 16

Bias: Values as a Predictor of Future Behavior

- Past behavior is the best predictor of future behavior... a valid source of predictive information
- People’s values are idealistic... less likely to be a valid source of predictive information
- Values-congruent predictions represent a major source of bias when thinking about how you would behave

Block 3: Slide 13 of 16

Revisit Handout 3.1

- How did you respond?
 - Were you biased in predicting how you might behave?
- Why does this matter?
 - People predict they would behave more ethically than the average “other person”
 - *You* too are likely to make this faulty prediction
 - You have personal biases to overcome

Block 3: Slide 14 of 16

The “Take-Home” Point

- You might think that you do not need this training
- You assume, due to your values, that you would not behave unethically under any circumstances
- Consequences:
 - You might take this training too lightly
 - You could be drawn into an ethical dilemma because you assume that you are not vulnerable to it

Block 3: Slide 15 of 16

Summary

- You are subject to bias in your judgments, including judgments about yourself
- Be self-aware to avoid situations that could undermine the integrity of your research
- Convince yourself that this applies to you, and act as if it does
- Have a realistic view of human nature
- Be aware of the powerful role of situations

Block 3: Slide 16 of 16

Lunch Break!

1 Hour Lunch

“Hit” or “Miss” Activity

When you are facing an ethical problem you should...

1. apply the rules or principles that best support your preferred course of action?
2. consider the outcomes for all involved parties before taking action?
3. ask yourself how other people will perceive the decision that you have made?

Block 4: Slide 1 of 7

“Hit” or “Miss”?

Because you have been trained in solving ethical problems,...

1. your immediate reactions will be quite objective and thorough?
2. you are not likely to be influenced by personal biases?
3. you understand that your decisions might differ from those made by others in your field?

Block 4: Slide 2 of 7

“Hit” or “Miss”?

When you need objective advice concerning an ethical dilemma you should...

1. ask a respected colleague for help?
2. tell everyone you know about the situation so that they are aware of it?
3. think about previous decisions made by others in similar situations?

Block 4: Slide 3 of 7

Constraints Introduction

- A “Constraint” is any personal or situational element that interferes with, or complicates, ethical decision-making
- This could be an error in the ethical decision making process
- Typical constraints include:
 - not considering the perspectives of others
 - short-term thinking
 - time and energy constraints
 - only selecting evidence that substantiates your theory
 - not understanding key causes of the situation

Block 4: Slide 4 of 7

Identifying Constraints

- Case: “Barking Up the Wrong Tree?”
- Discussion:
 - In the context of this case, the other assigned cases, and any experiences that you have, think about the way people typically respond (make decisions) when dealing with an ethical dilemma, or simply any very difficult problem, and answer the following question:

In this situation, what constraints could cause Nellie to make an error while attempting to make an ethical decision?

Block 4: Slide 5 of 7

Constraint Generation Activity

- Instructions
 - Put 2-3 responses on your small individual card
 - As a group, select the best suggestions and put them on your large group index card
 - Rotate your group card with the other groups
 - Add suggestions to the group cards and continue exchanging until you receive your original card
- *Question: What are some examples of constraints that you may encounter while conducting research that could keep you from making ethical choices?*
 - *E.g. time pressure or poor communication*

Block 4: Slide 6 of 7

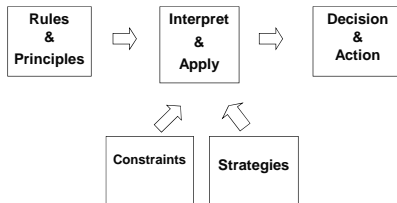
Constraint Generation Discussion

- Example “constraints” that may arise during an ethical dilemma:
 - Difficulty identifying key causes – i.e., what/who started the dilemma? What are the most critical ethical issues at stake?
 - Not fully weighing good and bad outcomes for ALL parties involved
 - Engaging in absolute, or black-and-white, thinking
- Constraints Handout

Block 4: Slide 7 of 7

Break!

Ethical Decision-Making Model



Block 5: Slide 1 of 14

Introduction to Ethical Decision-Making

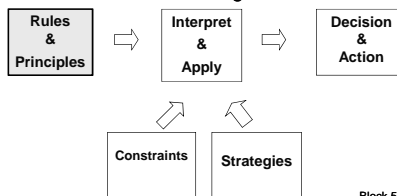
- Challenging even for experienced professionals
- Personal biases and situational pressures make decisions more complex
- Model can assist with understanding constraints and complexities associated with ethical dilemmas

Block 5: Slide 2 of 14

Ethical Decision-Making Model

Rules and Principles

- Guidelines are established by institutions
- Principles are general themes such as “maximizing benefits and minimizing harms” that shape our behavior
- Provide a foundation for making ethical decisions

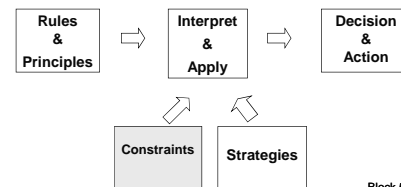


Block 5: Slide 3 of 14

Ethical Decision-Making Model

Constraints

- Personal biases, misperceptions and misjudgments about oneself and situational pressures and constraints
- Reduced when individuals realize that they commit errors just like everyone else and understand the constraints most likely to occur in given situations

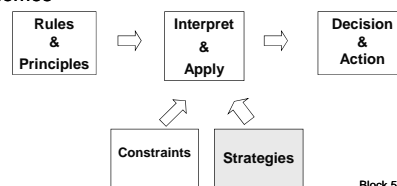


Block 5: Slide 4 of 14

Ethical Decision-Making Model

Strategies

- Tactics for how to approach thinking through an ethical decision
- Help researchers analyze and interpret constraints
- Help researchers make decisions that result in better outcomes

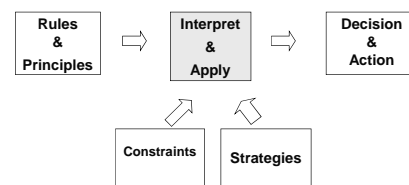


Block 5: Slide 5 of 14

Ethical Decision-Making Model

Interpret and Apply

- Assimilate aspects of the research dilemma
- Make sense of the situation in its entirety and decide how to proceed

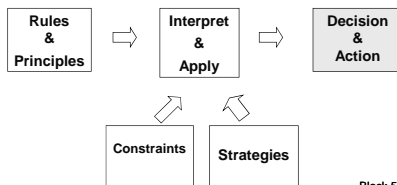


Block 5: Slide 6 of 14

Ethical Decision-Making Model

Ethical Decisions

- Require interpretation of the situation, relevant guidelines, and constraints and the use of strategies
- Involve emotion which typically needs to be managed
- Have consequences for self and others; outcomes should be evaluated after actions are taken



Block 5: Slide 7 of 14

Why are “Strategies” Important?

- Strategies are tools that can help you to make ethical decisions
- Help you to avoid common pitfalls
- Help you to think about the situation and work through it to a decision

Block 5: Slide 8 of 14

What is a “Strategy”?

- Thinking and/or information gathering processes
- Specific actions, ways of thinking about the problem, or different ways to evaluate or view the situation
- Strategies recognize that all situations differ
- Require conscious effort to work through the situation

Block 5: Slide 9 of 14

Strategy Generation

- Case study – The Baltimore Affair
- The characters
 - David Baltimore
 - Imanishi-Kari
 - O’Toole



Block 5: Slide 10 of 14

Strategy Generation

- Please answer the questions about the case, in particular the “constraints” and “strategies” questions.
 - What are the **constraints** among the individuals in “The Baltimore Affair”?
 - What **strategies** could have been used?
- Group Discussion of the Case

Block 5: Slide 11 of 14

Strategies Handout

- Seven Key Strategies for Ethical Decision-Making
 - Recognize your circumstances
 - Ask for help
 - Question your judgment
 - Deal with your emotions
 - Anticipate consequences
 - Look within
 - Consider other’s perspectives

Block 5: Slide 12 of 14

Assignments for Day 2

- **Please complete before the next training session.**
- **Bring all of your materials with you on Day 2.**
- **Field-Specific Guidelines**
 - Find your field's guidelines (or a related field)
 - Read and answers questions
- **Two Case Studies**
 - Read and answer questions
- **Be ready to discuss these on Day 2!**

Block 5: Slide 13 of 14

Training Feedback

- Please take a moment to complete this feedback survey about today's training session.
- Your feedback is important for continual improvement of this training.

THANK YOU!

Block 5: Slide 14 of 14

End of the First Training Session

Thanks!
See You Next Time!

RCR Training Day 2

Welcome Back Everyone!

Day 1 Review

- During training session one you learned about:
 - Professional, institutional, and government guidelines
 - Common constraints that you may encounter that can affect your judgment and decision-making
 - Strategies that can assist you in making ethical decisions
 - A general model for ethical decision-making

Block 6: Slide 1 of 7

Editor-in-Chief Case Review

- Please provide your responses
 - What research guidelines apply here?
 - What "constraints," or errors in ethical decision making, could (or did) prevent the characters from making ethical decisions?
 - What "strategies" could have been used to help the characters resolve the issue?
 - Were the decisions made by the characters in this case appropriate?

Block 6: Slide 2 of 7

Editor-in-Chief Case Review

- Research Guidelines
 - Conflicts of Interest
 - Authorship & Publication Practices
 - Mentor-Trainee Relationship Issues
- Potential Constraints
 - Being unaware of personal biases
 - Making hasty decisions
 - Being biased by subjective feelings
 - Not taking enough time to evaluate outcomes

Block 6: Slide 3 of 7

Editor-in-Chief Case Review

- Potential Strategies
 - Asking for help from an uninvolved and more experienced researcher
 - Anticipating consequences for different action
 - Being mindful of how others will perceive one's actions and the effects of these actions
 - Reflecting on personal motives and biases
- Were the decisions made appropriate?

Block 6: Slide 4 of 7

Whistle-Blower Blues Case Review

- Please provide your responses
 - What research guidelines apply here?
 - What "constraints," or errors in ethical decision making could (or did) prevent the characters from making ethical decisions?
 - What "strategies" could have been used to help the characters resolve the issue?
 - Where the decisions made by the characters in this case appropriate?

Block 6: Slide 5 of 7

Whistle-Blower Blues Case Review

- Research Guidelines
 - Conflicts of Interest
 - Data Management
 - Mentor-Trainee Relationship
- Potential Constraints
 - Not identifying the hidden motives
 - Not identifying key causes or situational demands
 - Allowing subjective feeling to guide decisions

Block 6: Slide 6 of 7

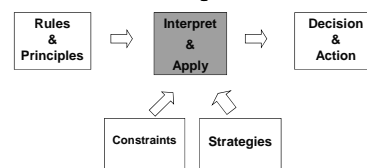
Whistle-Blower Blues Case Review

- Potential Strategies
 - Ask a more experienced researcher what he/she would do in a similar situation
 - Question one's judgment
 - Manage emotional response to the situation
 - Anticipate consequences (long- and short-term) and consider all relevant options before acting
- Were the decisions made appropriate?

Block 6: Slide 7 of 7

Introduction to Sensemaking

- Making sense of the situation in its entirety
 - Integration and interpretation of all aspects
- Takes place during the "Interpret & Apply" stage of ethical decision-making



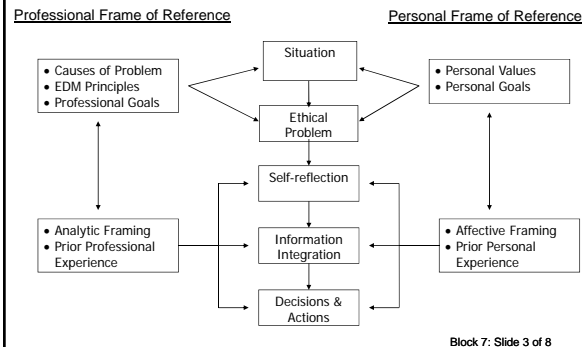
Block 7: Slide 1 of 8

Sensemaking

- Used in the management literature to describe the way that managers handle significant information, especially during crisis
- Three key processes:
 1. Scanning: information gathering
 2. Interpreting: comprehend meaning
 3. Responding/Action: implement understanding
- Key Point: Thinking through, integrating, and acting on complex information (such as in an ethical dilemma) is a complicated, dynamic process

Block 7: Slide 2 of 8

Sensemaking in Ethical Decision-Making



Block 7: Slide 3 of 8

Sensemaking in Ethical Dilemmas

- Key considerations include:
 - The people involved:
 - How do the key players of this situation interact?
 - What is my relationship among the key players?
 - The department/organization/team/lab:
 - How are situations generally handled in the group?
- Additional considerations:
 - Initial responses influence the tone and outcomes of the situation
 - Influence of your underlying frames of reference & assumptions about the situation

Block 7: Slide 4 of 8

Role Play Activity – Introduction

- “A Clash to Remember”
- Volunteers are needed
 - Four primary characters
 - Investigative committee members
- Play the role of your character and defend your position

Block 7: Slide 5 of 8

Role Play Activity – Instructions

- Everyone
 - Read the background information about the case
- Michael, Rachel, Alyssa, & Dr. Swift
 - Read the information about your character
 - Prepare to discuss your side of the issue and your reasoning behind it
 - Before you defend your role, you will summarize your role in the case
- Investigative Committee Members
 - Read the information about your character
 - After the testimony of the primary role holders, deliberate with the committee and make a decision about the outcome of the case
 - Before you deliver your decision, you will summarize your role

Block 7: Slide 6 of 8

Role Play Activity – The Scenario

Alyssa is a graduate student who works in a Science lab with Dr. Swift, the lab director. Alyssa has been working on a project in Dr. Swift's lab for about 9 months and believes her name should be placed on the resulting publication.

A committee has been called to investigate the conflict between Dr. Swift and Alyssa, which has been labeled a publication issue.

This committee must decide if Dr. Swift should be reprimanded for not placing Alyssa's name on the publication.

Block 7: Slide 7 of 8

Role Play – Discussion

- What were the main conflicts in this situation?
- What did you consider when making your decisions about Dr. Swift and Alyssa?
- How did different frames of reference influence this situation?
- What constraints were involved in the situation?
- What strategies did you use to help make your decision?

Block 7: Slide 8 of 8

Break!

Research and Ethics Across Disciplines

Science is a Social Enterprise

- Scientists share knowledge through written publications, conference presentations, and direct communication
- Scientists in similar fields may
 - think alike
 - ask questions that are congruent with other researchers in the field
 - use a particular set of scientific methodologies
 - use similar experimental designs to test questions
- Over time ethical norms will deviate from those in other fields

Block 8: Slide 1 of 9

Research and Ethics Across Disciplines

Researcher's Questions Vary

- Researchers in social, biological and health sciences seek answers to different questions.
 - Social scientists are concerned with the social well-being of individuals, whereas those operating in health sciences are concerned about physical health
 - Scientific fields share broad principles such as "beneficence" and "do no harm"

Block 8: Slide 2 of 9

Research and Ethics Across Disciplines

Different Approaches

- Researchers in the different sciences (also across specializations) use different approaches
 - For instance, field research differs from experimental research
- Designs have different implications for scientific research
- In social research controlling all the variables in an experimental setting is very complex, whereas in the biological sciences, control is much easier

Block 8: Slide 3 of 9

Research and Ethics Across Disciplines

Field-Specific Norms Differ

- Authorship rights
 - Standards of what constitutes a "significant contribution" to a publication may vary across fields
 - For instance, in biological and health sciences, it is more acceptable for lab managers and clinical directors who supply materials to receive authorship credits
- Grant proposal budgets
 - In biological and health research, it is generally expected, and sometimes required (by institutions) that researchers request extra funds for their research

Block 8: Slide 4 of 9

Research and Ethics Across Disciplines

Field Differences Summary

- Understanding that field differences exist is important to avoid potential conflicts and resolve ethical dilemmas
- This understanding is especially salient when you are:
 - Conducting research outside your primary area
 - Collaborating with researchers in other areas
 - Reporting the misconduct of other researchers

Block 8: Slide 5 of 9

Field-Specific Guidelines Activity

- Get into field-specific groups (or related fields)
- Compare and contrast your ethical guidelines
- Discuss your reactions to the guidelines and your responses to the questions
 1. What seem to be the 2 or 3 most critical guidelines in your field?
 2. Are the guidelines in your field missing anything that you think should be added?
 3. Do think that the guidelines are overly specific, overly vague, or just right?
 4. Would these guidelines help you to make decisions in your day-to-day practices in your field? Why or why not?

Block 8: Slide 6 of 9

Field-Specific Guidelines Discussion

- Report your group's reactions and responses to your field's guidelines
- Discuss the relevance of the principles acquired for each field or specialization
 - Do you feel that these principles are effective for dictating how research should be conducted in your field?

Block 8: Slide 7 of 9

"Big Pharma" Case Activity

Instructions:

1. Get into groups with mixed fields
2. Read the Big Pharma Case
3. Answer questions as a group
4. Report and discuss group solutions with everyone

Block 8: Slide 8 of 9

"Big Pharma" Case Discussion

- Group Questions:
 - What are the guidelines/principles that apply here?
 - What constraints could keep Robin from making an ethical choice?
 - What strategies can Robin use to make an ethical decision in the case?
 - What decision should Robin make that will result in the greatest ethical outcome?

Block 8: Slide 9 of 9

Lunch Break!

1 Hour Lunch

Viewpoint Activity – Wunderkind Case

Instructions:

Part 1:

1. Divide into four (4) groups
2. Read “Wunderkind” Case
3. Answer case questions & briefly discuss

Part 2:

1. Read perspective of a researcher in the “Wunderkind” case
2. Justify this perspective
3. Discuss

Block 9: Slide 1 of 9

Viewpoint Activity: Part 1 Discussion

- What are the relevant research guidelines in this case?
- Identify key constraints
- Identify key strategies
- What might be the appropriate decisions and actions for the characters in the scenario?

Block 9: Slide 2 of 9

Viewpoint Activity: Part 2 Differing Perspectives

- Different characters have different perspectives and focus on different types of decisions
 - Graduate Student (Alex)
 - Professor (Dr. Marx)
 - IRB Member (James Mendel)
 - University Administrator - Research VP (Anabelle Parker)
- Defend your character’s decision

Block 9: Slide 3 of 9

Review Activity

- Revisit the Baltimore Case
- Consider plausible “Alternative Endings”
 - Suggest potential constraints that could hinder ethical decision-making
 - Recommend decision-making strategies for the persons involved

Block 9: Slide 4 of 9

The Baltimore Affair

➤ The characters

➤ David Baltimore



➤ Imanishi-Kari



➤ O’Toole



Block 9: Slide 5 of 9

Review Activity

➤ Baltimore Case Summary

- O’Toole accuses Imanishi-Kari of publishing fraudulent data
- Extensive investigations by the university, ORI, even the Secret Service gets involved
- Imanishi-Kari was initially found to have falsified data; she was later exonerated

Block 9: Slide 6 of 9

Review of Potential Constraints

- “Constraints” are personal and situational elements that hinder ethical decision-making
 - Focusing only on oneself
 - Making decisions that prevent other actions
 - Not considering hidden motives or agendas
 - Engaging in black-and-white thinking
 - Making hasty decisions
 - Deceiving one-self and/or others
 - Avoiding personal responsibility
 - Time constraints

Block 9: Slide 7 of 9

Review of Possible Strategies

- “Strategies” are thinking and/or information gathering processes that facilitate ethical decision-making
 - Recognizing the circumstances
 - Asking for help and advice
 - Questioning one’s own judgment
 - Dealing with one’s own emotions
 - Anticipating possible consequences
 - Consider one’s own personal biases and motivations
 - Considering other people’s perspectives

Block 9: Slide 8 of 9

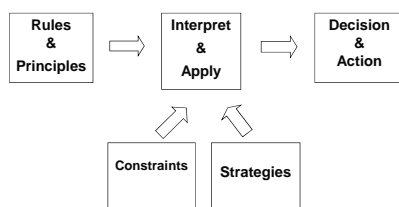
“Alternative Endings”

1. Baltimore Hears of O’Toole’s Studies
2. O’Toole Gets Advice from Two Colleagues
3. O’Toole Talks to Imanishi-Kari
4. O’Toole Gets Mixed Results
5. O’Toole Is a Co-Author

Block 9: Slide 9 of 9

Break!

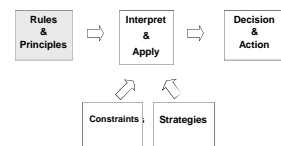
Training Summary: EDM Model



Block 10: Slide 1 of 12

Training Summary: Rules & Principles

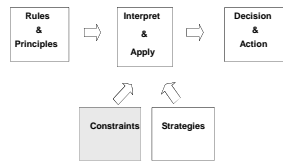
- Established by governmental agencies, institutions, and professional fields to guide research.
- Provide ethical guidelines to serve as a foundation for conducting research.
- Solving real-world problems is complex, and researchers need other tools as approaches for ethical decision-making.



Block 10: Slide 2 of 12

Training Summary: Constraints

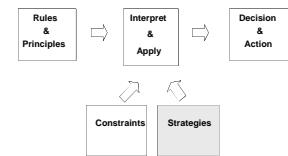
- Personal and situational biases and elements that hinder a researchers' ability to confront ethical issues and find a solution.
- Identify possible constraints in advance.
- Acknowledge that all researchers face constraints and pressures that can inhibit decision-making.



Block 10: Slide 3 of 12

Training Summary: Strategies

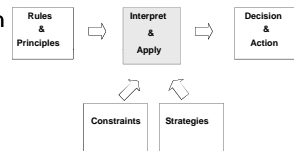
- Tools that help researchers make ethical decisions.
- Guide your thinking and promote the effectiveness of your decision-making process.
- Allow you to be more objective and consider issues, consequences, and options that you might not have otherwise.



Block 10: Slide 4 of 12

Training Summary: Interpret & Apply

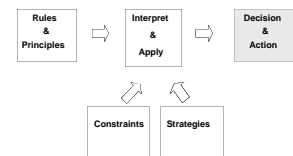
- Sensemaking is required in this stage
 - Making sense of all aspects of the situation in order to arrive at a decision
- Identifying all elements
 - Rules & principles
 - Constraints
 - Strategies
- Considering personal and professional perspectives
- Assimilating all elements



Block 10: Slide 5 of 12

Training Summary: Decision

- Outcome of ethical decision-making
- Based on researcher's EDM process
- Consequences for oneself and others
- Quality of the decision should be evaluated by the researcher
- Learn from successful and less successful decisions



Block 10: Slide 6 of 12

Training Summary: Field Differences

- Standard practice in one field can be considered inappropriate in another
- Differences may be difficult to recognize, especially for the novice researcher
- Differences are especially important when conducting interdisciplinary research

Block 10: Slide 7 of 12

Training Summary: Varying Perspectives

- All people in the research process have different perspectives
 - Students (undergraduates and graduates)
 - Post docs
 - Junior and Senior researchers
 - University administrators
- Reflect on, and consider, the differing perspectives with considering the problem

Block 10: Slide 8 of 12

Reflection Activity

- What distinguishes a decision involving ethical choices from the other kinds of decisions we make in the research process?
- What makes an ethical decision a “good” decision? (What are the criteria for a good ethical decision?)

Block 10: Slide 9 of 12

Training Feedback

- Please take a moment to complete this feedback survey about today's training session.
- Your feedback is important for continual improvement of this training.

THANK YOU!

Block 10: Slide 10 of 12

Concluding Activity (Post Test)

- Apply and reflect on the material covered in this training
- Enhance your preparedness to tackle difficult situations that may arise in your future research
- Before beginning, please follow these instructions...

Block 10: Slide 11 of 11

- Thank you for participating.
- Certificates may be picked up at the Graduate College.

Block 10: Slide 12 of 12