Ethics of Experimental Research

Throughout the history of American psychology, the issue of research ethics has been a subject of concern and debate. The purpose of experimental research in psychology is to enhance our knowledge of the psychological characteristics of the human species. In order to do this, psychologists often use human and animal subjects in their experiments. Some would argue that in certain instances the development of valid laws of psychology requires that a subject be deceived or in some way physically harmed. This point of view is based on the principle that the pursuit of knowledge must continue unabated. After all, it is possible that the ultimate truths revealed in psychological research may be of great benefit to humankind. But a psychologist is also bound by a code of ethics in which the psychological and physical safety of subjects is rigidly safeguarded.

In many psychological experiments it is possible to advance our understanding of psychological characteristics while clearly protecting the psychological and physical well-being of the subject. An experimenter should always be sensitive to the ethical problems that may arise in experiments, and while following the guidelines that must be adhered to, balance the potential harm with the potential gain.

At times, experimenters have used questionable means to obtain results. Such abuses of human and animal subjects have caused great concern among psychologists and some members of the public. (See Larson, 1982, for a trial of an animal researcher.) Because of these concerns, the Committee on Scientific and Professional Ethics has been formed by the American Psychological Association (APA). Through many years of work, this organization has developed a series of ethical principles.

Each of the principles that concerns psychologists is presented in this chapter. Following the principles, we describe case studies in which the princi-
Ethical Principles of Psychologists and Code of Conduct*

Preamble
Psychologists work to develop a valid and reliable body of scientific knowledge based on research. They may apply that knowledge to human behavior in a variety of contexts. Their goal is to broaden knowledge of behavior and, where appropriate, to apply it pragmatically to improve the condition of both the individual and the society. Psychologists respect the central importance of freedom of inquiry and expression in research, teaching, and publication. They also strive to help the public in developing informed judgments and choices concerning human behavior.

General Principles

Competence: Psychologists strive to maintain high standards of competence in their work. They recognize the boundaries of their particular competencies and the limitations of their expertise. They use only those techniques for which they are qualified by education, training, or experience. Psychologists exercise careful judgment and take appropriate precautions to protect the welfare of those with whom they work. They maintain knowledge of relevant scientific and professional information related to the services they render, and they recognize the need for ongoing education.

Integrity: Psychologists seek to promote integrity in science, teaching, and practice of psychology. In these activities psychologists are honest, fair, and respectful of others.

Concern for Others' Welfare: Psychologists seek to contribute to the welfare of those with whom they interact professionally. In their professional actions, psychologists weigh the welfare and rights of their patients or clients, students, supervisees,

*This version of the Ethical Principles of Psychologists and Code of Conduct (formerly titled Ethical Standards of Psychologists) was adopted by the American Psychological Association in August 1992. The revised version contains both substantive and grammatical changes from the Ethical Standards of Psychologists previously adopted in 1981. Inquiries concerning the Ethical Principles of Psychologists should be addressed to the Office of Ethics, American Psychological Association, 750 First Street, NE, Washington, DC 20002. These revised ethical principles apply to psychologists, students of psychology, and others who do work of a psychological nature under the supervision of a psychologist. They are also intended for the guidance of nonmembers of the Association who are engaged in psychological research or practice. While the full code is not published here, it is available from the APA and appeared in the December 1992 issue of American Psychologist. What is presented here is verbatim.
human research participants, and other affected persons, and the welfare of the animal subjects of research.

**Social Responsibility:** Psychologists are aware of their professional and scientific responsibilities to the community and the society in which they work and live. They apply and make public their knowledge of psychology in order to contribute to human welfare. When undertaking research, they strive to advance human welfare and the science of psychology. Psychologists try to avoid misuse of their work.

**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.

**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 of research conducted 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.

**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.

**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.

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

**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 [Section] 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 [Section] 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.

**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.

**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.

**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 tend to coerce participation.

**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 is 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.)

**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.

**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 psychologists' roles as scientific investigators.

**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.

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

**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 respon-
sible 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 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.

### 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.

### 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.

### 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 principal author on any multiple-authored article that is substantially based on the student’s dissertation or thesis.

### Duplicate Publication of Data

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

### 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.

**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.

**Research with Humans**

The use of human subjects in a psychological experiment poses special problems. A psychologist is both a scientist and a member of society. Sometimes, in the zealous pursuit of scientific truths, experimenters may become so wrapped up in their research that they overlook some ethical considerations regarding human participants. This is a grievous mistake and will ultimately reflect poorly on experimenters and psychological research in general.

In the early days of psychological research, few ethical guidelines were available, save the researcher’s personal ethical code and the laws of society. In fact, some research conducted during that period would not be allowed by current standards, and as a consequence, some prospective participants today are wary of volunteering for experiments.* But some researchers have argued that the standards that have since evolved are too restrictive and forbid the collection of important data. Once again, new ethical standards will likely evolve.

This section presents the principles that govern research using human participants. We have also included an example of a consent form and one case study. We suggest that each point be discussed in class and that students be encouraged to write their own cases exemplifying both ethical and unethical research for each principle. Also, if contemplating research with human subjects, the complete Ethical Principles of Psychologists should be read thoroughly. See also the section in Chapter 10 on securing human (or animal) subjects approval from your institution.

**Research with Human Participants†**

The decision to undertake research rests upon a considered judgment by the individual psychologist about how best to contribute to psychological science and human welfare. Having made the decision to conduct research, the psychologist considers alternative directions in which research energies and resources might be invested. On the basis of this consideration, the psychologist carries out the in-

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*See Baumrind (1985) for an insightful discussion of deception in social science research.

vestigation with respect and concern for the dignity and welfare of the people who participate and with cognizance of federal and state regulations and professional standards governing the conduct of research with human participants.

A. In planning a study, the investigator has the responsibility to make a careful evaluation of its ethical acceptability. To the extent that the weighing of scientific and human values suggests a compromise of any principle, the investigator incurs a correspondingly serious obligation to seek ethical advice and to observe stringent safeguards to protect the rights of human participants.

B. Considering whether a participant in a planned study will be a “subject at risk” or a “subject at minimal risk,” according to recognized standards, is of primary ethical concern to the investigator.

C. The investigator always retains the responsibility for ensuring ethical practice in research. The investigator is also responsible for the ethical treatment of research participants by collaborators, assistants, students, and employees, all of whom, however, incur similar obligations.

D. Except in minimal-risk research, the investigator establishes a clear and fair agreement with research participants, prior to their participation, that clarifies the obligations and responsibilities of each. The investigator has the obligation to honor all promises and commitments included in that agreement. The investigator informs the participants of all aspects of the research that might reasonably be expected to influence willingness to participate and explains all other aspects of the research about which the participants inquire. Failure to make full disclosure prior to obtaining informed consent requires additional safeguards to protect the welfare and dignity of the research participants. Research with children or with participants who have impairments that would limit understanding and/or communication requires special safeguarding procedures.

E. Methodological requirements of a study may make the use of concealment or deception necessary. Before conducting such a study, the investigator has a special responsibility to (1) determine whether the use of such techniques is justified by the study’s prospective scientific, educational, or applied value; (2) determine whether alternative procedures are available that do not use concealment or deception; and (3) ensure that the participants are provided with sufficient explanation as soon as possible.

F. The investigator respects the individual’s freedom to decline to participate in or to withdraw from the research at any time. The obligation to protect this freedom requires careful thought and consideration when the investigator is in a position of authority or influence over the participant. Such positions of authority include, but are not limited to, situations in which research participation is required as part of employment or in which the participant is a student, client, or employee of the investigator.

G. The investigator protects the participant from physical and mental discomfort, harm, and danger that may arise from research procedures. If risks of such consequences exist, the investigator informs the participant of that fact. Research procedures likely to cause serious or lasting harm to a participant are not used unless the failure to use these procedures might expose the participant to risk of greater harm or unless the research has great potential benefit and fully informed and voluntary consent is obtained from each participant. The participant should be informed of procedures for contacting the investigator within a
Consent Form

The Ethical Principles of Psychologists’ requirements for consent forms has several basic components, including: (1) that the agreement be clear and explicit, (2) that the terms be fair and not exploitive, and (3) that the investigator honor the agreement. An example of an informed consent form follows:

Consent Form for “Color Research”

My name is Bill Simon. I am a student working on an advanced degree in experimental psychology.

You have been asked to participate in a psychological experiment, which we call “Color Research.” The purpose of the experiment is to measure your reaction time when matching colors with color names, colors, or associates of colors. No deception is involved in this experiment. You will be asked to look at colors on a TV screen and press a key, which will measure your reaction time. The entire experiment will take 20 minutes or less. The task is similar to looking at a TV, and we foresee no risks or discomforts. You will receive class credit for your participation in the experiment.

The results of this experiment may be presented at professional meetings or published in the scientific literature. Your name will not be used in the reporting of results. Only group data will be used; however, your scores and name will be coded for a possible follow-up study or reanalysis of the data. All personal data will be kept confidential.

If you wish to withdraw from the experiment you may do so at any time without penalty.

Following the experiment I will discuss the results of the experiment with you.

If you have any questions please feel free to ask me or the supervisor of this research, Dr. Elizabeth Kane, Department of Psychology, University of Western California, phone 882-5968.

Thank you.

I, ____________________________, ____________________________, understand that my participation in this experiment is voluntary and that I may refuse to participate or withdraw from the experiment at any time without penalty.

___________________________ _____________
Signature Participant   Date

___________________________ _____________
Signature Experimenter  Date
reasonable time period following participation stress, potential harm, or related
questions or concerns arise.

H. After the data are collected, the investigator provides the participant
with information about the nature of the study and attempts to remove any mis-
conceptions that may have arisen. Where scientific or humane values justify de-
laying or withholding this information, the investigator incurs a special
responsibility to monitor the research and to ensure that there are no damaging
consequences for the participant.

I. Where research procedures result in undesirable consequences for the in-
dividual participant, the investigator has the responsibility to detect and remove
or correct these consequences, including long-term effects.

J. Information obtained about a research participant during the course of
an investigation is confidential unless otherwise agreed upon in advance. When
the possibility exists that others may obtain access to such information, this pos-
sibility, together with the plans for protecting confidentiality, is explained to the
participant as part of the procedure for obtaining informed consent.

CASE STUDY

In an experiment reported by Smith, Tyrell, Coyle, and William (1987) in the
British Journal of Psychology, the effects of experimentally induced colds and
influenza on human performance was measured to determine whether minor
illnesses “alter the efficiency of human performance.” The experiment involved
recruiting volunteers who stayed at the Common Cold Unit for ten days. They
were housed in groups of two or three and isolated from outside contacts. Fol-
lowing a three-day quarantine period the subjects were inoculated with nose
drops containing either the virus or a placebo. An incubation period of 48–72
hours followed. Then each participant was assessed by a clinician who evalu-
ated the severity of the illness. Objective measures included temperature, num-
ber of paper tissues used, and the quantity of nasal secretion.

Then, two performance tasks were done. In one the participants were to
detect and respond quickly to target items that appeared at irregular intervals
(a detection task). The second task tested hand-eye coordination.

The results indicated that influenza impaired performance on the detec-
tion task but not in the hand–eye coordination task. Colds generally had the
reverse effect.

The procedures used in this experiment were approved by the local ethi-
cal committee, and the informed consent of the volunteers was obtained. All
participants were screened to exclude pregnant women and people who took
sleeping pills, tranquilizers, or antidepressant medicines. The participants also
took a medical examination, including a chest X-ray, and anyone who failed the
examination was excluded. The participants were not paid but received food,
accommodation, traveling expenses, and pocket money. Other clinical trials
were also conducted.
Students should discuss the ethics of this experiment.

1. Did the experimenters follow acceptable (APA) standards?
2. Were the participants coerced?
3. Was the risk-to-benefit ratio worthwhile? (Keep in mind that other tests were done.)
4. Were there alternative means available to collect the data?
5. Were the participants treated in a way consistent with the APA principles?
6. Ask students if they would volunteer for this experiment.
7. Would they collect the data for this experiment? Why or why not?
8. Discuss this case (or the original article) in class.

Case Studies

In this section we present several research projects, some of which are questionable and others that seem to conform to the principles discussed previously. Try to find the flaws and acceptable standards in these projects.

Case Study 1

An experimenter was interested in the personality traits of subjects who had scored well in a test of ESP. The gist of the experiment was to have participants (receivers) report their impressions of an ESP card that was being viewed by another person (sender). The cards were randomly ordered, and the sender was completely concealed from the receivers. Several receivers scored well, but their personality measures did not differ from the rest of the group. Nevertheless, the experimenter thought he had identified a group of participants that was unusually sensitive to receiving ESP signals, so he conducted four additional experiments with these subjects. On the first three experiments the participants scored significantly better than would be expected by chance alone, but on the fourth experiment the group’s performance was no better than would be expected by chance. In reviewing the results, the experimenter decided to report only the first three experiments, attributing the results on the fourth experiment to sender and/or receiver fatigue.

1. What could be considered a procedural problem with this study?
2. What is the ethical problem in this study?

Case Study 2

While working at a major eastern university, an experimental psychologist trained in research design and physiological psychology was approached by a large company that produced a health food cereal. The company asked the psy-
chologist to design an experiment that would demonstrate the effectiveness of a cereal in reducing common ailments (e.g., colds) and absenteeism. The company agreed to pay the researcher a large sum of money if she would design the experiment and lend her name to the conclusion in a subsequent advertising campaign. The psychologist agreed to do so, but stipulated that she would have final approval of the advertising copy. She would not be directly involved in the collection of data but was assured that it would be done according to her exact specifications. Although she had little knowledge or training in nutrition, she felt that her background in experimental design and physiological psychology was sufficient to design a valid experiment.

1. Should the psychologist have accepted this offer?
2. Why or why not?

Case Study 3

In an investigation of higher moral standards, an experimental psychologist was interested in the strength of people's moral convictions. An experiment was designed in which participants were told that a child was in critical need of a drug that could be derived from a fungus found in a particular limestone cave. The fungus grew in abundance in this cave, and only a small portion was needed for treatment. However, the owner of the cave refused to allow anyone to use the fungus. The experimenter found that a large percentage of participants reported that they would trespass to obtain samples of the fungus. In a second part of the experiment, the researcher asked some of the participants to obtain the fungus illegally. In justifying the procedure, he argued that a higher moral principle was served and that the results would have a major impact on the knowledge of civil disobedience.

1. Did the researcher's plan conform to the code?
2. Could this research be modified to achieve the psychologist's aim and yet conform to the ethical principles?

Case Study 4

A research psychologist, working on problems of human memory, developed a superior mnemonic technique. She decided to test the technique by becoming a contestant on a television quiz show. After several successful appearances, she decided to write a book on the technique. Because she was well known after her appearance on the television quiz show, she agreed to have her picture on the cover and in the advertising for the book, along with the statement, “You too, can learn the extraordinary memory technique of Dr. Josephine Brown!”

1. What specific ethical issues are raised by this example?
Case Study 5

At a meeting of lawyers, a social psychologist was asked to present the results of her recent research on the decision-making process of juries. In one of her studies, she interviewed each member of a jury involved in a celebrated murder trial. In the study, the identity of each member of the jury was carefully concealed, but she did discuss the deliberative processes of subgroups. For example, the jury had among its members seven women, two African Americans, one foreign-born Italian American, an architect, and a truck driver, and the researcher referred to the voting and deliberative patterns of these groups. When questioned about the ethical propriety of revealing the findings, she said the names of the jurors had not been used and the jurors were now public figures whose opinions were no longer private.

1. What ethical concerns are raised here?
2. What are your views?

Case Study 6

A doctoral candidate at a large midwestern university was completing his dissertation on the relationship between mothers’ religious attitudes and the bedwetting tendencies of their children. His sample consisted of 48 white mothers between the ages of 20 and 28 who were members of a specific religious group. Their children were healthy. He had nearly completed his study when four subjects dropped out of the experiment. Since the dissertation was due soon, he decided to recruit subjects from his friends who had children. He was careful to make sure that all new subjects were identical on the designated attributes.

The dissertation was successful and he was awarded a doctoral degree. He is now a valued member of a department of psychology at a large midwestern university.

1. Did the candidate act unethically?
2. Is there any way the candidate could have salvaged his study, without starting over, and without recruiting from his friends? If so, how?

Case Study 7

“One of the best graduate seminars I took was in industrial psychology from good ol’ Professor B. J. Smith,” a colleague told another professor. “Each member of the seminar was given a very specific hypothetical problem concerning the design of work spaces and its effect on productivity. We did an extensive review of the literature and designed an experiment. We even anticipated the results and analyzed and discussed them. The professor gave us the problems and we did all the work, but it was an excellent learning experience.”
Several years later the same two colleagues saw each other at a psychology meeting. "Do you remember the story I told you about good ol’ Professor Smith?" one began.

"Yes, I do . . ." the other said. "Something about a good seminar you had with him."

“Well, the old fraud,” the first said, seething, “he took our research ideas, put them into practice, and published the results in the latest issue of the Journal of Important Industrial Research. See, here is a copy.”

The design in the article was similar to the one submitted by the seminar group, and the article even cited the very sources in the introductory material that were contained in the original paper.

1. Did the professor act unethically?
2. What could the students and the professor have done to avoid this uncomfortable situation?

Case Study 8

A social psychology experimenter wanted to use a test instrument called “Study of Basic Attitudes” to see if attitudes are related to scholastic achievement. A group of participants reported to a psychology investigator from a small liberal arts college to complete the attitude scale. But when they arrived the principal investigator was absent. Because the test was simple to administer—in effect, it was self-administering—the experimenter decided to have the secretary administer it. The secretary had no formal background in psychometrics but was briefed in the proper procedures for the administration of the test. Following the collection of data, the psychologist discussed the test and its results with the participants.

1. Is the procedure questionable from an ethical standpoint?

Case Study 9

The identification of criminal offenders by eyewitnesses is considered an important social and psychological issue. To study it, a researcher decided to stage a crime in the presence of eyewitnesses and then ask them for a description of the perpetrator. The experiment was conducted in a fast-food outlet, and all employees carefully rehearsed the staged crime. The crime was committed by an actor who entered the store, displayed an unloaded handgun, and demanded all the money from the cash register. He told the employees not to call the police and, in making his getaway, shouted, “The first one out the door is going to get blown away.” Immediately after the thief left, the researcher and his associates entered the store with a questionnaire, which they distributed to the patrons. The questions dealt with the physical appearance of the thief, whether or not
the person had a weapon, and what he or she said. Then each patron was presented with a series of photographs and asked to identify the thief.

Each patron was thoroughly debriefed after the questionnaire was completed, and the important social and psychological issues were discussed. An opportunity was provided for further debriefing and counseling, but no subject indicated a need for further intervention.

1. Comment on the experiment from an ethical standpoint.
2. Design an experiment that could have evaluated eyewitness identification, without the level of deception used in this study.

Case Study 10

In a study of the effects of vitamin A on maze-learning ability of rats in a semi-darkened environment, a researcher had reason to believe that enhanced performance would occur under minimum dosages but that at higher dosages performance would decrease. The experimenter selected four levels of vitamin A ingestion. The highest level had been shown by previous research to be toxic to rats, but the researcher argued that to demonstrate the hypothesized results such levels were necessary.

Previous research had also suggested that higher levels of vitamin A interfere with maze performance, but the hypothesis had not been tested empirically. Thus, the results would reveal something new and would have important scientific implications.

The rats were well cared for except for the high level of vitamin A ingestion in one group. Upon collecting the minimum amount of data necessary for analysis, the experiment was terminated and the rats were rapidly and painlessly killed.

1. Did the experimenter follow the ethical guidelines established for animal use in research?
2. What are your views on this study?

As the above guidelines show, it is impossible to cover all the ethical questions that might arise in the course of experimental work in psychology, just as civil laws cannot cover all contingencies of human conduct. However, the guidelines we have presented do provide a general structure that can be applied to a wide range of specific situations. These principles are subject to a degree of interpretation and, as such, may be interpreted differently by different investigators. When planning research that might involve ethical questions, the researcher should seek the opinions of other scholars before interpreting ethical principles. Sometimes there is a fine line between ethical and unethical experimentation, and the advice of others may help determine whether a piece of experimental work is advisable.
Definitions

The following terms and concepts were used in this chapter. We have found it instructive for students to go through the material a second time to define each of the following:

- competence
- deception
- informed consent
- integrity
- plagiarism
- social responsibility