Chapter 2
Methodology: How Social Psychologists Do Research

LEARNING OBJECTIVES

1. Explain why social psychological results sometimes appear obvious. (pp. 22)
2. Explain why it is necessary to translate beliefs into hypotheses. Describe the process of theory refinement. (p.22–24)
3. Identify the goal of the observational method and distinguish between everyday observations and systematic observations. Describe participant observation and define operational definition and interjudge reliability (pp. 25–26)
4. Describe the procedures used in archival analysis. (pp. 27–28)
5. Identify the goal of the correlational method. Discuss and define the characteristics of a correlation. Define and state possible values of a positive correlation. Define and state possible values of a negative correlation. (p. 29–30)
6. Identify the role of surveys and samples in conducting correlational research. Explain the importance of selecting samples randomly. Identify potential threats to obtaining inaccurate survey results. (pp. 30–32)
7. Distinguish between correlation and causation. (pp. 32–33)
8. Identify the goal and components of the experimental method. (pp. 34–35)
9. Distinguish between independent and dependent variables. (p. 35)
10. Define internal validity. Identify factors that threaten the internal validity of an experiment. Define random assignment to conditions and explain why it is necessary to internal validity. Define the term probability value and explain what a p-value tells us. (pp. 36–37)
11. Define external validity. Identify the kinds of generalizability that concern researchers. What is the connection between meta-analysis and replication? Define cover story and psychological realism. (pp. 37–41)
12. Describe the basic dilemma of the social psychologist. Compare and contrast lab experiments and field experiments. Describe the relationship between internal and external validity and each type of experimental setting. (pp. 39–40)
13. Describe two new approaches to the study of social behaviour. (pp. 41–43)
14. Contrast the goals of basic and applied research. Discuss the relationship between these types of research. (p. 41)
15. Describe the ethical dilemma faced by social psychologists and the role of informed consent in resolving this dilemma. Identify a deception experiment. Explain the necessity and functions of a debriefing session. Discuss the effects on participants of being deceived. (pp. 43–46)

CHAPTER OUTLINE

I. Social Psychology: An Empirical Science

• Fundamental to social psychology is that many social problems can be studied empirically.
• It is important to understand how social psychological research is done.
• • Findings from social psychological research may appear obvious because they deal with familiar topics.
• Findings that appear obvious in retrospect may not have been predictable before the experiment was conducted; hindsight bias is the tendency to exaggerate how predictable an outcome may have been.
• A Try It! Social Psychology Quiz is found on page 23.

A. Formulating Hypotheses and Theories

• A theory is an organized set of principles that can be used to explain observed phenomena.
• A hypothesis is a testable statement or idea about the relationship between variables.
• Many studies stem from a researcher's dissatisfaction with existing theories or the belief that he or she has a better way of explaining behaviour. (e.g. Festinger and attitude change)

B. Hypotheses Based on Personal Observations

• Researchers often construct a theory based on phenomenon observed in real-life (e.g., Kitty Genovese).
• Speculation cannot explain a phenomenon—researchers must design a study to test the hypothesis
• However observations are done, it is important to construct an operational definition, a precise specification of how variables are manipulated or measured.

II. Research Designs

• Social psychology relies on three types of methods—observational, correlational, and experimental--to provide empirical answers to questions about social behaviour.
• Table 2.1 (p. 25) summarizes the questions answered by the observational, correlational, and experimental methods.

A. The Observational Method

• The observational method involves systematic observation and measurement of behaviour.

1. Ethnography

• An observational method whereby the observer interacts with people being observed, but tries not to alter the situation in any way.
• Chief method of cultural anthropology, but being used more in social psychology
• May employ technology to monitor behaviour.
• Important for the researchers to clearly define the behaviours of interest (e.g bullying)
• lnterjudge reliability is the level of agreement between two or more people who independently observe and code a set of data; by showing that two or more judges independently come up with the same observations, researchers ensure that the observations are not the subjective impressions of one person.

2. Archival Analysis

• Archival analysis is a form of systematic observation whereby the researcher observes social behaviour by examining accumulated documents of a culture.
• Archival analysis can tell us a great deal about a society's values and interests.
• One archival study looked at body mass index of adult magazines form the 1950s to 1990s.
• • A Try It! exercise on page 29 provides students the opportunity to do their own archival analysis.

B. The Correlational Method

- Social scientists want to do more than describe social behaviour. A second goal is to understand the relationships between variables and to be able to predict when different kinds of social behaviour will occur.
- The correlational method involves systematically measuring the relationship between two or more variables.
- The correlation coefficient provides a metric for calculating the degree of association between two variables. Positive correlations indicate that an increase in one variable is associated with an increase in the other, and negative correlations indicate that an increase in one variable is associated with a decrease in the other.
- Correlations can range from - 1 to +1. The sign indicates the direction of the correlation, and the magnitude of the absolute value of the correlation, which ranges from 0 to 1, indicates the strength of the association.

1. Surveys

- A survey is a research method in which a representative sample of people are asked questions about their attitudes or behaviour.
- The validity of survey data depends on using samples that are representative of the population being studied. Random selection can ensure that a sample is representative.
- One possible problem with surveys is sampling errors (for example, the 1936 Literary Digest United States presidential poll fiasco, in which relying on telephone directories and automobile registries for the sample led to selecting a sample wealthier, and more prone to vote Republican, than voters in general).
- Survey questions that ask people to predict or explain their own behaviour are likely to be inaccurate.
- Answers to survey questions can be influenced by the way the question is phrased.

2. Limits of the Correlational Method: Correlation Does Not Equal Causation

- The major problem with the survey method is that it identifies only whether two variables are associated, and not why they are. An association might mean that A causes B, that B causes A, or that some third variable C causes both A and B, which are not causally linked.
- Confusion of correlation and causality may turn up in media reports.
- Examples are given and students can test their understanding of correlation in the Try It! exercise on page 33.

C. The Experimental Method: Answering Causal Questions

- Only the experimental method, which systemically controls and manipulates events, can determine causality.
- Readers are asked to imagine how they might test the relationship between the number of people present and helping in an emergency and to consider the ethical problems involved. Then the Latane and Darley (1968) study is described. In this study, 0, 2, or 4 other bystanders were presumably present when the confederate victim faked an epileptic fit, and the percentage of participants who tried to aid the victim was measured. The greater the number of bystanders, the less likely participants were to help.

1. Independent and Dependent Variables

- The independent variable is manipulated by the researcher. It is the variable that is presumed to cause the change in the other variable. The dependent variable is the one measured by the researcher to see if changes depend on the level of the independent variable.

2. Internal Validity in Experiments

- An experiment has high internal validity when everything is the same in the different levels of the independent variable, except for the one factor of concern. Internal validity is established by controlling all extraneous variables and by using random assignment to

conditions. In random assignment, each participant has an equal probability of being assigned to any of the experimental conditions. Random assignment helps ensure that the participants in the two groups are unlikely to differ in any systematic way.

- Even with random assignment, there is a small probability that different characteristics of people are distributed differently across conditions. To guard against misinterpreting the results in such an event, scientists calculate the probability level (p-value) that their experimental results would occur by chance. By convention, a p-value of less than or equal to 5 chances in 100 that an event would occur by chance is considered to be statistically significant.

3. External Validity in Experiments

- External validity is the extent to which the results of a study can be generalized to other situations and other people.

4. Generalizability across Situations

- Laboratory research in social psychology could possibly be critiqued as being artificial and hence ungeneralizable to real life. However, there are different ways in which an experiment can be realistic. An experiment is high in mundane realism to the extent that it is similar to situations encountered in real life, while an experiment is high in psychological realism to the extent to which the psychological processes triggered are similar to the psychological processes occurring in everyday life. Psychological realism often depends upon the creation of an effective cover story, or false description of the purpose of the study. Cover stories are used because if participants are forewarned about the true purpose of the study, they will plan their response, and we will not know how they would act in the real world. Thus cover stories increase psychological realism.

5. Generalizability across People

- The only way to be certain that the results of an experiment represent the behaviour of a certain population is to randomly select from that population. However, this may be impractical and expensive. Social psychologists often assume that the psychological processes studied are basic components of human nature and thus similar across different populations. To be truly certain of this, however, studies should be replicated with different populations.

6. *Field Research*

- One of the best ways to increase external validity is through field experiments, experiments conducted in real-world settings.

7. *The Basic Dilemma of the Social Psychologist*

- There is often a trade-off between internal and external validity--making a situation more controlled makes it less realistic, and making it realistic makes it less controlled. This trade-off has been referred to as the basic dilemma of the social psychologist (Aronson & Carlsmith, 1968). The resolution to this dilemma is the use of replication in both laboratory and field settings.

8. Replications and Meta-Analysis

- Replication is repetition of a study, often with different populations or indifferent settings. This provides the ultimate test of an experiment's external validity.
- Meta-analysis is a statistical technique for making sense out of multiple studies, some of which find effects of an independent variable and others which don't. In this technique, the results of two or more studies are averaged to see if the effect of an independent variable is reliable.
- Many findings discussed in the text have been replicated with different populations and/or settings.

III. Basic versus Applied Research

• Basic research tries to find the best answer to the question of why people behave the way they do, purely to satisfy intellectual curiosity. Applied research tries to solve a specific social problem. However, in practice, the distinction between basic and applied research is often fuzzy.

IV. New Frontiers In Social Psychology

A. Culture and Social Psychology

• Cross-cultural research is conducted with members of different cultures to see whether psychological processes of interest are present across cultures.
• In conducting cross-cultural research, one must not impose one's own views.

B. Social Neuroscience

• Social neuroscience explores the links between social behaviour and biological processes.

V. Ethical Issues in Social Psychology

• Social psychologists face the tension between wanting experiments to be realistic and wanting to avoid causing participants unnecessary stress and unpleasantness.
• The dilemma is less problematic when researchers can obtain informed consent, specifying the nature of the experiment and getting permission from the participants before the experiment is conducted. In social psychology research, this fully informed consent is used whenever possible. However, in some cases, full disclosure of the procedures would influence the nature of the results, and in this case, deception experiments are used, where only partial or misleading information about the procedures is given to participants in advance.

A. Guidelines For Ethical Research

• Ethical principles specify, among other things, that deception experiments conduct a debriefing, or explicit statement to the participant about what deception was used and why it was necessary. During the debriefing, researchers attempt to alleviate any discomfort that occurred during the session, and discuss the research with them, which is educational to both participants and researchers.
• Virtually all parties understand and appreciate the need for deception when combined with debriefing.

LECTURE ENHANCEMENTS

Exercise 2-1
Name That Method

Time to Complete: 10-15 minutes, in class **Ahead of Time:** Copy handout.

In Class: The exercise in the handout will allow students to try their hands at determining the type of methodology used based on a brief description of study. Have students work on the problems first on their own, and then in a small group, and then review in a general class discussion.

Discussion: Answers to the problems follow.

1. This is a correlational study examining the association between caffeine consumption and the number of daily hassles experienced. The only question that the researcher can examine is whether or not there is a correlation between these two variables. You can use this example to drive home the idea that correlation does not equal causation by asking students to generate the three possible explanations for any correlation between two variables. If there is a correlation, it could be due (1) to daily stressors leading people to consume more caffeine, (2) to caffeine either actually causing people to make more minor errors and thus experience more daily hassles or causing them to perceive more events as daily hassles, or, (3) to some third variable, e.g., number of hours spent at work in a week, which independently leads people both to consume more caffeine and to experience more daily hassles.

2. This is an experiment. The independent variable is whether or not the participant finds a free quarter in the phone booth. This is an operationalization of the mood variable, since the researchers presumed that people who find the free dime will feel happy about it. The dependent variable is whether or not the participant helps. The hypothesis is that subjects who are put in a good mood by finding a dime will be more likely to help. This example provides a good opportunity to introduce the concept of operationalization, and to discuss the relationship between theory and data. Also note for the students that this exemplifies an experiment conducted in the field rather than in the laboratory. Additional discussion could focus around other ways that the mood could be manipulated and that helping could be measured. Also ask students what possible problems could occur conducting research in the field. Most objections students will raise relate to the lack of control in the field setting, giving you the opportunity to stress that variability in events in the field add to error variance and thus make it harder to find an effect. They don't invalidate the experiment itself. You could also ask students to design a laboratory experiment to test the same hypothesis, and have them compare and contrast the advantages of the field experiment and the lab experiments.

3. This is a correlational study. Some students may get confused and say that it is an observational study, since archival analysis is described under this section in the textbook. This example provides you the opportunity to stress that even though this study is archival, it is primarily correlational because it focuses on the relationship between two variables, and not just on describing the pattern of one variable. The hypothesis is that there is a positive correlation between ambient temperature and aggression, measured by the number of batters hit by pitched balls. Some students may wish to argue with this operationalization of aggression--again, a good opportunity to discuss the idea of operationalization and the relationship between theory and data. If students argue that this is not a good operationalization of aggression because some of the hits are really just accidents, you can explain that although that is certainly true, those accidents are really just adding to error variance. Other complaints that students might raise are that the "hits" do not measure aggression of the pitchers, but instead measure poor control

of the ball by the pitcher or slow reaction times by the batter. If these are mentioned, then ask students what their interpretation of the finding would be, and what better operationalization of aggression they might choose instead.

4. This is an experiment, since one of the two independent variables is manipulated and randomly assigned. The two independent variables are sex (male/female) and performance (success/failure), and the dependent variable is self-esteem. The hypotheses being tested might be something like: women, but not men, will show lower self-esteem after failure, while both sexes will show higher self-esteem after a success. Having students generate hypotheses for this study will allow you to mention briefly that this is a factorial design and that the researchers are interested in the interaction of the variables, that is, the way that one independent variable affects the dependent variable, depending upon the level of the other independent variable.

5. This is primarily a correlational study, since both variables are measured rather than manipulated. (Specifically, it is an ex-post facto study.) Some students will be misled into thinking that it is an experiment based on similarities to study #4. Emphasize that it is not a true experiment because participants are not randomly assigned to the gender condition. The association being measured is that between gender and persuasability (as measured by the amount of attitude change after exposure to a persuasive message).

Exercise 2-1
Name That Method

Answer the following questions for each study described below. (1) Is the study primarily an observational study, a correlational study, or an experiment? Why did you give the answer you did? (2) What are the variables involved in the study? For experiments, specify the independent and dependent variables. (3) What might be the hypothesis that the researchers are trying to test?

1. A researcher is interested in the relationship between caffeine consumption and level of stress. S/he has participants keep a diary for one week during which they count the number of cups of coffee, tea, and cola-based soft drinks they consume, as well as recording consumption of chocolate and medications that have caffeine as an ingredient. In addition, participants complete a measure of "daily hassles" experienced during the week.

_____Observational _____Correlational _____Experimental Variables:

2. A pair of psychologists are interested in the effects of mood on helping. They go to shopping malls and set up observation near telephone booths. Their participants are individuals who use the phone booths when the vicinity is otherwise unoccupied. For half of the participants, the researchers leave a quarter to be found in the coin slot of the pay phone. For all of the participants, when the phone call is completed and the person leaves the telephone booth, a confederate walks by the booth, and drops a file folder full of papers. The researchers watch to see if the participants help pick up the dropped papers.

_____Observational _____Correlational _____Experimental Variables:

3. Reifinan, Larrick, and Fein (1988) were interested in the factors causing aggression. They looked at an entire baseball season's worth of news reports. For each game, they recorded the temperature of the locale, and the number of batters who were hit by pitched balls.

_____Observational _____Correlational _____Experimental Variables:

4. Researchers are interested in influences on self-esteem. Half of the participants used in this study are male, and half are female. Participants are given a set of anagram problems to solve in a five-minute time limit. Half are randomly assigned to receive very easy anagrams, and half are given difficult ones. After completing as many of the anagrams as they can, participants are given a questionnaire labelled "Thoughts and Feelings Questionnaire" that is really a measure of self-esteem.

_____Observational _____Correlational _____Experimental Variables:

5. Researchers are interested in what determines how easily people are persuaded. Half of the participants used in this study are male and half are female. During the session, participants rate their attitude towards an increase in fees that has been proposed at their school. Following this, they listen to a persuasive message providing strong arguments in favour of the fee increase. Finally, they re-rate their attitude towards the proposed fee.

_____Observational _____Correlational _____Experimental Variables:

Exercise 2-2
In-Class Survey

Tim Wilson suggests conducting a survey in class to illustrate correlations, t-tests, generalizations, etc. Ask the class to think of hypotheses and design the survey. They usually think of interesting questions (e.g, correlating the amount of alcohol consumption with the frequency of engaging in sexual intercourse or with grade point average). Obviously, the data are collected anonymously.

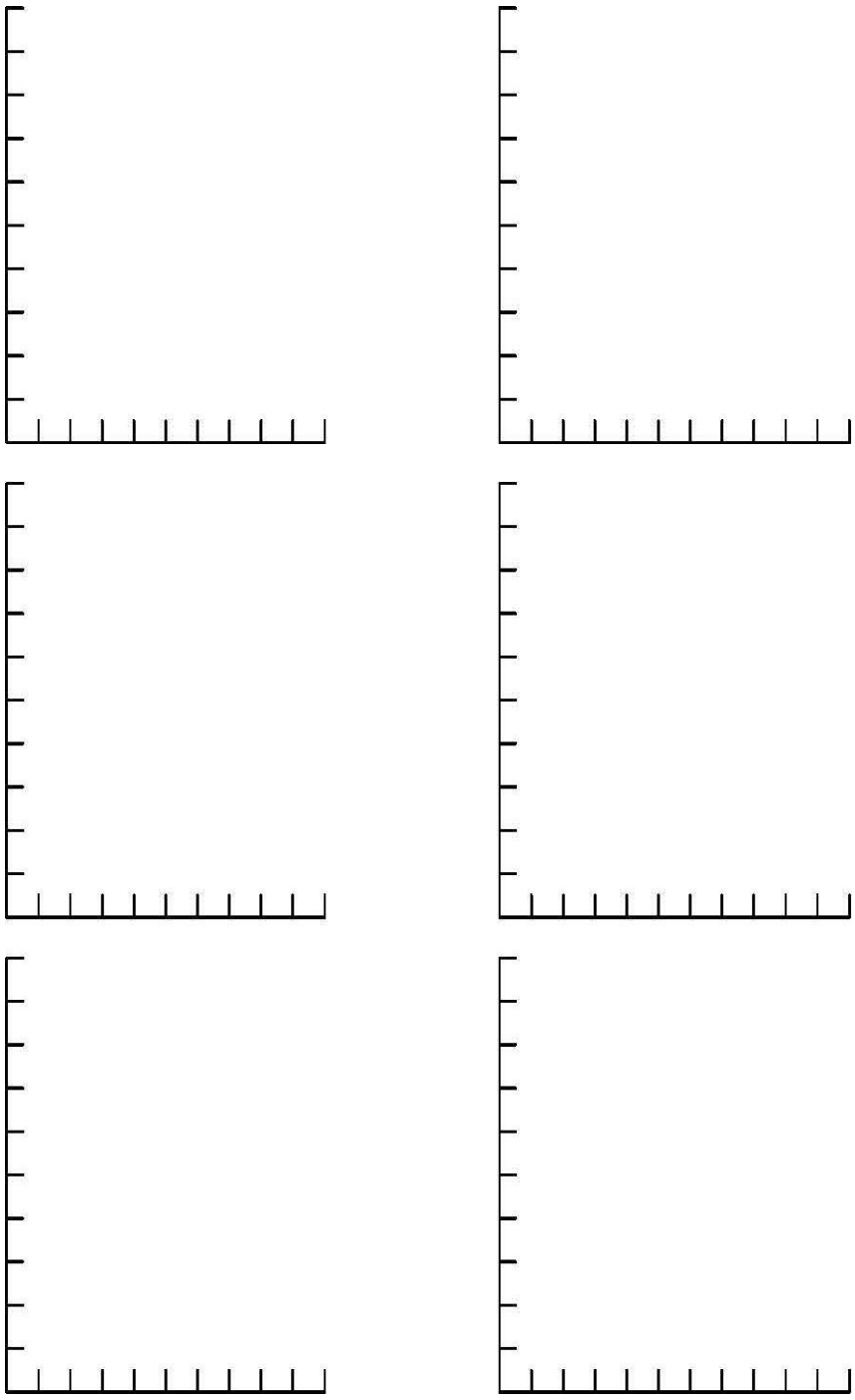
Exercise 2-3
Designing Observational, Correlational, and Experimental Studies

Divide the class into four groups. Each group should be assigned to design a study on the relationship between self-esteem and academic achievement/performance. One group should be asked to design an observational study, another a correlational study, another an experiment examining the effects of self-esteem on academic achievement, and the fourth an experiment on the effects of academic achievement on self-esteem. The groups should describe their methods and should describe what they would be able to conclude if statistically significant results were found. Once each group has presented its findings, the class as a whole can discuss the advantages and disadvantages of each method. Ask them to indicate how high their study seems to be in internal and in external validity. Note that although the group assigned to devise a correlational study may appear to have the easiest job, students are likely to just say that they will administer two different questionnaires, one measuring self-esteem and the other measuring academic achievement. If a group designs a very simple study such as this, after asking what they could conclude from such a study, you might ask what else they might measure to assess whether or not the correlation between these two variables is real. Although some correlational research has suggested that there is a strong relationship between these two variables (e.g., E.M. Skaalvik & K. A. Hagtvet (1990), "Academic achievement and self-concept: An analysis of causal predominance in a developmental perspective", Journal of Personality and Social Psychology, 58, 292-307), other research has suggested that the relationship is spurious and is due to third variables such as intelligence and family status (e.g., G. Maruyama et al., (1981), "Self-esteem and educational achievement: Independent constructs with a common cause", Journal of Personality and Social Psychology, 40,489-499). This will allow you to drive home the point that correlation cannot prove causation.

Exercise 2-4
Positive and Negative Correlations

To enhance student's understanding of positive and negative correlations, ask students to pair up and think of examples of variables that would be positively or negatively correlated with each other. To further enhance their understanding, you can collect data from the class on some of the variables they posit will be correlated. In a small class, you can do this by using the transparency master overhead and having students post their own data in a scatterplot; in a larger class, you may wish to collect the data and make the scatterplot for them. This exercise can also be used as a lead-in for a discussion on correlation and causality, by asking students to come up with alternative hypotheses for why variables that seem to be correlated are related.

Exercise 2-4
Transparency Master



Exercise 2-5
Ethics

Time to Complete: 30-35 minutes, in class
Ahead of Time: Copy handout.

In Class: Distribute handout on the following page to class members. Ask each person to fill out the questionnaire individually. Then divide the class into groups of four or five for discussion. Students should compare their answers. Are there any disagreements about which studies are ethical? Why did these disagreements occur? Which ethical principles do students refer to in making their decision about whether or not a study is ethical? Which ethical principles do students consider most important?

Have each group report back their results on each of the ethical dilemmas. Lead a class discussion about some of the issues raised. For example, when do psychologists have the right to study people's behaviour without their consent?

Discussion: Answers to the problems follow.

In Study 1, the behaviour occurs in a public setting and anyone can observe it. Since the observation involves minimal risk to participants, no informed consent is necessary.

In Study 2, the issue is whether the participation is truly voluntary. On a smaller scale, the participation of introductory psychology students for extra credit points in their classes involves a similar issue.

Study 3 is a description of the work of Piliavin, Rodin, and Piliavin (1969). The issue, as in most field experiments, is the lack of informed consent. When do psychologists have the right to study people's behaviour (or expose them to potentially distressing scenes) without their consent?

The major issue in Study 4 is the lack of debriefing. A second, perhaps more minor problem is deception: not telling participants the true purpose of the study, and observing them without their knowledge. Most studies involving deception are relatively harmless. Potential harmful effects of deception can be eliminated by careful and sensitive debriefing.

The major issue in Study 5 is the delay in the debriefing. Some aspects of the study are good, such as informed consent to the degree possible, and stressing the participant's freedom to withdraw at any time. However, debriefing is delayed for no obvious reason. The delay interferes with the researcher's responsibility to detect and to remove any damaging consequences that might have occurred as a result of the deception.

You should conclude that attention to the welfare of research participants is extremely important.

Exercise 2-5
Ethics

For each of the following studies, please indicate whether you consider it to be ethical or unethical.

Study #1. A social psychologist sits in a crowded bar all evening and records the number of people who came into the bar alone who leave alone or who leave with someone else, and the time at which they left.

_____ ethical _____ cannot decide _____ unethical

Study #2. A researcher wants to administer a new drug hypothesized to affect aggressive behaviour. He chooses prison inmates to be his participants, reasoning that aggression is more common in prisons. In order to persuade prisoners to participate, they are promised favourable letters to their parole boards which may facilitate earlier release.

_____ ethical _____ cannot decide _____ unethical

Study #3. A team of researchers is interested in studying helping behaviour. They stage a scene in a subway in which a confederate falls off his seat and bleeds from the mouth. The dependent variable is how quickly bystanders help the "victim." The bystanders are never told they have been in an experiment.

_____ ethical _____ cannot decide _____ unethical

Study #4. A psychologists is interested in studying discrimination against homosexuals. She carefully trains a confederate to portray stereotypical "macho" and "gay" behaviour. In the laboratory, naive participants interview the confederate for a hypothetical job. Without their knowledge, the psychologist observes their nonverbal gestures, eye contact with the confederate, and so forth. In order to assure that participants do not talk to their friends about the study, the psychologist never reveals to them that the true purpose was to study discrimination.

_____ ethical _____ cannot decide _____ unethical

Study # 5. Deception was employed in a study examining the relationship between attributional style and self-esteem. Prior to participation, research subjects were informed of the requirements and purpose of the experiment to the extent possible given the deception. Freedom to withdraw from the study at any time was emphasized. Following an assessment of attributional style, all participants were given false feedback on a test of a particular intellectual ability and were told that their scores indicated that they performed below average. Attribution and self-esteem measures were then administered. Immediately upon completion, subjects were thanked for their participation and promised a detailed report of the study. Two months later, subjects received the report which fully described the deception.

_____ ethical _____ cannot decide _____ unethical

Exercise 2-5
Ethics

Guidelines For Group Discussion

Compare your answers for each of the items. Where disagreements occur, participants should explain the reasoning used to decide whether or not a study was ethical. After you do this, answer the following questions. Be prepared to summarize your discussion for the rest of the class.

1. Are there any disagreements about which studies are ethical? Did you disagree more about some studies than others? Why do you think these disagreements occurred?

2. In your group, which issues seem the most important in determining whether or not a study is ethical?

SUGGESTED READINGS

Adair, J. G. (2001). Ethics of psychological research: New policies: continuing issues: new concerns. Canadian Psychology, 42, 25-37.

Aronson, E., Ellsworth, P., Carlsmith, J.M., & Gonzales, M. (1989). Methods ofresearch in social psychology (2nd ed.). New York: Random House.

Aronson, E., Wilson, T. D., & Brewer, M. (1998). Experimental methods. In D. Gilbert, S. Fiske, & G. Lindzey (Eds), Handbook of social psychology, 4th ed. New York: McGraw-Hill.

Brannigan, C. G., & Merrens, M. R. (Eds.) (1995). The social psychologists: Research adventures. New York: McGraw Hill. Includes autobiographical reports of how many notable social psychologists developed their research careers.

Campbell, D. T. (1969). Reforms as experiments. American Psychologist, 24,409-429. Argues that social policy reforms should be treated as quasi-experiments; Good examples of archival research.

Christensen, L. (1988). Deception in psychological research: When is its use justified? Personality and Social Psychology Bulletin, 14, 664-675.

Cook, T. D., & Campbell, D. T. (1979). Quasi-experimentation: Design and analysis for field settings. Boston: Houghton Mifflin. The definitive source for understanding internal and external validity.

Dunn, D. S. (1998). The practical researcher. New York: McGraw-Hill. A research methods text by a social psychologist focusing on helping students develop as consumers as well as potential producers of research.

Gergen, K. J. (1973). The codification of research ethics: Views of a Doubting Thomas. American Psychologist, 28, 907-912.

Judd, C. M. , Smith, E., & Kidder, L. (1996). Research methods in social relations (6th ed.).New York: Harcourt Brace.

McKenna, R. J. (1995). The undergraduate researcher's handbook: Creative experimentation in social psychology. Boston: Allyn & Bacon. Teaches research methods in social psychology by emphasizing student research projects rather than the professional literature. Provides many good examples of studies that could inspire students to go out and conduct their own research.

Pettigrew, T. F. (1996). How to think like a social scientist. New York: Longman. Focuses on critical thinking and understanding of causation and control. Includes seven reprints of media reports of social science research for students to practice analyzing.

Pines, A. M., & Maslach, C. (1993). Experiencing social psychology: Readings and projects. New York: McGraw Hill. Includes ideas and workbook forms for student research on topics spanning the field of social psychology.

Rosnow, R.L., & Rosenthal, R. (2008). Beginning behavioural research: A conceptual primer (6th ed.). Upper Saddle River, NJ: Prentice Hall. This book provides a good overview of basic research methods in psychology, including systematic observation, correlations, and experimentation.

Schlenker, B. R., & Forsyth, D. R. (1977). On the ethics of psychological research. ‚Journa/ of Experimental Social Psychology, 13,369-396.

Sharpe, D., Adair, J. G., & Roese, N. J. (1992). Twenty years of deception research: A decline in subjects' trust? Personality and Social Psychology Bulletin, 18,585-590.

Stanovich, K. E. (1998). How to think straight about psychology (5th ed). New York: Longman. A good resource for helping students learn to evaluate the popular media's reporting of research on psychology and the social sciences.

Webb, E. J., Campbell, D. T., Sechrest, L., & Gove, J. P. (1981). Nonreactive measures in the social sciences. Boston: Houghton Mifflin. The classic reference for unobtrusive measures.

CRITICAL THINKING TOPICS AND DISCUSSION QUESTIONS

1. In the first half of the 20th century, doctors began to notice a relationship between smoking tobacco and lung cancer. This line of research finally led to the warning by the Health Canada on cigarette packages. Ask the class if anyone is a smoker. There will usually be a smoker who can answer your questions. Ask the smokers "Why can you smoke cigarettes?" The answers will range from, "because I want to," to "because the government allows me to," to, "because there is a powerful lobby pushing tobacco company interests," To each response, reply," yes, and why else?" Several of the non-smokers are likely to contribute answers too. After several minutes (if class members have not raised the point), you can indicate that an important reason is that the relationship between lung cancer and smoking is a correlation. No cause-effect relationship between smoking and lung cancer has been definitively demonstrated in humans, (for obvious ethical reasons, no experiments have been done). The tobacco industry for years was able to use this argument as a defence. Ask the class how to establish the cause-effect relationship in humans. Have the class help design an experiment to answer the question. If you do this, you can use this discussion as a platform for a lecture on the ethics of human experimental psychology. Explain your institution's human subjects committee guidelines and explain the rights of participants in experiments.

2. Suppose you wish to find out how much people know about how to prevent AIDS. You obtain a brochure from Health Canada that indicates sensible precautions to take, and then you use this to design a survey to test whether or not people are aware of these precautions. How will you then find a group of people to conduct your survey on? Use this as a lead-in to a discussion on sampling methods and sampling bias. Note that there are problems with representativeness in convenience samples (for example, college students). Ask how one could get a representative sample of the population. Indicate that many polling organizations derive samples by randomly selecting from address or phone directories. You could note that even these lists might underrepresent populations of special interest such as the non-English speaking or the homeless, and indicate that special stratified random sampling techniques can be used (at greater expense) to attempt to reduce (though not totally eliminate) this problem.

3. Suppose that you wish to find out what actions people are actually taking to prevent the spread of sexually transmitted diseases. You obtain a brochure from Health Canada that indicates sensible precautions to take, and then you use this to design a survey to examine whether or not people actually take these precautions. What kinds of problems are you likely to run into in administering such a survey? Use this to lead into a discussion of the social desirability bias as a potential problem in research. Discuss anonymity of findings, social desirability scales, and unobtrusive measures (for example, condom sales: if students claim to be practicing safe sex but condom sales in the area are low, then you would suspect that students were answering your questions in a socially desirable way) as possible means of reducing social desirability concerns.

4. What are the problems with using college student samples in research? Pose this question to students. An article by C. Rubenstein, "Psychology's fruit flies" (July 1982 Psychology Today, pp. 83-84) provides a useful summary of issues that could be given to students before or after this discussion. Conclude the discussion by asking students why social psychologists so often use college student samples despite the problems, how social psychologists justify this frequent use of college student samples, and how social psychologists might be able to increase the sample base they use without their studies becoming prohibitively expensive.

5 .If you are teaching at a college or university in which psychology students participate in psychological research, you might try the following: Ask students who have participated in psychology experiments to share their experiences with the rest of the class. Were they deceived in any way? If so, how did they feel about it? Were they properly debriefed at the conclusion of the experiment? Tim Wilson finds that this stimulates an interesting discussion of ethics. Typically, people who have participated in studies recognize the reasons for any deception and bear no ill feelings about it. See Sharpe, Adair and Roese (1992).

6. Freedman and Sears (1967) wrote a paper on the selective exposure hypothesis that demonstrates the importance of conducting studies in field as well as laboratory settings. Although researchers working in field settings had found evidence for selective exposure, attempts to reproduce these results in the laboratory led to very inconsistent findings. This discrepancy can provide the basis of an interesting discussion. Suppose you were going to design a study to test the following hypothesis (known as the "selective exposure hypothesis"): when watching political ads on television, people will pay more attention to ads for the candidate that they support than to ads for the candidate that they are against. Ask students to design a laboratory study to test this hypothesis. Then ask: Is this study high in internal validity? What would you think if you conducted the study and found that there were no differences between the groups? Discussion will first focus on internal validity problems with the study. Ask students: If you conducted this study and found no effects, does this mean that the hypothesis is necessarily wrong? Is it wrong overall, or is there a problem with conducting this kind of experiment in the laboratory? What kind of mindset do people bring to a laboratory? How does it differ from the mindset that they might have when watching television at home? What are the conditions under which the selective exposure hypothesis is likely to apply? What does this suggest about the external validity of the original study? This discussion will sensitize students to the importance of external as well as internal validity.

7. The textbook discusses the possible cultural limits of research (p. 42), and suggests that many social psychological findings will hold up cross-culturally if variables are manipulated to make the same kind of "psychological sense" to people in different cultures. Have any students in class travelled in another culture (or subculture)? If several students in the class have travelled, this can provide the basis for discussions across the term about the potential limits and generalizability of the social psychological findings discussed in the text

INTEGRATING/ASSIGNING "TRY IT!" ACTIVE LEARNING EXERCISES

Exercise 2-6
Social Psychology Quiz

This exercise is located on page 23 of the text, and consists of 10 questions, each asking students to guess the results of social psychological research. The exercise can be used to make the point that not all results from social psychology are "just common sense." If you use this in class, have students answer the questions before you assign the chapter. After students have made their guesses and received feedback, you can ask them to try to explain the results that they guessed wrong, and ask if they know make sense. This can also be used as a lead-in to a discussion of the "hindsight bias" or the "I knew it all along effect" (Fischhoff, 1975).

Exercise 2-7
Archival Analysis

This exercise is located on page 29 of the text. It suggests that students do their own archival analysis of how women and men are portrayed in the media.

Exercise 2-8
Correlation Does Not Equal Causation Quiz

This quiz is located on page 33 of the text. Seven correlations are presented, and students are asked to generate alternative explanations of the results. Before students complete this on their own, you might introduce the exercise with a couple of additional examples in class: (1) A survey found a correlation between the number of dogs in a community and the number of fire hydrants. Is this a case of "if you build it, they will come" (that is, are the fire hydrants attracting the dogs)? What else could account for the found correlation? (size of the community); and (2) A researcher went to an elementary school and did a study examining the relationship between aspects of student's physical build and their performance on a test. To her surprise, the researcher found a significant correlation between students' shoe size and their test scores. Why might this correlation exist? (the researcher did not control for the third variable, student's age).

STUDENT PROJECTS AND RESEARCH ASSIGNMENTS

Exercise 2-9
Conducting An Observational Study

To give students some of the "hands-on" flavour of social psychological research, you can have them (ideally in pairs) conduct an observational study. Some ideas for studies are presented below, or students may wish to derive a method to test a hypothesis of their own. In each case, ask students to specify the hypothesis or research question, to decide ahead of time on a method, including what units will be sampled, over how long a period of time, how these units will be selected, what behaviour will be coded, and along what dimensions. Students should devise a coding form for themselves ahead of time. Both members of a pair should code the data, and the percentage agreement should be calculated as a measure of interjudge reliability. Disagreements between coders can be resolved through discussion. Have students report back by writing a paper summarizing their hypothesis, method, coding procedures, and results (using descriptive statistics such as means or frequency distributions).

Possible projects include:

1. What kind of explanations for their outcome are given by athletes who win versus athletes who lose? Use the sports pages to develop a topology of explanations. (This was done by C. Peterson (1980), "Attributions in the sports pages: an archival investigation of the covariation hypothesis", Social Psychology Quarterly, 43, 136-140). Try not to develop too many categories, but rather use fairly general categories such as accepting responsibility for the outcome oneself versus citing the competitor as being responsible, citing temporary or changeable causes such as injury versus citing more long-lasting causes such as problems with the coaching staff, and so forth. When you are done coding, see if you can come up with any generalizations about the explanations used by winners versus by losers.

2. How has the portrayal of men versus of women in the media changed over the past 30 years? Pick a medium, for example, ads in Macleans magazine, or the comic strips from your local newspaper. Go to the library and find some issues from 30 (or more) years ago. After looking through these briefly, develop a coding scheme. For example, you could look at the relative numbers of men and women depicted, what kind of role (e.g., housewife, worker, unable to tell) is being played by the characters portrayed, or what setting (e.g., home, work, or social) the characters are in, or how dominant, submissive, or egalitarian male versus female characters act in relationship to each other. [More details on similar projects are given in Carpenter (1998, Content analysis for research novices, Teaching of Psychology, 25, 42-43).]

3. Conduct an "unobtrusive measures" study of the concerns portrayed by men and women, as depicted in the kinds of graffiti found in men's versus in women's bathrooms on campus (of course, you will need a member of each sex in order to do the counts!).

4. Compare how men versus women portray themselves or portray the kinds of characteristics they are looking for in a romantic partner by doing an analysis of the personal ads. Alternatively, you might compare and contrast the kinds of ads presented by people in different media (a small town paper versus a city paper; or compare ads from different special interest magazines).

5. Do an observational study of who touches and is touched by whom. Find an area of the campus or town to observe, and study pairs of people. Code each pair as to the gender (and possibly age) of each member, and count the number of times each person touches the other, and indicate where on the body each touch is made. How often and where on the body do men touch women, men touch men, and women touch women? You might include boys and girls separately.

Exercise 2-10
Examining Media Reports Of Scientific Research

One out-of class project that students often find interesting is to search advertisements and the news media for examples of the confusion of correlation and causation. Before giving this assignment to students, you might make a transparency or handout based on the "Correlation Does Not Equal Causation Quiz" in the text (p. 33). Reviewing these items, which include several examples of media reports, should prime students for the kinds of errors they themselves might find in the media.

Exercise 2-11
Debate On Whether The Use Of Deception In Research Is Justifiable

Have students conduct a debate on whether the use of deception is justified in social psychological research. The textbook provides arguments about why deception may be necessary, and cites evidence against the idea that it may be harmful. Students arguing the "pro-deception" side should review this textbook material as they prepare. Students arguing the "anti-deception" side should refer to Z. Rubin's articles, "Taking deception for granted" (March 1983 Psychology Today, pp. 74-75) to help them prepare. Rubin argues that deception may retard scientific progress. Another pair of articles that the students could read to prepare themselves is the Baumrind-Milgram debate over ethical issues in the Milgram obedience study (Baumrind, D., (1964). Some thoughts on ethics of research: After reading Milgram's "Behavioral Study of Obedience." American Psychologist, 19,421-423; and Milgram, S. (1964). Issues in the study of obedience: A reply to Baumrind. American Psychologist, 19, 848-852. (This pair of articles has been reprinted in Pines, A. M., & Maslach, C., Experiencing social psychology: Readings and projects (3rd ed.), pp. 11-18. New York: McGraw-Hill. Of course, if students read the Milgram study debate, it is helpful for them to have seen a filmed version of the Milgram experiment, such as that presented in the video The Power of the Situation (referenced in the film/video section of Chapter 1). In the class before the debate, assign students to roles. Preparation for the debate could be done outside of class (for example, if debaters are receiving extra credit for this assignment), or the first part of the next class session could be allocated for preparation. Each team should get together and decide what their best arguments are, and prepare a three minute summary statement. Each team presents its side and listens to the other side. Debaters then have five minutes to prepare a one minute rebuttal. At the end of the debate, class members who are observing can discuss which arguments they found most persuasive.

Exercise 2-12
Participating in Research On-Line

Students are assigned to participate in one of the several social psychological studies being conducted over the Internet. One URL that lists web-based experiments is www.socialpsychology.org. Note that studies vary considerably in the amount of feedback that they provide to students; some come complete with debriefing, and others merely thank the respondent for participating. You could assign students to participate in one or more studies and then write a short paper describing their experience, using either the hypotheses provided by the researcher or (should these not be available), their speculations as to what the researchers' hypotheses might be.

FILM AND VIDEO LISTINGS

Against All Odds: Inside Statistics (videos 30 mm. each, ANN). This series put out by Annenberg teaches statistics. Episodes particularly relevant to social psychology are The Question of Causality, Samples and Surveys, and Experimentation.

Secrets of the Psychics. (60 minutes, 1993, TLV). This NOVA program explores the efforts of the noted skeptic "The Amazing Randi" to investigate claims of paranormal phenomena. Can provide a stimulating beginning for discussions of research ethics, values, and methodology.

Ghostbusters (1984). At the beginning of this move, there is a scene in which Bill Murray, playing a psychologist, conducts an experiment on ESP. It is an amusing illustration of how not to do experimental research.

Inferential Statistics: Part 2: Hypothesis Testing--Rats, Robots, and Roller Skates. (28 minutes, 1976, PSU). A humorous presentation of basic research principles including random assignment, control groups, and hypothesis testing.

Junk Science: What we know that isn't so. (58 min,1997, ABC). This ABC special hosted by John Stossel examines the relationship between science and politics, and looks at how scientists view several issues popularized by the media.

Methodology: The Psychologist and the Experiment (31 minutes, 1972, PSU). An introduction to research methods and experimental design. Focuses on Schacter's fear-affiliation study and a study by Riesen on the effects of light deprivation on visual-motor coordination in cats. Discusses independent variable, dependent variables, control groups, random assignment, and basic statistical concepts.

Observation (28 minutes, 1993, IM). The focus is on observing children, but a good primer on naturalistic observation in general.

Research Methods for the Social Sciences. (32 minutes, 1996, IU). Discusses the scientific method as applied to social science research.

Social Psychology in the Laboratory. (24 minutes, 1975, PSU). Three experiments in social psychology illustrate some of the standard features of experimental methodology. Shows such experimental procedures as the briefing and debriefing sessions, as well as such aspects of establishing the environmental setting as design of the laboratory, seating arrangements, and equipment. Experiments explore the stability of three-person groups, nonverbal communication, and communication in problem-solving.

Understanding Research. (27 minutes, 1991, ANN, Discovering Psychology series). The scientific method in psychological research is presented, along with data collection and analysis in the lab and in the field. The value of critical thinking in interpreting research findings is highlighted.