

PREFACE

TO STUDENTS

We—Tom, Wind, and Gary—love social psychology.

- We've written this book with the sincere hope that you'll love it too, from the first page to the last. We want you to really enjoy your reading and look forward to each chapter. We know that's an ambitious goal, but we know it can happen.
- Here's what we've learned after many years of teaching: Social psychology will surprise you. Some insights will be pleasant; others will be disturbing. The way you think about and experience your life after social psychology will be different, deeper, and better for you—and for everyone around you. You will gain the most if you dare to bring the honest questions hidden in the back of your mind out into the open. Ask your professor, ask each other. Then share the answers with others—friends, classmates, family members, etc. Engaging in the material with a scientific curiosity is how we got hooked on social psychology ourselves.
- We wrote parts of this book with the hope that they will remind you of some important themes and questions to keep in mind. The features focus on three things:
 1. The scientific, research-based story of social psychology. The feature called Spotlight on Research Methods reminds you of important methodology and statistical terms by highlighting an important, innovative, or controversial study in each chapter.
 2. How social psychology exists all around you. The feature called Social Psychology in Popular Culture emphasizes concepts and theories from the book that can be seen in movies, TV shows, and songs. We hope that when you're relaxing with your favorite show, you can't help but think, "Hey, we just talked about that in my social psych class!"
 3. How social psychology applies to you. Every chapter takes you through a What's My Score? feature, in which you can take a survey to see your own score on a variable developed by researchers. These surveys will help you see how social psychology concepts relate to you, personally, and you'll also gain a better understanding of how social psychologists study these ideas. If you really get passionate about the field, you might use these surveys in your own research studies someday!
- The bottom line is that we hope you immerse yourself in every chapter and idea in the following pages. Social psychology isn't just a bunch of terms and theories—it's every interaction you have, every day, with every other person in your life. What could be more interesting than that?

TO INSTRUCTORS

Thank you for helping us. We received so many suggestions from helpful reviewers and people who used previous editions of this book. We've incorporated as many of those suggestions as possible here in the third edition, because we saw the wisdom in each idea. We were proud that the first edition won the prize for the "Most Promising New Textbook of 2019" by the Textbook Authors Association. But we knew it could be better and accomplished that with the second edition. Now, we've set our sights even higher, and we couldn't do that without your help.

Our Features

We sincerely want students to love social psychology as much as we do. To that end, we've included many features that appeal to modern students. For example, each chapter features a discussion of how students can see concepts in popular culture. Students who vaguely recognize implicit and explicit social influence can rely on our discussion of *Bridgerton* to better understand conformity and compliance. Prejudice is on display in *Wicked*. Group dynamics are analyzed in any *Avengers* Marvel film. And dual attitudes can be seen as characters struggle with addiction in *Euphoria*. These features are fun ways to engage students in surprising, exciting ways.

- We also create experiences through self-assessments (the What's My Score? feature) that introduce the depth of social psychology. Measuring their own need for cognition (Chapter 4) introduces a new way to experience self-reflection. Experiencing how the just world hypothesis is measured (Chapter 5) connects students to the impulse to blame the victim. Seeing how much their attitudes match those in a culture of honor (Chapter 11) helps them understand the concept and examine whether their beliefs are tied to aggressive tendencies. Again, each chapter provides a self-report scale to engage the students in an important concept. Experiencing social psychology is a deeper, more memorable way to learn.
- Psychological literacy creates better citizens. We promote psychological literacy in several explicit ways when we encourage students to critically examine evidence and ask important questions about social phenomena. Every section of the book ends with a summary of main ideas, but—more importantly—we offer critical thinking questions. Instructors can use these as discussion starters in class, or they can be the prompts for students' weekly homework assignments. We offer several so that instructors or students can choose the questions of most interest to them.
- Reminding students of the science behind social psychology is also an essential goal. Our Spotlight on Research Methods features, embedded in every chapter, remind students of important methodological and statistical terms. Students learn these in Chapter 2, but we don't want to isolate that chapter from the rest of the material. By using the terms repeatedly and explicitly highlighting them in the feature, we can scaffold learning and build a strong foundation of science.

The Mini-Chapters

Response to the inclusions of applied mini-chapters in earlier editions was extremely enthusiastic! We're happy to share that these have been updated along with the main

text. First, we've added two completely new ones, one on sport psychology and one on the social psychology of cults. Like the rest of the book, the mini-chapters have been revised and updated for new research as well.

- A quick word on how to use the minis: Of course, it's up to you, but we encourage allowing students to select which minis they'd enjoy most. Wind allows her class to vote on which chapters to explore at the end of the semester. Involving students in this choice empowers them and gets them even more excited about the material. You could also allow each student to choose one mini and write an essay about how it could apply to their future career choice, or why they find it personally compelling. Finally, you don't have to wait until the end of the semester; you might assign minis throughout the semester as a way for students to see various applications of earlier theories.
- How you use the minis in your own class is flexible, but we hope they provide a fun and customizable experience to every instructor.

Changes in the Third Edition

Here's a bulleted list of some of the major changes you'll probably notice in the third edition, compared to the previous editions:

- We've updated several of the popular culture features to focus on newer movies or TV series that students will know. *Moneyball*, *The Marvelous Mrs. Maisel*, and *Mulan* are gone, for example, and replaced by *Euphoria*, *Bridgerton*, and *Wicked*.
- We have added more research on cultural differences and on advances from neuropsychology throughout the book.
- Language and examples are updated throughout to be even more sensitive to diversity and to be gender inclusive. For example, when discussing a fictional or theoretical person, we always use the pronoun "they" (instead of "he" or "she") to avoid an assumed gender binary.
- We removed the story about sexual abuse that was the theme of Chapter 6 (Attitudes and Persuasion) in the previous two editions, due to concerns that it might be upsetting to trauma survivors. We now highlight the wonderful achievements of Simone Biles.
- Throughout, the glossary and marginal term definitions are streamlined to be much shorter and accessible, but still accurate. We've also added a few new terms, such as "codeswitching" and "intersectionality."
- Chapter 2 (Research Methods) now includes an updated section on the importance of open science.
- We discuss even more critical thinking and criticisms regarding the famous Zimbardo and Milgram studies in Chapter 7.
- Chapter 8's organization is rearranged to make more sense, and the last section now more explicitly discusses how social psychology can maximize group potential.
- The examples at the opening of Chapter 9 (Stereotyping, Prejudice, and Discrimination) are all updated to be more recent and to cover different types of groups.

- In the main 12 chapters, we've added almost 200 new citations. Of these, 145 were published in 2020 or later, so the book has contemporary research throughout.
- Two brand-new mini-chapters have been added: "Social Psychology and Cult Indoctrination" and "Social Psychology and Sports." We hope these provide important perspectives on aspects of social life which almost every student can either find fascinating or find relatable.
- We've also added a third author: Gary Lewandowski. Gary is an award-winning teacher who really understands what gets students excited about social psychology and how to explain the concepts in meaningful ways. Gary's voice blends perfectly with the conversational tone but adds a fresh perspective we hope you'll love.

This text is available in Sage Vantage—an intuitive learning platform you and your students will actually love.

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Analytic Skill-Building

Assignable video activities and reading activities in Vantage align with learning objectives, reinforcing fundamental concepts in every chapter. With automatic assessment integration into your gradebook, these resources provide an ideal platform for students to hone their critical thinking and application skills by applying chapter concepts to real-world scenarios.

Video Activities for Social Psychology 3e

Chapter 1:

VA 1.1 Social Psychology in Action: Marshmallow Study

VA 1.2 Ask the Experts: Roy Baumeister on Free Will

Chapter 2:

VA 2.1 Ask the Experts: Keon West on Research Methods in Psychology

VA 2.2 Social Psychology in Action: Self-Deception Experiment

Chapter 3:

VA 3.1 Ask the Experts: Joanne Smith on Social Identity

Chapter 4:

VA 4.1 Ask the Experts: Thomas Gilovich on Intuition

VA 4.2 Social Psychology in Action: False Memory Experiment

Chapter 5:

VA 5.1 Ask the Experts: Susan Fiske on the Halo Effect

VA 5.2 Social Psychology in Action: Beautiful is Good

Chapter 6:

VA 6.1 Ask the Experts: Christian Klöckner on the Theory of Planned Behavior

VA 6.2 Social Psychology in Action: Festinger's Cognitive Dissonance Study

Chapter 7:

VA 7.1 Social Psychology in Action: Zimbardo's Stanford Prison Experiment

VA 7.2 Ask the Experts: Craig Parks on the Stanford Prison Study

VA 7.3 Social Psychology in Action: Milgram's Obedience Study

Chapter 8:

VA 8.1 Ask the Experts: Craig Parks on Group Dynamics

VA 8.2 Social Psychology in Action: Group Initiations

Chapter 9:

VA 9.1 Ask the Experts: Susan Fiske on Ambivalent Sexism Theory

VA 9.2 Social Psychology in Action: Blue Eyes, Brown Eyes

Chapter 10:

VA 10.1 Ask the Experts: Catherine Borshuk on Altruism

VA 10.2 Social Psychology in Action: Bystander Effect

Chapter 11:

VA 11.1 Ask the Experts: Anthony Ellis on Violence and Society

VA 11.2 Social Psychology in Action: Bandura's Bobo Doll Experiment

Chapter 12:

VA 12.1 Social Psychology in Action: Strange Situation

ADDITIONAL TEACHING RESOURCES

Visit collegepublishing.sagepub.com and navigate to the Resources tab on your book's page to find the teaching materials designed to accompany this textbook. On this site you will find an array of materials that will save you time and to help you keep students engaged, including the following:

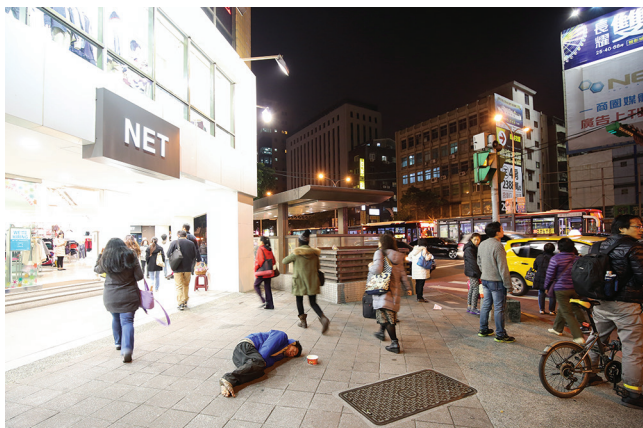
- **Learning management system** cartridges that easily integrate with your course management system so student test results and graded assignments seamlessly flow into your gradebook;
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- **Lecture notes** that provide an outline and the key concepts in each chapter to aid in lecture preparation;
- **PowerPoint® slides** that offer a flexible, accessible, and customizable solution for creating multimedia lectures;
- **Tables and Figures from the book** are available to support lecture preparation and class discussions; and
- **Sample course syllabi** include suggested models for structuring your course.



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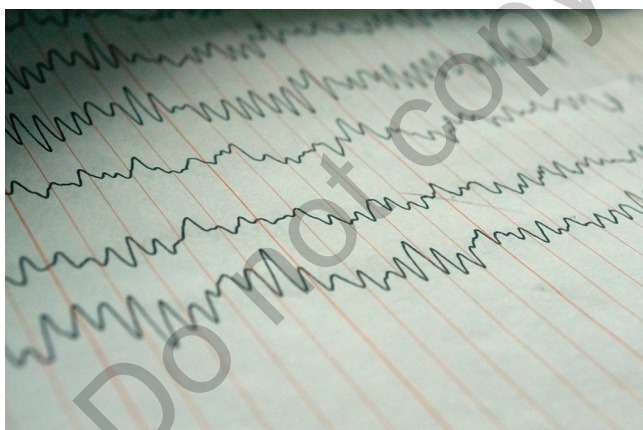
An Introduction to Social Psychology



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- A man on the street is having a seizure, but no one else seems concerned. What would you do?
- Seven people, including you, around a table need to say which of three lines matches the length of a fourth line. The correct answer is obvious: Line B. But the first six people declare "Line A." It's your turn to answer. What would you do?
- You're being paid to participate in a scientific study about memory and learning. Your job is to press a switch that delivers electric shocks each time another participant makes a memory error. You're supposed to increase the shock level each time, but the highest levels are labeled "DANGER: SEVERE SHOCK" and "XXX." What would you do?

Social situations are powerful.

These scenes aren't from a reality television show or even completely fictitious. They are real experiments in social psychology. So... what would you do? If you are like most people, you probably answered, "I would help the man having a seizure even if no one else appeared concerned," "I would report the correct line no matter what other people said," and "I would never give dangerous electric shocks to an innocent person." Your beliefs about yourself would probably be noble, flattering, and self-esteem enhancing. But there is a good chance that you would be wrong. Why? You probably underestimated the power of the immediate social situation.

In controlled experiments, a high percentage of people did *not* help the man who had a seizure (Darley & Latané, 1968). Many people *did* cave in to peer pressure when reporting the length of the line, which was a setup—all the other people in the room were actors, just pretending to be other participants but really working for the experimenter (Asch, 1956). And a frightening number of people delivered the highest possible level of electric shock—even when the other person (another actor who was secretly not really harmed) screamed in pain that he had a heart condition (Milgram, 1963, 1974).

Get ready for an exciting—but sometimes disturbing—ride of self-discovery as you enter the fascinating world of social psychology.

Core Questions

- 1.1 What is social psychology?
- 1.2 What are some big questions within social psychology?
- 1.3 How can social psychology make my life better now?

Learning Objectives

- LO 1.1 Explain social psychology's origin story and what social psychologists do now.
- LO 1.2 Analyze important questions about social thought and behavior.
- LO 1.3 Apply social psychological concepts to your own life and experiences.

WHAT IS SOCIAL PSYCHOLOGY?

>> LO 1.1 Explain social psychology's origin story and what social psychologists do now.

Someone is going to change your life.

That person could be a friend slipping away into substance abuse, a caring grandparent, a disappointing romantic partner, an inspiring teacher, a manipulative cult leader, or a frustrating coworker. Their influence may harm or help; they're all out there, waiting for someone just like you to cross their path.

Social psychology is the scientific study of how people influence each other's thoughts, feelings, and behaviors. Someone—and probably several people—will influence the curve of your life, just as you will influence others. Some social influences are obvious; a robber with a gun clearly wants to influence you to hand over your money. Someone proposing marriage wants you to say yes.

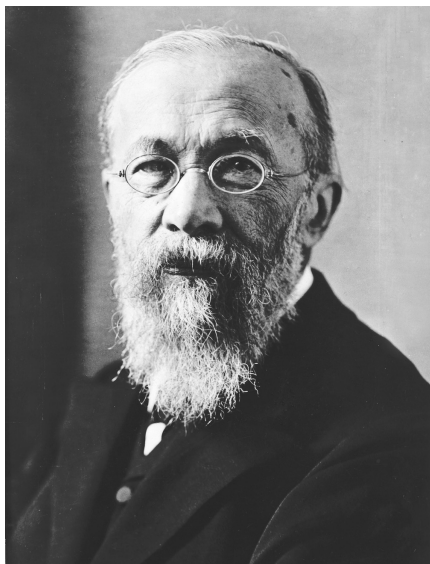
But many social influences are subtle. For example, advertisers try to influence you with earworms (melodies that get stuck in your head—"Nationwide is on your side.") and recognizable logos. When you travel to a different country, you realize that cultures vary and social norms can lead to confusion when you are accidentally rude.

Even when we're alone, others can influence us. We may change our clothes or choose what to post on social media because we worry about someone's opinion. We might stay in college or choose a major because we want to impress our family or provide for our current or future children. Friends and family members who have passed away may even influence us, because our memories of them have changed our goals and values. We are complicated beings, influenced by a variety of social factors.

The Origins of Social Psychology

If you love high stakes—epic stories such as *The Avengers* or *Lord of the Rings*—then you might love social psychology.

The birthing pains of social psychology were epic, violent, and real: World Wars I and II. Sigmund Freud was so "shocked and shaken by the carnage of the Great War" (WWI) that he perceived a "cosmic struggle" between two dueling psychological forces: life and death (Batson, 2012, pp. 243–244). Freud tried to provide epic answers, but his theories were often speculative and not based on experimental studies. The early social psychologists wanted more testable, scientific answers to questions about humanity that arose during and because of the world wars.



Wilhelm Wundt (1832–1920), now largely considered the “father of psychology.”

Weltrundschau zu Reclams Universum 1902

Scientific Thinking About Social Problems

Let’s go back even further in history. If there’s a birthplace for scientific psychology, it’s Germany about 150 years ago. In the late 1800s, Wilhelm Wundt started the first scientific laboratory there, specifically designed to apply the scientific method to human thought and experience. Wundt’s persistent, pioneering research is why many consider him the “father of psychology.” He was the first person to call himself a psychologist.

Both Wundt and Freud (who was in nearby Austria at about the same time) were asking questions about personality, individual perceptions, and how culture affects thought. Over the next few decades, most Europeans who considered themselves psychologists were interested in explaining abnormal behavior (like Freud) or in basic thought processes like sensory perceptions or memory (like Wundt). Just a few years later, most psychologists in the United States studied nonhuman animals (usually pigeons and rats) because their behavior was easy to observe and measure. Not many scholars studied everyday social interactions like conformity, prejudice, or heroism.

Social Conflicts and Private Curiosity

Fast forward to those two horrifying world conflicts, which changed the trajectory of psychology forever. The unanticipated, industrial destruction of 16 million people in the first “Great War” was startling. The failure to make peace at the Treaty of Versailles led directly to the deaths of 60 million more people only 20 years later during World War II. Clearly, humanity’s self-knowledge had not kept up with its technological advances. It was a call to action within psychology: Researchers realized that studying rats in mazes or psychoanalysis wasn’t enough. Social psychology emerged out of the emotional rubble.

Those wars are now long behind us—but only in time. Their consequences continue to shape public policies and the story of social psychology. Modern social psychologists worry about new conflicts rooted in old versions of prejudice and fascism. We also carry epic anxieties about global warming, environmental sustainability, mass incarceration, legalized torture, cyberbullying, media violence, and false confessions of guilt.



Intergroup friendships (such as across racial, gender, or economic groups) is an example of social psychology research that might be both on a theoretical level (what causes or reduces prejudice in humans?) and on an applied level (how can we change prejudice levels in real people’s lives?).

Jacek Makowicz/Alamy Stock Photo

Before you get too depressed, know that many social psychologists also find motivation from the more positive side of humanity. Researchers today have labs that study attraction, meaningful sexuality, love, cooperation, why and when strangers will help each other, the motivation to stand up to harmful conformity, and more. The crisscrossing threads holding all these diverse topics together include (a) a focus on the individual and (b) science-based methods.

Technology also has helped social psychologists create thousands of small answers to a few big questions. For example, driving simulators enable us to safely study attempts at mental multitasking, such as chatting with friends while driving (Felisberti & Fernandes, 2024; Held et al., 2024). It’s a precise, relatively small question, but it helps us understand

how humans think. Likewise, software using online surveys captures the strength of beliefs or reactions to images on a computer screen, measured in milliseconds (e.g., Axt et al., 2024; Howell et al., 2024). It's another precise, relatively small applied question that helps us understand basic research about how attitudes might lead to prejudice and discrimination.

You can see the importance of this work when you remember how much time people spend on social media, a world in which images appear on screens for only seconds as people scroll. Researchers increasingly use virtual reality to monitor how people respond to different social situations, such as practice job interviews, where technology can control social variables such as the gender or race of the person sitting across from you (e.g., Pan & Hamilton, 2018; Sterna & Zibrek, 2021).

Modern social psychologists are trying, through applied and basic research, to equip individuals with the psychological tools they need to walk intelligently—even courageously—deeper into the 21st century.

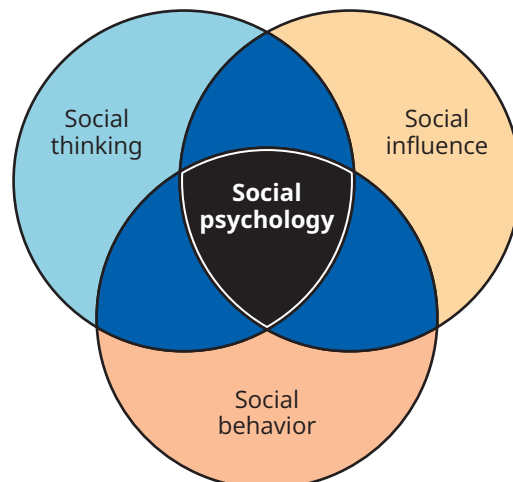
Content Domains: Social Thinking, Social Influence, and Social Behavior

The content domains of social psychology appear in Figure 1.1: social thinking, social influence, and social behavior. The circles in this Venn diagram overlap because we usually experience them as a blend. That is why the first three sections of this book explore each area separately but reunite them in a fourth section of mini-chapters. Each mini-chapter describes how social psychologists apply social psychology to particular social problems.

For example, the first section on social thinking examines how we define the self and make judgments about other people. The second section investigates how and why people persuade each other, change in group settings, and label and judge each other's group memberships through prejudice and discrimination. The third section focuses on social behaviors such as helping, aggression, and romantic relationships. The mini-chapters at the end of the book explore how they intersect with environmental sustainability, criminal justice, sport psychology, cult dynamics, and much more.

FIGURE 1.1

These three content domains within social psychology describe the thoughts and decisions people make about one another.



The Content Domains Represent Career Opportunities

There are at least three reasons why these content domains have turned social psychology into such a popular college course. First, social psychology satisfies some of our curiosity about everyday social interactions. Second, learning social psychology develops marketable skills (such as critical thinking and persuasion). Third, social psychology helps you become a social problem-solver. Satisfying curiosity, building marketable skills, and supporting social problem-solving are impressive accomplishments for such a young science. By “young,” we mean that scientific social psychology is only about 100 years old, give or take a few decades (Farr, 1996).

Professional organizations suggest a discipline’s relevance. The American Psychological Association has a separate division for social and personality psychology. In addition, there are two independent professional organizations: the Society for Personality and Social Psychology and the Society of Experimental Social Psychology. Their conferences are crowded, and there are dozens of textbooks just on social psychology (including this one!). About 185 colleges and universities in just the United States offer graduate degrees in social psychology.

Social psychologists are active around the world, thanks in part to our ability to communicate and share ideas and data electronically. It is an exciting time to engage with social psychology, both personally and professionally. Who knows? You may want to explore the many career paths available to social psychologists. The world is increasingly in need of people who are simultaneously adept at understanding people and data, which is a social psychologist’s skillset.

Distinguishing Among Similar Academic Fields

Academic disciplines are distinguished by their methods and observations (see Table 1.1). What distinguishes social psychology from similar fields?

Sociologists usually explore large social behaviors at a group level, using surveys and demographic data. **Anthropologists** focus on how culture and behavior change over time with methods that rely on “thick” (detailed) observations, sometimes made from inside the culture. **Clinical psychologists** focus on mental illnesses or problematic thoughts and behaviors, often working with people predefined as being in a specific population of interest (for example, people suffering from severe depression).

TABLE 1.1 Different Ways of Asking and Answering Research Questions			
	PREFERRED METHODS	FOCUS OF OBSERVATIONS	EXAMPLE: STUDYING AGGRESSION
Sociologists	Surveys, demographic patterns of data	Group-level behaviors and social expectations	Group characteristics of aggressive behavior
Anthropologists	Detailed observations of people in a given culture	A discrete group of people over time	Cultural habits of aggression within a discrete setting
Clinical psychologists	Therapeutic interviews and tests	Individuals who have problematic thoughts or behaviors	Individual and interpersonal causes of aggression
Social psychologists	Controlled experiments and observations	Everyday people in individual or group settings	Experiments testing the causes and control of aggression

However, no single discipline has “methodology rights” to any one approach. When social psychology is at its best, it uses multiple methods of scientific approach to answer questions, including a blend of qualitative data (such as interviews with individual people) with quantitative data (such as experiments; Brannen, 1995). You’ll learn more about the wide variety of research methods that social psychology uses in Chapter 2.

For example, almost all social sciences try to understand human aggression. Understanding aggression can lead to psychology careers in policing, community psychology, sport psychology, “industrial/organizational” psychology (which is the psychology of the workplace), forensic psychology, civil and marriage dispute mediation, and more. Table 1.1 describes how each discipline tends to rely on slightly different methods to make their distinctive observations.

- A sociologist is most likely to study aggression by creating or consulting demographic data regarding long-term patterns.
- A cultural anthropologist will usually make “thick,” detailed observations of how the culture of a particular town or village influences children’s aggressive behaviors.
- A clinical psychologist may use interviews to understand aggression at a personal or small group level—and then test therapeutic interventions.
- A social psychologist is more likely to invent a way to (temporarily and safely!) manipulate aggression in an experiment, focusing on individual reactions to group or environmental pressures.

Of course, sociologists and anthropologists also conduct experiments, and psychologists can’t get started without observing something! Multiple methods create a blend of research approaches that can increase or refine confidence in the validity of our observations and conclusions. For example, both Solomon Asch (who studied conformity in the line-matching experiments described at the start of this chapter) and Stanley Milgram (who studied obedience in the electric shock experiments) included qualitative interviews with participants who did not conform or obey that helped researchers understand how and why they were able to resist negative influences. Studies that explore healthy, adaptive behaviors are now called **positive psychology**, the scientific study of human strengths and virtues. There is an entire mini-chapter on positive psychology at the end of this book.

Social Psychology Is Personal: Kurt Lewin's Story

You probably would have liked Kurt Lewin.

The man now considered the pioneer or “father” of social psychology was known to miss an occasional class when he was teaching at the University of Iowa (Marrow, 1969). The reason? He was deeply involved in listening to students at a local café. Perhaps Lewin fit the stereotype of the passionate but absentminded professor. His vision for psychology could be summed up in just two words: **action research**, the application of scientific principles to social problem-solving.

It is difficult today to appreciate how deeply World War I shocked the world. The killing had become industrialized, but the dying was still personal. Kurt Lewin’s brother died in the war; Kurt himself was wounded and awarded the Iron Cross. When the Nazis rose to power in the 1930s, Lewin urged his mother to flee with him to America, because they were Jewish and feared the consequences of increasing anti-Semitism. She refused, confident that Germany would honor a mother who had lost one son and



Kurt Lewin (1890–1947), whom some consider the “father of social psychology.”

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claimed a second as a wounded war hero. Sadly, she was wrong: She disappeared, probably into one of the concentration camps.

As a Jewish World War II immigrant to the United States, Lewin studied the dynamics that allowed a Hitler to rise to power—and a Holocaust to happen. He was recognizing one of social psychology’s central insights: the power of the situation. Lewin organized his insights into what became a simple but famous equation:

Lewin’s equation: $B = f(P, E)$.

Lewin proposed that every person’s behavior (B) is a function (f) of both P, the individual person, and E, their immediate environment (Lewin, 1936). In other words, our individual choices and actions are partially based on who we are—factors like our personality and how we were raised—and partially based on the immediate situation. Social psychologists still use those two criteria to predict behavior.

Kurt Lewin’s warm, collaborative approach to teaching and learning probably would have astonished Wilhelm Wundt and Sigmund Freud. Lewin encouraged everyone to “express different (and differing) opinions [and] never imposed either discipline or loyalty on his students and colleagues” (Marrow, 1969, p. 27). British psychologist Eric Trist described Lewin as having “a sense of musical delight in ideas.” Lewin once became so distracted

during a conversation that Trist had to push him onto a moving train so he wouldn’t miss it.

Lewin died in 1947, only a few years after the end of World War II. However, the effects of war on Lewin’s pioneering work are reflected in what you’ll learn about in this and every other social psychology textbook: aggression, prejudice, persuasion, and prosocial behavior. His work, as well as other research that followed in his footsteps, is also influential in the world of business, management, and leadership in any context. Lewin used scientific methods to apply those two factors, P and E, to socially relevant topics—and he inspired many others.

Social Psychologists Value Diversity

We routinely experience diversity as beautiful, even awe-inspiring.

Diversity is a field of wildflowers, each adding to the total view in a unique and essential way. Just as diversity often produces what we regard as beautiful, shutting the door on social diversity sometimes appears (from our present perspective) ugly and embarrassing. For psychology to be a complete study of human behavior, both the participants in our studies and the researchers designing them must come from diverse backgrounds.

Honestly, the field hasn’t always been great at welcoming everyone. Psychology’s history, including its lack of diversity, has been examined. One place you can learn about this issue is in the book *Even the Rat Was White* (Guthrie, 1976/2004). In 2021, the American Psychological Association published a formal apology for their role in contributing to racist theories and policies over several decades. Of course, diversity is more than just race or ethnicity.

Intersectionality theory is the study of how multiple identity factors (such as race, gender, socioeconomic status, and sexuality) combine to form how others perceive

and treat us (Clauss-Ehlers et al., 2019; Crenshaw, 1989). No one is perceived as a single social category; a gay Black man receives different treatment than a heterosexual Asian woman—and both will receive different treatment if they are wearing expensive, designer clothes. Everyone has aspects of their identity that are tied to social privileges, and other parts of their identity that are tied to social disadvantages. Exactly how all of these variables combine is the focus of intersectionality research.

The positive effects of diversity on social psychology are demonstrated by some of the pioneering scholars who are women, people of color, people who have disabilities, and so on. They will continue to push social psychology beyond its original European American, heteronormative boundaries. Their stories also demonstrate how much is lost by ignoring the beauty of diversity. Consider just a few examples:

- Mary Whiton Calkins was born during the American Civil War. She fought hard to study psychology at Harvard—despite a formal policy blocking women from enrolling. She became the first female president of the American Psychological Association and of the American Philosophical Association. She published four books and over 100 research papers—and reset expectations about what women could achieve within psychology.
- One of Kurt Lewin's students, Beatrice Ann Wright, died as recently as 2018 (at the age of 100!). Her book *Physical Disability—A Psychosocial Approach* applied Lewin's concept of interactions between the person and the environment to understand people with disabilities (Wright, 1983). She was honored with a lifetime achievement award by the American Psychological Association.
- Mamie Phipps Clark and Kenneth Clark were a married African American couple who played an important role in social justice. They were the first Black people to earn PhDs in Psychology from Columbia University. Mamie Clark's master's thesis influenced one of the most famous decisions by the Supreme Court. The case of *Brown v. Board of Education* ended racial desegregation of public schools (Benjamin & Crouse, 2002). The Clarks' "doll studies" vividly demonstrated the harmful effects of internalized racism on children—that's what happens when living in a prejudiced culture leads people to have prejudiced feelings toward their own demographic group (you can search YouTube for the visual record of some of their interviews with children). Kenneth Clark became the first African American president of the American Psychological Association. This research is described in more detail in Chapter 9.



Mary Whiton Calkins



Mamie Phipps Clark and Kenneth Clark

K. Heyman, photographer, Library of Congress



Alice Eagly
Alice H. Eagly



Lisa Diamond
Lisa Diamond

- One of the most famous field studies about group prejudice was conducted by Muzafer Sherif, who was born in Turkey in 1906. In the same year that *Lord of the Flies* was published (Golding, 1954), Sherif, his wife Carolyn, and their research team brought young boys to a “summer camp” run by psychologists. They created situations that both created and then reduced prejudice between groups. Their research has inspired hundreds of studies on how and why groups do—or don’t—get along (see Chapter 9).



Claude Steele
TeachAIDS via Wikimedia



Mahzarin Banaji
Photo by Robert Taylor

- Alice Eagly has also devoted her research to reducing prejudice, with a particular focus on sexism. Her theoretical model (described in Chapter 9) continues to inspire applied research. For example, social role theory helps engage more girls and women in STEM (science, technology, engineering, and math) careers.
- Lisa Diamond studies lesbian, gay, bisexual, transgender, and queer/questioning (LGBTQ) issues and individuals, including the fluidity of gender and sexuality. Her research emphasizes that people’s gender and sexual identity can change over time and that these shifts can be so powerful that they can happen to people even when they resist the changes because of socialized prejudice.
- Both Claude Steele and Mahzarin Banaji explore how culture and stereotypes affect people of color. Steele, an African American professor who served as the provost at the University of California, Berkeley, designed clever experiments that helped explain how stereotypes and anxiety can be distracting when people feel pressure to perform in academic environments. Banaji studies how stereotypes and prejudice can influence us, even without our conscious awareness. She helped design one of the most controversial tests to measure prejudice in the field of social psychology (also explained in Chapter 9).

Across its history, many social psychologists have been motivated by a desire to use science to help solve social problems. This enduring commitment led the field to a more inclusive, diverse, and yes, a more beautiful understanding of the human experience.

THE MAIN IDEAS

- Social psychology is a subfield of psychology that scientifically studies how people influence each other's thoughts, feelings, and behaviors.
- Social psychology can be broken up into topics focused on social thinking, social influence, and social behavior, and each topic has concepts that can be applied to everyday people in the real world.
- Kurt Lewin is considered by many to be the "father of social psychology." He believed individual behaviors are determined by both the individual person and by the social situation or environment.
- Many other important social psychologists have been women, people of color, people who are disabled, people of various sexual orientations, and other variables representing the valuable diversity in our world.

CRITICAL THINKING CHALLENGE

- If World War II and the Holocaust had never happened, would psychology be where it is today? Would social psychology exist or be as popular if the world hadn't been inspired to understand the events leading up to and ending that war? What other topics might be considered more important?
- Lewin suggested that behavior is determined by both the individual person and the given social situation or environment. Which do you think is more influential? When you consider your own behavior across a variety of situations (such as in class, at a religious event, or when you're hanging out with friends), is your behavior fairly consistent due to your strong personality, or do you change how you act to better fit in with what's expected, given the environment?
- Can you identify another field (not psychology) where major progress or innovative thinking came from scholars who represented diverse backgrounds? For example, what scientific, literary, or other important ideas would be missing without women, people of color, LGBTQ+ people, people who are disabled, and so on?

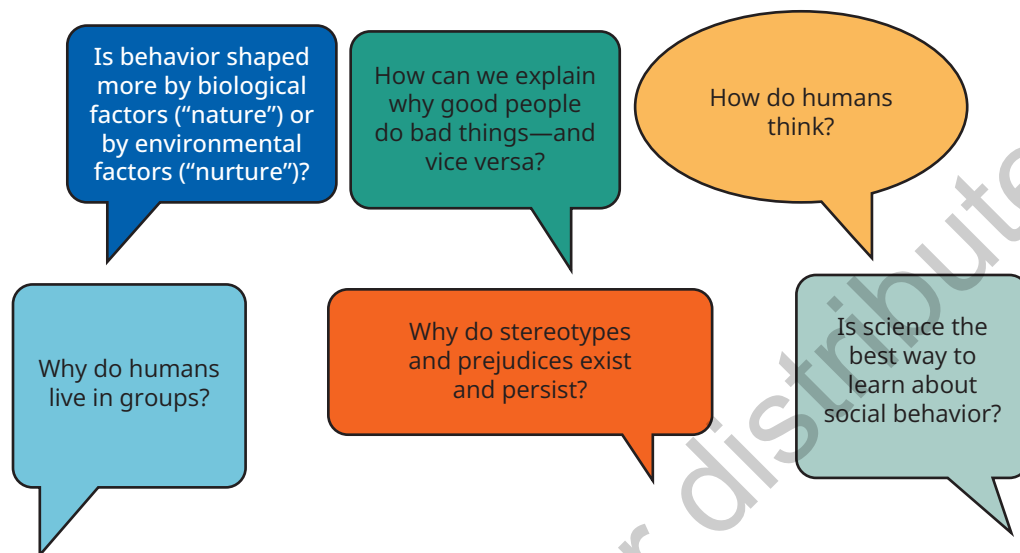
WHAT ARE SOME BIG QUESTIONS WITHIN SOCIAL PSYCHOLOGY?

>> LO 1.2 Analyze important questions about social thought and behavior.

After the two world wars, social psychology stabilized into a field with a big two-part mission: (1) to understand how our thoughts, feelings, and actions are influenced by other people and (2) to apply those insights to social problems. That big mission is made slightly more manageable by organizing the wide variety of topics in social psychology into the big questions listed in Figure 1.2. This list isn't formal or official by any means; it's not part of any professional association, and you won't find it as part of the table of contents for any academic journals. It's just our way of giving you a thought-provoking appetizer for some of the ideas you'll consider in this book.

FIGURE 1.2

Social psychology's big questions motivate researchers and provide a framework for understanding what social psychologists do.



The questions explore (1) nature and nurture, (2) how we explain why good people sometimes do bad things (and vice versa), (3) how humans think about social information, (4) why we live in groups, (5) why prejudice persists, and (6) whether science is the best way to learn about social behavior. These six questions convey the philosophical reach that, day by day, motivates many scholars in the field. Individual studies may only examine a small, specific piece of the larger puzzle, but social psychologists are slowly putting those pieces together.

Big Question 1: Is Behavior Shaped More by Biological Factors ("Nature") or by Environmental Factors ("Nurture")?

Nature *and* nurture influence behavior.

You will encounter the "nature versus nurture" debate whenever you try to explain behavior. It seems especially salient for exceptional behavior—at both ends of the spectrum. Were brilliant mechanics, exceptional athletes, sharp scholars, creative programmers, and creative artists born that way (nature), or did their experience and training shape what they became (nurture)? On the other hand, are serial killers, political fascists, cult leaders, and other people seemingly without empathy driven by physiological factors, or by traumas from their childhoods?

The nature-nurture debate applies to the ordinary rest of us, too. **Nature** refers to influences from biology or physiology, such as genetics and hormones. They are often (but not always) beyond our control. On the other hand, **nurture** refers to influences that come from our life circumstances, experiences, and environment. These might also be beyond our control, if they are things that happened during our childhood or events that traumatized us, offered us extraordinary opportunities, and so on.

Many psychologists describe the "nature" versus "nurture" debate as a **false dichotomy**, the presentation of two opposing and mutually exclusive options that

disregard any alternative explanations. In almost every case, *both* nature and nurture influence behavior—what psychologists call an **interaction**. For example, physically attractive people may be naturally beautiful (nature). That beauty might also make people treat them with special attention and care, giving them social privilege (nurture). That social privilege might give them access to things like wealth, which allows them to have a healthier lifestyle, leading to better food and more exercise (nature). And the circle continues.

Kurt Lewin, the observant World War I trench soldier with “a musical delight in ideas,” understood how nature and nurture interacted within social psychology. Behavior (B) is a function (*f*) of *both* the personality and biology (P) that you were born with (nature) and the environment (E) that you live in (nurture).

Big Question 2: How Can We Explain Why Good People Do Bad Things—and Vice Versa?

You are complicated; we all are.

Two men walked into a busy convenience store in northern New Jersey, a state with strict gun laws. They each carried a large gun, prominently displayed. They bought breakfast sandwiches and coffee and made small talk with the cashier. They both wore a T-shirt that declared: “I Carry Guns to Protect YOU From Bad People.” After they left, a young woman, probably of high school age, spoke up. “How do I know,” she asked the room, “whether they were good people or bad people?”

In social psychology, questions about who (or what) is good and bad are not reserved for preachers and extremist radio talk shows. Social psychologists explore what many call “good” and “evil” by creating controlled experiments that explore the situations that reliably produce prosocial behaviors that help others (Chapter 10) and aggressive behaviors that are intended to harm others (Chapter 11). The more pressing question studies can answer is how we all justify our actions using our own personal perspectives, politics, culture, and social norms. It is how we explain our own complicated “goodness” and “badness” to the most important audience of all—to ourselves.

This big question is also a practical question. What would happen to a society without laws and social punishments? Would humans become pure altruists and create communities of self-sacrifice for the greater good (like honeybees)? Or would we become lonely sexual competitors willing to stab rivals through the neck (like hummingbirds)? Or are we both?



The Hall of Fame baseball player Roberto Clemente played for the Pittsburgh Pirates for 18 seasons. He died in 1972 in a plane crash during one of his many humanitarian missions throughout the Caribbean. Was Clemente born to be an exceptional humanitarian and athlete—or is there more to his story?

Louis Requena/MLB via Getty Images



Movie antagonists are more interesting when the question of whether they are “good” or “bad” is complicated. In the blockbuster movie *Black Panther*, the antagonist feels justified in taking over the country Wakanda because he was orphaned and abandoned by the royal family. In addition, he believes he can lead Wakanda toward a future in which they help other children in need. Are his motives really that bad?

AF archive/Alamy Stock Photo

Big Question 3: How Do Humans Think?

We all have two different ways of thinking.

You probably have some big decisions on your personal horizon. What are you going to do for a career after you graduate? Where will you live? Will you get married? What about children? For every major decision in your life, you'll have to weigh what your instincts or "gut" tells you to do right along with what your logical, thoughtful, practical mind tells you. This book covers a lot of decisions we make, including whether we hold prejudices, how we decide to commit to a relationship partner, and more. All of these decisions are interesting individually, but a larger system of understanding how we think in general is called social cognition (see Chapter 4).

The study of social cognition explains why decision-making humans rely on two thinking systems. One system is fast and intuitive; the other is slower and logical. You can apply some logic to your career decisions by estimating your job choices and future earnings at the Bureau of Labor Statistics (see <https://www.bls.gov/mwe/>). But some careers will just "feel right" and you will be tempted to "go with your gut." Is logic the way to go? On the other hand, can you really trust your intuition? How did you decide what college or university to attend—was it intuition, logic, or a mixture of both?

We make this kind of decision all the time in our lives, and we feel the most confident when our two thinking systems both lead to the same conclusion (for example, your choice of college both makes logical sense and "feels" right). But have you ever had a "love-hate" relationship with a person, idea, or activity? Why does that happen?



Computers now allow even the most physically isolated people to connect to each other. Our motivation to stay connected to loved ones is part of our social nature.

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Big Question 4: Why Do Humans Live in Groups?

We are social animals.

Our social impulse may explain why we use solitary confinement (in prison) to punish people and use social events (like college graduation ceremonies) as rewards. It might also be why many religious festivals include feasts where people gather together to celebrate their bounty and wishes for the next year. An evolutionary perspective in psychology offers explanations in terms of how living in groups increases our chances of meeting, mating, and safely delivering our genes into the next generation. A functioning group improves our survival skills, teaches us how to share resources, and socializes us to help others. Groups also help us develop our self-identity, usually through comparisons of our own situation to the people we see around us (Chapter 3).

On the other hand, group decisions aren't always better. Group interactions may encourage a shift in group opinions that lead to more dangerous decisions, a mob mentality. Groups can also stumble into a conspiracy of silence that prevents the most thoughtful, skeptical members of a group from voicing their true opinions. In addition, when people suppress their individuality in groups, they may experience a feeling of anonymity and behave as if there are no consequences. Some group members might become

lazy by coasting on the work of others. Chapter 8 focuses on how these group dynamics influence decisions and outcomes, in both positive and negative ways.

Cultural norms may be the most subtle yet powerful form of social influence at the group level. It is difficult to appreciate our own cultural assumptions until we spend time in a different culture, because they are so imbedded into how we grew up and see the world now. It would be a mistake to say that culture influences people in definite, predestined ways—but it would also be a mistake to deny the influence of culture at all. Social psychological research has explored important cultural differences across a wide variety of specific contexts, so we'll discuss those studies throughout the entire book.

Big Question 5: Why Do Stereotypes and Prejudices Exist and Persist?

You can understand why stereotyping has attracted so much attention from social psychologists. Figure 1.3 displays the psychological path from stereotyping to social conflict. People experiencing social injustice won't put up with it forever.

Many social psychologists oppose social injustice, and the obvious place to dispel it is at the beginning: stereotyping. There's only one problem: Humans can't stop stereotyping—it seems to be an automatic instinct. Chapter 4 describes why stereotyping evolved in the first place, and Chapter 9 describes the types and consequences of stereotyping. Theories about stereotyping allow us to ask more specific questions: Why is it a basic human tendency to group and label people into different categories? Do particular stereotypes pop up across different parts of the world and different cultures? Why does stereotyping persist?

Chapter 9 also goes over some research from social psychology trying to address the ubiquitous problem of prejudice and discrimination and whether they can be reduced or eliminated. We'll cover a classic study that experimentally created prejudice between two groups, then attempted to eliminate it to test different ideas. That chapter also analyzes applications of theories, including an intriguing technique that some teachers are using in contemporary classrooms to help children learn to overcome their prejudice toward each other.

Big Question 6: Is Science the Best Way to Learn About Social Behavior?

This is a good news/bad news question; we give you the bad news first.

Social psychologists felt terrible when some of us discovered what was called the **replication crisis**. Some of the classic studies we all thought were foundations of the field were brought into question when scientists who tried to redo the studies found different results. Everything we thought we knew seemed to be turned upside down as people both inside and outside of the field questioned the validity of social psychology's theories and conclusions. The crisis seemed to develop in three stages (Earp & Trafimow, 2015).

FIGURE 1.3

The psychological path from stereotyping to social conflict.

Stereotyping → Prejudice → Discrimination → Social injustice → Social conflict



Do particular stereotypes pop up across different parts of the world and different cultures? Why does stereotyping persist?

Mario Tama/Getty Images zgurdonmaz/iStockPhoto

First, a few years ago, a small number of well-known social psychologists were caught cheating (by their students!). Those scientists had simply made up their data or manipulated it by doing things like only keeping results that confirmed their theories in efforts to make a name for themselves. It was outright fraud, but we won't name names; they are already embarrassed, and some of them got fired.

Second, an investigation revealed a research culture that rewarded new, original studies but offered few rewards for replicating someone else's research. That means that once a single study found an interesting result, few people make sure the result is solid by trying to find it again (the very definition of replication). So years went by with no one even attempting to replicate many studies people assumed were right—until we found out they weren't.

Third, actually testing and finding few replication successes suggests that our literature may be stocked with so many **false positives** (also called **Type I errors**) that we don't know what to believe. False positives happen when the analyses of a study imply a finding exists when it might not really be there or might be so weak that it's hard to tell if it really has much of an effect on actual behavior.

The good news is that there is a way to fix the problem. Science, as a tool of discovery, doesn't care about human vanity, ego, or greed. The answer to the replication crisis is twofold. First, people who conduct replications or "redos" of other people's work should be praised for their contribution to science. Second, scholars in the field need to change some of their practices to make their process more open and honest, such as being willing to share their raw data with the public (so that others can check their work). You'll read more about these fixes, called "open science," in Chapter 2. Third, researchers are trying more creative and different kinds of research methods (Rolls, 2013). We'll highlight several of these throughout the book.

Social psychology—just like any field of study—is made up of humans doing our best. We sometimes make mistakes, but we learn from them and make the next step of progress even better.

We focus your critical attention on the methods social psychologists use in two ways. First, we devote an entire chapter (Chapter 2) to helping you understand the research methods and statistical analyses most often used in social psychology. This chapter serves as a foundation for your understanding. We reinforce that understanding with our second emphasis: Each chapter highlights the detailed and clever methods used in one particular study. In these features, we hope to remind you of the science behind social psychology.

THE MAIN IDEAS

- One way to think about important topics in psychology is to consider the “big questions” asked by the field.
- This book provides evidence on both sides of these questions, but research is still needed to fully understand the complicated nature of human social experiences.
- Social psychology asks these questions because they are interesting from a philosophical or academic perspective but also because they actually affect people’s everyday lives.

CRITICAL THINKING CHALLENGE

- Consider social media influencers. How have nature and nurture impacted their success?
- Go back to each of the big questions asked in this section. Think about times in your own life when you’ve thought or behaved in a way that seems to confirm one side of the debate or the other. Now, try to identify a time in your life that confirms the *other* side of the question. Do you think your behaviors in general provide support for answers to these questions? What about when you think of other people’s behaviors?
- Many popular books and movies focus on utopias (perfect societies) or dystopias (malfunctioning societies). Examples of dystopias are *Lord of the Flies*, *Black Mirror*, and *The Handmaid’s Tale*. Why do people like this kind of story? Is it because it makes us feel good—our society is better by comparison—or because it serves as a warning, reminding us of what society could become?
- Which of the big questions posed here is the most interesting to you, personally, and why?

HOW CAN SOCIAL PSYCHOLOGY MAKE MY LIFE BETTER NOW?

>> LO 1.3 Analyze social psychological concepts to your own life and experiences.

At the risk of sounding like a cheesy YouTube advertisement, “Would you like to study less, learn more, and earn higher grades?” Here’s how to do it.

Any personal application of social psychology will make the information more interesting and memorable (Craik & Lockhart, 1972). For example, at the beginning of this chapter, we asked, “What would you do?” in different situations. Did you just read the words? That’s not studying; that’s reading. Studying social psychology is easier if you mentally engage by imagining what you would do if you (a) saw someone have a seizure, (b) experienced peer pressure in the line experiment, or (c) were ordered to deliver an electric shock. You’ve got a great imagination; use it. Here are three other tricks of the trade.

Apply Each Topic to Your Own Life

Use the Table of Contents.

The chapter titles will tell you which ones you can most easily apply to your life. For example, most of us are very interested in romantic attraction, sexuality, and dating partners. If that interests you, then pay special attention to Chapter 12. If you have been



Nobel Prize-winning physicist Richard Feynman once stated, "I would rather have questions that can't be answered than answers that can't be questioned." Science requires us to have healthy skepticism but to go beyond simply criticizing others by offering ways to create new knowledge and advances in our own field of study.

AP Photo/Dennis Cook

the victim—or the perpetrator—of stereotypes and prejudice, then you'll be excited about Chapter 9. You've been manipulated by peer pressure in some way, so take advantage of what you learn about social influence in Chapter 7. Our personal interests connect us to much bigger ideas, so use what you learn in Chapter 2 to develop your own hypotheses in every chapter.

You can be creative as you explore social psychology. For example, why do so many high school students in the cafeteria separate themselves into the same sorts of groups? Do you have a hypothesis? Do you know how you'd actually go out and test this hypothesis (ethically, of course)? If you find yourself quietly people-watching and then thinking, "I wonder why . . .," then you might be in line for a career connected to social psychology.

Use the Self-Report Scales to Compare Yourself to Others

Do you like quizzes about yourself on social media or BuzzFeed?

Those are fun, for sure—but they're not exactly scientific. Fill out the surveys and questionnaires you'll find in every chapter, starting with Chapter 2. You will probably enjoy the self-report scales in each chapter because (a) responding to the items will clarify the underlying concept, helping you learn and remember it, and (b) you will learn a little bit more about yourself. In Chapter 3, for example, you will experience one way that social psychologists measure self-esteem. Analyzing your score will help you understand how researchers think—and the relative importance of self-esteem to your own life.

Critically Analyze Your Opinions After Each Section

Ask yourself difficult-to-answer questions.

Critical thinking requires deeper processing, which is its own reward. It's the ability to analyze, apply, and explore ideas in new and open-minded ways. Instead of being told what to think, critical thinking is an invitation to think for yourself. And deep processing also makes it easier to remember information for an exam (Craik & Lockhart, 1972). We need the next generation of critical thinkers, you (!), to harness the science of social psychology in a variety of careers to fulfill its two great missions: (1) to understand how our thoughts, feelings, and actions are influenced by other people and (2) to apply those insights to social problems.

The social problems are out there, waiting for you.

THE MAIN IDEAS

- Being able to personally relate to theoretical ideas and to critically analyze them also makes them easier to remember later.
- This book offers several opportunities for readers to apply concepts to themselves, including self-report scales to measure certain topics.
- Social psychology can only progress when new thinkers approach topics with scientific thinking and friendly skepticism.

CRITICAL THINKING CHALLENGE

- Social psychology claims to provide insight into important topics that apply to real people's lives. However, most findings in the field are published in academic journals that only other scientists read. How can social psychologists do a better job of sharing their research with everyday people or with people or organizations that could use the research findings to actually improve the world?
- Sometimes, reality shows (such as *What Would You Do?*) put people into situations that are manipulated and then recorded without their knowledge, to appear later on TV. What are the ethical implications of this type of program? Once people learn that they were essentially "tricked," do you think they can learn from the experience? Do you think that participants in social psychology research studies can do the same thing—learn from the experience?
- Again, look over the Table of Contents of this book. Do you think there are important topics that are missing? Are there aspects of the social experience that you think social psychology needs to address or spend more time studying?

CHAPTER SUMMARY**What Is Social Psychology?**

Social psychology is the scientific study of how people influence each other's thoughts, feelings, and behaviors. It includes the study of

1. social thinking, such as how we define the "self" and how we perceive the world;
2. social influence, such as how we can persuade other people, why we conform, and the dynamics of stereotypes and prejudice; and
3. social behavior, such as helping, aggression, and romantic relationships.

All these areas of social psychology can apply to a variety of settings. Social psychology also can be understood by comparing it to similar but different academic fields. It has some similarities, but also important differences, from fields such as sociology, anthropology, and clinical and/or counseling psychology. Social psychology studies "everyday" thoughts and behaviors throughout life, including both negative behaviors (such as discrimination or aggression) and positive behaviors (such as helping or cooperation). One of social psychology's pioneers was the German World War I veteran Kurt Lewin, whom many people consider the "father of social psychology." Lewin was a Jewish man greatly influenced by both World Wars I and II. When he immigrated to the United States, he devoted his academic career to understanding social dynamics. Lewin famously suggested that both personality and the social environment influence each person's social behaviors. Many other influential social psychologists followed in his footsteps. Some of these later social psychologists were women, people of color, or disabled in some way that helps us recognize the inherent value of diversity.

What Are Some Big Questions Within Social Psychology?

Social psychologists use the scientific method to obtain many small answers to a few big questions. No single research study can find a single or simple answer to these questions, but each study helps us understand one more piece of the puzzle. Six of the most important big questions in social psychology are as follows:

1. Are we shaped more by personal, biological factors ("nature") or by environmental factors ("nurture")?
2. How can we explain why good people do bad things—and vice versa?
3. How do humans think?
4. Why do humans live in groups?
5. Why do stereotypes and prejudices exist and persist?
6. Is science the best way to learn about social behavior?

How Can Social Psychology Make My Life Better Now?

You will enjoy and learn more from each chapter by imagining how you can apply it to your own life. To help, each chapter has a feature called What's My Score? Here, you can fill out a survey that measures where you fall on one of the variables discussed in that chapter. If you are honest on these surveys, it will help you gain insight into how the topics discussed might affect your choices and actions. In addition, each section of every chapter ends with critical thinking questions. Your understanding will grow into permanent knowledge as you evaluate your opinion of different theories. Social psychology is the most fun when you start doing it, so try to design some way to test your own ideas. Perhaps you are the next famous social psychologist who will be included in books like this one.

CRITICAL THINKING, ANALYSIS, AND APPLICATION

- As we learn more and more about social psychology, will the field continue to grow in numbers, or will people stop studying it once we have more answers? Do you think spending your life as a social psychologist would be a worthwhile endeavor, or are there more important ways to spend your career?
- Consider the six big questions covered in this chapter and put them in order of importance. Which would you say is the most essential and urgent question that social psychologists should be studying, and which is less important? Justify your order of importance with historical or personal evidence.
- Do you think that every academic discipline, job, and career benefit from having diverse kinds of people involved? What are some of the advantages of providing opportunities for traditionally marginalized people in any job or field of study?
- What aspects of your own social world do you think would benefit from further analysis by social psychologists? Which chapters of this book sound like the most interesting or intriguing? Which topics are you most excited to study?

KEY TERMS

Action research, 7	Nature, 12
Anthropology, 6	Nurture, 12
Clinical or counseling psychology, 6	Positive psychology, 7
Critical thinking, 18	Replication crisis, 15
False dichotomy, 12	Social psychology, 3
False positives, 16	Sociology, 6
Interactions, 13	Type I error, 16
Intersectionality theory, 8	



gorodenkoff/iStockPhoto

2

Research Methods

Like all sciences, social psychology usually moves like a snail: steady but slow. It is slow, in part, because what social psychologists study is usually often invisible—and therefore difficult to measure. For example, prejudice, persuasion, altruism, and romantic love are all scientific **constructs**, theoretical ideas that we cannot directly observe. Although the scientific process is slow, social psychology is growing fast. It is growing fast because so many students are attracted to Kurt Lewin's vision of an applied science.

Perhaps social psychology's popularity explains why so many passengers were carrying long plastic or cardboard tubes on a recent plane ride. The plane was full of people presenting at a conference sponsored by the Society for Personality and Social Psychology (SPSP), which happens at the end of every winter. The tubes contained rolled-up posters summarizing the most cutting-edge research in the field. This chapter describes how all those professional established scientists, graduate students, and even a few undergraduates created those studies—and it invites you to join us.

Core Questions

- 2.1** How do social psychologists design studies?
- 2.2** How do experiments work in social psychology?
- 2.3** How can I recognize trustworthy research?

Learning Objectives

- LO 2.1** Describe the scientific method, methods of descriptive data collection, and correlations.
- LO 2.2** Identify the strengths and weaknesses of experiments and how their results are analyzed.
- LO 2.3** Explain why reliability, validity, random sampling, ethics, and open science signal good research.

HOW DO SOCIAL PSYCHOLOGISTS DESIGN STUDIES?

>> LO 2.1 Describe the scientific method, methods of descriptive data collection, and correlations.

The working world is full of designers.

We have fashion designers, graphic designers, architectural designers, cookware designers, landscape designers, and game designers. To become a clear-thinking social psychologist, you must become a research designer. Although there are guidelines, designing research is also an art that you can develop with experience—just like a fashion or a landscape designer.

The purpose of a research project often determines its design. The purpose of **basic science** is to increase understanding, create testable theories, and predict social behavior. Basic research strives to understand a given phenomenon more. The purpose of **applied science** is to translate those theories into applied problem-solving or social action. Applied research makes the world better in some tangible way, like reducing aggression or increasing self-esteem.

Both are important. Basic research is important because, as social psychology's pioneer Kurt Lewin famously recognized, "There is nothing so practical as a good theory" (see Bedeian, 2016; Lewin, 1951, p. 169). Theories are evidence-based ideas

that try to explain what we see in our lives and make predictions about the future. Applied science is where theory wrestles with reality—but with the understanding that reality always wins. If a theory does not describe reality, then the theory has to change. Figure 2.1 displays the four phases of the scientific method used in both basic and applied research.

Apply the Scientific Method

The whole **scientific method** is greater than the sum of its parts.

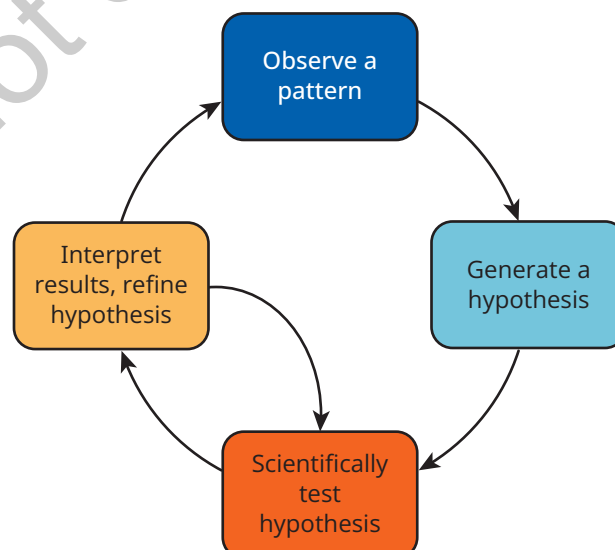
The parts of the scientific method include hypothesis generation, types of designs, procedural techniques, and measurement tools that are slightly different in every science. But the whole of the scientific method is an attitude based on healthy skepticism, the belief that evidence is the most trustworthy way to know about something. Healthy skepticism also implies a stubborn, Galileo-like refusal to believe something just because an authority says so. When opinion meets data, the data win.

Most research stories cycle through the same four phases. This pattern of research, shown in Figure 2.1, repeats with endless variations. You will grow accustomed to this rhythm: observation, hypothesis, testing, and interpretation of the results.

- *Phase 1: Observe a pattern of behavior.* Imagine that you are in a coffee shop quietly observing other customers. You notice that men frequently interrupt people during conversations—and that seems to be especially true when their conversation partner is a woman. Welcome aboard; you started the scientific journey when your curiosity prompted you to ask, “Is this a pattern?” (By the way, this exact observation was tested in coffee shops and drugstores back in 1975 by Zimmerman and West.) Phase 1 of the scientific method begins when we observe what we think is a reliable pattern of behavior. Of course, Phase 1 doesn’t always start with literal observation in this way. It can also start with observation of studies already done on a topic, when you notice something that could be added to this line of research to enhance understanding.

FIGURE 2.1

The scientific method includes these basic elements.



- *Phase 2: Generate a hypothesis.* A formal **hypothesis** specifies what you believe will happen when you test your observations. It's an educated guess in the form of a statement. You might hypothesize that (1) men interrupt more than women do in general, and (2) men interrupt women more than they interrupt other men. Hypotheses are never stated as questions (such as, "Who interrupts more, men or women?"). They start as statements of what you think is going to happen so that you can either reject the idea as wrong, gain support that you're right, or realize that the answer is more complicated than you originally thought.
- *Phase 3: Test the hypothesis.* You can do this in a wide variety of ways, which are described in the rest of this chapter. In this case, you'd probably use discreet observation techniques to watch people's behaviors in public places (like the coffee shop). But there are a lot of other options, and we'll cover those soon. And remember that a single study showing a pattern probably isn't enough to be really confident that your hypothesis was right; you need replication to build that confidence.
- *Phase 4: Interpret the results and refine your hypothesis.* If you found that your hypothesis was totally wrong, you might need to start all over at Phase 1. Or you might realize that your hypothesis is true some of the time but not all of the time. In that case, you refine the hypothesis and test it again.

Imagine that we found support for the basic idea that, overall, men are indeed more likely than women to interrupt someone. Consider the following possible new, refined hypotheses:

- Women with more assertive personalities are more likely to interrupt others, compared to women with less assertive personalities.
- Men are less likely to interrupt women they find physically attractive, compared to women they don't find attractive.
- Men interrupt others more in friendly or informal settings, compared to formal settings such as at work.
- Men from cultures with more traditional gender roles are more likely to interrupt women than are men from more egalitarian cultures.

Any scientific data story can only unfold if our observations are as objective as possible, our hypotheses are specific, our tests are fair, and the results are properly interpreted. Any individual research study is a very small piece of a very big puzzle. Importantly, the methods and procedure chosen for any given study will have important implications for what conclusions can safely be drawn. Every completed study brings us a tiny bit closer to understanding the complicated world of social interaction.

Begin With a Descriptive Design

Many research projects begin with a descriptive design.

There are a lot of choices when it comes to choosing a way to gather data for a study, and we won't cover all of them here (it's not a research methods book). We'll start with three options that typically fall into the category of descriptive designs. **Descriptive designs** define, explain, and clarify patterns of people or events that happen without experimenter intervention.

The idea is that they would have happened anyway, and the researcher's study helps us describe those observations in a more detailed way. Imagine you are trying to

understand how, when, and why some first-year college students drop out before their second year—and who is more likely to drop out compared to others. Here are three ways we could try to answer that question using descriptive designs.

Archival Data

Archival data are stored information that were originally gathered for a different purpose but can now be used to test hypotheses.

For example, most colleges and universities collect (and store) lots of information about their students. It includes application information (like high school GPA and hometowns), courses taken at that college, how long it took to graduate, what students majored in, and more. With all of this information, you could hypothesize and test questions like whether certain types of students drop out more or less.

There are many sources of archival data. Newspapers may report quotations from people who witnessed important events like natural disasters—and those quotations could be analyzed. Census data might be used to track patterns such as how many people of a certain socioeconomic status are married, cohabiting, or live alone. Facebook profiles and posts are used by social psychologists to study how people reveal personal information about themselves. Police records contain data that can reveal patterns of reported domestic violence or other crimes. Transcripts of texts between friends may tell us more about the role of gossip in friendships.

Archival data are a rich source of information that might be waiting quietly for someone to analyze and reveal patterns of human behavior.

Naturalistic Observation

Another option is scientific surveillance.

This descriptive design is usually called **naturalistic observation**, or watching people in their natural environments and recording their behaviors with a preset coding system, based on your hypothesis. By “natural,” we don’t mean in a cornfield or a forest but where the behavior normally occurs (such as a coffee shop). To find out what kinds of conversations college students have about dropping out, we might go to campus locations where we think we might overhear such conversations. This might be places like residence hall lounges, dining halls, academic success offices, free tutoring spots, or maybe even campus bars. Despite naturalistic observation’s benefits, some feel it has been an underutilized method in social psychology research (Robbins et al., 2024). For example, some researchers use an EAR (Electronically Activated Recorder) to automatically take snippets of naturally occurring conversations or other auditory information in real world settings (Mehl, 2017).

You may already notice that systems of data collection can sometimes overlap. If you decided to observe people’s behaviors based on several hours of security surveillance video footage, you’d be using both naturalistic observation and archival data. You might also use your critical thinking skills as you start to wonder about two important questions regarding naturalistic observation.

First, is naturalistic observation ethical? Video surveillance may have issues regarding the privacy of the people being taped (see Bhatia et al., 2019). For example, video surveillance could observe underage people buying alcohol, married people meeting for illicit affairs, or simply people doing things they would find embarrassing (like picking their nose). What are the researchers’ ethical obligations?

Even without videos, observing people and using them for your own research purposes may be unethical because they haven’t given consent to be part of your study. For this reason, companies, colleges, and universities always run their study ideas

through an objective ethics committee before they engage in any research endeavors (we describe this more later in the chapter). That said, most laws support the idea that if people are out in public, they give up their right to privacy.

A second question you might be thinking is, “If people realize they’re being observed, wouldn’t they change their behaviors?” If that thought occurred to you, then congratulations—that is a legitimate scientific concern. **Reactivity** occurs when people’s behavior changes when they know that they’re being watched. They might become more polite, or try to show off, or say nice things about their boss, or do anything else they think makes them look like better people. When that happens, your study will have problems because the behavior you’re trying to observe is no longer natural and authentic. Reactivity makes you wonder just how “real” reality TV shows or videos about YouTube influencers’ everyday life actually are.

One possible solution to this problem is **participant observation**, which is when researchers go undercover and pretend to be part of the natural environment so that no one notices them. They might pretend to be a substitute teacher in a school, a maintenance worker at a park, or a member of a cult. In this way, they hope the observed patterns they record will reflect genuine social interactions. The more authentic the behavior being observed, the better it is for research.

Descriptive Surveys

Sometimes the simplest way to collect data works best: Just ask.

Research surveys ask people to honestly report their thoughts, emotions, and behaviors. Often surveys include **self-report scales**, which ask people to respond to several items on a range (such as from 1 = *strongly disagree* to 7 = *strongly agree*). The researcher later sums or averages the responses to items and assigns that participant a score on a given variable. College administrators might ask current students to complete satisfaction scales as a way of trying to predict who might drop out versus make it all the way to graduation.

Creating a good survey is not as easy as it looks. Too few questions mean you won’t get the information you desire. Too many questions mean participants will get bored, quit, or just make up information to get it over with. But when done well, there are many advantages to the survey method. Surveys

- a. are relatively inexpensive,
- b. can reach hundreds of people relatively quickly,
- c. can assess personal information in ways that may not be possible through naturalistic observations, and
- d. attract participants from anywhere in the world (especially if the survey is online). That’s good because it means we can get a wide diversity of participants.

However, self-report surveys have a big problem: **social desirability**. This occurs when participants provide inaccurate information—they fudge their answers—in order to impress or please the researcher or simply because they don’t want to admit something. For example, would you tell the truth if asked whether you’ve ever mistreated a romantic partner, cheated on a test, stolen something, or used illegal drugs? Do not despair! The What’s My Score? feature describes one way to circumvent this problem when collecting data through surveys.

WHAT'S MY SCORE?

Measuring Social Desirability

Social desirability damages the quality of self-report scales when participants answer in a way that they think makes them look good. One creative way around this problem is to include a measure of how willing participants are to be honest. Most people *have* done many of the bad behaviors listed in this scale. So if research participants don't admit to any of them, then they are probably changing their answers on other parts of the survey to look good.

Instructions: Listed below are several statements concerning personal attitudes and traits. Please read each item and decide whether the statement is true or false as it pertains to you personally.

Circle "T" for true statements and "F" for false statements.

- T F 1. Before voting, I thoroughly investigate the qualifications of all the candidates.
- T F 2. I never hesitate to go out of my way to help someone in trouble.
- T F 3. I sometimes feel resentful when I don't get my way.
- T F 4. I am always careful about my manner of dress.

- T F 5. My table manners at home are as good as when I eat out in a restaurant.
- T F 6. I like to gossip at times.
- T F 7. I can remember playing sick to get out of something.
- T F 8. There have been occasions when I took advantage of someone.
- T F 9. I'm always willing to admit it when I make a mistake.
- T F 10. There have been occasions when I felt like smashing things.
- T F 11. I am always courteous, even to people who are disagreeable.
- T F 12. At times I have really insisted on having things my own way.

Scoring: Give yourself 1 point if you said TRUE for Items 1, 2, 4, 5, 9, or 11. Then, give yourself 1 point if you said FALSE for Items 3, 6, 7, 8, 10, or 12. The more points you have, the more you are trying to manage your impression—in other words, you have a higher score on social desirability. •

Source: Crowne and Marlowe (1960).

Understand Correlational Analyses

For many students (including your authors), the **correlational analysis** was a door-opening experience into the surprisingly pleasant world of statistics.

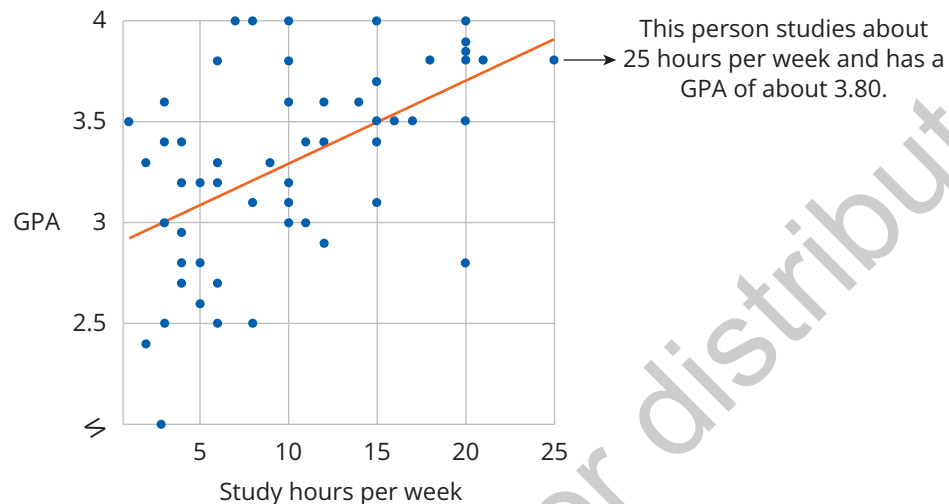
A correlation starts with two pieces of information from each participant. Each piece of information is a number that represents where that person falls on a range, or continuum, for two variables of interest. For example, you can ask people (1) how many hours they study each week and (2) their grade point average (GPA). The obvious hypothesis: More studying is associated with higher grades.

Figure 2.2 tells a beautifully nuanced yet easy-to-understand story. The pattern of dots flows upward and to the right, so the general theme is that more hours spent studying each week is associated with higher grades. And each individual dot is also a personal story. People in the upper left get high grades without studying very much; people in the lower right get low grades but study a great deal.

Correlations in which both variables move in the same direction are called “positive” correlations. Here, as studying goes up, grades go up—or as studying goes down, grades go down. So studying and grades have a positive correlation. If the two variables move in opposite directions—as one goes up, the other goes down—it’s called a “negative” correlation. You might hypothesize a negative correlation between partying and grades: More partying means lower grades.

FIGURE 2.2

In this graph, each dot represents one person. For each person, study hours per week fall on the x-axis, and grade point average (GPA) falls on the y-axis. By looking at the general pattern, we can determine whether the two variables are correlated.



Correlations will always appear as a number that ranges from -1.00 to $+1.00$. You already know what the sign (positive or negative) means. The number represents how closely each dot on the graph follows the pattern, or how close the dots are to the line. If they are all *exactly* on the line, then the association between the two variables is perfect, and the number will be 1.00 (either positive or negative). As the number gets closer to zero (from either direction), the dots start to spread out. That means there's more variation, and the association isn't as strong.

Figure 2.3 summarizes how to think about correlation numbers and graphs for you.

Caution! Correlation does not equal causation.

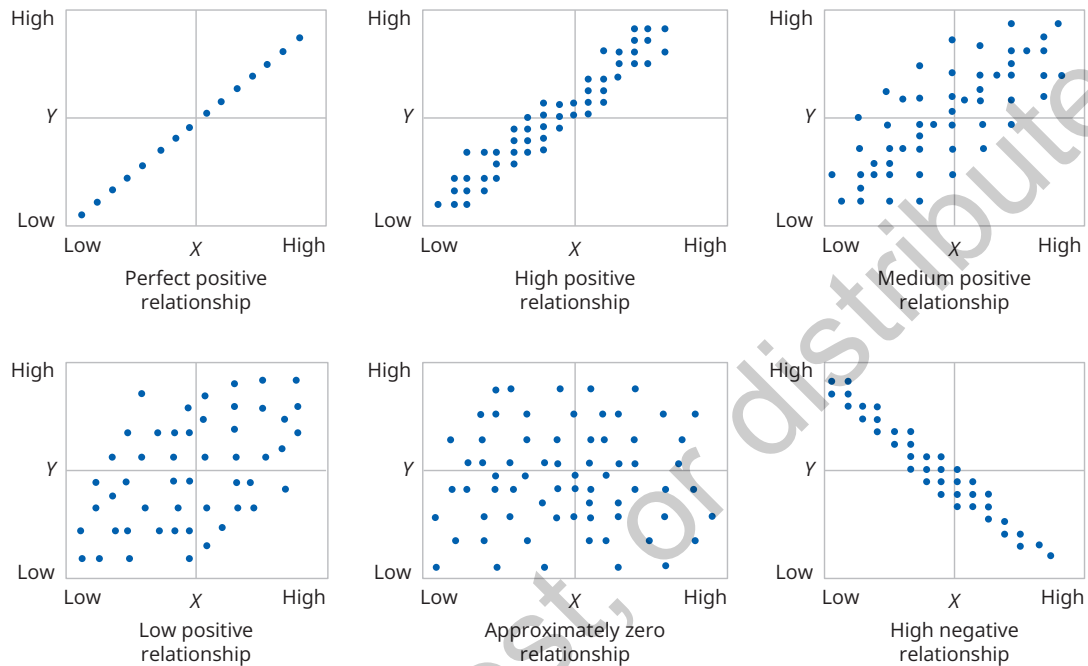
While it is *possible* that some correlations imply causal relationships, be careful. A third unknown or unmeasured variable could cause the correlation. In the case of a student who spends many hours studying and has a very good GPA, both of these outcomes might have been caused by third variables such as the student's (1) motivation to do well, (2) level of pressure from parents, (3) amount of enjoyment of class subjects, or (dare we hope) (4) the skill and engagement of a fine professor.

A weird example about ice cream will help you understand the "third variable" problem. There is usually a correlation between amount of ice cream sold per year in any given city and the number of people in that city who drown that year. Is ice cream consumption causing drowning or vice versa? Probably not. It's more likely that a third variable explains the correlation: heat. Towns that have hotter temperatures (such as Miami, Florida, and Austin, Texas) probably sell more ice cream. In addition, due to the heat, more people swim in these towns, which unfortunately sometimes leads to more drownings. So, while it might look like the two variables of ice cream and drownings are related, both are actually caused by something else.

Even if there is a causal relationship, we might not know which is the cause and which is the effect. Think about the controversial idea that watching violence on TV causes children to act more violently in real life. The correlation seems to be real, but the causal relationship may go in the other direction. Maybe children inclined to be

FIGURE 2.3

Correlations always range from -1.00 to $+1.00$. The number in the correlation (from 0.0 to 1.0) tells you how well each data point fits into a general pattern. The sign (positive or negative) indicates whether the two variables move in the same direction or in opposite directions. If a correlation is zero, it means there is no pattern or association between the two variables.



SOCIAL PSYCHOLOGY IN POPULAR CULTURE

Participant Observation in Movies



Pictorial Press Ltd/Alamy Stock Photo

In the movie *21 Jump Street*, two young police officers go undercover pretending to be high school students so they can bust a new drug that's hitting the community. In *Imperium*, Daniel Radcliffe's character works for the FBI and infiltrates a White supremacist



Allstar Picture Library/Alamy Stock Photo

group, pretending to be racist. If any of them had been social psychologists doing research with this undercover technique, it would have been called participant observation. •

violent already are attracted to TV violence. Simple correlations are only clues. But they are a provocative way to begin engaging with research designed to solve social problems.

THE MAIN IDEAS

- The scientific method, which is used by social psychologists who conduct research, includes (1) observing a pattern, (2) generating a hypothesis, (3) scientifically testing the hypothesis, and (4) interpreting results so that the hypothesis can be refined and tested again.
- Three ways to gather descriptive data are (1) archival data, (2) naturalistic observation, and (3) surveys.
- Correlations test whether two continuous variables (or variables that have scores along a range) are associated with each other in a systematic way.

CRITICAL THINKING CHALLENGE

- Think about the classrooms you've been inside recently. Consider the physical aspects of the room (such as size, type of desks, color, art on the walls, and so on). Then consider how people choose to sit in the room during classes (such as whether they prefer the front or back row, how much they spread out, what kinds of people tend to sit together, and so on). Generate three hypotheses about how either the physical environment or the social environment shapes learning.
- Imagine that you want to do a study on how companies support leadership within their organizations. First, describe how you might conduct the study using archival data; then, how you'd do it with naturalistic observation. Finally, describe how you would conduct the study differently if you decided to give people who work there a survey. What kinds of questions would you ask? How would you get people to fill it out honestly?
- Describe two positive correlations you think are true in your own life, and identify two negative correlations you see in your own life. Then, choose one of those correlations and discuss whether you think there is a causal relationship between the two variables or whether a third variable drives what appears to be an association.

HOW DO EXPERIMENTS WORK IN SOCIAL PSYCHOLOGY?

>> LO 2.2 Identify the strengths and weaknesses of experiments and how their results are analyzed.

If the most famous book about experimental designs were going for a big audience in the self-help market, then it might be called *How to Think Clearly*. However, the helpful book written by Donald Campbell and Julian Stanley (1966) had a less dramatic title: *Experimental and Quasi-Experimental Designs for Research*.

The groundbreaking book's original target market was the unruly world of education research. Campbell and Stanley (1966, p. 2) wanted to calm things down and remind researchers that experimentation takes time, replications, and multiple methods. They organized the world of experimental research design into three categories:

1. preexperimental designs,
2. quasi-experiments, and
3. true experiments.

Preexperimental Designs

Main strength: Everyone is treated equally. Main weakness: no comparison group.

The simplest experimental design is called a **preexperiment**. Here, a single group of people is tested to see if some kind of experience or treatment had an effect. Imagine a college is interested in making sure new students succeed, especially in their first year. The faculty design a class all incoming students have to take that's called something like "First Year Seminar" or "University Success." The college requires every new student to take this class, then tracks that group's success through outcomes like their GPA at the end of the semester.

You can see that with preexperiments, because everyone receives the exact same treatment, we avoid ethical concerns that might come up in research designs in which different groups are formed. For example, if the college required half of the incoming students to take the class and told the other half of students they weren't allowed to take the class, one of the groups might be at a disadvantage. This problem becomes even more clear when we think of research in areas like mental health interventions. If we design a new therapy to decrease anxiety, giving it to everyone who suffers from anxiety sounds the most fair.

But the problem with preexperiments also then becomes clear: Once we see results, can we really know any changes were because of the treatment? If grades in that year's incoming class are particularly good, how do we know they weren't just smarter than last year's class? And if anxiety decreases, was it the therapy—or something else that happened, like a change in the culture? We can be more confident that an experience or treatment has the effect we think it does when we use the next two research designs.

Quasi-Experiments

Main strength: enables comparison between groups. Main weakness: may not control alternative explanations.

Sometimes we want to compare groups that exist naturally. We might want to study people who have survived natural disasters (like tornadoes or hurricanes) compared to those who have never been in one. We might want to compare people who have served time in prison to those who haven't, people in the military versus civilians, athletes versus nonathletes, people who use social media versus those who don't . . . and so on.

Quasi-experiments compare outcomes between or among groups that are naturally occurring. For example, when comparing whether men or women are most likely to interrupt in a conversation, we use two groups (men and women) that existed regardless of our study. There are often extremely interesting questions that researchers can only ask through quasi-experiments, because people are already in their respective groups. We can now compare one group to another—which was impossible with preexperiments.

But here's the weakness: Even if we find a difference, we can't really be sure *why* that difference exists. In our interruption study, if one group interrupts more, is it because of genetics? Hormones? How boys versus girls are raised in our culture? Descriptive research (explained in the section above), preexperiments, and quasi-experiments all suffer from the same downfall: **confounding variables**.

Confounding variables are factors or issues that offer alternative explanations to why our results came out like they did, which limit our ability to ever say "Variable X caused changes in Variable Y." None of the methods of data collection described so far let us make claims about *causality*, because they all have confounding variables. The only way around confounding variables is a true experiment.

True Experiments

Main strength: controls (most) confounding variables. Main weakness: usually requires more time and effort, and may have ethical concerns.

The true experiment is the gold standard across all the sciences. That applies especially to social psychology because a **true experiment** compares two or more groups that are equal in every possible way except one (the variable we’re testing in the study). The only way to make sure that the groups are equivalent to each other in every way *except* what we’re studying is to use **random assignment**. Random assignment means that each person in the study has an equal chance of being put into any of the groups involved. We might flip a coin, draw names from a hat, or use a computer to assign people randomly to various experimental conditions.

Why does random assignment work—how does it eliminate confounding variables, or other explanations? With enough people in each group, random assignment creates a *statistical probability* that, on average, the people in each group are pretty similar to each other. If you have 100 people in your study and you know that half of them are men and half are women, then randomly assigning each person to be in either Group A or Group B of your study means there’s a pretty good chance that Group A will consist of about 25 men and 25 women—and the same goes for Group B. Thus, random assignment creates roughly equal groups.

The idea is that in a true experiment with random assignment, the groups you’re studying should be as equivalent as possible in every way *except* which group they’re in. That way, if the two groups have different outcomes at the end of the study, the only possible reason must be the experimental manipulation—there’s just no other explanation. Honestly, it is probably impossible to control every confounding variable. And random means just that—it’s possible that random chance will lead the groups to be slightly different in other ways. But random assignment is the best technique we have, and it’s why good *replications* are so important to any science.

Independent and Dependent Variables

True experiments have two types of variables (see Table 2.1).

The **independent variable** creates comparison groups, based on random assignment, that will have different experiences in the study. It’s the variable that

TABLE 2.1 Independent and Dependent Variables in Experiments		
STUDY BASICS	INDEPENDENT VARIABLE	DEPENDENT VARIABLE
Students listen to either classical or rock music while they study, to see if music affects their memory on a test later.	Type of music (classical or rock)	Performance on the memory test
People write an essay about either death or puppies, then rate how much anger they feel.	Essay topic (death or puppies)	Level of anger
Children watch a commercial with dolls or with trucks, then are rated on how aggressively they play with clay and crayons.	Commercial topic (dolls or trucks)	Level of aggression
Sports fans see images of athletes wearing black jerseys or green jerseys and are asked to rate how well they expect each player to do that year.	Jersey color (black or green)	Expectations of players’ performance

experimenters manipulate. For example, researchers might have one group of students listen to classical music and have the other group listen to rock music. So the independent variable is *type of music*—it's the experimental manipulation that makes the groups different from each other at the very beginning of the study. Importantly, we aren't able to ethically create manipulations for every type of experience. For example, we can't force participants to experience a romantic partner cheating, be bullied, or be the target of severe discrimination. Although it may be useful scientifically to have true experiments on these important topics, the ethics involved in needing to protect participants makes it impossible.

Of course, we also have to measure some kind of outcome, which is the **dependent variable**. Maybe while our two groups listen to either classical or rock music, everyone reads the same passage from a textbook. Then, we measure their memory on a test of the material: the dependent variable. In this case, we've hypothesized that *memory scores* are "dependent" on whether participants heard classical or rock music. In experiments, the independent variable is the *cause* (here, type of music) and the dependent variable is the *effect* or outcome (here, memory test scores).

If the groups really were equivalent to each other in every way except the independent variable, any differences in the dependent variable must have been caused by which group they were in. This is how true experiments allow us to make causal inferences. Sometimes, studies include a neutral or baseline group as well that receives no treatment. For example, a study might include (a) a group of students who listen to rock music, (b) a group of students who listen to classical music, and (c) a group of students who listen to no music at all. In this case, that last group—the neutral group—is called a **control group**.

Analyzing Results in Experiments

Once you're done with the study and have your results, how do you know if the hypothesis was supported?

Comparing Two Groups: The *t*-Test Statistic

If your study only had two groups in it, you'll use a test called a *t*-test (see Figure 2.4).

The ***t*-test** statistic compares the mean (i.e., the scores' mathematical average) and standard deviations of both groups to see if they're different from each other. You might find it interesting that this test was first created by a man named William Sealy Gossett, who used it to test whether different batches of Guinness beer tasted the same (Mankiewicz, 2000).

There were two critical components to Gossett's statistical invention: (1) The sampling had to be random, and (2) the sample had to be big enough to be representative of all casks of beer Guinness made in a given day. It would not be good for Guinness's business if the morning batch tasted different from the afternoon batch. Gossett's invention of the *t*-test statistic for comparing two groups (the morning vs. afternoon batches) ensured consistent quality in Guinness. When we use it for

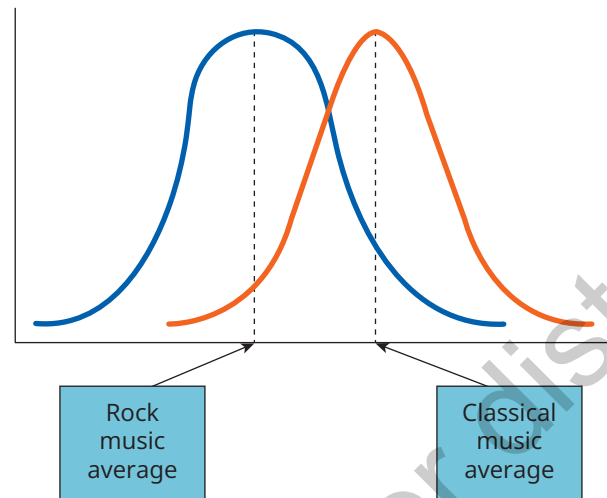


We have Guinness to thank for the statistic known as the *t*-test.

iStockPhoto/WaraJenny

FIGURE 2.4

One way social scientists look for patterns is by comparing average scores within different groups of participants. When we compare two groups, as here, we use a *t*-test. When we compare three or more groups, we do an analysis of variance, or “ANOVA.”



social psychology research, we usually want the groups to be *different* from each other, showing that our independent variable caused some change in the dependent variable. But we can still be grateful for how beer helped us reach our conclusions (thanks, beer!).

Comparing Three or More Groups: Analysis of Variance

What if you have three or more groups in your study?

Think back to one of our earlier examples: comparing memory test scores for students who studied while listening to rock music, classical music, or no music at all (the control group). Or what if Gossett wanted to compare Guinness taste samples from more than two groups of beer—say, one from each day of the week?

The principle for comparing multiple groups is the same as comparing two groups. For each group, we calculate the mean and the standard deviation, just like before. However, when we’re comparing three or more groups, the test is called an **analysis of variance**, or “ANOVA” for short. For example, perhaps the classical music group in a three-group experiment does better than the rock group—and maybe they are both better than the control group with no music at all. ANOVA tests will tell you whether at least one of the groups is different from the others. Different types of comparison groups require different statistical tests, and once you know the theory behind them, they can be fun to learn.

THE MAIN IDEAS

- A preexperiment is a method in which a single group of people is tested to see whether some kind of treatment has an effect.
- A quasi-experiment tests for the effect of a treatment in groups that have formed naturally, such as men versus women, or people who do or don’t like to drink coffee.

- A true experiment compares outcomes on two or more groups that have been created by the experimenter through random assignment to condition. True experiments are the only methodology that can lead researchers to make claims about cause-effect relationships between variables. The variable that's manipulated and makes groups different at the start of the study is the independent variable, and the measured outcome at the end is the dependent variable.
- Researchers can compare the means and standard deviations of their various experimental groups to see if they differ from each other at the end of a study. When two groups are compared, a *t*-test statistic is used; when there are three or more groups, an analysis of variance test is used.

CRITICAL THINKING CHALLENGE

- Earlier, we discussed challenges to naturalistic observation (reactivity) and to surveys (social desirability). What are some challenges to experimental research designs? How could scientists overcome these challenges?
- Imagine that you have a hypothesis that people who drink a lot of caffeine will experience heightened emotions over the course of a day. Explain how you might test your hypothesis using a preexperiment, a quasi-experiment, and a true experiment.
- True experiments are needed to test things like advances in medicine. If someone found a pill they think could cure cancer, a true experiment would require a study in which participants with cancer are randomly assigned to either a group that gets the pill or a control group who gets a placebo. Neither can know whether they're getting the "real" pill or the placebo. What are the ethics of this kind of study, where people's lives might actually be in the balance?

HOW CAN I RECOGNIZE TRUSTWORTHY RESEARCH?

>> LO 2.3 Explain why reliability, validity, random sampling, ethics, and open science signal good research.

You consume research many times each day.

Some of it is legitimate, but much of it is nothing more than "I read somewhere . . ." Research claims on TV or online about foods, drugs, and toothpaste are uncertain. Advertisements clearly have a conflict of interest in whether they're honest about the benefits of their products. Recognizing trustworthy friends, products, and research requires similar skills built from painful life experiences. You may not develop those skills until you've been burned a few times.

Reliability, Validity, and Random Sampling

Part of digital textbooks' appeal is practical: Printed textbooks are heavy!

Sometimes, your arms and back hurt from lugging them around all day. So you become curious about just how much those suckers weigh. You pile them on top of the scale at your local gym, and it gives you a result: 36.8 pounds. No wonder your back hurts! But then your friend tells you that the scale is often off by several pounds. She knows this because she sometimes compares what that scale tells her to the scale at her doctor's office on the same day. So you try again. This time the same scale tells you that the exact same pile of books weighs 33.2 pounds. Surprised, you take the books off and put them back on, and now it says 40.6 pounds! Clearly, you can't trust this scale because it is unreliable.



If you use a scale like this one to weigh yourself, how confident are you that the result is correct or that it wouldn't change if you stepped off and back on?

tzara/iStockPhoto



The people shown here look like they are from the United States and may be relatively educated and rich. They probably qualify as "WEIRD": Western, Educated, Industrialized, Rich, Democratic. If research samples aren't more diverse, they aren't generalizable to everyone.

ljubaphoto/iStockPhoto

construct, and external validity. High **internal validity** signals confidence that your results mean what you think they mean. For example, if you forgot to use random assignment in the music and memory study, then you have opened the door to self-selection and alternate explanations. Randomly assigning participants to different conditions reduces that threat to internal validity because it helps

eliminate confounding variables. Another way to improve internal validity is to ensure **construct validity**, which is whether the tests, surveys, and so on chosen for the study really measure what we think they're measuring.

Reliability is consistency of measurement over time or over multiple testing occasions. It doesn't matter if it is a weight scale, an intelligence test, a train that does not keep to schedule, or a friend who may or may not show up on time: To be trustworthy, consistency is key.

A study must also be high in internal, construct, and external validity. High **internal validity** signals confidence that your results mean what you think they mean. For example, if you forgot to use random assignment in the music and memory study, then you have opened the door to self-selection and alternate explanations. Randomly assigning participants to different conditions reduces that threat to internal validity because it helps eliminate confounding variables. Another way to improve internal validity is to ensure **construct validity**, which is whether the tests, surveys, and so on chosen for the study really measure what we think they're measuring.

High **external validity** builds trust in your results if they apply to other people or settings. For example, many social psychology studies have used college students as participants. That's great—if you are a college student and the results apply to you. But those results might be limited in their **generalizability**, or how much they apply to people "in general." This problem is sometimes known by the acronym WEIRD because so many participants are from "Western" countries (like the United States), Educated, and from Industrialized, Rich, Democratic cultures. We know less about other non-WEIRD kinds of people—the diversity in study participants is sometimes lacking.

One of the best ways to increase generalizability—and thus external validity—is to use **random sampling** (not the same thing as random assignment). Random sampling means that the people in your study were randomly selected from the larger population of interest. If you want to know students' opinions at your college or university, the easy approach is to ask for volunteers or survey people who live in a nearby residence hall. But if you want data you can trust, random sampling would involve getting a list of every student and choosing the people in your study in some truly random way. Hopefully, that technique results in a sample of participants who represent the diversity of people across your entire population.

Ethics and Institutional Review Boards

“The therapists . . . they should be in prison right now, today.”

It is distressingly easy to lose our moral compass. Bob Kelly had good reason to be critical of therapists during a presentation at the Duke University Law School. As owner of the Little Rascals daycare in Edenton, North Carolina, Bob (and six others) had been falsely accused of sexually abusing some 90 children. There was no physical evidence—none!

So some of the most important “evidence” included reports from psychological therapists. Sentenced to 12 consecutive life sentences, Bob Kelly’s conviction was overturned—but only after 6 years in prison. It was also unlikely that the therapists had lied. They had somehow lost sight of the ethical guidelines that guarded them and their profession. It seems they genuinely thought he was guilty, even though there was no evidence of that conclusion. We have a solemn responsibility to treat people with respect. That includes how we use unobtrusive methodologies like naturalistic observation and even archival studies when we examine people’s life information.

Researchers (across the sciences) rely on **institutional review boards (IRBs)**, committees that consider the ethical implications of any study. *Before* any of us begin formal research that might affect participants and be published, we are obliged to submit our methods for review. Your local IRB committee is typically composed of representatives from different departments in a college, university, research institute, or corporation—and sometimes from a combination of such organizations.

Many committees include a lawyer and sometimes a member with no background in research at all to represent the “average person’s” perspective. The IRB committee will consider applications for every study your university might run, then decide in advance if there is any potential serious harm involved. If there is possible danger, the study won’t be approved.

The specific guidelines for psychology come from both our local IRB committees and the **American Psychological Association (APA)**, an organization of professionals in the field who have determined what the ethical standards of research should be. Note that the standards currently in effect from the APA were not always in place. Some of the studies you’ll read about in this book were done before APA standards and IRB committees were standard—and thus, some of those studies have been harshly criticized for being harmful to the people who were in them. Protecting and respecting participants should be the highest priority for anyone conducting research. What are the guidelines?

The American Psychological Association lists several “rights” that they say all participants should have. Again, consider each of these as you read about studies in this book and consider whether you think the study was ethical. In addition, if you have the chance to participate in any studies yourself, it’s important for you to know what your rights are—so that you can stop participating at any point if you are uncomfortable



Ethical violations in the Tuskegee Syphilis Study helped establish the need for IRBs to prevent future violations of trust. Participants in this study of syphilis were not (a) told the purpose of the study, (b) given a chance to leave the study, or (c) treated with penicillin that might have cured them.

The National Archives at Atlanta

SPOTLIGHT ON RESEARCH METHODS

Questions Your Institutional Review Board Might Ask

Institutional review boards (IRBs) are committees that review ethical considerations for any new study; you need to get IRB approval before you can move forward. To know more about this process, consider the questions below; they are the typical types of questions any researcher will need to answer before starting the research process. Researchers are required to type their answers and submit them to the IRB committee for review, along with copies of any materials such as surveys, videos, and so on.

- What is the purpose of your study, and what are the hypotheses?
- What kinds of participants do you plan to use? How many? How will you recruit them? Will they be compensated for their participation through something like money or extra credit?
- Are the participants from any kind of legally protected group, such as children, prisoners, people with disabilities, and so on?
- How will you get informed consent?
- What are the specific questions you will ask or experimental procedures you will use?
- Will there be any deception? If so, what is the justification for that deception?
- How will debriefing occur?
- What are the potential harms (physically, emotionally, or mentally) that participants might experience, short term or long term?
- Will you provide any resources if participants have questions or concerns?
- Are there any potential benefits participants might experience as a result of being in your study?
- How long will your study take? How will you ensure that the data collected will remain confidential and/or anonymous?
- Do you plan to present your results to the public, such as through a conference presentation or publication? If so, will the participants have access to these results themselves if they are interested?

Hopefully, you can see that IRB committees take their jobs very seriously—as they should. There also are career opportunities waiting for you if you are interested in protecting the rights of both human and nonhuman animals. These careers combine elements of law, philosophy, science, and psychology. •

or feel like you don't want to continue for any reason. Some of the participant rights identified by the APA are as follows:

- **Informed consent:** Participants should be told what they will be asked to do and whether there are any potential dangers or risks involved in the study before it begins.
- **Deception:** Participants should be told the truth about the purpose and nature of the study as much as possible. *Deception*, or hiding the true nature of the study, is only allowed when it is necessary because knowing the truth would change how the participants responded.
- **Right to withdraw:** Participants have the right to stop being in the study at any time, for any reason, or to skip questions on a survey if they are not comfortable answering them.
- **Debriefing:** After completing the study, all participants should receive additional details about the hypotheses of the study, allowed the opportunity to ask questions, and even see the results if they wish. This *debriefing* after the study is complete and should definitely include an explanation of any deception that was involved (if deception occurred) so that participants have the right to withdraw their data if they are upset about the deception.

If you want to design your own study, you should consider all these criteria for the quality of good research. In addition, you'll have to get approval from your school's IRB committee as well before you begin. To learn more about the IRB approval process, see the Spotlight on Research Methods feature.

The "Open Science" Movement

Ethics are always important.

We've already discussed some ethical considerations, such as avoiding deception in studies whenever possible, making sure we get informed consent before participants start in a research project, and so on. The ethics of science are even broader, though, when we start to think about how studies happen from start to finish. What if a researcher misrepresented their results or decided to form hypotheses only after they knew how the study's results turned out? What if they refused to share their data with other people who could confirm the findings?

Open science is a movement to make scientific research transparent, accessible, cooperative, reproducible, and honest. The aim of open science is to remove barriers for the creation of studies, sharing of data and results, and analysis of implications or conclusions. It's a way of saying to others, "Let's all do this together in an open, honest environment." Open science is also a reaction to the "replication crisis" discussed in Chapter 1. As scientists, social psychologists want to be honest and confident about our research conclusions.

There are several ways that open science encourages this kind of communication and exchange; a few are preregistration, results-blind peer review, and publication badges.

Preregistration

Imagine that a scientist does a study in which they're not really sure what they're looking for.

This is called exploratory research, and there's nothing wrong with it. But now imagine that after the results are analyzed, the scientist publishes the study and more or less pretends that they predicted the outcomes from the beginning. They look super smart! But it's not an honest approach.

Open science's solution is **preregistration**, a practice of specifying—in advance—your hypotheses, procedure, and statistical plan for analyses (see Nosek et al., 2017; Nosek et al., 2019). Then, if you deviate from your preestablished plan (e.g., you weren't able to recruit the sample you hoped for, or you used a different measure for a variable than you originally planned), you are obligated to report that change (Willroth & Atherton, 2024).

This plan is made publicly available to anyone, so you are committing to everything in an open, transparent way before you begin your study. Several preregistration templates have been created to help people through this process, where researchers can post their plans on independent websites.

Preregistration is not without problems. For example, you might say that you're going to get 100 people for your study, but you can only get 75. Or you might assume that people will pay attention to instructions during your procedure, but some of them don't and they mess up what they are supposed to be doing. Or you might realize after you've collected data that you had a typo on your scale that changed what the question was asking. Scientists are certainly not perfect, and mistakes can be made. But all of these changes can simply be documented and explained. That way, readers of the research can understand exactly the process that occurred and why changes had to be made.

Typical questions you'll answer on a preregistration form are things like this:

- What are your hypotheses? If you're doing a quasi-experiment or experiment, what are the independent and dependent variables? If you're doing a correlation study, do you expect a positive or negative correlation?
- What exactly will the procedure be—what will participants do? What will be the order of procedural steps? How long will it take each person to do the study? How will you do random assignment (if relevant)?
- How will you recruit participants, and how many do you expect to find? Will anyone be excluded from data analysis—and if so, why?
- How will each of your variables be measured and calculated? What statistical tests will you use to analyze the results?

Results-Blind Peer Review

Every academic field has professional journals where researchers publish their results. Most of these journals are what we call “peer-review” journals. That means that before any journal accepts an article for publication, it's sent out to other experts on that topic to see what they think. Those people, called reviewers, give the author(s) anonymous feedback about whether they think the article is worthy of publication. Sometimes the reviewers will suggest changes that they want to see, and if those changes are made, the article will be published. Sometimes, however, the reviewers can simply say that they found flaws with the design or aren't convinced by the results and stop it from being published.

Until the open science movement, all of this reviewing happened after a study was completed and written up. That meant that the peer reviewers knew how the study turned out. The problem with this is that it can lead to biases in what is and isn't accepted for publication. Maybe the reviewers wouldn't like the results because they go against a theory they favor. A more common problem is that studies usually weren't published if their results didn't show statistically significant findings or results that matched their hypotheses.

These problems can largely be eliminated with a practice called **results-blind peer review**, which means that reviewers are asked about the importance of the study *before* they see the statistical outcomes, as shown in Figure 2.5. If they agree that the study has merit, they accept it for publication at this stage. Reviewers will also be asked for their feedback after the results are calculated—but now they comment on whether the study followed the preregistration plan and interpreted everything correctly.

That way, even if the results surprise everyone, the study still gets published. Chris Chambers, the chair of a committee at the Center for Open Science, stated the benefits of this process like this: “The incentives for authors change from producing the most beautiful story to producing the most accurate one” (Center for Open Science at <https://cos.io/rr/>). Just like a relationship partner, science is even more beautiful when it's accurate and honest.

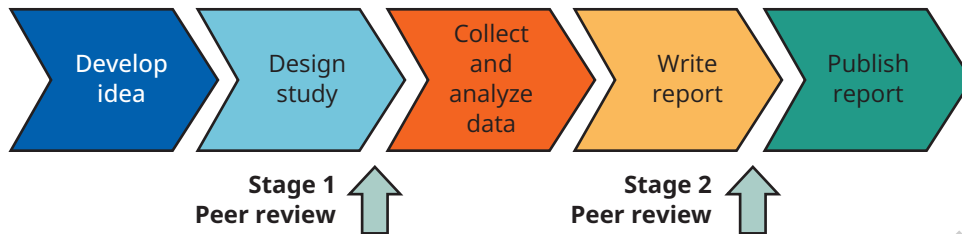
Publication Badges

Beyond the rewards of knowing you're doing good science, what incentives are there for people to engage in open science practices?

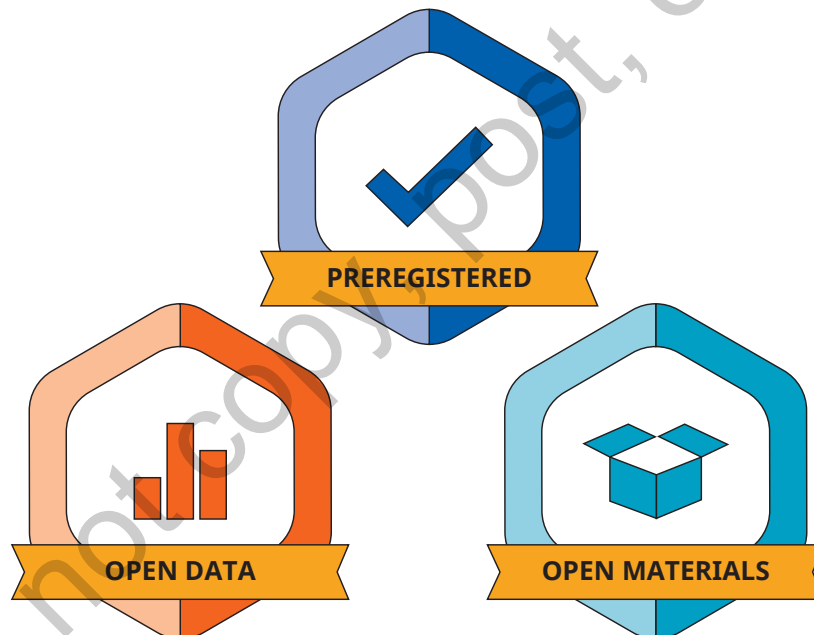
One reward is the use of **badges**, or visual icons that mark a study with signals that it has followed these procedures. You can see what the badges look like, at least for some journals, in Figure 2.6.

FIGURE 2.5

When an article goes through the results-blind peer review process, outside experts give feedback about the quality and importance of an article before the data are actually collected. Then, they review a second time, focusing on whether the study followed the original design plan.

**FIGURE 2.6**

Professional journals are increasingly marking studies with these images, called badges, when they follow open science guidelines. These examples are from the Center for Open Science.



Over 50 journals now use the badge system, and trends show that they really do increase the number of scientists who share their data publicly (Rowhani-Farid et al., 2017; Schneider et al., 2022). Though incentives have been slow to take hold (Rowhani-Farid et al., 2020), the open science movement is likely going to increase in usage and popularity over the next several years, as many people see it as the only way to make the scientific process truly objective and transparent.

THE MAIN IDEAS

- Reliability, validity, and random sampling are all criteria regarding the quality of any given research study.
- Ethical considerations are also very important when evaluating research studies. The American Psychological Association lists several participant rights, such as informed consent and debriefing. In addition, any study must be approved by an IRB before it can be conducted.
- "Open science" is a movement to make research more transparent, cooperative, and honest. It involves preregistration, results-blind peer review, and badges indicating whether studies have used the process before publication.

CRITICAL THINKING CHALLENGE

- Imagine a study conducted in 1930, before the APA enacted ethical guidelines and before IRB committees were common. If that study were unethical but highly interesting in terms of the results, should textbooks still talk about the study and what we learned from it? Does continuing to talk about the study disrespect the participants, or does learning from it mean that at least we are attempting to get some good from the bad that already occurred?
- Different IRB committees have different levels of strictness regarding ethical thresholds. For example, one committee might be fine with a study that causes participants to temporarily be angry, sad, or aggressive—while another committee might consider the same study unethical. If you were to serve on an IRB committee, how would you decide what the threshold of danger or harm should be? What's the balance between possible risk of harm versus what could be learned from the study?
- Some professional journals charge for copies of their articles or require people to pay for subscriptions. Others offer their articles to readers for free, but they require that the scientists themselves pay to publish their work in the journal. What do you think is the best system for research to be available to other scientists or the general public, in terms of how it is funded? Should there be a new system, like a "science tax" that everyone pays but is used to make scientific progress available to everyone? Discuss how you think science should be funded and why.

CHAPTER SUMMARY

How Do Social Psychologists Design Studies?

Basic researchers advance theories, while applied researchers translate those theories into real-world settings or people. Both types of researchers use the scientific method, a systematic way of creating knowledge. Descriptive designs clarify patterns of data without experimenter intervention. Examples of descriptive designs are use of archival data, naturalistic observation, and self-report surveys. Each method has strengths and weaknesses. Descriptive data are often analyzed using correlation tests. Correlations tell whether two continuous variables have a systematic association with each other but cannot tell whether there is a causal relationship between those variables.

How Do Experiments Work in Social Psychology?

Preexperiments are studies in which researchers test a single group of people to see if a treatment or experience has an effect. When scientists want to compare two or more groups to each other, they can use quasi-experiments or true experiments. Quasi-experiments compare naturally occurring groups to each other, while true experiments create groups using random assignment (participants are randomly put into one of the study's groups). The variable that makes groups different from each other at the start of a study is the independent variable, and scientists are testing whether that has an effect on the outcome of the study, which is called the dependent variable. To analyze results, a *t*-test is used when there are only two groups in a study, while an analysis of variance (ANOVA) tests for differences in three or more groups.

How Can I Recognize Trustworthy Research?

Reliability, validity, and random sampling are all important things to consider when trying to evaluate the quality of a research study. Reliability is whether the measures used are consistent. Internal validity is the extent to which results are interpreted in an accurate way, based on the setup of the study. External validity is the extent to which results could apply to other people or settings. Random sampling will hopefully result in a diverse variety of different kinds of people in the study. In addition, a committee called an institutional review board (IRB) will review the ethics of any proposed study. Examples of ethical considerations are whether a study includes informed consent, deception, and debriefing. Finally, the "open science" movement is a trend in psychology that encourages researchers to be honest, open, and transparent with their research from start to finish—for example, they might post spreadsheets of their data online so that other scientists can check the accuracy of their statistical analyses.

CRITICAL THINKING, ANALYSIS, AND APPLICATION

- Which of the research methods described in this chapter seem the most appealing to you? Why is that method appealing, and what issues or concerns do you have with the other methods?
- Find a news report that makes a claim that one variable causes another (for example, "Drug X leads to bad behavior," or "Access to birth control leads to risky sex," etc.). Is the causal relationship being suggested one that seems valid? Why or why not? How could this causal claim be scientifically tested?
- How many times does a study have to be replicated for researchers—or the general public—to be confident in the results? Even if a study is never replicated, does that mean that the data are useless? What other explanations could there be for results that seem to change (in other words, aren't replicated)? Is it possible that researchers simply haven't identified the exact reason why the pattern happened the first time, for example?
- Ideally, studies have generalizable samples of people who participate. But what if you want to generalize your findings to all of humanity? It's clearly impossible to use random sampling across everyone in the world, so most people just use participants who are nearby volunteers. What's the balance between convenience for the researcher and the need for a diverse, generalizable sample of participants? Are any studies truly high in external validity if they don't have true random sampling?

KEY TERMS

American psychological association (APA), 37

Analysis of variance (ANOVA), 34

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Archival data, 25

Badges, 40

Basic science, 22

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