

Case Studies in Research Ethics (Instructor's Manual)
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Abstract

Faculty at 2 universities integrated 6 case studies on research ethics into their introductory psychology curricula. Students who received the ethics modules were better able to identify ethical issues and consider moral ambiguities than students who received standard instruction. Students and faculty favorably evaluated the curriculum, and students indicated that ethics instruction increased their interest in research psychology and scientific ethics.

CASE STUDIES
IN RESEARCH ETHICS

INSTRUCTOR'S MANUAL

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INTEGRATING RESEARCH ETHICS INTO THE INTRODUCTORY PSYCHOLOGY COURSE CURRICULUM INSTRUCTORS' MANUAL

INTRODUCTION

Psychology faculty and members of the profession have long recognized the importance of ethics education as an effective means of fostering the values and standards that guide responsible scientific and professional practice. The American Psychological Association and the Association of American Colleges have recently recommended integrating ethics into the early education of college students as an important step in encouraging critical thinking about ethical issues for those students who will one day become psychologists or consumers of psychological research. National surveys suggest that there is a need for increased coverage of research ethics in undergraduate psychology curricula.

The broad educational goal of this set of instructional modules is to help introductory psychology instructors provide students with the knowledge and skills to identify ethical issues in human and animal subjects research. The modules are designed to sensitize students to the researcher's dual responsibility to produce scientifically rigorous knowledge and to protect the rights and welfare of research participants. Students will be introduced to current ethical procedures for balancing scientific and social responsibilities. They will also be encouraged to consider moral ambiguities that arise within various experimental contexts and to generate resolutions sensitive to alternative ethical approaches to specific research questions. The instructional materials are designed for psychology instructors with or without specialized training in scientific ethics. A brief overview of general ethical issues in psychological research is provided following the description of the curriculum.

THE CURRICULUM

The curriculum consists of 6 teaching modules representing a broad range of content areas and research methodologies. A case study approach gives students the opportunity to critically evaluate ethical issues relevant to the conduct of psychological science across different research contexts. The cases were developed to reflect ethical issues associated with "classic" empirical studies in core subject matter covered in a majority of introductory psychology textbooks.

The case studies can be integrated into the introductory psychology course curriculum in a variety of ways. The format of the cases allows instructors great flexibility in reaching their pedagogical goals. For example, in addition to promoting discussion of ethical issues, the format of the case descriptions are suitable for extended discussion on research design and on the topical domain addressed by the study. The six teaching modules are self-contained, allowing them to be taught in various orders without losing coherence so that instructors may order them in a way that best reflects their course curriculum. Instructors may wish to follow the sequence of case presentations outlined below. This sequence provides student exposure to cases of increasing levels of ethical complexity. In addition, the ordering of cases 2 - 6 follows the sequence of topics presented in most traditional introductory psychology textbooks. For instructors who utilize this traditional sequence, Case 1 is designed to complement the course section on Psychological Research. In what ever order they are presented, case

discussions can benefit from reference to previous cases. Below, each case article is listed along with the topical area and specific subject matter it exemplifies and a brief description of the distinguishing ethical issues it raises.

1. "Effect of Blood on Reactions to a Victim" Piliavin & Piliavin (1972)

TOPICAL AREA: RESEARCH METHODS/SOCIAL PSYCHOLOGY

Subject: Bystander Apathy

ETHICAL ISSUES IN FIELD RESEARCH: This example of manipulated field research exemplifies a type of study in which informed consent has traditionally not been required. The study raises the issue of whether harm can come to participants and to society when psychologists stage crises in public places.

2. "Single Unit Activity in Striate Cortex of Unrestrained Cats" Hubel (1959)

TOPICAL AREA: SENSATION AND/OR PERCEPTION

Subject: Detection of Visual Patterns

ETHICAL ISSUES IN ANIMAL RESEARCH: This example of animal research raises the question of whether animals have the same rights as human research subjects. The study requires students to consider which experimental procedures (e.g., surgery and terminations) are or are not justified in animal research.

3. "Conditioned Emotional Reactions" Watson & Raynor (1920)

TOPICAL AREA: LEARNING

Subject: Classical Conditioning in Humans

ETHICAL ISSUES IN AVERSIVE CONDITIONING RESEARCH: This classic study by Watson and Raynor introduces students to ethical procedures regarding informed (parental) consent and protection of confidentiality. It also raises questions concerning whether experimenters should use aversive procedures and whether they have a responsibility to eliminate negative consequences of research participation.

4. "IQ Test Performance of Black Children Adopted by White Families" Scarr & Weinberg (1976)

TOPICAL AREA: INTELLIGENCE

Subject: Nature/Nurture Influences on Intelligence

ETHICAL ISSUES IN SOCIALLY SENSITIVE RESEARCH WITH CHILDREN: This study introduces students to procedures regarding child assent and the ethical issues associated with acquiring information from state or school files. The case also challenges students to reflect on societal influences on research design and whether social scientists are responsible for how their research findings may be used by the public.

5. "Cognitive, Social, and Physiological Determinants of Emotional State" Schacter & Singer (1962)

TOPICAL AREA: MOTIVATION/EMOTION

Subject: Cognitive and Physiological Bases of Emotion

ETHICAL ISSUES IN DECEPTIVE RESEARCH: This study asks students to examine scientific and ethical arguments for and against the use of deceptive research practices. The case also raises issues regarding the use of introductory psychology students as research participants.

6. "NIMH Treatment of Depression Collaborative Research Program" Elkin et al (1989)

TOPICAL AREA: TREATMENT OF PSYCHOPATHOLOGY

Subject: Depression

ETHICAL ISSUES IN CLINICAL TRIALS RESEARCH: This description of clinical trials research provides an example of research that can directly benefit and at the same time harm research participants. The study challenges students to reflect on random assignment to treatment and pill-placebo conditions and informed consent issues pertinent to research with psychologically vulnerable (depressed) patients.

A BRIEF OVERVIEW OF ETHICAL ISSUES IN PSYCHOLOGICAL RESEARCH

Identification of ethical issues in the conduct of psychological research requires students to consider how psychologists can balance their obligation to produce scientifically valid data with their responsibility to protect the rights and welfare of research participants and others whom their research might affect. For example, researchers often find that ethical procedures designed to protect participant autonomy and welfare may conflict with scientific procedures required to search for truth through experimental controls. The primary goal of the American Psychological Association's *Ethical Principles of Psychologists and Code of Conduct* (1992) is to provide both the general principles and the decision rules to guide psychologists in protecting the welfare of individuals and groups with whom they work. While ethical standards 6.06 through 6.26 of the *Ethical Principles* specifically address the situations encountered by research psychologists (see below), the complexity of issues examined by research psychologists will often give rise to situations for which standards may appear ambiguous or contradictory when applied to specific situations. Accordingly, researchers often draw upon the following more general principles as they develop ethical procedures for psychological research with human or animal subjects:

Scientific Validity and Value: When evaluating the ethical acceptability of an experiment, psychologists must be confident that the design ensures a formal relationship between data and conclusions which can yield scientific facts relevant to the question under study. This value is articulated in the APA *Ethical Principles* in the requirement that psychologists "design, conduct, and report research in accordance with recognized standards of scientific competence and ethical research" (Standard 6.06). A study may be well designed, but be of little scientific or social value because the hypotheses are trivial or cannot be effectively translated into the body of scientific knowledge or into useful applications. Moral consideration of psychological

research rests in part, therefore, on the extent to which the research findings will expand the scope of scientific knowledge, directly help research participants, or influence societal attitudes or public policy.

Beneficence: The principle of beneficence reflects the ethical responsibility to maximize the benefits of research and to minimize possible harm. Individuals can benefit from research *directly* (e.g., as in the potential treatment effects of clinical trials research or the educative value of participating in basic research) or *indirectly* (e.g., through future applications of the knowledge generated by the research). Research designed to produce benefits can also expose participants to *direct* harm (e.g., the condition of depressed patients randomly assigned to a no-treatment control group may deteriorate) or *indirect* harm (e.g., members of a social group may be stigmatized by findings from a psychological experiment). The protection of subject welfare and avoidance of harm requires that the psychologist identify the risks and benefits of research participation and plan his or her research in a manner which will maximize benefit and minimize risk. According to the APA *Ethical Principles* this includes taking reasonable steps to implement appropriate protections for the rights and welfare of human participants and other persons affected by the research, minimizing the possibility that results will be misleading (Standards 6.06b and 6.06c).

Respect: The principle of respect reflects the moral concern that people have the right to self-determination and privacy and that persons with diminished autonomy (e.g., children, mentally impaired) have these rights protected. Informed consent is seen by many as a major means of respecting the rights of research participants. Three basic guidelines for consent are that participant involvement in research be informed, voluntary, and rational. According to the APA *Ethical Principles* prior to conducting research psychologists obtain appropriate informed consent which, using language that is reasonably understandable to participants (or their legal guardians), informs them of the nature of the research; their freedom to participate or decline participation at any time; the foreseeable consequences of declining or withdrawing; significant factors that may be expected to influence their willingness to participate (such as risks, discomfort, adverse effects, or limitations on confidentiality); and other aspects about which prospective participants inquire (Standard 6.11). The APA ethical standards do allow researchers to dispense with informed consent for research involving anonymous questionnaires, naturalistic observations, or certain kinds of archival research (Standard 6.12). In addition, psychologists are allowed to deceive research participants if: the deceptive techniques are justified by the scientific, educational, or applied value of the study; equally effective alternative procedures are not feasible; participants are not deceived about significant aspects (e.g., physical risks) that would influence their willingness to participate; and the true nature of the study is explained to the participant as soon as possible (Standard 6.15).

Justice: The principle of justice refers to the moral value of fair and equal treatment, including the equitable distribution of research benefits and costs. This principle requires that research subjects are equitably selected and treated regardless of nationality, race, age, sex or social status. In the design of psychological research, justice is also reflected in the concern with balancing the inclusion of diverse populations in scientific investigation with sensitivity to the differential impact that participation in such research may have on diverse populations. According to the APA *Ethical Principles* psychologists adapt methods to the needs of different populations and take steps to guard against unfair discrimination based on age, gender, race,

ethnicity, national origin, religion, sexual orientation, disability, or socioeconomic status (General Principle C and Standard 1.10).

The Contextual Nature of Ethical Decision Making: While general moral principles are useful starting points for ethical decision-making, research psychologists need to consider the following points:

- *Ethical requirements are best understood within their application to a given context*
- *Practical ethics involves a focus on the scientist as moral agent rather than moral judge*
- *Ethical decision-making is a process of construction rather than discovery.*
- *Ethical problems can be seen as design problems in which a creative approach may result in generating a solution which escapes a dilemma rather than resolves it.*

INSTRUCTIONAL MATERIALS INCLUDED IN THIS MANUAL

- Introduction and description of the curriculum
- A brief overview of ethical issues in psychological research
- The American Psychological Association's ethical standards for research with human and animal subjects
- Brief abstracts of each of 6 case studies
- Extended summaries of each case study detailing the *purpose, primary hypothesis, subjects, procedure, results, and conclusions of the study*
- Four student focus questions for each study to be used for homework assignments and class discussion
- Instructors' guides for leading each class discussions
- Three examination essays and grading guidelines
- A student evaluation form*

Materials included in the Student Workbook:

- Brief abstracts of each of the 6 case studies
- Extended summaries of each case study detailing the *purpose, primary hypothesis, subjects, procedure, results, and conclusions of the study*
- Four student focus questions for each study to be used for homework assignments and class discussion

RELATED READINGS

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ETHICAL PRINCIPLES OF PSYCHOLOGISTS AND CODE OF CONDUCT

STANDARDS 6.06-6.26

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American Psychologist, 47, No. 12, 1608-1610

6.06 Planning Research

- a) Psychologists design, conduct, and report research in accordance with recognized standards of scientific competence and ethical research.
- b) Psychologists plan their research so as to minimize the possibility that results will be misleading.
- c) In planning research, psychologists consider its ethical acceptability under the *Ethics Code*. If an ethical issue is unclear, psychologists seek to resolve the issue through consultation with institutional review boards, animal care and use committees, peer consultations, or other proper mechanisms.
- d) Psychologists take reasonable steps to implement appropriate protections for the rights and welfare of human participants, other persons affected by the research, and the welfare of animal subjects.

6.07 Responsibility

- a) Psychologists conduct research competently and with due concern for the dignity and welfare of the participants.
- b) Psychologists are responsible for the ethical conduct by them or by others under their supervision or control.
- c) Researchers and assistants are permitted to perform only those tasks for which they are appropriately trained and prepared.
- d) As part of the process of development and implementation of research projects, psychologists consult those with expertise concerning any special population under investigation or most likely to be affected.

6.08 Compliance With Law and Standards

Psychologists plan and conduct research in a manner consistent with federal and state law and regulations, as well as professional standards governing the conduct of research, and particularly those standards governing research with human participants and animal subjects.

6.09 Institutional Approval

Psychologists obtain from host institutions or organizations appropriate approval prior to conducting research, and they provide accurate information about their research proposals. They conduct the research in accordance with the approved research protocol.

6.10 Research Responsibilities

Prior to conducting research (except research involving only anonymous surveys, naturalistic observations, or similar research), psychologists enter into an agreement with participants that clarifies the nature of the research and the responsibilities of each party.

6.11 Informed Consent to Research

a) Psychologists use language that is reasonably understandable to research participants in obtaining their appropriate informed consent (except as provided in Standard 6.12, Dispensing With Informed Consent). Such informed consent is appropriately documented.

b) Using language that is reasonably understandable to participants, psychologists inform participants of the nature of the research; they inform participants that they are free to participate or to decline to participate or to withdraw from the research; they explain the foreseeable consequences of declining or withdrawing; they inform participants of significant factors that may be expected to influence their willingness to participate (such as risks, discomfort, adverse effects, or limitations on confidentiality, except as provided in Standard 6.15, Deception in Research); and they explain other aspects about which the prospective participants inquire.

c) When psychologists conduct research with individuals such as students or subordinates, psychologists take special care to protect the prospective participants from adverse consequences of declining or withdrawing from participation.

d) When research participation is a course requirement or opportunity for extra credit, the prospective participant is given the choice of equitable alternative activities.

e) For persons who are legally incapable of giving informed consent, psychologists nevertheless (1) provide an appropriate explanation, (2) obtain the participant's assent, and (3) obtain appropriate permission from a legally authorized person, if such substitute consent is permitted by law.

6.12 Dispensing With Informed Consent

Before determining that planned research (such as research involving only anonymous questionnaires, naturalistic observations, or certain kinds of archival research) does not require the informed consent of research participants, psychologists consider applicable regulations and institutional review board requirements, and they consult with colleagues as appropriate.

6.13 Informed Consent in research Filming or Recording

Psychologists obtain informed consent from research participants prior to filming or recording them in any form, unless the research involves simply naturalistic observations in public places and it is not anticipated that the recording will be used in a manner that could cause personal identification or harm.

6.14 Offering Inducements for Research Participants

a) In offering professional services as an inducement to obtain research participants, psychologists make clear the nature of the services, as well as the risks, obligations, and limitations. (See also Standard 1.18, Barter [With Patients or Clients].)

b) Psychologists do not offer excessive or inappropriate financial or other inducements to obtain research participants, particularly when it might coerce participation.

6.15 Deception in Research

a) Psychologists do not conduct a study involving deception unless they have determined that the use of deceptive techniques is justified by the study's prospective scientific, educational, or applied value and that equally effective alternative procedures that do not use deception are not feasible.

b) Psychologists never deceive research participants about significant aspects that would affect their willingness to participate, such as physical risks, discomfort, or unpleasant emotional experiences.

c) Any other deception that is an integral feature of the design and conduct of an experiment must be explained to participants as early as feasible, preferably at the conclusion of their participation, but no later than at the conclusion of the research. (See also Standard 6.18, Providing Participants With Information About the Study.)

6.16 Sharing and Utilizing Data

Psychologists inform research participants of their anticipated sharing or further use of personally identifiable research data and of the possibility of unanticipated future uses.

6.17 Minimizing Invasiveness

In conducting research, psychologists interfere with the participants or milieu from which data are collected only in a manner that is warranted by an appropriate research design and that is consistent with psychologist's roles as scientific investigators.

6.18 Providing Participants With Information About the Study

a) Psychologists provide a prompt opportunity for participants to obtain appropriate information about the nature, results, and conclusions of the research, and psychologists attempt to correct any misconceptions that participants may have.

b) If scientific or humane values justify delaying or withholding this information, psychologists take reasonable measures to reduce the risk of harm.

6.19 Honoring Commitments

Psychologists take reasonable measures to honor all commitments they have made to research participants.

6.20 Care and Use of Animals in Research

- a) Psychologists who conduct research involving animals treat them humanely.
- b) Psychologists acquire, care for, use, and dispose of animals in compliance with current federal, state, and local laws and regulations, and with professional standards.
- c) Psychologists trained in research methods and experienced in the care of laboratory animals supervise all procedures involving animals and are responsible for ensuring appropriate consideration of their comfort, health, and humane treatment.
- d) Psychologists ensure that all individuals using animals under their supervision have received instruction in research methods and in the care, maintenance, and handling of the species being used, to the extent appropriate to their role.
- e) Responsibilities and activities of the individuals assisting in a research project are consistent with their respective competencies.
- f) Psychologists make reasonable efforts to minimize the discomfort, infection, illness, and pain of animal subjects.
- g) A procedure subjecting animals to pain, stress, or privation is used only when an alternative procedure is unavailable and the goal is justified by its prospective scientific, educational, or applied value.
- h) Surgical procedures are performed under appropriate anesthesia; techniques to avoid infection and minimize pain are followed during and after surgery.
- i) When it is appropriate that the animal's life be terminated, it is done rapidly, with an effort to minimize pain, and in accordance with accepted procedures.

6.21 Reporting of Results

- a) Psychologists do not fabricate data or falsify results in their publications.
- b) If psychologists discover significant errors in their published data, they take reasonable steps to correct such errors in a correction, retraction, erratum, or other appropriate publication means.

6.22 Plagiarism

Psychologists do not present substantial portions or elements of another's work or data as their own, even if the other work or data source is cited occasionally.

6.23 Publication Credit

- a) Psychologists take responsibility and credit, including authorship credit, only for work they have actually performed or to which they have contributed.
- b) Principal authorship and other publication credits accurately reflect the relative scientific or professional contributions of the individuals involved, regardless of their relative status. Mere possession of an institutional position, such as Department Chair, does not justify authorship credit. Minor contributions to the research or to the writing for publications are appropriately acknowledged, such as in footnotes or in an introductory statement.
- c) A student is usually listed as principle author on any multiple-authored article that is substantially based on the student's dissertation or thesis.

6.24 Duplicate Publication of Data

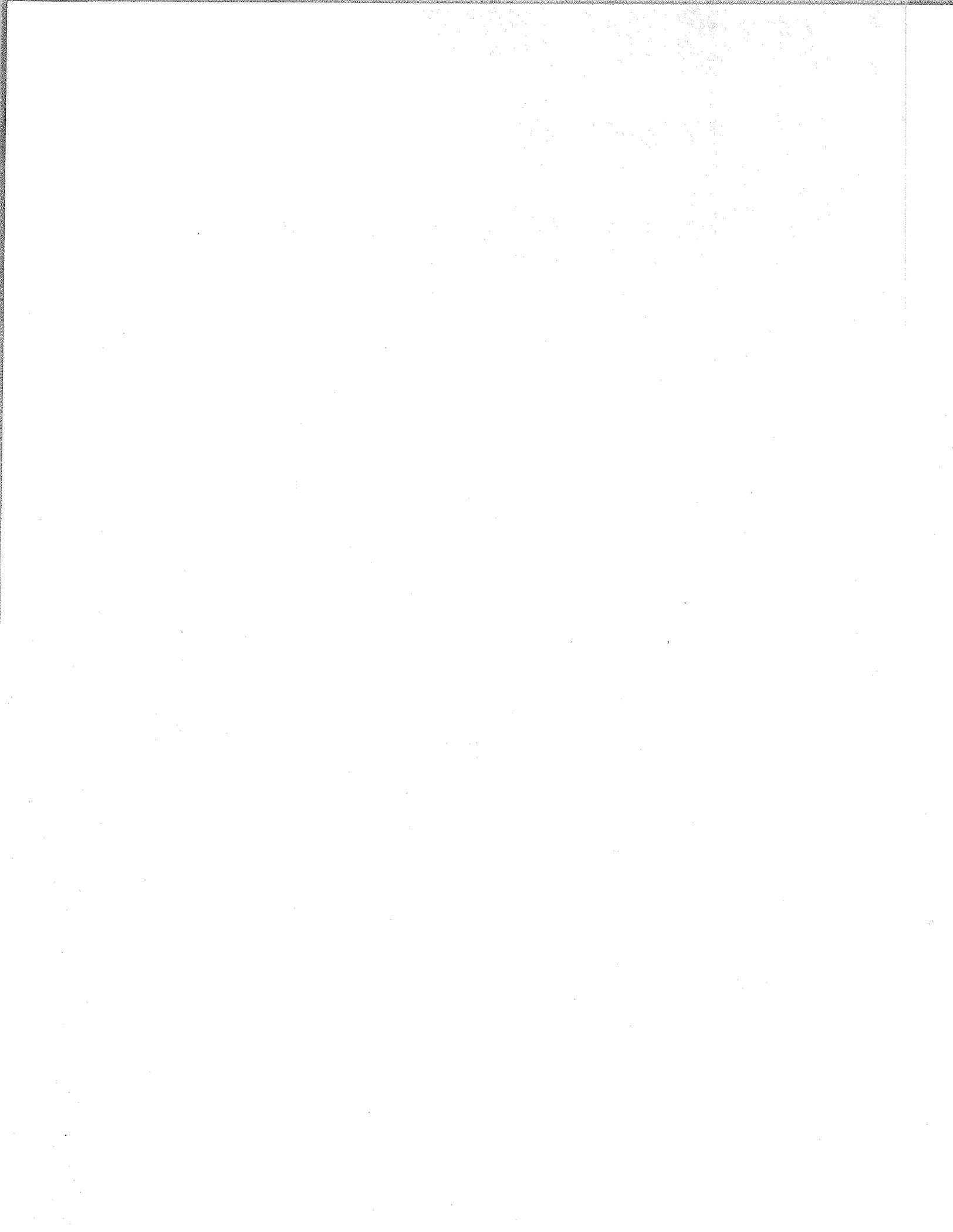
Psychologists do not publish, as original data, data that have been previously published. This does not preclude republishing data when accompanied by proper acknowledgment.

6.25 Sharing Data

After research results are published, psychologists do not withhold the data on which their conclusions are based from other competent professionals who seek to verify the substantive claims through reanalysis and who intend to use such data only for that purpose, provided that the confidentiality of the participants can be protected and unless legal rights concerning proprietary data preclude their release.

6.26 Professional Reviewers

Psychologists who review material submitted for publication, grant, or other research proposal review respect the confidentiality of and the proprietary rights in such information of those who submitted it.



Ethical Issues in Field Research

Read the brief study summary below and answer the 4 questions on the following 2 pages. You may also refer to the extended summary on the next page.

EFFECT OF BLOOD ON REACTIONS TO A VICTIM

Jane Allyn Piliavin and Irving M. Piliavin (1972)

Journal of Personality and Social Psychology, 232, 353-361

The purpose of this study was to examine some of the factors leading to "bystander apathy" (the failure of witnesses to help others in distress). Some researchers had suggested that people are less likely to help a victim if many other bystanders are present. Piliavin and Piliavin disagreed with this explanation and proposed that people are less likely to help a victim if they feel helping may place them in danger. The researchers observed the helping behaviors of subway passengers in response to a series of "staged crises" in which a "victim" with a cane feigned a collapse on a crowded train and appeared to either bleed (*indicating a potentially dangerous situation*) or not bleed from the mouth. During the experiment some of the passengers panicked when they saw the "bleeding victim" and some attempted to pull the emergency cord to stop the train. The finding that passengers were *less* likely to help the "bleeding" victim irrespective of how many other bystanders were present, supported the hypothesis that the perceived danger of the situation (rather than the number of other witnesses present) determines helping behavior.

"EFFECT OF BLOOD ON REACTIONS TO A VICTIM"

Jane Allyn Piliavin and Irving M. Piliavin (1972)

Journal of Personality and Social Psychology, 23(3), 353-361

PURPOSE OF THE STUDY: The purpose of this study was to explore some of the reasons underlying bystander apathy to the distress of others. At the time this study was conducted, there was a great deal of media coverage of Kitty Genovese; a woman viciously murdered outside her apartment in Queens, New York. Although Ms Genovese screamed for help, not one of the thirty-eight neighbors who watched the attack from their windows came to her assistance or even called the police. Researchers Bibb Latane and John Darley explained the witnesses failure to help by proposing that when there are a lot of other bystanders around, individuals are less likely to help someone because they feel that the other people share the responsibility. This was called the *diffusion of responsibility* theory. Piliavin and Piliavin offered a different hypothesis. they proposed that individuals are reluctant to help others when they feel they themselves may be in danger.

HYPOTHESIS: Piliavin and Piliavin proposed that when an individual observes another in distress they become anxious and desire to reduce their anxiety by offering direct help to the victim, indirect help (notifying others), or leaving the scene. Whether a bystander will offer help or leave the scene is determined by how costly (dangerous) the bystander believes the situation to be. The primary hypothesis tested in this study was: *As the perceived cost (personal risk) for helping increases, bystanders are less likely to offer direct help and more likely to provide indirect help or leave the scene.*

SUBJECTS: The subjects were all passengers riding in the end cars of express subways of the Market Street line in Philadelphia during the late afternoon. Subjects were not informed that an experiment was taking place, nor that notes were being taken on their behaviors.

PROCEDURE: To test Piliavin and Piliavin's theory of bystander intervention, the behavior of passengers was observed when an experimenter, posing as a "victim" with a cane, "collapsed" in a moving subway car. To experimentally manipulate the "cost" of helping, in half of the conditions researcher acting as a the victim had fake blod coming out of his mouth and in half he did not appear to bleed. The researchers assumed that the presence of blood increased the costs of helping because the sight of blood should arouse feelings of fear and revulsion in the typical bystander. The researchers staged approximately 42 of these incidents, each lasting approximately 3 minutes (the time between station stops). Problems encountered during the experiment included discovery and harassment by transit authority police; potentially dangerous actions on the part of real bystanders (e.g., attempting to pull the emergency cord to stop the train); and passenger panic during some of the blood trials.

RESULTS: As predicted, bystanders exposed to the "bloody" victim were less likely to offer direct help and more likely to offer indirect help or no help at all when compared to those exposed to the bloodless victim. The researchers also found that contrary to the *diffusion of responsibility* hypothesis, the number of bystanders present did not effect helping behavior.

CONCLUSIONS: The results of the Piliavin & Piliavin study support the theory that the perceived cost of helping a victim, rather than a sense of diffused responsibility with other bystanders, primarily determines whether a bystander will help a person in need.

"Effect of Blood on Reactions to a Victim"

INSTRUCTOR DISCUSSION GUIDE

1. Does this study have scientific and/or social value? Who will benefit from this study: The research subjects, science, society?

Social psychologists have long been interested in how people's actions in general, and their helping (prosocial) behaviors in particular, are affected by others. Societal interest in the study of the influence of bystanders on the helping behavior of individuals witnessing a crime increased following a number of highly publicized cases of witnesses failing to come to the aid of a crime victim.

2. Could the subway riders who saw the "victim" collapse be harmed by this experiment? If so, are there ways to minimize such harm and still conduct the experiment? Can harm come to society when psychologists stage crises in public places?

As indicated by the experimental observations (e.g., panic behavior, pulling the train's emergency cord), a number of subway riders were upset by witnessing an individual who they believed was hurt. Some might argue that witnessing an individual in distress has a high probability of occurring in a city subway system; and consequently the experimenters were exposing passengers to an event within the range of their normal daily experiences. Others have expressed concern that publicity regarding "staged crises" may lead citizens to be skeptical of events they witness, and perhaps not come to the aid of an individual when they might otherwise have done so.

3. Are the rights of the subjects protected in this study? Has the subway passengers' autonomy (the right to determine one's own fate) and/or privacy been violated? If so, are their ways to protect these rights and still test conditions that create bystander apathy?

Subway riders were not informed that they were part of an experiment, nor that they would observe what they believed was an individual in distress. While the experimenters were secretly taking notes on passenger behavior, the subway is a public place where riders do not assume their actions are private; thus some have argued this type of field research does not violate individual privacy. In addition, the experimenters did not have identifying information regarding the passengers, and thus their responses were anonymous. The hypothesis could not have been adequately tested if subjects were informed in advance that the "crises" was staged. One alternative is to inform passengers about the experiment at the end of the study (although this would have to be done quickly in a general announcement, since passengers quickly leave at each stop).

4. How might you modify this study to make it more ethically acceptable? If you were a member of an institutional review board (a committee that evaluates whether research proposals meet ethical standards), would you approve conducting this study today in its original form or with your modifications? Why or why not?

According to APA ethical standards 6.10 and 6.12, before conducting research, psychologists enter into an agreement with participants that clarifies the nature of the research, *except* in research involving only anonymous surveys, naturalistic observations, or *similar research*. The APA *Ethical Principles* thus leaves the decisions about whether to conduct this type of field study up to the ethical discretion of researchers and IRBs (Standard 6.06c). Decisions regarding the ethical acceptability of this study need to take into account the value of the experiment, participant rights, potential harm, and the feasibility of alternative procedures. *Naturalistic* observation is a methodological alternative to the experimental procedures used in this study. Experimenters could ride the subways, noting and observing passenger behavior when real passengers appeared to be in trouble, taking into account the nature of the victim's problem, how many, and what types of bystanders were present. This method is, however, more costly, and might put the observers in real danger. A second option, is to post on the subway walls a sign noting that an observational experiment on passenger behavior was being conducted, although some have argued that this would threaten the validity of the experiment by creating passenger expectations. Moreover, not all passengers would read the sign and city permission for such an experiment might be denied, as indicated by the fact that transit police stopped the experiment on the second day.

"Effect of Blood on Reactions to a Victim"

Additional Readings

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- Koocher, G. P. (1977). Bathroom behavior and human dignity. *Journal of Personality & Social Psychology*, 35, 120-121.

Ethical Issues in Animal Research

Read the brief study summary below and answer the 4 questions on the following 2 pages. You may also refer to the extended summary on the next page.

SINGLE UNIT ACTIVITY IN STRIATE CORTEX OF UNRESTRAINED CATS

David H. Hubel (1959)

Journal of Physiology, 147, 226-238

The major purpose of this study was to discover whether our ability to see is determined by cells that fire in the brain to points of light in specific locations. To test this hypothesis, Hubel developed a procedure which enabled researchers to study brain activity in cats whose visual system shares similarities with the human eye and brain. First the cats were anesthetized and a hollow peg was surgically implanted into their skulls. Once the cats recovered from the anesthesia, tiny microelectrodes were placed into the brain through the peg. The electrodes measured the response of brain cells when the cat watched stationary and moving points of light. At the end of the experiment the cats were killed to determine that the pegs had not damaged the brain areas causing abnormal brain cell responding. The results of the study supported the hypothesis by demonstrating that cells in the cat visual cortex respond to small distinct points of light. In addition Hubel found that many cortical cells respond to light points moving in particular directions. Hubel eventually won a Nobel prize for his work on the cat's striate cortex and its implications for our understanding of human vision.

"Single Unit Activity in Striate Cortex of Unrestrained Cats"

David H. Hubel (1959)

Journal of Physiology, 147, 262-238

PURPOSE OF THE STUDY: The purpose of this study was to determine whether our ability to see is determined by cells that fire in the brain (the striate cortex). This question was first examined in cats who have a visual system similar to humans. At the time this study was conducted, scientists had only been able to study brain (cortical) cell responding while cats were not conscious (under anesthesia). Hubel's experiment pioneered a new technique to study brain activity when animals were in a natural conscious awake state. Hubel eventually won a Nobel Prize for his work on cells in the cat striate cortex and the implications of that work to our understanding of human vision.

HYPOTHESIS: Scientists had previously found that cells in the eye (the retina) responded to specific points of light. Hubel wanted to determine whether there were cells in the striate region of the brain that also responded to these points of light. The primary hypothesis tested in this study was: *Cells in the cat striate cortex will respond to points of light in specific locations.*

SUBJECTS: Thirty-five cats were studied.

PROCEDURE: Hubel developed a technique which would allow cortical brain cell responses to be measured while cats were in a natural awake state. To do this he first anesthetized the cats and implanted a hollow peg into each of their skulls. The peg enabled Hubel to insert tiny microelectrode wires into the cat's brain once the cat recovered from the anesthesia. The electrodes recorded cortical cell responding while the cat watched a screen upon which stationary or moving points of light were displayed. During these recordings the awake cat lay on a table restrained by a loose fitting chest harness. In the last phase of the experiment Hubel terminated the lives of the animals to ascertain whether the insertion of the pegs had damaged the brain in a way that would have caused the cells to respond unnaturally. Other practical methods for determining brain damage were not available at the time of his experiments.

RESULTS: The microelectrode recordings indicated that many cells in the visual cortex respond to both stationary points of light and to points of light moving in particular directions.

CONCLUSIONS: Hubel's findings indicated that detection of specific features of the visual world occur in the striate cortex of the cat brain. He also found that some cells only respond to stationary points of light, while other cells only respond to movement of light points in specific directions. The discovery of movement sensitive cells suggested that the visual cortex might enable cats to attend to moving objects and coordinate head and eye movements. It also suggested that people with damaged retinas might someday be helped to see by stimulating their striate cortex.

"Single Unit Activity in Striate Cortex of Unrestrained Cats"

INSTRUCTOR DISCUSSION GUIDE

1. Does this study have scientific and/or social value? Who will benefit from this study: The research animals, other members of the cat species, science, human society?

In many respects, the cat's visual system is similar to that of humans. To understand how humans are able to perceive visual patterns we must examine how light information received by the retina is changed into neural impulses that are sent to and then processed by the brain. Hubel's work was an important step in understanding what role the visual cortex plays in perception. He won the Nobel prize for the body of research he produced in this area. Increased understanding of these brain events has the potential to lead to techniques that can help visually impaired individuals with retinal damage "see" by means of bypassing the retina and directly stimulate cells in the striate cortex of the human brain with electrical patterns simulating the light patterns of the visual world. Studies of the feline visual system might also contribute to veterinary care of domesticated cats with impaired vision.

2. Did the surgical procedures cause harm? Was sacrificing the animal to determine if the pegs had damaged the brain justified? Are there ways to minimize harm to the animals in this study?

At present, non-invasive technique for measuring neural responding of brain cells is not available. According to APA Ethical Principle 6.20h surgical procedures on animal subjects are performed under appropriate anesthesia using techniques that avoid infection and minimize pain. Whenever surgery is performed on experimental animals investigators need to determine whether the behaviors they observe (in this case the response of neural cells) was elicited by the independent variable (in this case the light stimuli) or whether they are a product of the surgery itself. Thus analyzing the cat brains was an important means of determining the internal validity of the study (did the experimental treatment make a difference). According to APA Ethical Principle 6.20i, when it is appropriate to terminate an animal's life, it must be done rapidly and with minimal pain, according to recognized procedures.

3. Do animal research subjects have the same rights as human research subjects? If so, why? If not, why not? What are the rights of animal research subjects? Do researchers have an ethical responsibility to animal subjects?

The demonstrated continuity between animal and human physiology have lead researchers to conclude that animals at the least experience pain, and may even have emotions. On this basis it has been argued that researchers have a special responsibility to protect animal subjects since animals can neither consent nor be informed of experimental risks (Carroll, Schneider, & Wesley, 1985). Some psychologists taking an act-utilitarian approach believe that animal research is justified if the costs to the animal are outweighed by the potential benefits to members of society. A statement by Singer (1975) expresses another ethical perspective:

"...either the animal is not like us, in which case there is no reason for performing the experiment, or else the animal is like us, in which case we ought not to perform an experiment on the animal which would be considered outrageous if performed on one of us (pg. 47)."

4. How might you modify this study to make it more ethically acceptable? If you were a member of an institutional review board (a committee that evaluates whether research proposals meet ethical standards), would you approve conducting this study today in its original form or with your modification? Why or why not?

APA Principle 6.20g states that researchers only subject animals to pain, stress or privation when an alternative procedure is unavailable and the goal is justified by the research's prospective value. While alternative procedures are not yet feasible, researchers could minimize the number of animals used for such studies and restrict the time animals would be exposed to stress (e.g., use the minimal number of trials necessary). In all animal research, investigators must treat animals humanely. This includes ensuring that they are housed and cared for properly before, during, and after the experiment.

"Single Unit Activity in Striate Cortex of Unrestrained Cats"

Suggested Readings

Carroll, M. A., Schneider, H. G., & Wesley, G. R., (1985). *Ethics in the practice of psychology*. Englewood Cliffs, NJ: Prentice-Hall, Inc.

Gallup, G. G., & Suarez, S. (1980). On the use of animals in psychological research. *Psychological Reports*, 30, 211-218.

Singer, P. (1975). *Animal liberation*. New York: Avon Books.

Ethical Issues in Aversive Conditioning Research

Read the brief study summary below and answer the 4 questions on the following 2 pages. You may also refer to the extended summary on the next page.

CONDITIONED EMOTIONAL REACTIONS

John B. Watson and Rosalie Raynor (1920)

Journal of Experimental Psychology, 3, 1-14

In this study, John Watson, the founder of the behavioral approach to understanding psychological phenomena, tested the hypothesis that fear could be classically conditioned in young children. The subject of the experiment was an 11-month-old infant named Albert, who lived in the University-affiliated hospital with his mother, a wet nurse (a woman who nurses other women's babies). Over a period of 4 months Albert was exposed to numerous trials on which a white rat (which Albert did not at first respond to fearfully) was presented along with a loud, startling sound (which Albert did respond to fearfully). Once the loud sound was omitted, Albert not only showed a fear response to the white rat, but generalized the learning to fear other similar objects such as a white rabbit and a dog. The investigators took motion pictures of Albert's reactions. Albert's mother took him from the hospital before Watson and Raynor had the opportunity to experimentally eliminate the fear response.

"Conditioned Emotional Reactions"

John B. Watson and Rosalie Rayner (1920)

Journal of Experimental Psychology, 3(1), 1 - 14.

PURPOSE OF THE STUDY: The purpose of this study was to demonstrate that emotional reactions to situations can be learned. At the time this study was conducted Freudian theory proposed that sex (or love) was the principal emotion around which later normal or pathological emotional reactions arose. Watson and Rayner believed that fear and rage was as primal as love in influencing personality and that the complexity of adult emotions could be explained by early learning experiences tied to these three emotions.

HYPOTHESIS: Watson and Rayner proposed that the range of situations eliciting emotional reactions in adulthood were learned during childhood by means of classical conditioning. The primary hypothesis tested in this study was: *A fear response to an originally unfeared stimulus can be conditioned in infancy by presenting the unfeared stimulus at the same time a feared stimulus is presented.*

SUBJECTS: The subject was an infant named Albert B. whose mother was a wet nurse in a nearby home for invalid children. Testing began when Albert was approximately 9-months of age and ended when he was approximately 13-months.

PROCEDURE: The first phase of the study was designed to demonstrate that Albert did not fear a white rat, a rabbit, a dog, and other objects, but did fear a loud sound made by striking a hammer upon a suspended steel bar in back of his head. The next phase of the experiment was designed to demonstrate that a fear response to the rat could be conditioned by striking the steel bar each time Albert reached out his hand to touch the white rat. Albert's reactions to the rat were then observed when the steel bar was and was not struck. The final phase of the experiment was designed to assess whether a conditioned fear response would generalize to the other objects. Over a period of weeks, Albert was presented with blocks, the rat, a rabbit, a dog, and other stimuli and his emotional reactions were observed. Motion pictures were taken of these reactions. Albert left the study before the final phase of the experiment, removing the fear response, could be implemented.

RESULTS: In the first phase of the experiment, Albert only exhibited fear to the striking of the steel bar. The fear response was defined as a violent startle, checked breathing, raised arms, lips trembling, and crying. In the second phase of the experiment, after the rat had been continuously presented with the striking of the steel bar, Albert showed the fear response when the rat was presented alone. In the third phase of the experiment, Albert showed a fear response to objects with furry characteristics similar to the rat.

CONCLUSIONS: The results of this study indicated that fear can be classically conditioned in infancy, and that learned fear can generalize to other objects. Watson and Rayner believed that the early home life of children establishes many such conditioned emotional responses. They concluded that many adult phobias (exaggerated fears) can be explained in terms of such early conditioned responses. Today, some psychologists use behavioral (conditioning) principles to help cure phobias.

"Conditioned Emotional Reactions"

INSTRUCTOR DISCUSSION GUIDE

1. Does this study have scientific and/or social value? Who will benefit from this study: Albert, science, society?

John Watson was the first behavioral psychologist. Contrary to many scientists of his day, he believed that observable behavior should be the focus of psychological study and that most psychological phenomena could be explained in terms of early learning experiences rather than innate characteristics. His research with Albert was part of his program of study designed to demonstrate that one could modify human behavior by modifying the environment. The finding that emotions can be conditioned by past experiences has had implications for the development of behavioral treatments for different emotional disorders such as anxiety and phobias.

2. Was Albert harmed by this experiment? If so, are there ways to minimize such harm and still test the experimental hypothesis? Did Watson and Raynor have an ethical responsibility to remove the conditioned fear response before Albert left the experiment?

As reported by Watson and Raynor, Albert found the experiment a negative emotional experience. He often cried when the bar was hit and later when presented with the rat. Watson and Raynor justified their method by saying that the experimental conditions they created were no more harmful than natural events Albert would experience in everyday life. An alternative might have been to use a less noxious stimulus for conditioning or to observe Albert in his natural surroundings, noting his behavior when fearful events were spontaneously paired with neutral objects (this method would be time intensive and lack the experimental control available in the original study). Although the researchers write that they planned to recondition Albert's fear, they do not discuss the efforts, if any they made to persuade his mother to allow them to do so; in fact it is unclear whether Albert's mother even knew he was in the experiment since he lived at the hospital in which the experiments took place. According to APA Standards 6.06d and 6.18, a psychologist must take reasonable steps to protect the rights and welfare of research participants and provide a prompt explanation of the results of the study that corrects any misconceptions that participants (*in this case their guardian*) might have.

3. What ethical procedures should Watson and Raynor have followed to protect Albert's autonomy (the right to make decisions regarding one's own fate) and privacy?

According to APA Ethical Principle 6.11 when working with those incapable of giving their consent psychologists obtain guardian or parental consent. Albert's mother should have been informed about the purpose, procedures, and risks of the experiment. She should have been told that her consent to allow her son to participate was voluntary and that she could withdraw him at any time. Watson and Raynor needed to provide this information at a level that the mother could understand. Since Albert's privacy might have been violated by filming his reactions, the experimenters needed to obtain parental permission to take the pictures (as stated in APA Ethical Principle 6.13).

4. How might you modify this study to make it more ethically acceptable? If you were a member of an institutional review board (a committee that evaluates whether research proposals meet ethical standards), would you approve conducting this study today in its original form or with your modifications? Why or why not?

Watson and Raynor might have minimized the number of aversive trials in the experiment or selected a positive emotion to condition. They could have made advance arrangements with the mother to have Albert "deconditioned." According to APA Ethical Principle E and 6.07 psychologists seek to contribute to the welfare of research participants and take reasonable steps to implement appropriate protections for participant rights and welfare. The question remains whether aversive conditioning experiments, with no potential for direct benefit to the participant, should be conducted -- even with parental consent. Kant's *practical imperative* is relevant to this question "act in such a way that you always treat humanity, whether in your own person or in that of any other, never simply as a means, but always at the same time as an end (page 96)."

"Conditioned Emotional Reactions"

Suggested Readings

Fisher, C. B., & Rosendahl, S. A. (1990). Psychological risks and remedies of research participation. In C. B. Fisher & W. W. Tryon (Eds.). *Ethics in applied developmental psychology: Emerging issues in an emerging field* (pp. 43-59). Norwood, NJ: Ablex Publishing Corporation.

Harris, B. (1979). What ever happened to little Albert? *American Psychologist*, 43, 151-160.

Kant, I. (1785/1964). *Groundwork of the metaphysic of morals*. Trans. H. J. Paton. New York: Harper & Row.

Ethical Issues in Socially Sensitive Research with Children

Read the brief study summary below and answer the 4 questions on the following 2 pages. You may also refer to the extended summary on the next page.

IQ TEST PERFORMANCE OF BLACK CHILDREN

ADOPTED BY WHITE FAMILIES

Sandra Scarr and Richard Weinberg (1976)

American Psychologist, 31, 726-739.

During the 1970's scientists debated whether genetic or environmental factors could explain why lower socioeconomic and black (African American) children on average obtained lower intelligence test and school achievement scores than higher socioeconomic and white children. The purpose of this study was to test the hypothesis that African American children adopted by white middle-class parents would have higher IQ (intelligence test) and school achievement scores than scores reported for African American children reared by their biological parents. IQ testing was conducted in the child's home. Information regarding the child's adoption history and school performance was obtained from State Department of Public Welfare adoption records and school records. The researchers found that the IQ scores and school achievement scores for the adopted children were above the average previously reported for both black children and the general population. The researchers concluded that the IQ scores of African American children are influenced by their environment and that African American children's intellectual achievement can be increased by rearing in environments like those typified by economically and educationally advantaged white families.

"IQ Test Performance of Black Children Adopted by White Families"

Sandra Scarr and Richard A. Weinberg (1976)

American Psychologist, 31, 726-739

PURPOSE OF THE STUDY: During the 1970's there were several studies indicating that children from lower socioeconomic and black (African American) families regularly scored lower on standardized intelligence and school achievement tests than children from upper socioeconomic and white families. Researchers debated whether these economic and racial differences resulted from genetic or environmental differences between the groups. Scarr and Weinberg sought to demonstrate the influence of environmental factors on children's test performance by comparing the IQ and school achievement scores of African American children adopted by white upper middle class families with the scores reported for African American children raised by their biological families.

HYPOTHESIS: Scarr and Weinberg proposed that the social-environment of white economically and educationally advantaged families, when compared to the social-environment of African American economically and educationally less advantaged families, was more conducive to bringing out a child's full intellectual potential. The primary hypothesis tested in this study was: *African American children reared in economically advantaged white homes will have IQ scores higher than those reported for African American children reared in African American families.*

SUBJECTS: Approximately 100 highly educated and economically advantaged white families with a African American adopted child 4 years of age or older participated in the study. The families were informed about the study by the Minnesota State Department of Public Welfare Adoption Unit and through a Newsletter from the Open Door Society (an organization founded by adoptive parents of African American children). The Open Door Society was very enthusiastic about the project.

PROCEDURES: IQ tests and family interviews were administered in the children's homes. Information about the child's adoption history was also gathered from State Department adoption records. School achievement scores were obtained from the children's schools. Information regarding the average IQ and school achievement scores of nonadopted African American and white children were derived from previous national surveys.

RESULTS: The IQ scores of adopted African American children were significantly above the average IQ of the general population and those reported for African American children raised by their biological parents. The school achievement and aptitude scores of the African American adopted children were also higher than the national norms.

CONCLUSIONS: Scarr and Weinberg found that African American children raised in economically advantaged white families had IQ and school achievement scores significantly higher than that usually achieved by African American children reared in their biological homes. They suggested that the IQ scores of African American children are influenced by their environment and that disadvantages suffered by African American families may not be conducive to academic achievement. They concluded that African American children's intellectual achievement can be increased by rearing them in environments, that are culturally similar to the traditional white school environment.

**"IQ Test Performance of Black Children
Adopted by White Families"**

INSTRUCTOR DISCUSSION GUIDE

1. Does this study have scientific and/or social value? Who will benefit from this study: The adopted children, their families, other African American children and their families, science, society?

This study addressed the classic nature-nurture issue as it pertains to the determinants of intelligence. The investigators used a research methodology that in the 1970's was considered advanced and innovative. Within the context of research methodologies designs used today, conclusions drawn from the study might be limited in several ways. First, IQ and educational achievement of African American children living with their biological families were not experimentally evaluated. Conclusions regarding the effect of adoption were inferred by existing norms for African American children. However, the demographic characteristics underlying these norms were unknown, e.g., the socioeconomic distribution of the sample, whom the children actually live with, the quality of their schools, their prenatal history and/or health complications. Second, the IQ of the biological parents was inferred from what information there was on their educational level. Third, Scarr & Weinberg found a correlation between the educational level of the biological parent and the IQ of the white adoptive parents--a relationship that can confound conclusions regarding the "independent" impact of rearing in a white environment. This study was supported by the Open Door Society (an organization founded by adoptive parents of African American children) suggesting that the adoptive parents believed that the results of this study would benefit their families. Evidence that environment exerts a strong influence on IQ and school achievement had the potential to influence public policy in the direction of providing economic support to enrich the environment of poor African American children (e.g., Headstart programs).

2. Could the research subjects be harmed by this experiment? Can harm come to members of an ethnic minority group when research is directed at demonstrating that children of this group have higher IQ scores if raised in white, economically advantaged homes? Are social scientists responsible for how their research findings might be used by the public? If so, are there ways to minimize potential harm?

One conclusion that might be drawn from this study is that African American families are inferior child-rearing environments. Indeed, Scarr and Weinberg describe the adoption of African American children by white families as an "intervention," on a par with compensatory education, that could remedy the "alarming rate of school failure" reported for African American children. There is a lack of consensus whether social scientists are responsible for how their data is used by the public. Some, like Scarr (1988), argue that the "academic freedom" to discover the laws of human nature, irrespective of the particular facts found, will in the long run benefit all of society. Others, like Sarason (1984) and Hoffman (1990), believe that researchers need to consider the social implications of their work as well as their own social biases since the conduct of science is never free from societal influence. According to APA Ethical Principle F, psychologists try to avoid misuse of their work.

3. What ethical procedures should Scarr and Weinberg have followed to ensure that the rights to autonomy (the right to determine one's own fate), privacy, and confidentiality were protected for all subjects of this research: the adoptive parents, the adopted children, and the biological parents?

According to APA Ethical Principle 6.11 when working with those incapable of giving legal consent (e.g., minors) psychologists obtain guardian or parental consent. Thus, parents should have been informed about the purpose, procedures, and risks of the experiment as well as the voluntary nature of their participation. In addition, the *assent* of the child should also be required (Principle 6.11e). The child should be given information about the study at a language level he or she can understand. The researcher must however weigh the potential for harm versus the child's autonomy when deciding the extent to which each child will be told the full purpose of the study. This decision will depend upon the age of the child and the extent to which the investigator views parental consent as a means of protecting the child's autonomy. The researchers must acquire signed parental consent to use both the adoption and school records of each child. They must also institute procedures for maintaining the confidentiality of all information acquired in this study. Scarr and Weinberg also had to develop procedures to insure that the privacy of each biological parent was protected (e.g., had biological parents been promised that their identity would not be revealed to the adoptive family).

"IQ Test Performance of Black Children Adopted by White Families"

4. What social values prevalent today might influence decisions regarding the ethical justification of this type of research? How might you modify this study to make it more ethically acceptable? If you were a member of an institutional review board, would you approve conducting this study today in its original form or with your modifications? Why or why not?

The nature-nurture issue as it relates to the IQ and academic achievement of African American youth was an issue of central concern in both scientific and social spheres in the 1970's. During this time, federal funding for both research and intervention programs was more abundant than at present. Like today, the ability to understand the relationship of academic achievement and family life was confounded by the effects of poverty and racism on child development. In addition, today, issues related to school achievement are confounded by scientific, social and political concerns over school violence. As a consequence, psychologists studying ethnic minority development must be particularly careful to plan their research to minimize the possibility that it will be misleading or misinterpreted by the public (Standard 6.06b). Today, there is a heightened sensitivity to ethnic identity issues in society. According to APA Ethical Principle D, psychologists must be aware of, and demonstrate sensitivity to, cultural and socioeconomic differences of those with whom they work. In recent years, researchers have recognized that studies of ethnic minority families based simply upon white, middle-class comparison groups limits our understanding of ethnic minority family development and the influence of environment and culture in all development. Today this study might be modified by comparing the IQ and academic achievement of African American children raised in a variety of African American households (e.g., middle and lower-economic families, single and dual-parent families, rural and urban families).

SUGGESTED READINGS

- Hoffman, L. (1990). Bias and social responsibility in the study of maternal employment. In C. B. Fisher & W. W. Tryon (Eds.) *Ethics in applied developmental psychology: Emerging issues in an emerging field* (pp. 253-272). Norwood, NJ: Ablex Publishing Corporation.
- Sarason, S. B. (1984). If it can be studied or developed, shout it? *American Psychologist*, 39, 477-485.
- Scarr, S. (1988). Race and gender as psychological variables: Social and ethical issues. *American Psychologist*, 43, 56-59.

Ethical Issues in Deceptive Research

Read the brief study summary below and answer the 4 questions on the following 2 pages. You may also refer to the extended summary on the next page.

COGNITIVE, SOCIAL, AND PHYSIOLOGICAL DETERMINANTS OF EMOTIONAL STATE

Stanley Schacter and Jerome E. Singer (1962)

Psychological Review, 69, 379-399.

In 1890 William James proposed that we feel an emotion when our body is spontaneously aroused by an emotion producing event. Schacter and Singer expanded upon James' theory to propose that in order to experience *specific* emotions, such as joy and anger, we need both physiological arousal and a specific cognitive interpretation of the emotion producing situation. They designed a study to test their hypothesis using undergraduate psychology students who received 2 extra points on their final exam for participating. Students were deceptively told that the purpose of the study was to test how a vitamin injection would affect their visual skills. In reality some participants were given an injection of epinephrine (a drug causing physiological arousal) and others were given a placebo injection (an inactive substance). Immediately following the injection, students were placed in a room with a confederate of the investigators' who either pretended to be very happy or very angry about being in the research experiment. The "confederates" external behavior was supposed to provide the participants with a cognitive interpretation of the emotional nature of the event. Students were then asked to answer written questions about how angry or happy they felt. Schacter and Singer found that those students who were given the placebo did not report any specific type of emotion, while those who were given the placebo reported feeling strong emotions of anger or joy depending upon how the confederate had acted. The investigators concluded that their experiment proved that in order to experience specific emotions we need both physiological arousal and a cognitive interpretation of the emotional nature of the event.

"COGNITIVE, SOCIAL, AND PHYSIOLOGICAL DETERMINANTS OF EMOTIONAL STATE"

Stanley Schacter and Jerome E. Singer (1962)
Psychological Review, 69(5), 379 - 399

PURPOSE OF THE STUDY

PURPOSE OF THE STUDY. The first psychological theory of emotion was proposed by William James in 1890. He stated that emotions were created by our spontaneous physiological reactions to an emotion producing event. Schacter and Singer expanded upon James' theory. They proposed that to experience a specific emotion, such as anger or joy, we need to be physiologically aroused and be able to apply a cognitive interpretation of the emotion producing situation. For example, if we see a bear in the woods our body may immediately become aroused. According to Schacter and Singer, in order to experience that arousal specifically as fear, we need to cognitively interpret the situation as dangerous. The purpose of this study was to examine whether both physiological arousal and cognitive factors jointly determine specific emotional states.

HYPOTHESIS. According to Schacter and Singer, if cognitive factors determine specific emotions, then the *same state of bodily arousal* could be experienced as "euphoria" or "anger" depending on the cognitive interpretation of the situation. The major hypothesis tested in this experiment was: *Given a state of physiological arousal for which an individual has no explanation, the individual will rely on cognitive/situational cues to label this arousal as a specific emotion.*

SUBJECTS. The subjects were male, introductory psychology students who received 2 extra points on their final exams for participating in the study. The investigators checked with the university health center to ensure that the subjects were in good health.

PROCEDURE. Subjects were deceptively told the purpose of the study was to test how an injection of a vitamin supplement would affect their visual skills. In reality some participants were given an injection of epinephrine (a drug that raises heart rate, accelerates breathing, and causes other emotion-related bodily states of physiological arousal) and some participants were given a placebo injection (an inactive substance). Immediately following the injection, the student was placed in a room with a man (a confederate of the researchers) who pretended to be another research subject. The confederate gave situational cues by acting either euphoric or very angry about being in the experiment. After sitting in the room with the confederate, each student was asked to answer written questions regarding how angry or happy he felt. The investigator then announced the experiment was over and explained the deception.

RESULTS. Schacter and Singer found that those students who were given a placebo (inducing no physiological arousal) did not report feeling any specific type of emotion despite the emotional acting out of the confederate. By contrast, those students who were deceptively given the epinephrine (inducing physiological arousal) reported feeling strong emotions of anger or euphoria depending upon which emotion the confederate had expressed.

CONCLUSIONS. The results of Schacter and Singer's experiment demonstrated that while physiological arousal caused by the epinephrine was needed to feel emotion, which specific emotion the subjects felt depended upon the situational cues given by the confederate. The investigators concluded that the study supported the theory that specific emotions are jointly determined by awareness of physiological arousal *and* cognitive interpretation of the situation that induced that arousal.

"Cognitive, Social, and Physiological Determinants of Emotional State"

INSTRUCTOR DISCUSSION GUIDE

1. Does this study have scientific and/or social value? Who will benefit from this study: The research subjects, science, society?

Schacter and Singer were examining the *nature of emotions*, a question that psychologists have believed to be of scientific import for the past 100 years (e.g., James, 1890; and the James-Lange theory of emotion). Research examining whether different emotions are largely governed by cognitive or physiological factors can potentially benefit society through its influence on the development of different treatment strategies for emotional problems (e.g., cognitive or pharmacological therapies). The research subjects gain course credit through their participation and have the opportunity to acquire first-hand learning about psychological research.

2. Were the research subjects harmed by this experiment? If so, are there ways to minimize the harm and still test the influence of arousal and situational cues on emotion? Can the use of deceptive research practices jeopardize the public trust in psychology?

There were several aspects of this study that had the potential to cause harm to the subjects. First, some students might experience a negative physiological reaction to the epinephrine. Schacter and Singer did take this into account by contacting the Student Health Service regarding the risk for each potential subject. Today, this would be considered an invasion of the student's privacy; thus, a researcher might address this issue by asking subjects to fill out a health questionnaire before participation. Some subjects might have been upset or embarrassed upon learning that they had been deceived. Principle 6.15c of the *APA Code of Conduct* requires researchers to explain the deceptive procedures to participants as early as possible. Psychologists need to develop *dehoaxing* procedures that can adequately address and eliminate any negative reactions to the experimental procedures. Some have argued that public knowledge concerning deceptive research practices can diminish the status of the profession of psychology as well as lead future subjects to be suspicious of experimental procedures, thereby jeopardizing the scientific validity of future studies.

3. Were the autonomy rights (the right to determine one's own fate) of the subjects protected in this study? Do special ethical concerns arise when subjects are introductory psychology students participating in the study for course credit? Are there ways to protect the autonomy rights of the participants and still test the experimental hypothesis? If so, how?

The subjects' consent to participate in this study was based on misinformation: They were not informed about the true purpose of the experiment (they were told it concerned vision), misinformed about the contents of the injection (they were told it was a vitamin supplement), and many were misinformed about the physiological effects of the injection. In addition, as introductory psychology students receiving course credit for their participation, the subjects might not have felt free to refuse to participate in a study in which they were to receive an injection. According to APA Ethical Principle 6.11d, when research participation is an opportunity for extra credit, prospective subjects are given the choice of equitable alternative activities. In this experiment the subjects' privacy was also invaded, since they did not know their behavior with the confederate was observed through a one-way mirror. To address these issues, some have suggested that during the consent stage psychologists using deceptive procedures *forewarn* participants that deception might be used and that they may experience some form of the experimental manipulation (e.g., physiological arousal, behavioral observation). However, forewarning runs the risk of creating subject expectations that may inhibit "natural" responding to the experimental situation.

"Cognitive, Social, and Physiological Determinants of Emotional State"

4. *What are some scientific reasons for using deceptive procedures in psychological research? What are ethical reasons for or against using deceptive procedures in psychological research? How might you modify this study to make it more ethically acceptable? If you were a member of an institutional review board (a committee that evaluates whether research proposals meet ethical standards), would you approve conducting this study today in either its original form or with your modifications? Why or why not?*

From a methodological perspective, deception enables the researcher to obtain adequate control of the experimental conditions (e.g., the subject's state of physiological arousal) and is used on the premise that it is important to keep subjects naive about the purposes of a study so that they can respond to experimental manipulations spontaneously. An *act-utilitarian* argument underlies ethical reasons for deceptive research: The benefits to science and society are seen to outweigh the potential harm to the subject. Ethical arguments against deception focus on the premise that all subjects have the right not to be harmed and to autonomously decide what types of experimental situations they wish to participate in. According to Principle 6.15b of the *APA Code of Conduct*, psychologists do not deceive subjects about aspects of a study that would affect their willingness to participate (such as physical risks, discomfort, or unpleasant emotional experiences). Moreover, they do not conduct deceptive research unless it has scientific, educational, or applied value and alternative procedures for testing the hypotheses are unfeasible (Principle 6.15a). One modification for addressing the participant's autonomy in deceptive research is to obtain "proxy" consent: Describe the study to individuals similar to those who will be recruited for the experiment, and ask these individuals whether they would want to be in such a study. If a majority or significant minority says they would not want to participate, the researcher should seriously question whether the study should be conducted. Alternatively, participants could be informed that the injection would contain either adrenaline or a nonactive ingredient and that they would learn the contents of the injection when the experiment was over.

Additional Readings

Baumrind, D. (1985). Research using intentional deception: Ethical issues revisited. *American Psychologist*, 40, 165-174.

Fisher, C. B., & Fyrberg, D. (1994). Participant partners: College students weigh the costs and benefits of deceptive research. *American Psychologist*, 49, .

Ethical Issues in Clinical Trial Research

Read the brief study summary below and answer the 4 questions on the following 2 pages. You may also refer to the extended summary on the next page.

NATIONAL INSTITUTE OF MENTAL HEALTH TREATMENT OF DEPRESSION COLLABORATIVE RESEARCH PROGRAM

Irene Elkin et al (1989)

Archives of General Psychiatry, 46, 971-983

The purpose of this study was to test the hypothesis that two types of psychotherapy were as effective as antidepressant drug therapy in treating depression. Subjects were patients diagnosed as having major depressive disorder (characterized by difficulty thinking, recurrent thoughts of death or suicide attempts, loss of interest or pleasure in activities, appetite and sleep disturbances, and feelings of worthlessness or guilt), who had come for treatment to one of several psychiatric outpatient centers participating in the research project. Patients who agreed to participate were randomly assigned by the experimenters to one of four treatment conditions: Interpersonal psychotherapy, cognitive behavioral psychotherapy, antidepressant drug treatment, and a pill placebo condition (in which the pill had no real ingredients). Patients in the two pill conditions were not told until the end of the study whether they had received the antidepressant or the placebo pill. The findings demonstrated that severely depressed patients in the psychotherapy groups improved more than those in the placebo group and in some cases improved as much as those in the antidepressant group. The researchers concluded that for some patients, psychotherapy is an effective treatment for depression.

**"National Institute of Mental Health Treatment of Depression
Collaborative Research Program"**

Irene Elkin, M. Tracie Shea, John T. Watkins, Stanley D. Imber, Stuart Sotsky,
Joseph F. Collins, David R. Glass, Paul Pilkonis, William R. Leber,
John P. Docherty, Susan J. Fiester, & Morris B. Parloff (1989)
Archives of General Psychiatry, 46, 971-983

PURPOSE OF THE STUDY: The purpose of this study was to investigate the effectiveness of two forms of brief psychotherapy for patients with major depressive disorder: Interpersonal psychotherapy and cognitive behavior therapy. At the time this study was conducted there was scientific evidence that drug therapy with an antidepressant drug called imipramine hydrochloride was an effective treatment for this population.

HYPOTHESIS: The goal of this study was to determine whether psychotherapy treatments for depression would be as effective as the antidepressant drug therapy. A primary hypothesis tested in this study was: *Patients given imipramine treatment, interpersonal psychotherapy, or cognitive behavior therapy would demonstrate significantly higher rates of recovery from major depression than patients treated with a placebo pill (a substance with no active ingredients).*

SUBJECTS: The subjects were patients diagnosed as having major depressive disorder (characterized by loss of interest or pleasure in activities, appetite and sleep disturbances, decreased energy, feelings of worthlessness or guilt, difficulty thinking, and recurrent thoughts of death or suicide attempts) who had come for treatment to one of several psychiatric outpatient centers participating in the research project. Patients were informed that if they agreed to participate in the study they would be randomly assigned to one of four treatment conditions: Interpersonal therapy, cognitive behavioral therapy, antidepressant drug therapy, or a pill-placebo condition.

PROCEDURE: All treatments were planned to be 16 weeks in length. The interpersonal therapists sought to help the patients better understand their interpersonal problems and improve ways of relating to others. The cognitive behavior therapists used techniques to correct the patients' negative and distorted views about themselves and the world. In addition to the weekly administration of the medication or placebo pill, the drug therapy and pill-placebo conditions included a *controlled management* component involving management of medication and side effects, a review of the patient's clinical status, support and encouragement, and direct advice if necessary. Patient self-reports and clinical evaluations were used to assess patient depression before treatment began, at several points during treatment (4, 8, and 12 weeks), and when treatment was terminated.

RESULTS: Of the 239 patients included in the study, 59 either dropped out or were withdrawn by the experimenters before the study was completed because of negative treatment-related reasons (e.g., dissatisfaction with the condition they had been assigned to or intolerable side effects). Treatment differences in the reduction of depressive symptoms only emerged for patients who had been originally diagnosed as most severely depressed. For these patients imipramine worked best but the two psychotherapy treatments (especially interpersonal therapy) predicted greater improvement than the placebo condition.

CONCLUSIONS: The data from the Elkin et al study suggest that for severely depressed patients imipramine treatment and, to a lesser extent, interpersonal therapy can reduce depressive symptoms. The results indicated no evidence that interpersonal therapy or cognitive behavior therapy is more effective than the placebo pill condition in treating less severely depressed patients.

**"National Institute of Mental Health Treatment of Depression
Collaborative Research Program"**

INSTRUCTOR DISCUSSION GUIDE

1. Does this study have scientific and/or social value? Who will benefit from this study: The research subjects, science, society?

The experiment was a well-designed controlled clinical trial study that sought to determine whether non-invasive psychotherapy techniques were as effective as pharmacological treatment of depression. Subjects randomly assigned to the imipramine and psychotherapy conditions had the opportunity to directly benefit from the treatments if they were effective. Patients in the pill-placebo condition as well as other depressed patients might benefit in future by having practitioners be more knowledgeable about the relative effectiveness of psychotherapy and drug treatments for depression.

2. Could the research subjects be harmed by this experiment. What are the scientific reasons for using a no-treatment, placebo-pill condition? Are there ways to test the effectiveness of psychological treatments without comparing them to no-treatment control conditions?

Patient subjects run a variety of risks in this experiment (continued or increased depression and suicidal ideation or attempts) depending upon the condition to which they have been randomly assigned. The imipramine group faces the least risk since their depression is being treated with a drug found to be effective. Patients in the two psychotherapy conditions are being treated with professionally accepted techniques that may or may not be as effective as the imipramine. Patients in the pill-placebo condition are at greatest risk since they are receiving no substantial treatment; the controlled management procedures were an attempt to minimize this risk. The scientific rationale for no-treatment control conditions in clinical trials research is based on the importance of conducting rigorous tests that can lead to scientifically valid conclusions about treatment efficacy. In this study, since the imipramine condition was the standard reference against which the other treatments would be compared, the researchers decided it was important to demonstrate that patient response to the imipramine was to the drug itself and not patient expectations concerning the treatment. An act-utilitarian position would suggest that the risks to subjects in the pill-placebo condition are outweighed by the potential benefit to other depressed patients of demonstrating the efficacy of non-invasive psychotherapies under the most stringent scientific conditions. However some might argue that the scientifically proven efficacy of imipramine removed the necessity for a placebo condition in this study when weighed against depriving depressed patients treatment.

3. What ethical procedures should the researchers use to protect the autonomy (the right to determine one's own fate) and confidentiality of the subjects in this study? How can the patient's autonomy be protected if, after random assignment to one of the pill conditions, they do not know whether they are receiving medication or a placebo? What special consideration needs to be given that the subjects are depressed?

All potential subjects should be fully informed about the purpose of the study, the procedures, the potential risks, and the voluntary nature of their participation. Since cognitive deficits often accompany depression, the researchers need to insure that subjects comprehend this information (see APA Ethical Principle 6.11). Although subjects will be randomly assigned to conditions, their autonomy is protected if they understand, before consent to participate, that they will not be able to choose their treatment and that they have a 25% chance of receiving a pill-placebo. To minimize coercion, patients must also be assured that they can withdraw from the study at any time and still receive standard hospital treatment for depression. Researchers protect patient confidentiality by maintaining patient records in a secure place and by reporting the results of the study in terms of group rather than individual performance.

**"National Institute of Mental Health Treatment of Depression
Collaborative Research Program"**

4. How might you modify this study to make it more ethically acceptable? If you were a member of an institutional review board (a committee that evaluates whether research proposals meet ethical standards), would you approve conducting this study today in its original form or with your modifications? Why or why not?

The acceptability of this study is enhanced by a rigorous monitoring of all the patient's psychological status during the experiment (which the researchers did include). Patients in the least effective conditions should be provided the most effective treatment at the end of the study. An ethical issue associated with clinical trials research concerns whether the treatment is continued after the study is over. For example, can the patients who responded well to the interpersonal treatment, continue to receive such treatment after the study is completed? Moral concerns for patient welfare and subject autonomy are central to ethical decisions regarding the use of clinical trials research. Bok (1974) has asserted that a hospital setting gives patients a sense of trust and faith in a beneficial outcome that may prevent a potential research participant from fully understanding the nature of research risk. This can be addressed through an assessment of the participant's understanding of the project during informed consent procedures. Some may argue that placebo conditions should not be used when the effectiveness of a treatment is well known (e.g., the imipramine treatment). Others have argued that since depressive disorders are so variable, a placebo control is always needed as a comparison to insure the validity of the drug reference condition (Feinstein, 1980).

Suggested Readings

Bok, S. (1974). The ethics of giving placebos. *Scientific American*, 231, 17-23.

Feinstein, A. R. (1980). Should placebo-controlled trials be abolished? *European Journal of Pharmacology*, 17, 1-4.

Imber, S. D., Glanz, L. M., Elkin, I., Sotsky, S. M., Boyer, J. L., & Leber, W. R. (1986). Ethical issues in psychotherapy research: Problems in a collaborative clinical trials study. *American Psychologist*, 41, 137-146.

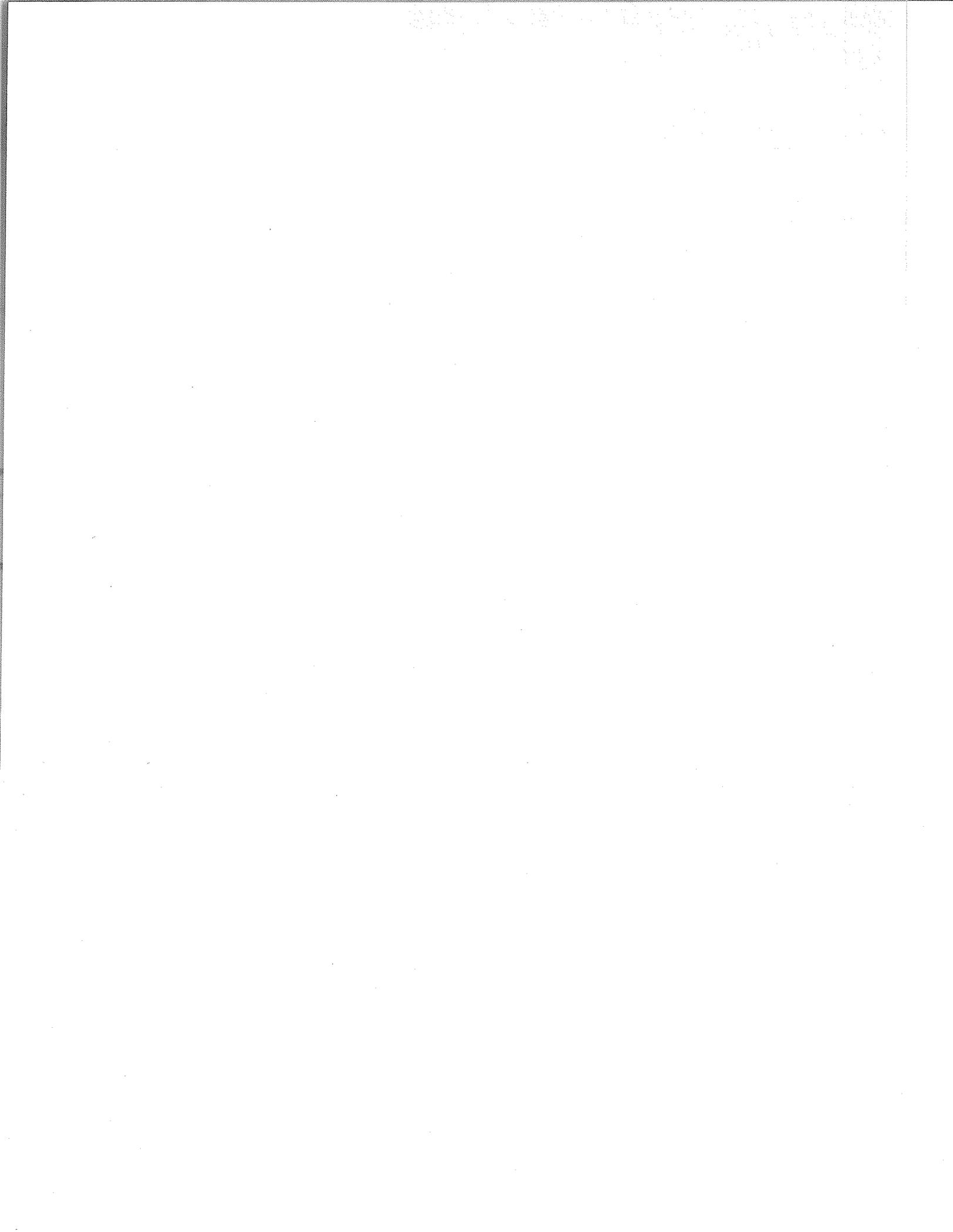
Veatch, R. M. *The patient as partner*. Bloomington, IN: Indiana University Press.

SAMPLE ESSAY QUESTIONS

AND

INSTRUCTOR'S GRADING GUIDE

The 3 posttest questions are each worth 5 points. For each question, answers receiving scores of 5 - 0 can be given letter grades of A - F, respectively. The full posttest grade can be determined from the average of the 3 letter grades or as follows: A = 13 - 15 points, B = 10 - 12 points, C = 7 - 9 points, D = 4 - 7 points, F = 0 - 3 points.



ESSAY 3: ANIMAL EXPERIMENTATION

"Effects of the Availability of Rewarding Septal and Hypothalamic Stimulation on Bar Pressing for Food under Conditions of Deprivation"

Aryeh Routtenberg and Janet Lindy (1965)

Journal of Comparative and Physiological Psychology, 60, 158-161

The major purpose of this study was to test the hypothesis that a rat deprived of food would neglect eating in favor of receiving electrical stimulation of a part of the brain called the hypothalamus. To test this hypothesis electrodes were implanted in the brains of 14 rats. Over the course of 4 days each rat was deprived of food for 23 hours and placed for 1 hour in a Skinner box with 2 pedals. By pressing one of the pedals the rat could receive food. By pressing the other pedal the rat could receive electrical stimulation to the brain. At the end of the experiment the rats were sacrificed to determine the exact brain location of the electrodes. The results of the study indicated that rats with electrodes in the hypothalamus self-starved themselves by choosing to press only the pedal giving them electrical brain stimulation. In contrast, rat's with electrodes in the septal region of the brain chose to press the food pedal and did not self-starve. The researchers proposed that the hypothalamus may be important in controlling both the experience of hunger and pleasure, especially sexual pleasure. Later studies suggested that this brain region may also be associated with self-preservation and pleasure in humans.

a) Describe 3 ethical procedures or modifications you would use to protect the welfare and rights of the research participants in this study.

(0-3 points) The students answer should include a description of at least 3 of the following ethical procedures or modifications:

*Students must present a new procedure or suggest an alternative method. For example, merely stating that the animals should not be sacrificed is not a valid modification.

Proper care and housing: A complete answer would indicate that prior to and during the course of experimentation, researchers are required to provide humane and appropriate housing and care for the animals. For example, animals should be kept in clean cages, and treated humanely throughout the experiment.

Appropriate use of surgical procedures: A complete description of such procedures would indicate that researchers who perform animal surgery must be competently trained and utilize techniques that avoid infection and minimize pain.

ESSAY 1: DECEPTIVE RESEARCH

A Behavioral Study of Obedience in Children

Mitri Shanab and Khawla Yahya (1977)

Journal of Personality and Social Psychology, 35, 530-536.

In the 1960's, Stanley Milgram tested the hypothesis that the Nazi atrocities of World War 2 could have been carried out by average citizens obeying authority. He demonstrated that many adults tested under deceptive laboratory conditions would obey experimental instructions to administer what they believed was a harmful electric shock to another adult. Milgram also discovered that participation in this type of experiment was stressful and that after the experiment some of the participants were distressed about what they had done. Using Milgram's original test of obedience, Shanab and Yahya asked Jordanian children (ages 6 - 16) to teach another child a list of words by administering increasingly high levels of electric shock to the learner whenever mistakes were made. The child participants were unaware that the child they were teaching was actually an actor hired by the experimenter and that in reality no shocks were ever given. The researchers found that 73% of the children obeyed orders to administer the most severe levels of shock. Shanab and Yahya concluded that this type of obedience, is found cross-culturally and develops very early in life.

a) Describe 3 ethical procedures or modifications you would use to protect the welfare and rights of the research participants in this study.

0 - 3 points: For full credit the student's answer must include descriptions of informed consent and debriefing procedures and at least 1 of the ethical modifications listed below:

Parental consent and/or child assent (0 - 1 point): A complete description of consent procedures would reflect an understanding that due to the deceptive nature of the study the child assent information would not reveal the true purpose of the study, while the parental consent might include all relevant information. Specifically, students may mention any of the following in their response to earn full credit:

- a. Written parental consent*
- b. Voluntary nature of participation*
- c. Participants may withdraw at any time without penalty.*

Debriefing/dehoaxing (0 - 1 point): A complete description of debriefing/dehoaxing procedures would recognize that the experimenter must inform the child about the deception once the study was over and alleviate any experimentally induced distress. Specifically, students may mention any of the following to earn full credit:

- a. Reveal the purpose of the study after its completion; the confederates were actors and no shock was administered*

Grading Key for Shanab and Yahya

- b. Discuss follow-up procedures to monitor participants or the provision of therapy to insure that the participants were not harmed by the experiment.*

At least one of the following modifications (0 - 1 point)

**Students must provide an alternative method, rather than merely state, for example, that researchers should minimize harm.*

Minimize participant stress: Student's might suggest that the investigator create a less stressful situation by utilizing a different stimulus, e.g., asking the participant to harshly criticize the "learner" rather than administer electric shocks.

Forewarning: At the beginning of the experiment the investigator could warn the child that some deception might be used in the study. This would help protect participant autonomy during child assent procedures as well as prepare the child for the dehoaxing procedures. Forewarning does however pose risks to the validity of the study by making the child suspicious about experimental procedures.

Recruit older participants: Some students might argue that young children are more susceptible to the potentially damaging impact of learning that an adult experimenter had lied to them or that they might not have the cognitive capacity to fully understand the dehoaxing procedures. Students might suggest utilizing older children or adults, however, students may not earn credit for merely stating that children should not be used.

For this particular study it would be unlikely that an experimenter would be able to find a naturalistic situation in which an adult told children to harm other children.

b) Give ethical reasons for why you would or would not conduct this study in its original form or with your modifications.

(0-2 points) This question should be graded on the students' reasoning skills rather than their decision whether or not to conduct the study.

A FULL CREDIT answer must recognize the tension between scientists' responsibility to conduct well-controlled scientifically valuable studies and to protect the rights and welfare of participants. For example, in one part of the answer a student might discuss the importance of understanding the development of "obedience" behaviors and the need to use deceptive procedures to ensure that participants are acting "naturally." Alternatively they might challenge the scientific validity of the study by questioning whether young children are as free as older participants to disobey adult orders. In the

Grading Key for Shanab and Yahya

second part of the answer the student might consider at least one of the following experiment induced reactions: stress associated with believing someone was harmed, the potentially negative consequences of having adults model such aversive procedures, the potential damage to children and society posed by knowledge that psychologists engage in deceptive activities, the violation of participant autonomy inherent in deception research, and whether the children are being taken advantage of because they are minors.

A 1-POINT ANSWER would describe only 1 reason for approving or disapproving the study or 2 reasons which do not reflect the tension between the investigator's dual responsibility to science and to research participants. Mentioning the negative effects of the treatment, or discussing the specific scientific contributions of the study will receive one point. Examples of one point responses include the following: *"Society must be knowledgeable about what lead the Nazi's to do such terrible things. Deception is the only way that we can find out what people would really do if asked to harm someone"* or *"Psychologists should not lie to children because it serves as a bad model. Children in this experiment might leave believing that it is all right to harm another child to teach them something."*

NO CREDIT should be given to nondescriptive answers: *"This study should not be conducted because you should never harm children,"* or *"This study should not be conducted because you should never lie to children."* Additionally, no credit should be given if a student demonstrates that he/she did not understand the study, i.e., believed that individuals were actually shocked.

ESSAY 2: INTERVENTION RESEARCH

Long-term Effects of a Control-Relevant Intervention

E. J. Langer (1983)

The Psychology of Control (Chapter 16), Beverly Hills, CA: Sage

Langer and her colleagues proposed that the loss of independence experienced by elderly people who become institutionalized in a nursing home creates a perceived sense of helplessness and loss of control that can further impair the nursing home residents' health and perhaps lead to early death. To test their hypothesis they divided elderly residents of a nursing home into either a treatment or no-treatment control group. The staff encouraged the treatment group to become more active and take control of decisions regarding their daily activities. The comparison group was encouraged to follow the usual regime of depending on hospital staff for care and decision-making. After 6 months, the residents in the treatment group who had been encouraged to be independent were healthier and happier than those in the control group. In further support of the researcher's hypothesis, 18-months later it was found that the death rate for the control group was twice that for the treatment group.

a) Describe 3 **ethical procedures or modifications** you would use to protect the welfare and rights of the research participants in this study.

(0-3 points) The student's answer must include a description of informed consent procedures and at least 2 of the additional ethical procedures and modifications listed below:

Informed consent (0 - 1 point): Nursing home residents should have the right to choose or decline to participate in the study, they should be told that they may be randomly assigned to either a treatment or control group, and that they will not be penalized if they refuse to participate. Students may include any of the following to earn full credit:

- a. *Written guardian consent*
- b. *Voluntary nature of consent*
- c. *Informed nature of consent; participants should fully understand the random assignment procedures*
- d. *Participants may withdraw at any time without penalty*

At least 2 of the following ethical procedures or modifications (0 - 2 points)

Post-experimental treatment for the control group: At the conclusion of the study, the control group participants should be offered the treatment (if the experiment demonstrated that it was effective).

Grading Key for Langer

Monitoring participant health: The health and welfare of the participants (especially the control group subjects) should be monitored and provisions made to treat those whose mental or physical health has declined to potentially dangerous levels. This should be expressed as an ongoing process directed at assessing the impact of participation in the experimental or control groups.

Minimize harm: The length of the experimental follow-up might be shortened once the researchers had determined the efficacy of the treatment. The no-treatment control group might be replaced with a minimum treatment-level control group. Students must provide an alternative method, rather than merely state, for example, that researchers should minimize harm.

Verbal Debriefing: At the end of the study treatment and experimental group participants are given a full explanation of the purpose and results of the study.

Naturalistic observation: Utilizing records from other nursing homes, the investigators could compare the health and happiness of residents of nursing homes that differ in the degree to which they encourage or discourage independence. Alternatively the researchers could compare the psychological and physical adjustment of nursing home residents who demonstrate independent personal styles versus those who demonstrate dependent personal styles.

b) Give ethical reasons for why you would or would not conduct this study in its original form or with your modifications.

(0-2 points) This question should be graded on the students' reasoning skills rather than their decision whether or not to conduct the study.

A FULL CREDIT answer must recognize the tension between scientists' responsibility to conduct well controlled scientifically valuable studies and to protect the rights and welfare of participants. For example, in one part of the answer a student should discuss the researcher's responsibility to *empirically* demonstrate that independent behaviors positively affect nursing home residents' physical and mental well being when compared to more dependent behaviors. This part of the answer could consider the scientific validity and social value of using experimental (treatment vs. no treatment) or naturalistic designs to evaluate the importance of independence in nursing homes. In the second part of the answer, the student should consider at least one of the following ways in which participation in the study might impact the nursing home residents: the treatment group has the opportunity to benefit from the study, the control group may have been harmed by allowing the study to continue after the first 6 month evaluation. or nursing home residents may be a "captive" population with limited freedom to refuse participation.

Grading Key for Langer

A 1-POINT answer would describe only 1 reason for approving or disapproving the study or 2 reasons which do not reflect the tension between the investigator's dual responsibility to science and to the research participants. For example an answer receiving 1 point for recognizing issues associated with scientific responsibility might include a statement such as *"This study should be conducted because it is important to find treatments to help nursing home residents and you need a no-treatment control group to do this."* Such answers need to include one of the following points: the necessity for a comparison/control group; how the results of this particular study could be generalized to benefit society; or how the investigators could have used a more naturalistic study based on observing resident reactions to different types of ongoing nursing home practices. An answer receiving 1 point for recognizing issues associated with responsibility to participants might include a statement such as *"This study should not be conducted because the nursing home residents are not free to make their own decisions about treatment and some of them will die without the treatment."* Such answers need to include one of the following points: The participants in the treatment group were helped by the study; the control participants were not harmed by the study since they were receiving standard care; or the experimenters allowed the study to go on for too long, thereby jeopardizing the welfare of the control participants;

NO CREDIT should be given to nondescriptive answers: *"This study was important to do because it helped old people" or "This study should not have been conducted because some people died."*

Grading Key for Routtenberg and Lindy

Rapid and humane termination: A complete description of the termination procedure would indicate that when it is scientifically justified, researchers must terminate an animal's life rapidly according to recognized procedures minimizing pain.

Minimize harm: A complete answer would suggest that researchers use the minimum number of animals necessary to ensure appropriate scientific findings, limit the number of experimental days during which the animals could potentially self-starve themselves, or use more expensive procedures (e.g., CAT scans) to determine the point of the electrodes rather than autopsy.

b) Give ethical reasons for why you would or would not conduct this study in its original form or with your modifications.

(0-2 points) This question should be graded on students' reasoning skills rather than their decision whether or not to conduct the study.

A FULL CREDIT answer must recognize the tension between scientists' responsibility to conduct well-controlled scientifically valuable studies and to protect the rights and welfare of participants. For example, in one part of the answer the student might discuss the value of learning about the biological bases of behavior, the need to sacrifice animals to scientifically determine the location of the electrode implant (to ensure that conclusions drawn from the study are valid), the importance of determining whether or not research on rat brain behavior can be validly generalized to human biology, or whether alternative, noninvasive scientifically valid procedures are available. In the second part of the answer the student might consider whether animals have the same rights as human research participants and reflect upon the responsibility of researchers to protect these rights, to minimize harm, or to not subject animals to harmful procedures.

A 1-POINT answer would describe only 1 reason for approving or disapproving the study or 2 reasons which do not reflect the investigator's dual responsibility to science and to the research participants: *"This study should not be conducted because animals have rights just like humans. Since animals cannot tell the scientists what they would or would not want, the psychologist has a special responsibility to make sure they are not harmed."*

NO CREDIT should be given if the student gives a nondescriptive answer: *"This study should not be done because killing animals is unethical" or "This study should be conducted as long as the procedures do not hurt the animal."*

Student Evaluation of the Research Ethics Curriculum

Name of your Professor _____ Date _____

The following questions pertain to the Research Ethics sections of your Introductory Psychology course. For each question please circle the answer most closely reflecting your reactions to the Research Ethics lectures, class discussions, and materials.

1. I would rate the overall level of difficulty of the brief summaries presented in the *Case Studies in Research Ethics* booklet as

1 2 3 4 5
very elementary somewhat elementary about right somewhat difficult very difficult

2. I would rate the overall level of difficulty of the extended summaries at the back of the *Case Studies in Research Ethics* booklet as

1 2 3 4 5
very elementary somewhat elementary about right somewhat difficult very difficult

3. I would rate the overall level of difficulty of the Student Focus Questions in the *Case Studies in Research Ethics* booklet as

1 2 3 4 5
very elementary somewhat elementary about right somewhat difficult very difficult

4. I would rate the overall value of the extended summaries in the *Case Studies in Research Ethics* booklet as

1 2 3 4 5
excellent good about average fair poor

5. I would rate the overall value of the Student Focus Questions to class discussion as

1 2 3 4 5
excellent good about average fair poor

6. I would rate the overall value of class discussions on the research ethics topics as

1 2 3 4 5
excellent good about average fair poor

****Please answer the remaining questions on the back of this page****

7. The addition of the Research Ethics sections made the workload for this course compared to other courses of equal credit

1 2 3 4 5
much heavier heavier about the same lighter much lighter

8. The Research Ethics end of semester examination questions clearly reflected the important aspects of the ethics material covered in class

1 2 3 4
strongly agree agree disagree strongly disagree

9. The topics covered in the *Case Studies in Research Ethics* workbook fit nicely into the rest of the course curriculum

1 2 3 4
strongly agree agree disagree strongly disagree

10. The Research Ethics portions of the course increased my interest in the research aspects of the field of psychology

1 2 3 4
strongly agree agree disagree strongly disagree

11. The Research Ethics portions of the course increased my interest in scientific ethics

1 2 3 4
strongly agree agree disagree strongly disagree

12. What grade do you expect to receive in this course?

1. A 2. B 3. C 4. D 5. Fail 6. Pass

13. What is your approximate overall grade point average?

3.50 - 4.00 3.00 - 3.49 2.50 - 2.99 2.0 - 2.49 1.50 - 1.59 1.00 - 1.49

less than 1.00

14. What is your class level?

1. Freshman 2. Sophomore 3. Junior 4. Senior 5. Other

Instructor Summative Evaluation of the Research Ethics Curriculum

Name _____ Date _____ Course _____
Address _____ Phone _____ e-mail _____

For each question please circle the answer most closely reflecting your reactions to the Research Ethics materials.

1. I would rate the overall level of student difficulty of the brief summaries presented in the *Case Studies in Research Ethics* booklet as

1 2 3 4 5
very elementary somewhat elementary about right somewhat difficult very difficult

2. I would rate the overall level of student difficulty of the extended summaries in the *Case Studies in Research Ethics* booklet as

1 2 3 4 5
very elementary somewhat elementary about right somewhat difficult very difficult

3. I would rate the overall level of student difficulty of the Student Focus Questions in the *Case Studies in Research Ethics* booklet as

1 2 3 4 5
very elementary somewhat elementary about right somewhat difficult very difficult

4. I would rate the overall value of the extended summaries in the *Case Studies in Research Ethics* booklet as

1 2 3 4 5
excellent good about average fair poor

5. I would rate the overall value of the Student Focus Questions to class discussion as

1 2 3 4 5
excellent good about average fair poor

6. I would rate the overall value of the Instructors Guides for class discussion as

1 2 3 4 5
excellent good about average fair poor

7. The addition of the Research Ethics sections made the workload for this course compared to other courses of equal credit

1 2 3 4 5
much heavier heavier about the same lighter much lighter

Please answer the remaining questions on the back of this page

8. The Research Ethics end of semester examination questions clearly reflected the important aspects of the ethics material covered in class

1 2 3 4
strongly agree agree disagree strongly disagree

9. The topics covered in the *Case Studies in Research Ethics Booklet* fit nicely into the rest of the curriculum

1 2 3 4
strongly agree agree disagree strongly disagree

10. I would rate the overall value of the Instructors Guide for grading the final examination as:

1 2 3 4 5 na
excellent good about average fair poor

11. I would consider using an expanded version of case studies including vignettes on practice issues for teaching in the future:

1 2 3 4
strongly agree agree disagree strongly disagree

12. Additional comments or suggestions are greatly appreciated:

****I hope you enjoyed my curriculum and appreciate your feedback****

Please return to:

**CELIA FISHER, DEPARTMENT OF PSYCHOLOGY, DEALY HALL,
FORDHAM UNIVERSITY, BRONX, NY, 10458**

