AN INDEPENDENT STUDY COURSE BY CORRESPONDENCE
Paralleling the Course of the Same Name and Number
Offered in Residence by
Texas State University
San Marcos, Texas

PSY 1300

Introduction to Psychology

1996 Edition
(Three Semester Credit Hours)

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Correspondence Study Policy on Academic Freedom

Texas State University defends the rights of its faculty and students to express views on a full spectrum of issues. This principle of academic freedom is especially important in courses containing controversial subject matter. It extends to the Correspondence Curriculum as well as to on-campus classes. Views expressed in this study guide should not be expected to represent a consensus of the university faculty and administration.

Contents and Overview

Introduction to Psychology

CORRESPONDENCE NOTE:

If you change your address while taking this course, please notify us of your new address as soon as possible.

Your Instructor

Christopher Wilson is a professor of psychology at Sam Houston State University. He received a B.A. from Florida Presbyterian College (Eckerd College) in 1972, an M.A. in 1975, and a Ph.D. in 1976, both from Texas Christian University.

You may contact Dr. Wilson via e-mail at: psy_dcw@shsu.edu.

CORRESPONDENCE NOTE:

If you have any questions for your professor, type them up and submit them along with your assignments.

PSY 1300
Introduction to Psychology

Scope & Nature of the Course

This course introduces you to the field of psychology. It is designed to familiarize you with the many facets of the science of psychology, including an understanding of basic research methods, biological bases of behavior, development, learning, thinking, motivation, personality, emotion, sensation, and perception. Psychological disturbance and methods of therapy will be examined as well. This course should not only provide you with a foundation for learning related information in psychology, but it should also help provide some insight into human behavior.

This course is a prerequisite for all other psychology courses. Through this introduction to psychology, you should become familiar with the major theories of psychology, areas of study, psychological perspectives (e.g., behavioral, cognitive, psychodynamic), major contributors to the field of psychology, as well as basic terminology related to this field.

We are all "armchair psychologists." There are times when we ask ourselves why we behave the way we do, why others react in certain ways, how we can improve our outlook on life, change unwanted behaviors, improve our interactions with others, and so on. Psychology examines how and why organisms behave the way they do in a given situation. Through psychology, we gain a better understanding of how we think, how we learn, and how we behave. While much of psychology focuses on human behavior, other organisms are studied as well.

Course Goals

After you have completed this course, you should be able to do the following:

- describe how psychology developed from other fields of study, philosophy in particular;
- understand how scientific research is conducted and the various techniques used to collect information;

- describe biological processes underlying behavior, including parts of the nervous system, the endocrine system, and nerve cells;
- identify the processes involved in sensation and perception, including cognitive processes that can affect the interpretation of sensory input;
- describe various states of consciousness and the physiological changes that occur during sleep;
- compare and contrast classical conditioning, operant conditioning, and observational learning, including which forms of learning are more useful for certain behaviors;
- identify the processes involved in memory, cognition, language, and intelligence;
- recognize the physical, emotional, and cognitive developmental changes that occur during the lifespan;
- identify major personality theories and techniques used to assess personality;
- compare and contrast motivation theories and how they are used to explain behavior; and
- describe techniques used to identify psychological disturbance and the psychological and physiological perspectives used as the basis for therapy.

Required Textbook

The text required for this course is the following:

Sternberg, R. J. (1995). *In Search of the Human Mind* (1st Ed.). Fort Worth, TX: Harcourt Brace. ISBN 0-15-500342-9.

The Sternberg text was chosen because it is comparable to the textbooks being used for the regular lecture course of introductory psychology at Texas State. While *In Search of the Human Mind* is somewhat rigorous, it provides a comprehensive view of most topics and I believe will be a useful reference for psychology students.

Course Procedure

This course is divided into thirteen lessons. The lessons in this study guide are each divided into five parts:

Reading Assignments - Sections from the textbook are assigned according to the topic being studied. In some lessons, additional readings are included following the discussion section. Later lessons may require information learned from earlier lessons, so it will be helpful to review some earlier reading assignments. These will be noted in the lesson discussions.

Objectives - These outline the main topics and ideas covered in the readings and specify what you should have learned by the end of the lesson. Keep these objectives in mind while reading and completing the assignments. It will help to review these objectives after the reading assignment and discussion to determine if you have understood the lesson.

Discussions - The discussion section includes important material not found in the other readings and points out areas in the reading that should be emphasized. The discussion is equivalent to a lecture in the regular course.

Self-Help Exercises - These are multiple-choice questions intended to help you learn the objectives in each lesson. Try to answer them without looking up the correct answer. Answers for the items and textbook page numbers are found in the Study Guide Appendix. Even though you will not be graded on these items, it is important that you do these exercises. Some lessons will include a substantial number of questions. Because a number of Self-Help items will be included in your exams, use them to help study for the midcourse and final examinations.

Written Assignments

These are usually multiple-choice questions or short essay questions. When used in conjunction with the list of Objectives and Self-Help Exercises, these should provide sufficient guidelines for understanding the lessons and studying for the exams.

To get the most out of your lessons, you should begin by reading the lesson objectives and briefly scanning the assigned readings to get the gist of the lesson. Next, carefully read the discussion. Follow the discussion by carefully reading the textbook and any other assigned readings.

There are a total of 13 written assignments in this course. Each multiple-choice item is worth one point. If you submit your assignments via mail or fax, you should answer these items on the accompanying answer sheet with your choices clearly marked. If you submit your assignments via e-mail, you are not required to submit the answer sheet.

Some written assignments will include short essay questions. You should need less than a page to answer each question—often a few sentences will do. (Hint: the more points an essay is worth, the more detailed and lengthy the answer should be.) Each essay is worth between two and five points, depending upon the required length of the essay and the difficulty level. You may submit hand-written essays as long as they are written in ink and are legible.

It may help to submit the first assignment for grading before completing any other lessons. You may receive some suggestions on how to improve your essays that may gain you a few extra points in future written assignments.

Remember, this is a college course, and college-level work is expected from students; therefore, essays will be graded on grammar and writing style as well as on content. Also, be sure you understand the meaning of plagiarism and avoid it at all costs! This study guide includes an Academic Honesty Policy, so be sure you read it carefully. The penalties for academic dishonesty (including plagiarism) include an F in the course and prosecution through the student justice system.

You may submit assignments for this course via e-mail and fax. Instructions for e-mail and fax assignment submission are located in the Important Information section under "Doing and Submitting Assignments." Be sure to follow these instructions carefully to avoid any delays in the grading and return of your assignments.

Exams

In addition to the written assignments, you will be required to complete a midcourse examination as well as a comprehensive final. Both exams are closed-book; you cannot use your books or notes during the examinations. Both exams are multiple-choice, with each item worth one point towards your course grade. Both exams must be taken at an approved testing site and must be proctored. A Texas State answer sheet will be provided, but you will need to bring a #2 pencil.

Midcourse Exam - The midcourse exam will include all material covered in Lessons 1 through 6. It will consist of 80 items, and will include some questions from the Self-Help Exercises and the Written Assignments. You will have a maximum of two hours to complete the exam.

Final Exam - The final consists of 100 multiple-choice items. It is comprehensive (i.e., includes questions from all 13 lessons), and the questions will be similar to the types of items found in the midcourse exam. You will have a maximum of two and a half hours to complete the exam. **In addition, you must pass the final (60 points or more correct) in order to pass the course.**

Students with Disabilities

The Office of Distance and Extended Learning is committed to helping students with disabilities achieve their education goals. A disability is not a barrier to correspondence study, and we strive to provide reasonable and appropriate accommodations to individuals in coursework and test taking. Students who require special accommodations (e.g., testing accommodations, information in alternative format, sign language interpreting services) need to provide verification of their disability to the Office of Disability Services, Suite 5-5.1 LBJ Student Center, (512) 245-3451 (voice/TTY).

Grading Criteria

Grades are based on the total number of points earned from the written assignments and exams. Your course grade will be determined as follows:

Written Assignments	130 points possible	42%
Midcourse Exam	80 points possible	26%
Final Exam	100 points possible	32%
	310 total points possible	100%

Your course grade will be determined by adding the total number of points earned from the above activities and then using the following grading scale:

279-310 points = A	Excellent	90-100%
248-278 points = B	Good	80-89%
217-247 points = C	Average	70-79%
186-216 points = D	Poor	60-69%
185 points or less = F		59% and below

No pluses or minuses will be added to the final, reported grade. **You must make a 60 percent or better on the final exam in order to pass the course.**

Final Comments

Having read this introduction, you are now ready to begin learning about psychology. I hope you find the course interesting and begin to see how much psychology affects our daily lives. Perhaps you will gain some insight into your own and others' behaviors.

Your success in this course depends upon your understanding the material. Therefore, if you have any questions as you progress through this course or if you have any suggestions on how to improve the course, please be sure to submit them with your written assignments. It would also be helpful in grading the assignments to know a little bit about you. With your first written assignment, please include a little information about yourself: are you taking any other course, have you chosen a major, why did you choose to take this course by correspondence, and what do you hope to gain from this course?

Important Information

Before beginning work in your course, you will find it helpful to familiarize yourself with the policies and procedures of the Texas State Office of Distance and Extended Learning contained in the online student handbook and on our website. In addition, the following pages contain information important to know when taking a course from our office. Please take the time to carefully read through this section.

Textbooks and Course Materials

Be sure to purchase all materials required for your course within thirty days of your enrollment date. After thirty days, course materials may become unavailable. If you need to order additional textbooks or course materials, you will find an order form on our website.

Making a Schedule

You have nine months to complete your course. To meet graduation or other personal deadlines, you may need to complete your course earlier.

Using the Personal Study Schedule in the front of this study guide, set a reasonable schedule for submitting each assignment and taking any required exams. **When making your schedule, keep in mind that unless otherwise stated in the Introduction of this study guide, you may submit no more than two assignments per week.** Consider the assignment turnaround time involved with a correspondence course. You should plan around dates when the university is closed for extended periods of time and faculty will not be on campus or grading correspondence assignments. Also be aware that it will take longer to get your assignments graded during exceptionally busy times for faculty, such as when final exams are being administered in on-campus classes. **Allow four weeks for final grades to be reported to the Texas State registrar. Allow additional time for receipt of transcripts.** It is your responsibility to know your personal deadlines. Take these into consideration when making your schedule, particularly if you need to complete this course to graduate. Once you have constructed a study schedule, stick to it. Refer to it often to ensure that you are staying on track. If you should fall behind, amend your schedule so that it is still a useful tool for helping you complete the course in a reasonable amount of time.

Doing and Submitting Assignments

Follow assignment directions carefully. If possible, complete your assignments using a computer word processing program. If you do not have access to a computer or need to write out hard-copy assignments, print legibly in ink unless otherwise directed by the instructor. For mathematical work, show all calculations and circle your final answer.

Identify your work. Number all pages of your assignment and include on each page the course prefix and number, the assignment number, and your name. (This is especially important for assignments submitted via e-mail or online.) Attach an assignment cover sheet from the back of this study guide to all hard-copy assignments. Fill out all information completely and clearly. If you have questions, e-mail your instructor or ask them on the cover sheet for hard-copy assignments. Your instructor or our office will respond. **Make or save a copy of your work.** Doing so will save you from having to redo your assignment if it is lost.

When you submit your assignment, our office notes your submission, and your instructor grades it. **Your instructor may take up to ten working days to grade your assignment.** Our office records the grade, and graded hard-copy or e-mailed assignments are returned to you. Assignments submitted online are graded by your instructor online and available for your review online.

Submitting Assignments by Mail

Place your assignment in one of the pre-addressed envelopes provided. If you find the envelope is too small for your entire assignment, obtain a larger envelope and record on it your return address, course name, and assignment number. Do not split an assignment into more than one envelope. Never give or send your assignment directly to your instructor.

Be sure your assignment has sufficient postage to avoid any last-minute delays. You must pay any outstanding postage fees incurred during your enrollment period to avoid a hold being placed on your records. Mail exam request forms separately from your assignments; do not mail an exam request form in the same envelope with an assignment.

Submitting Assignments by Fax

In some courses, you may fax your assignments to our office for an additional fee. Check the Introduction of this study guide to see if your instructor will accept faxed assignments. When faxing an assignment to our office, fill out the assignment cover sheet and use this as the cover sheet for your fax. Always call to verify receipt of the assignment and the total amount of the fax charge.

Submitting Assignments by E-Mail

Some instructors allow students to submit assignments as e-mail attachments to corrassign@txstate.edu. Check the Introduction of this study guide to see if e-mail assignment submission is an option for this course. All e-mail submitted assignments must be saved as MS Word documents. If you submit your assignment in a format that the instructor is unable to access, you will be asked to resubmit it as an MS Word document. **When submitting your assignment, instead of an assignment cover sheet, please be sure to note the course number, the assignment number, and your name in both the subject area and the body of the e-mail message.** For instance, the second assignment for ENG 2340 would read as follows: ENG 2340-Assignment Two-Jane Smith

Also, be sure the file you attach to this e-mail is clearly identified with your name and assignment number as follows:

JaneSmith2

While we encourage you to include any questions regarding course content along with your e-mailed assignment, please send any questions regarding correspondence policies and procedures in a separate message to our office e-mail address. Remember, do not submit e-mail assignments directly to the instructor. The Office of Distance and Extended Learning will forward these assignments to the instructor, who will then post grades back to our office or record your grades online. Following these instructions carefully will expedite the return of your graded assignment.

Submitting Assignments Online
Some print-based courses have companion websites in TRACS, Texas State's online learning environment. If your course has a companion site that includes online assignment submission, follow the directions for submitting assignments in that TRACS site. Not all print-based courses have companion sites in TRACS, and not all course companion sites include online assignment submission. The Introduction of this study guide will inform you if your course includes a course companion site in TRACS.

Exams

Almost all correspondence courses require you to take at least one exam. For these courses, a minimum grade on the exam(s) is required to pass the course independent of the grades you earn on the assignments. An explanation of the exam grade requirement for your course can be found in the Introduction of this study guide.

If you live at a distance from the Texas State campus and need to have your exam proctored, be sure to read the information on exam proctors in the About Your Exam section of this study guide. We will contact all proctors for verification. Review proctor requirements to avoid possible delays in your exam being mailed to your testing location.

Reporting Course Grades and Incompletes

All assignments must be completed and all exams must be taken for you to receive credit for your course. Once you have completed your course and the instructor has determined your final grade, you will receive a final grade report. Letter grades of A, B, C, D, and F are used for final grades. The lowest passing grade is a D. There is no pass/fail grading option for any course except MATH 1311. Final grades are reported to the Texas State Registrar only if you complete the course. No grade is reported if you do not complete the course. If your enrollment expires and you do not drop your course, your course remains on your transcript as "in progress," but no grade is reported. If you drop your course, no transcript entry is made.

Your final exam grade report (for courses that have a final exam) and a course report are mailed to you upon completion of the course. You may also obtain a course grade on an official Texas State transcript. Transcripts are available from the Registrar's Office, 111 J.C. Kellam Building, and may be requested in person, by mail, or by fax at 512.245.2367. The cost is $5 per transcript, payable by check, cash, or credit card. No official transcript can be released if there is any financial obligation to Texas State. For more information, refer to the website of the Texas State Registrar's Office, www.txstate.edu/registrar.

Additional Resources

The Texas State Library

All Texas State students, including correspondence students, receive library support services from the Alkek Library, located on the main campus. The library website (located at www.library.txstate.edu/services/distance-students) is your essential portal to resources and services. Distance learning students are also eligible for additional assistance (including document delivery) from the Distance Services Librarian. Some library resources may require a Texas State username and password, which you may obtain by contacting the Texas State Office of Distance and Extended Learning. Please contact the Alkek Library for more information on specific library services. Contact the Reference Desk at 512.245.2686, or contact the Distance Librarian at 866.255.3511.

Online Tutoring

The Texas State Office of Distance and Extended Learning provides students with online tutoring for correspondence courses offered through our office. The subject areas in which students can receive help include math, writing, and Spanish. For detailed information about this service, visit our website or contact us by phone.

A Final Word

The Office of Distance and Extended Learning will work with you to see that you benefit from and enjoy correspondence study. Should you have any questions about our procedures, call 512.245.2322 from 8 a.m. to 5 p.m. Central Time, Monday through Friday. If you have questions concerning course content, e-mail your instructor or use the assignment cover sheets to communicate with your instructor. The Office of Distance and Extended Learning is committed to offering you the highest quality educational experience. We appreciate feedback concerning our services to you, your instructor, and ideas for new courses. For current course listings, visit our website, **www.correspondence.txstate.edu**.

You may also contact our office directly: Texas State University, Office of Distance and Extended Learning, 601 University Drive, San Marcos, TX 78666-4615.

Local: 512.245.2322 • Toll-free: 800.511.8656 • Fax: 512.245.8934
Website: **www.correspondence.txstate.edu** • E-mail: **corrstudy@txstate.edu**

University Honor Code

The Texas State University Honor Code serves as an affirmation that the University demands the highest standard of integrity in all actions related to the academic community. The Honor Code applies to all Texas State students, including correspondence students. As stated in the Texas State *Student Handbook*,

> Violation of the Honor Code includes, but is not limited to, cheating on an examination or other academic work, plagiarism, collusion, and the abuse of resource materials.
>
> Academic work means the preparation of an essay, thesis, report, problem, assignment, or other projects which are to be submitted for purposes of grade determination.
>
> Cheating means engaging in any of the following activities:
>
> - copying from another student's test paper, laboratory report, other report or computer files, data listing, or programs;
> - using, during a test, materials not authorized by the person giving the test;
> - collaborating, without authorization, with another person during an examination or in preparing academic work;
> - knowingly, and without authorization, using, buying, selling, stealing, transporting, soliciting, copying, or possessing, in whole or in part, the content of an unadministered test;
> - substituting for another student—or permitting another person to substitute for oneself—in taking an exam or preparing academic work;
> - bribing another person to obtain an unadministered test or information about an unadministered test;
> - purchasing, or otherwise acquiring and submitting as one's own work, any research paper or other writing assignment prepared by an individual or firm. This section

does not apply to the typing of the rough or final versions of an assignment by a professional typist.

Plagiarism means the appropriation of another's work and the unacknowledged incorporation of that work in one's own written work offered for credit.

Collusion means the unauthorized collaboration with another person in preparing written work offered for credit.

Abuse of resource materials means the mutilation, destruction, concealment, theft, or alteration of materials provided to assist students in the mastery of course materials.

Personal Study Schedule

Here's a planning schedule to help you successfully complete your course. Follow these steps:

First, enter the course abbreviation and number, and the date you enrolled in the course.

Second, enter your deadline for completing the course at the bottom of the schedule. Be sure to allow for holidays and breaks between semesters.

Third, enter the dates you plan to take each exam.

Fourth, enter the dates you plan to submit each assignment.

Planning Schedule

START I began _____ on _____ .

Assignment	Planned Date	Actual Date Sent	Date Received	Grade
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____

MIDCOURSE EXAM I plan to take the midcourse exam on _____ .

7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____
11	_____	_____	_____	_____

Assignment	Planned Date	Actual Date Sent	Date Received	Grade
12	_____	_____	_____	_____
13	_____	_____	_____	_____

FINAL EXAM I plan to take the final exam on _____ .

DEADLINE My grade must be received on _____ .

CORRESPONDENCE NOTE:

Need help with your course? Visit correspondence.txstate.edu for information on free online tutoring.

Lesson One

Introduction and Understanding Research

Reading Assignment

Sternberg text: Student Preface, pp. xiii - xx; Chapter 1, pp. 3 - 33; Appendix pp. A-1 to A-11

Objectives

After you have completed this lesson you should be able to

- define psychology and describe its relation to other social sciences;
- describe the four characteristics of scientific findings;
- describe some common misconceptions about science and explain why they are untrue;
- identify the steps scientists use in solving a problem;
- describe the four primary goals of psychological research;
- compare and contrast various research methods in terms of the data obtained, advantages, disadvantages, and when each method is likely to be used;
- define and describe various experimental designs and when these designs are typically used;
- recognize ethical considerations that are present in psychological research; and
- describe how researchers can have objective measures of phenomena.

Discussion

Psychology, as it is commonly defined, is the scientific study of behavioral and mental processes. One can take the definition further to say that psychology also examines **how** those behaviors and mental processes are affected by the organism's physical state (e.g., is it fatigued, is it ill, is it well-rested and alert?), mental state (is it happy, confused, depressed?), and external environment (Is the organism in a climate that is hot and humid?, Does the organism know it is being

observed?, Is the room brightly lit or dimly lit?). In essence, psychologists study how living organisms (human or otherwise) behave in certain situations, and how differences in the organism's mental and physical state as well as the environment can affect behavior and what goes on in the mind.

The science of psychology includes examining a wide variety of elements and draws its study from a number of related fields. To illustrate, let's examine the following situation:

> Three men: a doctor, a lawyer, and an engineer, are all about to be executed on a guillotine. As they step up to the scaffold, each is given the choice of lying face up or face down. The doctor goes first. Because he is familiar with human anatomy, he believes death will come more quickly if he is lying face up. The blade drops, but stops just a foot above the doctor's body. There is much amazement and the prisoner is released. The lawyer is next. He is sure that legal precedent would lead to his own release if the blade were to stop for him as it did for the doctor, so he lies face up too. Once again the blade stops short and the prisoner is released. Now it's the engineer's turn. He decides his best bet is to go with whatever worked before. As he lies on his back, he can see the blade directly overhead. But then, just before the blade is about to drop, he points up and says to the executioner, "Hey, I think I see what your problem is."

Why is this joke funny to some people and not to everyone? How do you think someone from another culture would react to it? Would a depressed person find it funny? At what age would a person be able to comprehend the humor in it? The more you think about it, the more questions you can develop to examine people's differing reactions to this joke. In fact, all the processes involved in humor—how your eyes distinguish between the light and dark on this page, perceiving the black marks as letters and converting them into a comprehensible form of communication, the mental processes involved in comprehending a joke, determining whether the joke is funny, situational and personal characteristics that can affect reactions to humor, memorizing the joke and recalling it correctly when you tell it to others—all that and more is studied in psychology. As your text notes, what distinguishes psychology from the other sciences is its focus on the individual rather than on aggregate groups.

As you will learn from the text, research requires certain criteria in order to be classified as scientific. Scientific findings must be verifiable, cumulative, public, and parsimonious. Also, scientists solve problems using a specific, logical procedure.

What Are the Goals of Psychology?
Psychological research is done in order to provide more information and insights about human behavior. Psychological research focuses upon: (1) **describing** what happens, (2) **explaining** behavior, (3) **predicting** what will happen, (4) **controlling** behavior, and (5) **improving** the quality of life. Your text describes the first four goals; the fifth goal is more likely found in applied research, which attempts to find solutions to particular problems (e.g., discovering effective intervention techniques to reduce the likelihood of child abuse). Applied research is done for the sake of its immediate, practical usefulness.

The Scientific Method
Psychological research is guided by the **scientific method**. The scientific method uses a series of procedures for gathering and interpreting information (data) that is designed to limit sources of error (inaccurate or incorrect data) and provide consistent, dependable conclusions.

When psychologists begin a study, they usually have some idea of what they believe the outcome to be. These "educated hunches" are called hypotheses. Hypotheses can be based on information gained from a previous perspective, or from a new perspective on existing theories of behavior.

Let's use the humor example again. Suppose Janet wanted to study how a person's affective (emotional) state would influence that person's reaction to a humorous story. Janet's hypothesis is that people who have a negative affect (sad or depressed) will be less likely to judge a joke as being funny. The **null hypothesis** would be that affective state has no effect on people's judgments of humor. So, Janet conducts her study and collects her data. Her goal is to show statistically that the evidence is contrary to the null hypothesis—that there *really is* a systematic difference in humor judgments related to affective state—and that Janet can reject the null hypothesis as being incorrect and accepting an alternative hypothesis (namely, hers).

The techniques used in psychological research, while designed to minimize error and bias, cannot completely remove all sources of error. Therefore one can never be absolutely sure one's hypothesis is the correct one. Psychologists do their best to obtain as accurate a picture of behavior as possible, but all we can do is gain support for a hypothesis; we can't prove it to be true. If you ever read an article in a magazine that says, "Research proves that hostility shortens your lifespan..." take a good look at their procedures and read it more critically. What psychologists do is conduct research, collect data, analyze it, and if their predictions are correct, the evidence will force them to reject the null hypothesis of no effect and accept an alternative hypothesis. Many people new to this concept think that by accepting the alternative hypothesis we have proven something—proven that an effect really exists; this is not the case. Psychology, among other fields, is not an exact science. There may be other plausible

explanations that we may or may not have even considered when developing our hypotheses. What we have done is provided evidence that supports our conclusions.

Why Conduct Research?
There are two broad kinds of information that scientists seek to understand: (1) the **structure** of behavior and its processes: what things are present and what is involved when behavior occurs; and (2) the causes or **determinants** of behavior: what elements bring about certain behaviors or events.

When psychologists study the structure of behavior, they typically use the correlational design. They collect information about a number of variables and see how strongly related each variable is with the others. For the most part, variables are measured as they are, and researchers do not manipulate the setting or the subject in any way. The stronger one attribute is related to another, the higher its correlation (the closer the statistical correlation to +1.0 or -1.0). If a weak relation exists between two variables, the statistical correlation is closer to zero. Janet might conduct a humor study in which she has subjects first describe their affective state, then rate a series of jokes according to how funny subjects thought the jokes were. She expects to find a strong positive correlation between affective state and humor judgments (the better they feel, the funnier they judge the jokes to be; the worse they feel, the less funny they judge the jokes to be).

Examining the causes or determinants of behavior or mental processes requires an experimental design. Researchers manipulate variables in order to determine if one variable or set of variables (known as independent variables) can influence another variable (known as the dependent or outcome variable). Janet might conduct a humor study in which she manipulates subjects' affective state by giving them money (producing positive affect) or by withholding a promised gift (producing negative affect), then have them rate a series of jokes according to how funny they thought they were. By manipulating the specific variable in question as well as controlling other variables (e.g., room temperature, time of day) Janet can conclude that any statistical differences in humor ratings were a direct cause of affective state.

There is one caveat to remember when examining correlational designs**:** **CORRELATION DOES NOT IMPLY CAUSATION**. A strong correlation between two variables does not indicate whether one variable caused the other variable to change in relation to it. For example, a large-scale study was conducted in Taiwan to determine what variables best predicted the use of contraception methods. After measuring a number of variables, the researchers found that the strongest correlation existed between contraceptive use and the number of electrical appliances in the home (Li, 1975, cited in Stanovich, 1992). What can one conclude from that? Do contraceptives make one want to buy more toasters? Would handing out free electric fans make people use contraceptives? In this situation, these questions seem ridiculous. But it

illustrates how a relation between two variables does not necessarily signify that one variable causes the other. In this case, some third variable (possibly educational level or socioeconomic level) is likely related to both contraceptive use and appliances.

Ethical Considerations

As you'll learn from your text, there are often moral and ethical issues that must be addressed when designing a study. Is it acceptable to deceive subjects in order to reduce potential bias? How far can a researcher manipulate the environment and his/her subjects if the results could lead to dramatically improving the quality of life? What is it that a researcher can and cannot do with human and animal subjects? Stanley Milgram's study raised a number of ethical issues and led to some minimum standards that all psychologists adhere to. First, almost all psychological research with human subjects is reviewed by a human subjects experimentation committee. Second, prior to taking part in the study, human subjects must give the researcher their consent to participate in the study. Participants' consent means they understand what the research entails and are willing to take part. For those subjects who are unable to give informed consent (e.g., children), a legal guardian must provide the consent. In some cases, children who are old enough to understand will also be asked to give their consent. Participants are told that they are free to withdraw from the study at any time without fear of penalty or embarrassment. Also, any information collected in the course of the research is kept confidential, and participants' names are never associated with the data. Finally, following the completion of the research, participants are debriefed and told about any deception that may have been involved.

Enhancing Objectivity

Data measurement and collection must be as objective as possible in order to minimize sources of error entering the data. Some techniques researchers use include operational definitions, standardized measurement instruments, and reliable and valid measures. An operational definition involves describing a variable using very specific operations (steps) that researchers can use to identify its presence. An operational definition of fear might include a heart rate greater than 120 beats/minute, and facial expressions including drawn up eyebrows, eyes open wide, and lips pulled back and drawn downward. If the behavior does not meet this criteria, then the subject is not fearful.

Standardization involves using uniform, systematic procedures: there must be consistency throughout the study. Observations must be measured and scored the same way, stimuli must be presented in the same way across many subjects. You can think of standardization as a kind of quality control for experiments; everything gets done the same way for every subject. Standardization helps researchers be sure that subject response was caused not by faulty experimental technique but by the experimental stimuli.

Also, as your text outlines, measures must be reliable (consistent) and valid (accurate). With unreliable or invalid measures, results cannot be replicated, which is one of the elements of good scientific research.

One of the biggest problems researchers encounter is that of **bias** (systematic error). If any degree of bias is present in the data, the results are potentially distorted. When data are biased, there is no clear way of knowing whether the results were due to experimental manipulations or from some other uncontrolled factors. Bias can occur even with carefully standardized methods—one can have very uniform, consistent procedures yet still have bias. The following are a few sources of bias.

Experimenter expectancy bias effect is what Sternberg describes as the self-fulfilling prophecy. The Rosenthal-Jacobson (1968) study described in your textbook illustrates this form of bias. Granted, the vast majority of experimenters do not purposely manipulate their research just to get the result they predicted—much of it is inadvertent—but the self-fulfilling prophecy exists nonetheless. How would a researcher control for this kind of bias? One technique is to keep the treatment groups unknown to those conducting the experiment. With Janet's humor study, she might have one person responsible for manipulating affect, while another person distributes the humor survey *not knowing which treatment the subject received.*

Another source of bias originates in the participant and is known collectively as **reactivity**. Subjects may have privately held hypotheses about the nature and purposes of the experimental manipulations and may thus react in ways they deem appropriate to the situation. For example, Orne and Scheiber (1964) discovered that placing subjects in an isolation room with a red "Emergency Alarm" button and instructing subjects to report any bizarre or unusual experiences led them to describe more unusual sensory symptoms than control group subjects who were not exposed to suggestive cues. Some deception, in which the subjects cannot infer the variables of interest, can help reduce this bias.

A well-known source of subject bias can occur when the subject knows he is being watched. This is known as the **Hawthorne Effect**. It was named after research done in the 1920s at the Western Electric Company in Hawthorne, IL. Researchers were interested in investigating how changes in the work environment (room temperature, lighting, work hours) would affect productivity. No matter what changes were made, the workers all improved in productivity, probably just because they knew they were being observed. Controlling for the Hawthorne effect requires unobtrusive measures and perhaps some deception so the subjects do not know the behavior of interest.

References

Orne, M.T., & Scheiber, K.E. (1964). The contribution of nondeprivation factors in the production of sensory deprivation effects: The psychology of the panic-button. *Journal of Abnormal and Social Psychology, 68*, 3-12.

Stanovich, K.E. (1992). *How to think straight about psychology* (3rd ed.). New York: Harper Collins.

CORRESPONDENCE NOTE:

Always attach an assignment cover sheet, found in the back of your study guide, to the assignments you submit.

Self-Help Exercise One

DO NOT submit for grading. For each multiple choice question, select the letter of the response that best completes each statement. The answers to these questions are located in Appendix A.

Multiple Choice

1. A thermometer that always shows the same wrong temperature when placed in a beaker of ice water can be said to be _____.
   a. both reliable and valid
   b. only valid
   c. only reliable
   d. neither reliable nor valid

2. Thirty 18-year-old women took a vocabulary test. Which of the following is a dependent variable?
   a. the age of the test takers
   b. the gender of the test takers
   c. the scores on the test
   d. the test they took

3. Drawing a causal inference is a particularly important part of the process of _____ a behavior.
   a. explaining
   b. describing
   c. predicting
   d. measuring

4. Which of the following is an advantage of a controlled experimental design?
   a. Findings can be readily applied to settings outside the laboratory.
   b. Typically utilizes a representative sample.
   c. Rarely raises ethical concerns.
   d. Provides a strong basis for drawing causal inferences.

5. Psychologists use inferential statistics to decide if a difference between two sets of scores is due to _____.
   a. the sample statistic
   b. the dependent variable
   c. the population parameter
   d. chance fluctuations in the data

6. The null hypothesis predicts that there is _____ between groups.
   a. a negative correlation
   b. a true difference
   c. no difference
   d. an inferential difference

7. Neither _____ nor _____ designs permit researchers to infer causation.
   a. controlled experimental; quasi-experimental
   b. quasi-experimental; correlational
   c. correlational; controlled experimental
   d. controlled experimental; naturalistic observational

8. Which of the following correlational values represents the strongest relationship between two variables?
   a. .41
   b. -.32
   c. -.65
   d. .26

9. _____ research sparked much of the controversy about ethical issues in psychological research and led to the requirement that research be reviewed by others before being carried out.
   a. Milgram's obedience
   b. Rosenthal and Jacobson's Pygmalion in the classroom
   c. Cialdini's participant observation
   d. Weiss's marital separation

10. To say that some psychological research is conducted on a confidential basis means that _____.
    a. no one knows who has participated in the research.
    b. no identifying information about a subject is associated with the data they provide.
    c. researchers ensure that they are the only ones with access to information identifying participants.
    d. subjects do not give any identifying information to the researchers.

Submitted Written Assignment One - Complete this written assignment and submit for grading. If you are submitting this assignment via regular mail or fax, be sure to fill out and attach an assignment cover sheet from the back of the study guide.

Multiple Choice (1 point each) – Choose the letter of the word or phrase that best completes the statement or answers the question. If you are submitting this assignment via regular mail or fax, record your answers on the answer sheet that follows.

1. Broadly speaking, psychologists study _____.
   a. the mind and behavior
   b. the unconscious
   c. people who are mentally ill
   d. psychic phenomena (ESP, telepathy, etc.)

2. Which of the following is not a characteristic of science or scientists?
   a. It verifies that research outcomes are reliable and conclusions are valid.
   b. It is a collection of facts.
   c. They build on past research.
   d. Findings are subjected to the criticism of others.

3. Which of the following is NOT a goal of science?
   a. description
   b. operationalization
   c. explanation
   d. prediction

4. If you wanted to determine the effect of alcohol on reaction time, you should probably use the _____ method.
   a. questionnaire or survey
   b. experimental
   c. case study
   d. naturalistic observation

5. When using a(n) _____ design the researcher is primarily concerned with observing the degree of association between two or more attributes.
   a. controlled experimental
   b. quasi-experimental
   c. observed score
   d. correlational

Short Essay (5 points) - Submit on your own paper or as an e-mail attachment.

Identify a personal problem that you would like to change (e.g., bad temper, mood swings, excessive smoking or drinking, etc.). Describe the research methods (experiment; test, questionnaire, and survey; case study; naturalistic observation) you would use to obtain a complete and accurate description of this problem. Why is a good description of the problem the first step in making changes?

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Name _____

Written Assignment #1
Answer Sheet

Do not use this answer sheet if you are submitting this assignment via e-mail; instead, follow the instructions for e-mail assignment submission in the Important Information section of this study guide.

If you are submitting this assignment via regular mail or fax, record your answers for the *objective* questions on this answer sheet. Detach and submit for grading along with the *essay* question. Be sure to fill out and attach an assignment cover sheet from the back of the study guide.

Part I - Multiple Choice

1._____

2._____

3._____

4._____

5._____

Part II - Short Essay

Submit on your own paper.

CORRESPONDENCE NOTE:

When studying, take a short break every sixty minutes or so to help maintain your focus on the material.