

Chapter 4

Social Cognition and Person Perception



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Focus Questions

1. How can our schemas unconsciously influence our thinking and behavior?
2. In what ways are heuristics an illustration of human beings' capacity for "useful thinking" versus "stupid thinking"?
3. How might our belief about the stability of personality traits, such as intelligence, relate to our own academic achievement?
4. Why do people from individualist cultures tend to explain others' actions as being caused by their personalities more so than by the situation?

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Introduction

In March 2020 the World Health Organization declared a pandemic for the novel coronavirus (COVID-19). This resulted in a massive change to people's lives as schools and businesses closed, travel was restricted, and social gatherings were prohibited. In the following months, as the virus spread and the death toll increased, people attempted to navigate their lives under stressful circumstances. Little was known about the virus, how it spread, the health implications for individuals who might contract it, and the effectiveness of various medical treatments. The future for many people was uncertain as they became unemployed or switched to remote work and it was unclear when and how schools would reopen. Information of varying accuracy spread through the media, resulting in conflicting opinions on the origin of the novel virus, the actual threat of becoming ill, and the best treatment methods. This misinformation became problematic for formulating a clear response to the pandemic (Funk & Tyson, 2022). How did people make sense of their world during this time and decide which advice to follow or ignore?

During a health crisis, such as the pandemic, perceptions of health-care professionals, scientists, and government leaders play an important role in establishing people's confidence in, and ultimately compliance with, health guidelines and policies. While many people followed the advice of leaders and public health professionals to engage in social distancing, masking, and other health-related behaviors recommended to reduce the potential spread of COVID, other people protested and pushed back against these policies. Some people who disagreed with public health policies even threatened and harassed health-care leaders (Mello et al., 2020). In the United States, people who trusted and perceived the World Health Organization and the Centers for Disease Control as competent were more likely to comply with social distancing orders and other health-related guidelines than those who displayed mistrust of the government health agencies (Bayram & Shields, 2021; Wong & Yang, 2021). In contrast, people who concluded that they were personally at low risk of becoming ill from the virus were less likely to follow health guidelines than those who perceived greater risk (Schnell et al., 2022; Wong & Yang, 2021). Furthermore, once a vaccine for COVID-19 became available, people's decision to become vaccinated was based not only on their confidence in scientists who developed the vaccine, but also on the type of news outlets they trusted and their own judgment of their personal risks from either the COVID-19 virus or from receiving the vaccine (Madison et al., 2021; Viswanath et al., 2021).

Social psychologists were active in studying people's experiences during the COVID-19 pandemic (as noted in Chapter 2, section 2.1b). One thing they were interested in was understanding how people processed information in their social world, especially given the stressful circumstances and conflicting information. When determining their personal risks from COVID-19 and subsequent behaviors, did people carefully deliberate the information provided and consider the expertise of the health-care professional or leader making the recommendation? Or did people make quick decisions, perhaps based on emotions?

How people perceived and responded to the pandemic highlights several important aspects of **social cognition**, which is the way we interpret, analyze,



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In March 2020 the World Health Organization declared a pandemic for the novel COVID-19 virus. What information did people rely on to determine the trustworthiness of health professionals' and government leaders' advice to reduce the spread of the virus?

social cognition

The ways in which we interpret, analyze, remember, and use information about our social world

remember, and use information about our social world. As discussed in Chapter 1 (section 1.2b), we interpret events and make sense of them using two types of thinking: automatic and relatively effortless thinking, and deliberate and relatively effortful thinking. In this chapter, we will examine how people use this dual-process thinking to organize their knowledge about the social world, form impressions of others, and make sense of people's actions. Let us begin by examining some of the basic principles of social thought.

4.1 How Does Automatic Thinking Help Us Make Sense of Social Information?

Life is often complicated and difficult to understand. Faced with such complexity and thrust into the world as both actors and observers, we rely on two different ways of thinking (Kruglanski & Orehek, 2007). As previously defined in Chapter 1 (section 1.2b), *explicit cognition* involves deliberate judgments or decisions of which we are consciously aware, and *implicit cognition* involves judgments or decisions that are under the control of automatically activated evaluations that occur without our awareness. Being unintentional and consuming few cognitive resources, implicit cognition operates quickly, while explicit cognition is generally a slower process. As you will see, the fast and automatic operation of implicit cognition sets the stage for all social judgments.

4.1a We Are Categorizing Creatures.

A mental grouping of objects, ideas, or events that share common properties is called a *category*. For example, *insect* is a category of animals that have three body divisions (head, thorax, abdomen), six legs, an external skeleton, and a rapid reproductive cycle. Categories are the building blocks of cognition (Markman, 1999; Woll, 2002). The scientific consensus is that humans could not survive without automatically categorizing things. Imagine, for example, how lost and bewildered you would be if you attended a college class without an appreciation of some key categories such as professor, student, lecture, chair, or notes.

This automatic tendency to perceive and understand the world in categorical terms is an implicit cognitive process that greatly expands our ability to deal with the huge amount of information constantly presented to us (Dijksterhuis, 2010). Categorization allows us to generalize from one experience to another, making it possible to assign meaning to novel stimuli. Thus, if someone tells you to meet at the student union by the magnolia tree, you probably know what to look for, even if you have never seen a magnolia tree. By understanding the general properties of the category *tree*, you will probably seek out an object that is tall, with branches and leaves. By relating new stimuli to familiar categories, you are much more efficient in understanding and making decisions in your environment.

We also naturally form categories about people based upon their common attributes. This process is called **social categorization** (Pattyn et al., 2013). Starting as young children, we categorize people based on readily apparent physical features, such as gender, ethnicity, and age (Shutts et al., 2010). Even infants as young as 9 months old categorize faces by ethnicity, gender, and even facial expressions (Anzures et al., 2010; Rhodes & Baron, 2019). Because categorizing others by physical features is done so frequently, it becomes habitual and automatic—occurring without conscious thought or effort. In fact, such categorization is so automatic that it is probably impossible to inhibit it. Under normal circumstances, can you meet someone and not notice whether the person is male or female? Wouldn't it seem strange not to remember whether the person was young or old?

social categorization

The process of forming categories of people based on their common attributes

Exactly how do we mentally group things, including people, into categories? Consider classifying someone based on ethnicity. How would you classify someone who has a combination of Caucasian and Afrocentric facial features? Do all Africans or all Caucasians have the same skin color? Research suggests that categorizing has less to do with the features that define *all* members of a category and has more to do with the features that characterize the *typical* member (McGarty, 2004). The most representative member of a category is known as a **prototype**: a mental model that stands for or symbolizes the

category (Zimmerman & Sieverding, 2011). Because a prototype is the member that best represents that category for you, other members of that category will vary in how closely they match the prototype. Thus, although patrol officers and undercover officers both fit into our category of police officer, for most of us, patrol officers are more “cop-like.” Not surprisingly, we can categorize prototypical members more quickly than those who match the prototype less closely (Lei et al., 2020; Olson et al., 2004). Failing to correctly categorize people because they do not resemble the prototype often leads to errors in decision-making. This is why female doctors are more often mistaken for nurses than are male doctors, while male nurses are more likely than female nurses to be miscategorized as doctors. In both cases, the mistaken judgments are due to our culturally derived prototypes for these two professions.

Generally, the more experience we have with a particular category, the more accurate we are in noticing similarities and differences between members of that category. Thus, a bird-watcher will more quickly and accurately identify different types of birds than will someone with limited bird-watching experience. The fact that it is more difficult to notice subtle differences between members of a category with which you have limited exposure helps explain why you may think that members of another ethnic group have faces that “all look the same” to you. While this *other-race effect* is embarrassing during everyday interaction, the consequences can be life changing and extremely negative in cases of eyewitness misidentification (Michel et al., 2009; Wilson et al., 2013).



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If you encountered this person in a hospital, would you assume that she was (a) a nurse, (b) a doctor, or (c) a service worker? The social category you place her in will likely be based on how closely she matches your prototypes for these three social roles.

4.1b Schemas Affect What Information We Notice and Later Remember.

Implicit cognition allows us to group objects, ideas, or events into categories and also to develop theories about those categories. The theories we have about categories are called schemas. A **schema** is an organized structure of knowledge about a stimulus that is built up from experience and that contains causal relations; it is a theory about how the social world operates (Kunda, 1999). The stimulus could be a person, an object, a social group, a social role, or a common event. A student who observes her psychology professor conducting research will have a schema for the professor role and a schema for the research process. Without these schemas, the student would have great difficulty making sense of the professor and her actions. However, with these schemas, the student can not only understand what is happening in the situation but can also go beyond the presented information and anticipate the next set of events that might occur in this setting. Because they provide a theory about the category of interest, schemas also hasten the processing of information and, hence, decision-making. An expert in an area has a well-developed schema and thus can be especially efficient in making related decisions.

We also have schemas about ourselves (*self-schemas*), which are the personal attributes that we identify with. These self-schemas are the ingredients of our self-concepts (see Chapter 3).

prototype

The most representative member of a category

schema

An organized structure of knowledge about a stimulus that is built up from experience and that contains causal relations; a theory about how the social world operates

One important self-schema is our **gender schema**, which is the cognitive structure for processing information based on perceived female or male qualities. People with well-developed gender schemas habitually organize things in their minds according to gender categories. When information is filtered through a gender schema, social perceptions and judgments typically adhere to cultural standards. For example, if George and Laura have strong gender schemas, they may perceive such things as dogs, football, sports cars, math, and assertiveness as “guy-like”; such things as cats, shopping, hybrid cars, the fine arts, and empathy would then be labeled “girl-like.” Gender schemas are so strong that if individuals display gender-nonconforming features, such as men who have feminine characteristics or appearance, they are often misgendered regardless of whether they are cisgender or transgender (Morgenroth et al., 2023). Furthermore, when people do not conform to our gender schemas, there is often a backlash of negative attitudes. For example, transgender individuals who are physically androgynous in appearance (displaying physical traits that are not easily identified as male or female) are evaluated more negatively than those who display sex-typical characteristics (Stern & Rule, 2018).

For George and Laura, their gender schemas also help them organize and make sense of their lives. If Laura’s gender schema causes her to perceive science ability as a male quality—regardless of any inborn potential—Laura is less likely to identify skill in science as an important personal quality (Carli et al., 2016; Miller et al., 2018). Due to this disidentification, she is unlikely to spend time developing her math skills and she is less likely to choose careers that emphasize science. In contrast, perceiving this same “scientist = male” association, George may develop positive attitudes toward science and be more likely to pursue a science-oriented occupation. This is just one example of how schemas can shape our own self-perceptions.

We also have schemas about common events. A **script** describes how a series of events is likely to occur in a well-known situation (Woll, 2002). The script is used as a guide for behavior and problem-solving in the situation. We have numerous scripts, including those for attending class, eating dinner at a restaurant, asking someone out on a date, and even breaking off a romantic relationship. Learning scripts is an important part of the socialization process, and children as young as 3 years of age have well-developed preconceptions about familiar routine events in their lives, such as having lunch at the day care center or getting ready for bed at night (Nelson, 1986). Scripts often help us clear up ambiguities in social situations. For example, if you go over to someone’s house for dinner and are later asked to “spend the night,” your interpretation of this question will be shaped by the script that you have in mind. If a platonic friend asks this question, you are likely following a different script than if the questioner is a much-desired romantic partner. Embarrassment is likely if your host has a very different script in mind from your own.

As you can see, once schemas are formed, they can have a profound effect on our social thinking and behavior. Schemas often determine what information in our surroundings we pay attention to and how quickly we process it, what information we form memories about, and what information we later recall when making decisions. In general, we tend to have better memories of past events and people when this information was originally processed through well-formed schemas (Hirt, 1990), but using a schema can also cause us to screen out or “misremember” information that is inconsistent with it. As an example, imagine seeing someone assisting a person with a disability cross the street. While watching this situation unfold, you would typically assume that the person is empathetic and helpful. However, what if this individual is a White supremacist? Because empathy and helpfulness are inconsistent with most people’s White

gender schema

A cognitive structure for processing information based on perceived female or male qualities

script

A schema that describes how a series of events is likely to occur in a well-known situation and which is used as a guide for behavior and problem-solving



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We use different scripts for different occasions in our lives. What happens when you misinterpret another person’s intentions in a script?

supremacist schemas, research indicates that in this situation you are much less likely to make the typical spontaneous social judgment of helpfulness (Wigboldus et al., 2003). Instead, you may automatically dismiss this behavioral information as not useful in making inferences about the White supremacist's personality; however, you may also engage in more effortful, non-schema-based thinking and consider what situational factors may be causing him to behave this way (perhaps this is a ploy to rob the person).

Sometimes, information is so sharply inconsistent with an existing schema that we take great notice of it and store—or *encode*—it into a new, separate schema (Greve et al., 2019; Stangor & McMillan, 1992). With our White supremacist, imagine that you learn that he volunteers at a homeless shelter and an AIDS center, and that he strongly believes in social justice and civil rights for all groups. This information may be so inconsistent with your White supremacist schema that you spend time thinking about how he could have become a White supremacist in the first place. This effortful thinking may result in you forming a new schema for “socially progressive White supremacist,” while still retaining your more general White supremacist schema.

Schemas also play an important role in what we remember. However, unlike photographs that freeze exact images of past events, our memories are often sketchy reconstructions of the past. Linda Carli (1999) conducted an experiment demonstrating this effect—she asked college students to read a story about a woman named Barbara and a man named Jack who had been dating awhile before going to a ski lodge for the weekend. In one condition of the experiment, Jack proposed marriage to Barbara at the end of the story, whereas in the other condition, the story ended with Jack raping Barbara in their lodge room. Two weeks after reading the Jack–Barbara stories, participants read several details about the two characters and were asked whether this information had appeared in the original story. As depicted in Figure 4–1, Carli found that, in both conditions, participants tended to falsely remember details that were consistent with their original schema for the Barbara and Jack event. Those in the *proposal* condition were likely to falsely remember that “Jack wanted Barbara to meet his parents” and “Jack gave Barbara a dozen roses.” Similarly, participants in the *rape* condition were likely to falsely remember that “Jack was unpopular with women” and “Jack liked to drink.”

4.1c Schemas Can Be Situationally or Chronically Activated.

Schemas help us make sense out of our world, but what activates a schema from memory? The process by which recent exposure to certain stimuli or events increases the accessibility of certain memories, categories, or schemas is known as **priming**. More than a century ago, psychologist William James described priming as the “wakening of associations.” As an example of this memory process, answer the following two questions as quickly as possible: How do you pronounce the word spelled p-o-k-e, and what do you call the white of an egg? If you answered “yolk” to the second question, you’ve demonstrated priming. Priming is a good example of automatic thinking because it occurs spontaneously and unconsciously (Custers & Aarts, 2007).

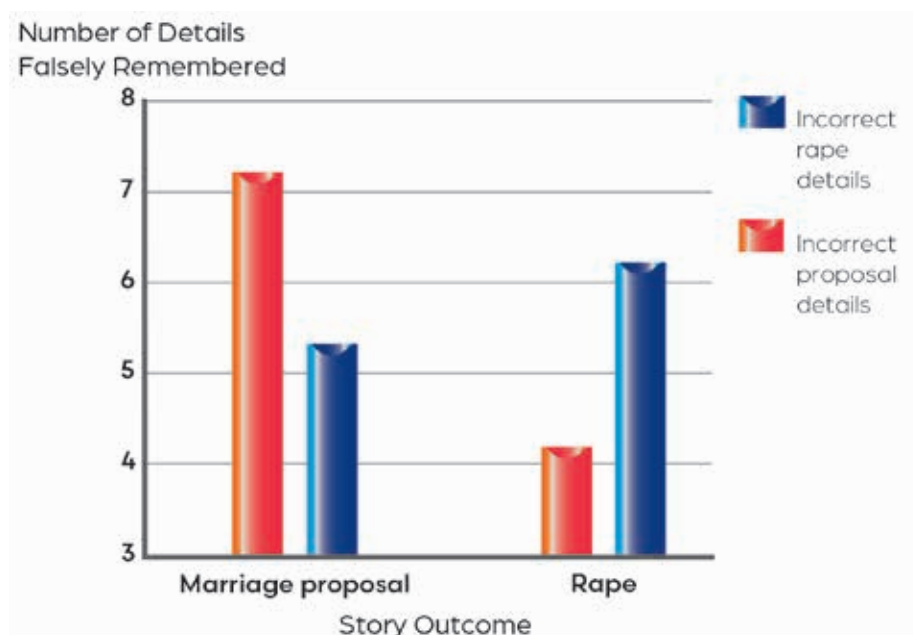
In one priming experiment, Christopher Bryan and his colleagues (2009) primed participants’ success schemas to determine whether doing so would influence their subsequent support for various social policies. They argued that there are two schemas commonly used to explain a person’s success in life. A *Good Fortune* schema explains people’s success by focusing on their social advantages and the help they received from others. In contrast, a *Personal Merit* schema explains success by focusing on effort and wise decisions. Most Americans, to some extent, give credence to both explanations of success, but the two schemas appear to differentiate political conservatives and liberals. The Good Fortune schema underlies liberal ideology whereas the Personal Merit schema underlies conservative ideology.

priming

The process by which recent exposure to certain stimuli or events increases the accessibility of certain memories, categories, or schemas

Figure 4–1 Schemas and Misremembering the Past

Linda Carli (1999) found that participants who read a story about a man raping his girlfriend were more likely to falsely remember details that were consistent with their rape schema, while those who read a story about a man proposing to his girlfriend were more likely to falsely remember details that were consistent with their proposal schema. What implications does this research have for the validity of witnesses' testimony in criminal trials?



Data source: "Cognitive Reconstruction, Hindsight, and Reactions to Victims and Perpetrators," by L. Carli, 1999, *Personality and Social Psychology Bulletin*, 25(8), pp. 966–979.

In this experiment, college students were first instructed to write an essay about how they got into their highly selective university (Bryan et al., 2009). Half of the participants were asked to write about their "hard work, self-discipline, and wise decisions" (Personal Merit condition) and the others wrote about the role of "chance, opportunity, and help from others" (Good Fortune condition) (p. 891). After writing the essay, participants completed a questionnaire indicating their support for social policies that are generally divided by political ideologies, such as prisons, unemployment benefits, health care, and taxes. Results indicated that participants in the Personal Merit condition supported the conservative positions on the social policies more strongly than did individuals in the Good Fortune condition, with a moderate effect size between the two groups (Cohen's $d = .55$). Importantly, these two schemas were primed by the essay and do not necessarily reflect the person's self-reported political ideology or affiliation. The results from this experiment demonstrate that situational cues can activate schemas, and these activated schemas influence how we perceive unrelated information in our surroundings.

Schema activation can also prompt us to physically behave in ways consistent with them, even if the schema is primed without our awareness. For example, in one experiment, Becca Levy (1996) asked older participants (age 60 years plus) to watch a computer screen and identify if a flash that occurred was above or below a bull's-eye on the screen. The flash was actually an age-related word that was presented *subliminally*, meaning that it was presented so fast that it was just below the person's threshold of conscious awareness. Half of the participants were presented with words that were positively associated

with aging (wise, sage, accomplished) and the others were presented with words that were negatively associated with aging (decline, decrepit, forgets). Following the schema priming task, participants completed a series of memory tests that are associated with decline in older age. Results from the study indicated that older adults in the positive aging schema

condition performed better on the memory tasks than did the adults in the negative aging schema condition. In a second study, Levy tested younger adults using the same experimental procedures. However, they did not show the same differences in memory performance between the positive and negative aging prime conditions. Together, these findings not only suggest that schemas about aging must be self-relevant in order to impact a person's subsequent memory, but they also suggest that such priming can have practical, real-life implications. Memory and physical decline is a real concern for older adults and Levy's (1996) work suggests that subliminal priming of positive aging stereotypes might be an effective intervention for older adults.

In a follow-up study, Levy and her colleagues (2014) investigated the effectiveness of a 4-week intervention in a sample of 100 adults aged 61 to 99. Participants were exposed to either a positive subliminal aging prime or a neutral condition once a week for a total of 4 weeks.

Participants also completed measures that assessed their belief in age stereotypes, their self-perception of aging, and physical functioning (strength, gait, balance). Results indicated that after the 4-week intervention, participants in the positive implicit aging condition had more positive age-related stereotypes, had more positive self-perceptions of aging, and had improved physical function. Recent research has even found that among older adults with mild cognitive impairment, those with positive perceptions of aging were more likely to recover cognitive functioning than those with negative perceptions of aging (Levy & Slade, 2023). A meta-analysis of 137 studies examining age stereotype priming effects confirmed that positive age priming improves behavioral performance, and that negative age priming impairs performance, compared to the neutral condition (Meisner, 2012). Importantly, the harmful impact of negative aging stereotype is about three times stronger than the impact of the positive aging stereotype prime. The lesson to be learned here is that people who interact with older adults should be cautious not to prime negative aging stereotypes through their comments or actions.

Besides being situationally activated, schemas are often chronically accessible due to past experiences. For example, imagine observing a parent yelling at a child in a public setting. If you suffered from physical abuse growing up, you may habitually perceive such emotionally ambiguous scenes as signs of impending violence. However, if you grew up in a household where family members regularly expressed themselves in a raucous but loving manner, you may expect such situations to end with hugs and smiles. People who experienced child abuse are more likely to form maladaptive schemas, and these schemas can have long-term implications for their mental well-being (May et al., 2022). The *Applications* section at the end of the chapter discusses how people with optimistic versus pessimistic outlooks on life habitually respond in different ways to similar life events. Their contrasting interpretations of positive and negative outcomes can be understood in terms of them having markedly different schemas chronically accessible.



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Positive, age-related stereotypes can contribute to improved physical functioning in older adults.

4.1d Heuristics Are Time-saving Mental Shortcuts.

Here is a question for you: Which two of these four cities—Atlanta, Los Angeles, New York, and St. Louis—have the highest crime rates? In arriving at your answer, you probably relied upon images that came to mind from a host of popular TV shows and picked New York and Los Angeles, which are actually less crime-ridden than Atlanta and St. Louis. This example illustrates the fact that we often employ various mental strategies that require minimal effort. **Heuristics** are time-saving mental shortcuts that reduce complex judgments to simple rules (Tversky & Kahneman, 1974).

In dual-process thinking, heuristics require very little thought; people merely take the shortcut and make the judgment. The downside of using heuristics, however, is that they aren't always accurate. To be useful, heuristics must satisfy two requirements: they must allow us to make quick social judgments, and they must be reasonably accurate. Unfortunately, satisfying the first requirement often works against judgment accuracy (Higgins, 2000). You can make a quick judgment by ignoring a great deal of potentially relevant information in your environment, but what cost does this have for the accuracy of your judgment? And keep in mind that the second requirement of heuristics involves “reasonable” accuracy, not “high” accuracy. With that in mind, let us consider some commonly used mental shortcuts that social psychologists have identified and studied over the years.

The Representativeness Heuristic

During Deb's first few years as a professor, people often mistook her for a student. Why was this so? Well, she did not fit their image of what a university professor should look like. That judgment was an example of the **representativeness heuristic**, which is the tendency to judge the category membership of things based on how closely they match the prototype of that category (Kahneman & Tversky, 1973). Because she was a young woman (inconsistent with the prototypical male professor with a beard and tweed jacket), people guessed that she was a student.

The representativeness heuristic helps people quickly decide in what categories to place others. It is essentially stereotyping operating in reverse. That is, when we stereotype someone, we first place them in a particular social category and then infer that they possess the personal attributes associated with people in that category. When we rely on the representativeness heuristic, we merely reverse this cognitive process: Because a person possesses attributes we associate with a particular social category, we infer that he/she must be a member of that category. The old saying “If it looks like a duck and if it quacks like a duck, then it probably is a duck” is an example of the representativeness heuristic. Although this cognitive shortcut is a rapid method of identifying people, it does not consider other important qualifying information. The most important information relates to *base rates*—the frequency with which some event or pattern occurs in the general population.

The tendency to overlook base-rate information was demonstrated in a classic study by Tversky and Kahneman (1973). Research participants were told that an imaginary person named Jack had been selected from a group of 100 men. Some were told that 30 of the men were engineers (a base rate for engineers of 30%), and others were told that 70 were engineers (a base rate of 70%). Half the participants were given no other information, but the other half were given either a

heuristics

Time-saving mental shortcuts that reduce complex judgments to simple rules

representativeness heuristic

The tendency to judge the category membership of things based on how closely they match the “typical” or “average” member of that category



(Shutterstock)

Due to the representativeness heuristic, you are unlikely to recognize this person as a college student because he probably does not match your student prototype.

Critical Thinking

If the representativeness heuristic is stereotyping operating in reverse, does that mean that stereotyping is also a heuristic?

description of Jack that fit the common stereotype of engineers (for example, practical, likes to work with numbers) or one that did not. They were then asked to guess the probability that Jack was an engineer. Results indicated that when participants received only information related to base rates, they were more likely to guess that Jack was an engineer when the base rate was 70% than when it was 30%. However, when they received information about Jack's personality and behavior, they tended to ignore the base-rate information and, instead, focus on whether Jack fit their image of an engineer. The tendency to ignore or underuse useful

base-rate information and to overuse personal descriptors of the individual being judged has been called the *base-rate fallacy*.

The Availability Heuristic

When the novel COVID-19 vaccines first began being distributed to the general public, a common discussion point among possible recipients was the negative side effects. Despite the fact that these vaccines were found to be safe and effective in clinical trials involving tens of thousands of participants, if you happened to have a friend who experienced extreme discomfort after receiving the shot, did this information decrease your willingness to get the vaccine? If so, you were most likely relying upon the **availability heuristic**, which is the tendency to judge the frequency or probability of an event in terms of how easy it is to think of examples of that event (Tversky & Kahneman, 1973). In estimating the likelihood of you having an adverse reaction to the vaccine, you relied on the easy accessibility in your memory of your friend's negative experience. If the information you accessed from memory had been reasonably representative of the actual safety of these vaccines, relying on the availability heuristic would have resulted in an accurate assessment.

availability heuristic

The tendency to judge the frequency or probability of an event in terms of how easy it is to think of examples of that event

In the use of the availability heuristic, the most important factor for people is not the content of their memory but the *ease* with which this *content* comes to mind (Higgins, 2000). For example, Adam Fetterman and his coworkers (2023) found that people who use neighborhood apps—media sites providing constant information about local neighborhoods—are more likely to overestimate the crime in their neighborhoods compared to people who do not use such apps. This is likely because crimes and other negative

(“PenAir Flight 3296 [N686PA] after crash landing,” NTSB, Public domain, via Wikimedia Commons)



Why is it that people tend to estimate that air travel is more dangerous after reading about a recent aircraft disaster? Upon what heuristic are they basing their estimate?

incidents are much more reported on these neighborhood sites than are positive incidents, which increases the ease with which negative incidents come to mind, and this exaggerates the perception of neighborhood crime rates.

The availability heuristic provides insight into a number of faulty social judgments, including peoples' responses to risks. Highly visible events that have a low probability of occurring (such as terrorism or a mass shooting) can result in people overresponding to the risk. In contrast, people will under-respond, and fail to take proper precautions, for low visibility but high probability events (such as biking or automobile accidents). Cass Sunstein and Richard Zeckhauser (2011) experimentally tested this process by comparing four groups of participants who were told that the chance of getting cancer with the current level of arsenic (a known carcinogen) in the public drinking water was either 1 in 1,000,000 or 1 in 100,000. Furthermore, half of the participants were given a vivid and highly emotional description of cancer (gruesome, painful, etc.), while the others were not. All were then asked the maximum amount of money they were willing to pay to lower the arsenic levels in their drinking water. Results indicated that participants were willing to pay more money to reduce the arsenic level when their risk of getting cancer was relatively high (1/100,000) versus being lower (1/1,000,000), but only if they *did not* receive the vivid description of cancer ahead of time. Participants who first read the vivid description of cancer were willing to pay the same substantial amount of money to reduce the arsenic risk, regardless of their actual risk level. These findings suggest that people are much more likely to try to avoid a health risk when it is presented to them in a vivid and frightening manner, even when the actual probability of the event occurring is very small.

Despite these examples of social judgment errors, availability is a fairly valid cue for the judgment of frequency because frequent events are more likely than infrequent events to be stored in memory and later recalled. If doctors are seeing patients during the height of the flu season, the fact that they can easily bring the flu virus to mind will influence how many patients they diagnose with this ailment. Busy doctors may quickly diagnose ailments as normal influenza and make correct judgments 99.9% of the time; but with "the flu" on their minds, they are also more likely to misdiagnose far more serious ailments as simple influenza (Weber et al., 1993).

The Anchoring and Adjustment Heuristic

Do you think the population of Cincinnati, Ohio, is more than 100,000? Yes is the correct answer. Now estimate Cincinnati's actual population, and then check the margin of this section for the correct answer. If, instead of asking whether Cincinnati's population is *more than 100,000*, we had asked whether it is *less than 1 million*, your answer probably would have been higher. The reason this effect often happens is because our quantitative judgments are often biased toward an initial anchor point—in our example, this was the 100,000 figure. Later, when making our estimate, we use this anchor as our starting point and, thus, usually insufficiently adjust toward the correct answer. This mental bias is known as the **anchoring and adjustment heuristic** (Epley & Gilovich, 2001; Tversky & Kahneman, 1974).

Jetter and Walker (2017) examined the implications of the anchoring effect for contestants on the TV show *Jeopardy*. In this trivia game, three participants compete to correctly answer questions to earn money. Contestants select questions, of varying dollar amounts, and earn the money if they answer it correctly. In each episode, there are three hidden questions, known as *Daily Doubles*, and the contestant who unknowingly selects that question can wager any amount of money. Importantly, the contestant places the wager after having already selected the question at a specific dollar value. This provides an interesting real-life situation for examining the anchoring effect. Does the initial dollar value of the question influence how much money contestants wager? If anchoring occurs,



Cincinnati has a population of 309,513

(Source: United States Census Bureau, 2022)

anchoring and adjustment heuristic

A tendency to be biased toward the starting value or anchor in making quantitative judgments

then the wagers should be lower if the initial dollar value is low and increase with the initial question value. However, rationally, the initial dollar amount should not be a factor in determining the size of the wager because the question difficulty is not associated with the initial question's dollar value.

Consistent with the anchoring effect, an analysis of 12,596 daily double clues on *Jeopardy* indicated that as the initial clue value increased, so did the waged amount. In practical terms, for every increase in \$100 of the clue value, the wager increased by \$29. This increase occurred even when controlling for other variables, such as the category of question (sports, government, etc.) and the contestant's gender. Based on these findings, can you think of situations in your own life where the amount of money you are willing to pay for something changes depending on an initial anchoring value?

Critical Thinking

Donald Trump Jr. stated that he was more concerned about his son being falsely accused of sexual assault than of his daughters being assaulted. Similar sentiments have been expressed by other high-profile men. Statistically, women have a 20% chance of being sexually assaulted (National Sexual Violence Resource Center, 2014). In contrast, it's been estimated that men have somewhere between a 0.6% and a 3.2% chance of being falsely accused of committing a sexual assault (Lisak et al., 2010). What cognitive heuristic might be contributing to this heightened concern about men's false accusations? Why do you think people were relying on this heuristic?

Why do arbitrary numbers influence us? In making a judgment, when we are given a number or value as a starting point, we appear to selectively recall information from memory that is consistent with this anchor (Mussweiler & Strack, 2000). For example, if you inherit a painting, you might look at the local antique store and estimate your painting to be valued similarly to one you see there. Furthermore, after starting with the modest price of the antique store painting as the anchor value, you are likely to remember instances when other people sold antiques at a similar modest price. However, if your painting's anchor is a high price from the *Antiques Roadshow*, you are likely to recall from memory stories of people discovering they had inherited masterpieces worth millions. In a very real sense, the anchor becomes a situational cue that triggers relevant memories, just as priming people with words can activate relevant schemas. In both instances, people's automatic, effortless thinking has an effect on the way they make judgments. Fortunately, people who are trained to be aware of this bias and to engage in effortful thinking about the lack of association between the anchor and subsequent decisions are less likely to show the anchoring bias in subsequent decisions (Adame, 2016).

Is Heuristic Thinking “Stupid” Thinking?

Examining the research on heuristics may lead you to conclude that we are irrational decision-makers, with distortions and errors being the most common end products of social thinking. Indeed, the use of heuristics to make health-related decisions during the pandemic often resulted in people underestimating the risk of various activities and may have contributed to the spread of the COVID-19 virus (Madison et al., 2021; Timmons et al., 2022). The reality is that although basing decisions on heuristics may lead to errors and may be motivated by lazy thinking, relying on them can be adaptive in conditions where we do not have the luxury of systematically analyzing all our options (Haselton & Nettle, 2006; Lieder et al., 2018). From an evolutionary perspective, human beings can be thought of as having evolved a large number of mental strategies to adapt to their surroundings. In this regard, heuristics and other effortless thinking have been very helpful to us because they yield reasonably accurate and adaptive results under most environmental conditions (Figueredo et al., 2004).

Research has identified the following conditions that are most likely to lead to the use of heuristics rather than more careful decision-making (Hertwig & Hoffrage, 2013):

1. We simply do not have *time* to engage in systematic analysis.

2. We are *overloaded with information* so that it is impossible to process all that is meaningful and relevant.
3. We consider the issues in question to be *not very important*.
4. We have *little other knowledge* or information to use in making a decision.
5. Something about the situation calls to mind a given heuristic, making it *cognitively available* (priming).
6. We are in a *positive mood*, signaling to us that everything is fine and no effortful thinking is necessary.

Section Summary

- Social categorization entails classifying people into groups based on common attributes.
- Schemas are organized knowledge structures that:
 - provide theories about how the social world operates,
 - hasten information processing and decision-making, and
 - influence what information is remembered and later recalled.
- Priming makes memories, categories, and schemas more accessible.
- Heuristics allow quick judgments with minimal cognitive effort but can cause biased and inaccurate judgments.

The representativeness heuristic involves judging the category membership of things based on how closely they match the prototype for that category.

The availability heuristic involves judging the probability of an event in terms of how easy it is to think of examples of it.

The anchoring and adjustment heuristic involves being biased toward the starting value or anchor in making quantitative judgments.

4.2 How Does Deliberate Thinking Help Us Make Sense of Past Events?

In Chapters 1 and 3, we discussed how imagining future events can help us construct effective self-presentations and how imagining our future self can motivate current behavior. Yet what about past events? How do we employ effortful thinking to make sense of past events?

4.2a The Hindsight Bias Is Fueled by Our Desire for Sensemaking.

When recalling past events, we often believe that we “knew all along” how things would turn out. After learning that your friend’s romantic partner has been unfaithful, you might think, “I could see this coming for some time.” Or after your favorite sports team defeats its archrival for the first time in years, you exclaim, “All week long, I could tell that my team would win!” In such instances, this after-the-fact overestimation of our ability to have foreseen the outcome is known as the **hindsight bias** (Arkes, 2013; Hawkins & Hastie, 1990). For example, in the early months of the COVID-19 pandemic, researchers asked participants to estimate the death toll of the pandemic (Giroux et al., 2023). Two months later, participants were provided up-to-date estimates of the death toll rates and were then asked to recall their original estimate. The recalled estimates were significantly higher than the initial estimates and closer to the actual provided statistics. In hindsight people believed that they had known, from the start, that the pandemic toll would be higher than they had actually estimated.

Cross-cultural studies indicate that the hindsight bias occurs throughout the world (Pohl et al., 2002). This bias develops by age 3 and is more pronounced among preschoolers and elderly adults due to enhanced memory problems at these ages (Bernstein, 2021). Hindsight biasing can and does occur right after an event’s outcome is known, but it tends to gain strength over time, as we increasingly forget our earlier beliefs about what we thought would happen (Bryant & Guilbault, 2002). A meta-analytic review found that this bias is moderately strong ($d = .39$ overall), and interventions to reduce this bias, to date, have not been effective (Guilbault et al., 2004).

The most commonly accepted explanation for the hindsight bias is that it is fueled by our desire for accuracy, and we are most likely to rewrite our memory of a past event when the outcome is initially surprising. When thinking about a past event that had a surprising outcome, we appear to selectively recall information in constructing a plausible story that is consistent with the now-known outcome (Müller & Stahlberg, 2007). This “rewriting” of how events occurred allows us to insert the missing causal connections so that the story makes sense given the outcome (Roese & Vohs, 2012). Claiming hindsight reassures us that we understand—and can anticipate—events in our world.

The hindsight bias can also be used to protect self-esteem and reduce disappointment (Roese & Vohs, 2012). For example, Orit Tykocinski (2001) proposed that people may minimize the likelihood of a positive outcome in order to make any negative outcome easier to accept and less damaging to self-esteem.

In one study, he examined Israeli students’ voting intentions and their perceived probability that their preferred candidate would win. Participants completed a survey both before and after the election. Results indicate that, prior to the election, those who intended to vote for the two major candidates did not differ in their reported probability that their chosen candidate would win. However, after the election, those who had voted for the losing candidate reported that they had previously thought their candidate had a significantly lower chance of winning compared to the winning candidate. This suggests that those who voted for the losing candidate shifted their ratings of the probability of success downward after the election to make the outcome easier to accept: “My candidate never had a chance anyway.”

“I just knew I should have picked door number two.”

—*Let’s Make a Deal* TV-show contestant

hindsight bias

The tendency, once an event has occurred, to overestimate our ability to have foreseen the outcome



Based on research on the hindsight bias, why might those who voted for a losing candidate be likely to later claim that they anticipated this loss?

4.2b Counterfactual Thinking Often Follows Negative and Unexpected Events.

Our social judgments and current moods are also affected by the ease with which we can imagine alternative versions of past events. For example, when watching Olympic competitions, have you noticed that bronze medalists often look much happier than silver medalists? Why would third-place finishers be happier than the athletes who outperformed them? Quite simply because, while the bronze medalists are imagining how they could have finished without a medal, the silver medalists are contemplating how they just missed out on winning a gold medal (Hedgcock et al., 2021).

In a study of this type of “What if . . .?” thinking, Neal Roese and his colleagues (1999) asked people to imagine the following day at the ski slopes:

Hector loves to ski but is cautious and never goes down the expert slope. Yesterday, however, he tried it and broke his leg. Martina also loves to ski and frequently goes down the expert slope. Yesterday she broke her leg going down this slope.

The researchers found that the majority of respondents believed that Hector would feel the greatest regret following his injury; most respondents also expressed greater sympathy toward him than toward Martina. The reason for these different judgments is that we engage in **counterfactual thinking**, which is the tendency to evaluate events by imagining alternative versions or outcomes (Lindberg et al., 2013). We are most likely to engage in counterfactual thinking following negative and unexpected events, and the thoughts that are generated usually deal with how the negative outcome might have been prevented. Counterfactual thinking is also more likely to occur for events that we have

some degree of ability to control (Roese et al., 2017). Regarding Hector and Martina, it is easier for us to imagine that Hector would have been uninjured if he had not deviated from his normal cautious skiing style than it is to imagine this altered outcome for Martina, given her tendency to take

*“Oh God! That it were possible,
To undo things done, to call back yesterday!
That Time could turn up his swift sandy glass,
To untell the days, and to redeem these hours.”*

—Thomas Heywood, English dramatist, 1574–1641

greater risks on the slopes. Because it is easier to undo Hector’s broken leg through counterfactual thinking (“If only he had stuck to his usual routine . . .”), we are more likely to feel sympathy for him. When our skiers engage in this same “What if . . .?” thinking, Hector will experience greater regret over his injury than Martina for the same reason.

Why do we engage in counterfactual thinking? One function served by these thoughts is that they can help us feel better following a negative outcome (Roese, 1997). Following a traffic accident in which your car is damaged, you may think, “At least I didn’t get hurt.” By imagining an even worse outcome, your accident seems less negative by contrast (Sanna et al., 2001). Besides helping us emotionally cope in the present, a second function of counterfactual thinking is that it can better prepare us for the future. By considering alternatives to past actions, we can better understand our mistakes and thereby improve our chances for future success (Smallman, 2013). For example, after doing poorly on an exam you may imagine alternative study strategies that you could have used—such as memorizing key terms or working through the study guide. If you implement these new strategies in preparing for your next exam, you may improve your grade.

counterfactual thinking

The tendency to evaluate events by imagining alternative versions or outcomes to what actually happened

Critical Thinking

Why might a neuroscientist argue that the hindsight bias is triggered by some of the same neurological activity that creates the story lines of dreams?

Summarizing these two functions, then, we can say that imagining alternative versions or outcomes to what actually happened may not only help us emotionally cope with negative events but may also help us to achieve success in the future. Unfortunately, as discussed in Chapter 3 (section 3.1c), sustaining a negative affect is often necessary to motivate behavioral change. When counterfactual thinking is used to emotionally cope with a negative event, our improved mood can reduce our motivation to take corrective steps to avoid similar negative events in the future (McMullen & Markman, 2000).

Another important function of counterfactual thinking is that it can help us make sense of our lives. Because counterfactual thinking is the pondering of “what might have been,” this cognitive process often plays a crucial role in the creation of

meaning across the life span (Heintzelman et al., 2013; Hershfield et al., 2013). That is, one way that we make sense of our lives is by identifying “defining moments” that created for us new beginnings and unforeseen twists of fate. Imagining alternative outcomes in those defining moments gives us a sense of who we now are. Such imagining can strengthen our most cherished relationships and our most deeply felt values, but it can also undermine those relationships and values if our defining moments are filled with regrets.

Such regrets are most likely to occur following traumatic life events, when the reality is already the worst-case scenario. For instance, Christopher Davis and his coworkers (1995) interviewed people who had lost a spouse or a child in an accident. The more

“I know we won silver, but it really just feels like we lost gold.”

—Margaretha Sigfridsson, Swedish curling captain, after her team lost to Canada in the 2014 Winter Olympics women’s gold-medal match

those people imagined how the tragedy could have been averted by mentally undoing events preceding it, the more distress and guilt they felt. This tendency to engage in counterfactual thinking following traumatic life events also helps to explain why crime victims often blame themselves for their victimization (Blix et al., 2016; Davis et al., 1996). In trying to understand how their plight could have been avoided, victims tend to focus on trivial aspects of their own behavior rather than on the causally more significant behavior of the perpetrator. If they can imagine some plausible way in which they *could* have prevented the crime, they may come to believe that they *should* have prevented it. Although crime victims who engage in such counterfactual thinking may not blame themselves for being the cause of their injuries, they may blame themselves for not avoiding the situation that was the cause (Mandel, 2003). Among survivors of a terrorist bombing, the people who reported counterfactual thinking

were more likely to develop post-traumatic stress disorder than the people who did not engage in such thinking (Moss et al., 2022). Furthermore, people who have experienced a traumatic event and engage in upward counterfactual thinking (imagining how things could have been better), rather than downward counterfactual thinking (imagining how things could have been worse), tend to experience more psychological distress (Kennedy et al., 2021). Psychological therapies that challenge such harmful counterfactual thinking can help people effectively deal with life tragedies (Petrocelli et al., 2011).



When we engage in counterfactual thinking, we are constantly asking, “What if...?” For example, after a car accident, we may think, “What if I had only gone down a different street?”

Section Summary

- The hindsight bias involves overestimating our ability to have foreseen the outcome of an event.
 - Counterfactual thinking involves evaluating events by imagining alternative versions or outcomes.
-

4.3 How Do We Form Impressions of Others?

We've all had the experience of interacting with someone for the first time and trying to "size them up." "Why are they smiling so much?" "Are they always this quiet?" "Are they being honest with me?" The process by which we try to detect other people's temporary states (such as their emotions, intentions, and desires) and their enduring dispositions (such as their beliefs, traits, and abilities) is known as **person perception** (Gilbert, 1998). This aspect of social cognition is often not a single, instantaneous event but rather comprises a number of ongoing processes. It is also dynamic, involving both explicit and implicit cognition, with judgments being continually updated in response to new information (Freeman & Ambady, 2011). It is analogous to building a "working model" of a person and then using this as a guideline in our actions toward them. Person perception is also integrative, meaning that each bit of information about a person is interpreted within the context of all the other information we have about her or him. As you will discover, however, not all bits of information are created equal.

4.3a The Nonverbal Behaviors of Others Shape Our Impressions of Them.

The first phase in person perception is forming first impressions of others, a judgment process that occurs spontaneously and, in some instances, is concluded within the first 100 milliseconds of an interaction (Zebrowitz, 2017). First impressions are often based on **nonverbal communication**, which is the sending and receiving of information using gestures, expressions, vocal cues, and body movements rather than words. Whether a person smiles when greeted by another, how they dress, whether a person's walk is "bouncy" or "purposeful," or whether one's gestures are expansive or constricted can provide important information in developing a working model of those we meet on a daily basis. When forming impressions of others, we rely on static cues, such as facial features and clothing, as well as dynamic cues, such as facial expressions and body movements.

Facial Expressions and Person Perception

More than 2,000 years ago, the Roman orator Marcus Cicero wrote that the "face is the image of the soul," and today social scientists recognize that the face is a critical stimulus used by people to make judgments about others' personalities, including their cognitive and emotional tendencies (Madan et al., 2022; Over & Cook, 2018). For example, people with higher facial width-to-height ratios (wider faces) tend to be perceived by others as being more aggressive, dominant, and threatening than people with lower facial ratios (Geniole, 2015), and as having relatively simple emotional and cognitive abilities (Deska et al., 2018). Other facial features, such as lower eyebrows, are associated with

person perception

The process by which we try to detect other people's temporary states and enduring dispositions (also called social perception)

nonverbal communication

Communicating feelings and intentions without words

perceptions of the person being angry. In contrast, “baby-faced” features, such as large eyes and a round face, are associated with perceptions that the person is warm but low in competence (Zebrowitz, 2017). Importantly, these are perceptions about people’s personalities that are based solely on facial features.

In the 1800s, Charles Darwin (1872) proposed that *facial expressions* play an important role in human communication, and further, that certain emotional expressions are inborn and understood throughout the world. Studies conducted during the past 30 years generally support Darwin’s assertions: There is substantial cross-cultural agreement in both the experience and expression of emotions, although certain emotions are easier to distinguish than others (Ekman, 1994; Elfенbein & Ambady, 2002; Izard, 1994). For example, people from all cultures can easily tell the difference between happiness and anger, but it is harder for them to distinguish adoration from desire. The upshot of these findings is that most researchers have concluded that certain emotions are more basic, or *primary*, than others. Primary emotions are similar to primary colors in perception. By combining primary emotions and altering their intensity, just as we do for primary colors, the full variety of other emotions can be derived. Most classification lists include the following seven primary emotions: *anger*, *disgust*, *fear*, *happiness*, *surprise*, *sadness*, and *contempt* (although some dispute that contempt is a primary emotion). These primary emotions are also the ones people around the world can accurately “read” by examining facial expressions.

Facial expressions signaling specific emotions tend to be brief, lasting between 1 and 5 seconds; and they are hard to produce voluntarily (Keltner & Lerner, 2010). There is a noticeable difference, for example, between a genuine smile of pleasure and a forced smile (although most people still cannot reliably tell the difference). When a smile is genuine, the eyes crease up and the end of the eyebrows dip slightly. We tend to dislike and do not trust people who have facial expressions that do not match the social context, such as someone who looks happy in a sad situation (Chanes et al., 2018). This suggests that facial expressions play a powerful role in forming our impression of others.

When Darwin proposed that certain emotional expressions are universally understood, it was within the context of introducing evolutionary theory to the sciences. He believed that this ability to recognize emotion from the observation of facial expressions was genetically programmed into our species and had survival value for us. Being able to accurately read the facial expressions of others allows us not only to better predict their



(Adobe Stock)

Happiness is a primary emotion easily recognized in people’s facial expressions.

behavioral intentions (“Do they mean to harm me?”) but also to understand how others are interpreting the world (“Why are they afraid? Are we all in danger in this situation?”). This “survival value” hypothesis would predict that we do not attend equally to all facial expressions, but rather we exhibit the most sensitivity to those that would give us the best chances of survival. In other words, we should be most attentive to facial expressions that signal potential danger.

Research supports the survival value hypothesis. For instance, a number of studies have shown people pictures of crowds of faces to determine what facial expressions were most recognizable in such a clustered setting. People spot threat-related faces (anger first, fear second) faster and more accurately than non-threat-related faces, even when the non-threat-related faces depicted negative emotions such as sadness (Hansen & Hansen 1988; Öhman et al., 2001). The threat-related faces appeared to “pop out of the crowd,” while the non-threat-related faces were often overlooked. Apparently, threat-related facial expressions function as general danger cues, evoking anxiety and preparing people for self-protective action. Furthermore, people are able to accurately detect if a person is conveying threatening facial features from a photograph after seeing the photo for a mere 36 milliseconds (Bar et al., 2006). However, they are not able to accurately detect other traits, such as intelligence, that quickly. Interestingly, people’s current psychological needs can sensitize them to specific facial expressions. In one study, when induced with a fear of social rejection and loneliness, participants were quicker to notice faces in a crowd with friendly, welcoming expressions (DeWall et al., 2009). While this evolutionary explanation is frequently used to understand the automatic perceptions of emotional expressions, some recent studies also suggest that trait inferences from faces can be learned over time as people begin to associate certain expressions (such as a scowl) with anger (Over & Cook, 2018). Together, existing research suggests that people might have both a predisposition to identifying threats, as well as an ability to refine this skill with experience.

“Your face, my thane, is as a book where men may read strange matters.”

—William Shakespeare, English poet and playwright, 1564–1616, from *Macbeth*, Act 1, Scene 5

Body, Movements, and Nonconscious Mimicry

Besides facial cues, the body as a whole can convey a wealth of information (Keating, 2006). When forming an impression of others, the way they adorn their bodies (tattoos, jewelry, makeup, hairstyle,) is often used to make inferences about their personalities. We often make inferences about a person’s social status, political or social beliefs, or even their professional competence based on their clothing (Hester & Hehman, 2023). For example, women who dress in nonconventional or “provocative” ways are perceived as less intelligent and competent than women who dress more conservatively (Gurung et al., 2018a and 2018b). Likewise, the presence of tattoos increases people’s negative ratings of others, although women with tattoos are rated as stronger and more independent than women without tattoos (Broussard & Harton, 2018).

Body movements also convey information about the person. For example, people who walk with a good deal of hip sway, knee bending, loose jointedness, and body bounce are perceived to be younger and more powerful than those who walk with less pronounced gaits (Montepare & Zebrowitz-McArthur, 1988). Numerous studies indicate that observers often infer other people’s underlying emotional states by reading their body movements during social interaction. Body movements that are fast, energetic, and spatially expansive signal to observers that the person displaying these movements is angry or elated, rather than sad or bored (Macrae & Quadflieg, 2010).

Laura Naumann and her colleagues (2009) investigated people’s ability to accurately judge a target’s personality based on photographs of them. The personalities of the targets

were assessed by them completing a series of personality profiles and having this personality assessment verified by three of their friends. Research participants who did not know the targets were then shown their photographs and asked to make judgments about their personalities. Results indicated that people's accuracy in rating the targets' personalities was significantly influenced by what type of photographs they were shown. When shown photographs of targets displaying neutral facial expressions and body postures, observers were somewhat accurate in judging their degree of extraversion, but no better than chance in judging any other personality traits. However, when shown photographs where the targets displayed spontaneous facial expressions and body postures, observers' accuracy increased in judging targets' extraversion, openness, likability, and self-esteem. These findings suggest that our ability to accurately perceive other people's personalities improves when we observe their spontaneous facial expressions and body cues rather than those that lack emotional content and individual character. What specific nonverbal cues did observers tend to rely on in making their personality judgments? Additional analyses indicated that observers tended to rate targets as extraverted when they were smiling and had energetic body postures. Targets who were rated as agreeable were more likely to be smiling and have a relaxed stance, while targets who were rated high in conscientiousness dressed neatly. Targets who were rated as high in openness to experiences had distinctive styles of dress. In contrast, targets who were rated as lonely had less energetic stances and appeared tense, unhealthy, messy, and unstylish. Overall, these findings suggest that observers rely on facial expressions, clothing styles, and body postures when assessing others' personalities, and these nonverbal cues do result in some degree of perceptual accuracy. However, although the correlations between observers' and targets' personality profile ratings were better than chance guesses (r 's ranging from .19 to .34), they were only moderately accurate.

"You know about a person who deeply interests you more than you can be told. A look, a gesture, an act, which to everybody else is insignificant tells you more about that one than words can."

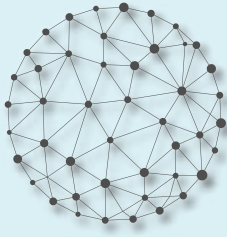
—Henry David Thoreau, philosopher, author, naturalist, 1817–1862

Together, this research suggests that body features and body movements, in addition to facial gestures, convey a wide variety of information to others that may well have a significant impact on our perceptions of them. Yet, although there are commonly shared meanings of many physical gestures, it is also true that people from different cultures often assign different meanings to the same physical movements. *Self/Social Connection Exercise 4–1* provides a brief sketch of how certain nonverbal cues are interpreted differently around the world and a suggestion for a nonverbal exercise to try yourself.

Beyond interpreting the meaning of specific nonverbal gestures, our perception of others is also shaped by **nonconscious mimicry**, which is the tendency to adopt the behaviors, postures, or mannerisms of interaction partners without conscious awareness or intention (Chartrand & Lakin, 2013). What are some examples of nonconscious mimicry? When conversing with others, we tend to mimic their speech tendencies and accents, we laugh and yawn when they do, and we adopt their body postures and gestures (Yoon & Tennie, 2010). Mimicking others' facial expressions appears to be so inborn that 1-month-old infants have been shown to smile, stick out their tongues, and open their mouths when they see someone else doing the same (Meltzoff & Moore, 1989).

nonconscious mimicry

The tendency to adopt the behaviors, postures, or mannerisms of interaction partners without conscious awareness or intention



Self/Social Connection Exercise 4-1

What Are a Few Cultural Differences in Nonverbal Behavior?

Although a number of facial gestures and body movements appear to convey universal meaning, here are some nonverbal behaviors that are more culture specific. To avoid misunderstandings when traveling overseas or when hosting an international visitor, North Americans should duly note that everyday gestures and accepted interaction patterns in this culture are not universally shared.

Eye contact: Most North Americans and Arabs are taught to look others directly in the eye when conversing. Avoiding eye contact is considered to be a sign of shyness, disinterest, or weakness. In Japan, Nigeria, Puerto Rico, Thailand, and Korea, however, people are taught to avert the eyes and avoid direct eye contact. There, engaging in eye contact is considered intimidating, disrespectful, or perhaps a signal of sexual interest.

Nodding the head: When North Americans nod their heads up and down this means “yes,” while shaking their heads from side to side means “no.” The opposite meaning holds true in some areas of India and Africa. In Korea, shaking the head means “I don’t know.”

Shaking hands: North Americans are taught to shake hands as a friendly sign of greeting. A firm, solid grip is thought to convey confidence and good character. Japanese prefer greeting one another by bowing, Southeast Asians press their own palms together in a praying motion, and when Middle Easterners and many Asians shake hands, they prefer a gentle grip, because a firm grip suggests aggressiveness.

Touching: North Americans and people in Asian cultures are generally not very touch oriented, and hugging is almost never done among casual acquaintances, especially among men. In contrast, Latin Americans, Mediterranean cultures, and those in the Middle East often embrace and hold hands as a sign of friendship.

Personal space: North Americans and northern Europeans generally maintain a distance of about 30 inches during normal social interaction. Asians tend to stand farther apart, and Latin Americans, Middle Easterners, and southern Europeans stand very close, often brushing up against one another. In those cultures where space relationships are small, moving away is interpreted as a sign of unfriendliness.

Spend some time breaking each of the above nonverbal social norms for your culture. For example, if you are a North American, when conversing with others, avoid eye contact, reverse your head nodding when voicing agreement and disagreement, press your palms together when greeting others, purposefully touch people, and invade their personal space. What sort of reactions does your norm breaking elicit from your social targets? Ask these individuals whether they noticed your norm breaking and inquire about their cognitive and emotional reactions.

(Franzoi)



Mimicking other's gestures in their presence appears to be spontaneous and nonconscious, and is important in establishing and maintaining emotional ties with them.

Evidence that mimicry is often nonconscious and unintentional comes from a number of studies (van Baaren et al., 2003), including a classic experiment by Tanya Chartrand and John Bargh (1999) where participants interacted with two unknown confederates. For half the participants, the first confederate rubbed her face and the second confederate shook her foot throughout their interaction. For the other participants, the confederates reversed roles. Results revealed that participants mimicked the gestures of the confederates—they rubbed their face more when they were with the face-rubber than the foot-shaker, and they shook their foot more when they were with the foot-shaker than the face-rubber. When the experiment was over and participants were asked about the gestures of the confederates and about their own gestures, they did not report noticing either.

Insight into the biological basis for nonconscious mimicry comes from PET scans and EEG recordings of people's brains while they observe another person performing an action: Similar neural circuits are firing in the observers' brains as are firing in the brains of those who are carrying out the action (Iacoboni, 2007). These specialized neural circuits located in the premotor cortex are called *mirror neurons* (Gallese et al., 2007). The firing of these mirror neurons probably does not directly cause imitative behavior, but they may serve as the basis of imitation learning, which is closely associated with mimicry.

How does mimicking affect the person perception process? In a follow-up experiment to their face-rubbing/foot-shaking study, Chartrand and Bargh (1999) found evidence that mimicry increases liking for the imitator. The researchers instructed confederates to subtly imitate the mannerisms of people they were interacting with in a "get acquainted" session (for example, rubbing their face or tapping their foot when their partner did so). Their findings indicated that people whose gestures had been mimicked liked the confederates more than those who had not been mimicked. Mimicry appears to play a role in establishing relationships. People tend to imitate people who they like, and that imitating leads to increased liking from that person (Kämpf et al., 2018). As people interact with one another and establish rapport, they exhibit an increase in mimicking each other's gestures (van Baaren et al., 2006). Men are also more likely to mimic an attractive woman's behaviors if they are romantically attracted to her (Farley, 2014). Furthermore, mimicry can promote prosocial behavior. People are more likely to mimic an individual to whom they feel gratitude for past help, presumably as a way to strengthen that relationship (Jia et al., 2015). The targets of mimickers also become more prosocial to others in the immediate vicinity (van Baaren et al., 2004). Together, these studies suggest that mimicry serves an important function in the establishment and maintenance of social relationships.

Not everyone engages in nonconscious behavioral mimicry in all situations. People are less likely to engage in behavioral mimicry when they have been induced to feel pride, possibly because when feeling pride, they are likely self-focused rather than attentive to others (Dickens & DeSteno, 2014). When feeling pride, people might also be concerned about maintaining their power and status, and therefore, are less likely to mimic others who are perceived to be of lower status. Supporting this argument, Claire Ashton-James and Ana Levordashka (2013) found that people who are high in narcissism (a personality trait associated with a heightened desire to be admired by others) engaged in nonconscious behavioral mimicry when interacting with a higher social status person, but not when interacting with someone of lower social status. Interestingly, the people who were high in narcissism reported liking the low- and high-status individuals equally, which suggests that their mimicry was not driven by their positive feelings toward others but instead for their heightened desire to form a positive emotional bond with high-status individuals.

Why do we have this fascinating tendency to mimic? What function does it serve? The reviewed studies suggest that behavioral mimicry supports affiliation goals and pro-social motives, as well as a desire to maintain status and social position. As previously discussed in Chapter 1 (section 1.2d), throughout human evolution, individual survival and success at reproduction depended on our ancestors having successful social interactions. Due to the process of natural selection, behaviors that fostered group cohesion eventually became widespread throughout the human population (Caporael, 2001). Over time, many of these behaviors became automatically activated without awareness. A number of social scientists believe that nonconscious mimicry is an example of this form of automatically activated behavior that creates affiliation and rapport among people, and thereby fosters safety in groups (Chartrand et al., 2005; de Waal, 2002).

4.3b Culture and Gender Influence the Expression of Nonverbal Cues.

Given the important role that emotions play in human interactions, it makes abundant sense that cultures would develop social rules for when and how different emotions are expressed (Mesquita & Frijda, 1992). For example, the cultural belief systems of individualism and collectivism have shaped norms related to acting in ways that might threaten group harmony. That is, collectivists are much more likely than individualists to monitor their behavior so that it does not disrupt the smooth functioning of the group. Regarding emotions, people from collectivist cultures are much more uncomfortable about publicly expressing negative emotions than are people from individualist cultures (McDuff et al., 2017).

How you express your emotions may also be associated with your gender and the resulting social roles that you learned (Brody, 1999). A **social role** is a cluster of socially defined expectations that individuals in a given situation are expected to fulfill. According to Alice Eagly's (1987, 1996) **social role theory**, the different social roles occupied by women and men lead to differences in the perception of their behavior. In other words, because men and women typically operate in different domains within most societies—for example, women in the home and men in the world of paid employment—they engage in different patterns of behavior to properly play their roles. Social role theorists contend that women and men do not differ in their ability to experience an array of emotions, but they do differ in monitoring which emotions they publicly express (Fischer & LaFrance, 2015).

A key factor underlying these gender norms is the exercise of social power and dominance within society. For women, the most acceptable emotional style to publicly display is *extravagant expressiveness*, which is an open style of experiencing and communicating emotion associated with nurturing and intimate relationships (Shields, 2002, 2007). For men, the most acceptable emotional style is *manly emotion*, which telegraphs intense emotion under control. The underlying message of manly emotion is that the person is independent and powerful: "I can control my emotion (and thereby, my *self*), and I can harness it to control the situation." In contrast, the underlying message of extravagant expressiveness involves nurturance and service: "My emotion (and thereby, my *self*) is at your service, and I am not seeking power."

Gender expectations are also played out via men's and women's nonverbal expressions. In a meta-analysis of about 110,000 participants in 162 studies, Marianne LaFrance and her colleagues (2003) found that women and adolescent girls smile more than men and adolescent boys. However, these gender differences vary depending on the situation. Women smile more than men when they are aware others are watching, but this gender difference is much smaller when there are no observers. Similar results have been found for crying, with women reporting that they cry more in public than do men, but this gender difference disappears for reports of crying alone (Fischer & LaFrance, 2015).

social role

A cluster of socially defined expectations that individuals in a given situation are expected to fulfill

social role theory

The theory that virtually all of the documented behavioral differences between males and females can be accounted for in terms of cultural stereotypes about gender and the resulting social roles that are taught to the young

Furthermore, in very emotional situations (such as the death of a loved one) men and women report similar frequency of crying, but in more ambiguous situations (such as interpersonal conflict) women report that they cry more than men do. Additional research

finds that not only are women more likely to express fear and sadness than are men, they are also less likely to nonverbally express anger, and they are also better than men at masking disappointment with a positive expression (Davis, 1995; McDuff et al., 2017). In thinking about your own upbringing, are your skills at constructing emotions consistent with these gender socialization patterns?

Beyond the gender differences in using specific nonverbal cues, meta-analytic studies indicate that females are significantly more adept than males in *decoding* nonverbal communication. For example, in a review of 75 studies testing the ability of men and women to decode nonverbal behavior, Judith Hall (1978) found that 68% of the investigations reported superior female performance. Later meta-analyses found that this gender difference is greatest for decoding facial expressions, next largest for body cues, and smallest for correctly interpreting voice tone (Hall, 1984). The studies further

suggest that this gender difference is not isolated in adult samples but can also be found in adolescents and children. Women are effective at detecting even subtle differences in nonverbal expressions. For example, women are better than men at differentiating a genuine smile from a forced, nonauthentic smile (Spies & Sevincer, 2018). Although

these gender differences vary in size from study to study, females appear to be consistently better than males at decoding nonverbal cues (Brody & Hall, 1993).

As with emotional expression, social psychologists principally explain these gender differences in reading nonverbal cues by examining the different social roles played by females and males. Because the social roles played by women tend to have lower status relative to male roles, women have had to learn to be accommodating and polite (Mast & Hall, 2004). This explanation is consistent with research indicating that regardless of gender, those who have less powerful social roles smile more (Fischer & LaFrance, 2015) and are more sensitive to the feelings of their superiors than vice versa (Hecht & LaFrance, 1998).



Women tend to smile more than men do when in the presence of other people.

Critical Thinking

How might an evolutionary theorist explain the gender differences in decoding nonverbal communication? That is, from an evolutionary perspective, why would it be more beneficial for females than males to have good nonverbal skills?

4.3c Most of Us Are Poor Deception Detectors.

One sobering fact about daily living is that people are not only capable of being deceptive in their self-presentations, but also that we as social perceivers often unquestionably accept their lies. As discussed in Chapter 3 (section 3.3), sociologist Erving Goffman (1959) asserted that we generally accept the presented selves of others at face value because to do otherwise would disrupt the smooth flow of social interaction. In this respect, the dynamics of social interaction actually work against easy detection of lies and deceit. Yet how common is lying in everyday life, and how gullible are we to others' deceptions?

Research informs us that, while we are not born liars, by about 4 or 5 years of age we have the ability to effectively tell strategic lies—and this ability increases in sophistication as we mature (Evans et al., 2011; Heyman et al., 2013). During an average week, we lie

to about one-third of those with whom we interact, and we also often lie during job interviews (Griffith et al., 2007; Weiss & Feldman, 2006). On average we tell about 10 lies per week, with the greatest lying committed by those of us who are more extroverted and manipulative, who are feeling socially powerful, or who are concerned about creating favorable self-presentations (Kashy & DePaulo, 1996; Yap et al., 2013). Although lying is a fact of life, it is a risky and often costly self-presentation strategy. We dislike those who frequently deceive us and tend to reciprocate with lies of our own (Tyler et al., 2006).

Given that others may try to conceal their true feelings and intentions from us, how do we—as person perceivers—respond to the possibility of such subterfuge? Goffman (1959) contended that when we judge other people's self-presentations, we pay attention to two different types of social stimuli, which he called *expressions*. First, there are expressions that people freely “give” to others in what is typically thought of as their traditional communication patterns. These *given expressions* consist of the words and gestures that people are consciously trying to transmit to others. Besides these strategic gestures, there are also expressions that people “give off,” which are mostly nonverbal in nature. *Expressions given off*, also known as *nonverbal leakage*, cover a wide range of behavior unintentionally transmitted and of which people are much less aware. Your lack of gusto when chewing a host's poorly prepared meal, accompanied by the tortured look on your face, are examples of expressions given off.

Of the two types of expressions, those unintentionally “given off” by self-presenters are better indicators of possible deception than those that are consciously “given” (Ekman & O'Sullivan, 1991). Unfortunately, in those situations where detecting lies is most important to us, we tend to give more weight to messages that people consciously convey to us. James Forrest and Robert Feldman (2000) found that when people were highly involved in a discussion topic, they paid more attention to speakers' words and thus were more easily deceived than less involved people (who attended more to nonverbal behavior).

Although attending to nonverbal behavior can improve our ability to detect lies in others' self-presentations, not all nonverbal cues are equally instructive. One mistake we often make is placing too much importance on the face to reveal deception. We tend to believe that others do not smile when they lie, when in fact smiling is a common device used by deceivers to hide their true feelings (Ekman et al., 1988). We also tend to believe that liars fidget and won't look us in the eye; however, both of these cues are only weakly related to deception (Hartwig & Bond, 2011). In fact, experienced deceivers engage in deliberate eye contact to convince us they are being truthful (Mann et al., 2013). We are also often fooled by the *structure* of people's faces, falsely assuming that baby-faced individuals (with large eyes and symmetrical facial features) and physically attractive persons are more honest than those with mature-looking and less attractive faces (Zebrowitz & Montepare, 1992; Zebrowitz et al., 1996).

It is sometimes possible to detect deception by attending to certain changes in people's speech patterns—what is known as *paralanguage*—and by analyzing the quality of their stories (see Table 4–1). Several studies indicate that when people lie, they give shorter answers, their stories make less sense, their voices sound tense, and their pitch rises slightly (DePaulo et al., 2003; Hauch et al., 2015). Liars' speech is also slower and filled with many pauses (“ahs” and “ums”) and other sentence hesitations. In an analysis of 911 homicide calls, what differentiated truthful from deceptive callers (those making false claims) was that the liars displayed more emotionality (self-dramatizing, fluctuating mood) and had stories that lacked structure or clear focus (Markey et al., 2022). Experts believe that the reduced complexity, logic, and fluidity of liars' stories—combined with the heightened voice tension—reflect the additional cognitive burden caused by their attempt to deceive. Liars also tend to use fewer first-person singular pronouns (*I*, *me*, *my*) and sound less involved in their storytelling, which is thought to reflect their attempt to dissociate themselves from the lie (Hauch et al., 2015; Newman et al., 2003). Finally,

liars also use negative-emotion words at a higher rate than truth tellers, which may be caused by their feelings of guilt (which triggers negative emotions) (Hauch et al., 2015; Newman et al., 2003; Vrij, 2000). However, use of profanity is positively related to honesty (Feldman et al., 2017). These cues to deception are more likely to be revealed when people are lying about something very important rather than about more trivial matters (DePaulo & Morris, 2004). To some extent, people have an intuitive understanding that these language cues reflect deception and are more likely to judge a person as deceptive if their stories are illogical, improbable, and have few details (Hartwig & Bond, 2011).

Table 4-1 What Are Some Possible Verbal Symptoms of Lying?

Symptoms	Likely Causes
Shorter answers to questions Stories make less sense Slower speech filled with pauses and other sentence hesitations	The cognitive burden of concealing the truth interfering with the generation of smooth conversation
Slight rise in voice pitch and vocal tension	Activation of the sympathetic nervous system
Less use of first-person singular pronouns Sound less involved in what they are saying	Psychological attempt to dissociate oneself from the lie
More use of negative-emotion words	Feelings of guilt that trigger negative emotions

However, despite such cues, meta-analysis of more than 200 experiments finds that people are just slightly better than chance—54%—at distinguishing truths from lies, and accuracy drops even further when people are even mildly mentally fatigued (Bond & DePaulo, 2006; Reinhard et al., 2013). This is also the accuracy level of those who make these judgments for a living—such as judges, police officers, CIA polygraphers, and customs inspectors. Indeed, the best of the professional deception detectors (Secret Service agents) are successful only about 70% of the time (Ekman & O’Sullivan, 1991).

People are particularly bad at detecting deception from strangers (Anderson et al., 1999). One important reason for this low level of accuracy among the unacquainted is that people often individually behave in distinctive ways when lying. However, when interacting with strangers, we have no knowledge of their distinctive “lying signals.” Fortunately, we do appear to gain insight into people’s telltale lying signals the longer we know them. In a longitudinal study of friendship development, researchers found that friends become more accurate in detecting each other’s deception as their relationship progresses, improving from 56% accuracy early in the friendship to 66% accuracy after 5 months (Morris et al., 2016). The key ingredient in increasing your ability to detect deception is having relevant information. The more relevant information you have about people who might be deceiving you, and the more relevant information you have about the social context in which the possible deception occurs, the greater your ability to identify lies from truths (Blair et al., 2010; Levine, et al., 2010).

Taken as a whole, the research suggests that deceivers often succeed in duping us regardless of our sex, race, cultural background, socioeconomic status, or educational level, and they are most successful when we do not know them well and the issue is important to us (Geary & DePaulo, 2007). However, it is also true that liars are most likely to reveal deception cues when the issue is important to them. Perhaps the primary reason we so often fail to detect deception is that, by and large, we tend to believe that others are basically

honest (Zuckerman et al., 1981). Yet one thing that works to our advantage when dealing with habitual liars is that while we may not detect their deception the first few times, we are more likely to do so as we observe them over time and become more familiar with their self-presentation strategies (Yamagishi et al., 2003).

4.3d We Develop Implicit Personality Theories Based on Central Traits.

The initial phase of person perception often involves little cognitive effort and is based on easily recognizable physical characteristics—such as sex, age, and race—and nonverbal actions presented by the target persons (Park, 1986). If the individuals are of no interest or the interaction is very brief, we will not bother to analyze them further and may judge them based on cultural stereotypes. However, if we are motivated to learn more about these people as individuals, our thinking becomes more deliberate and effortful, resulting in our impressions becoming more abstract and less tied to superficial physical qualities (Van Overwalle et al., 1999). Because personality traits are commonly used in forming impressions (Fiske & Cox, 1979), one of the first questions asked by social psychologists was how traits are combined to form a meaningful picture of a person.

In the 1940s, Solomon Asch worked within the German tradition of *Gestalt psychology*, which studied how the mind actively organizes stimuli into a coherent whole—or *gestalt*. In person perception, Asch hypothesized that our overall impression of others is not simply determined by adding up all their personality traits. Instead, certain traits exert greater influence than do others on people's overall impressions.

In testing this hypothesis, Asch (1946) asked participants to examine a list of discrete traits that belonged to a particular person and then form an impression based on this information. For some participants, the following traits were presented: intelligent, skillful, industrious, warm, determined, practical, and cautious. For other participants, the trait *warm* was replaced with the trait *cold*, but otherwise everything else was identical. Those who had been told that the hypothetical person was warm rated him as significantly more generous, humorous, sociable, and popular than those who had been told that he was cold. In contrast to the effect of switching these two central traits, when Asch switched the traits *polite* and *blunt* in a similar list, the resulting impressions differed very little from one another. Asch concluded that warmth and competence are **central traits** in person perception. The less important traits Asch called *peripheral traits*. Asch's groundbreaking study has been replicated with a large, online sample (Nauts et al., 2014) and in real-life settings (Judd et al., 2005; Kelley, 1950).

More recently, researchers have suggested that morality is a third central trait that also influences impression formation (Goodwin, 2015). Furthermore, the importance of specific traits varies depending on the social context in which we make evaluations (Singh & Teoh, 2000). For example, the traits *intelligent* and *humorous* generally have equal value in forming impressions of people. But *intelligent* would carry more weight for a psychology department's graduate school admissions committee evaluating applicants, while *humorous* would have more of an impact on the owner of a comedy nightclub looking for a new act.

Inspired by Asch's ideas about central traits, social cognitive theorists proposed that people develop **implicit personality theories**. Implicit personality theories are a schema we use to organize and make sense of which personality traits and behaviors go together



(Adobe Stock)

Why is it that a person who is described as intelligent, skillful, industrious, determined, practical, and cautious will be perceived much more favorably when they are also described as warm rather than cold, but not when they are described as polite rather than blunt?

central traits

Traits that exert a disproportionate influence on people's overall impressions, causing them to assume the presence of other traits

implicit personality theories

A type of schema people use to organize and make sense of which personality traits and behaviors go together

(Adobe Stock)



As social thinkers, how do we decide whether other people's actions are primarily caused by their attitudes and personalities versus the circumstances in which they find themselves?

(Bruner & Taguiri, 1954; Norenzayan et al., 2002). Like many other schemas, implicit personality theories are shaped by both personal experiences and cultural beliefs, and they are often passed from generation to generation (Chiu et al., 2000; Haimovitz & Dweck, 2016).

In analyzing how people develop implicit personality theories, Carol Dweck proposed that people vary in the degree to which they view personality as fixed or malleable (Dweck et al., 1995). Those who endorse a *growth mindset* believe that personality traits, such as intelligence, can be changed and developed over time. In contrast, those who endorse a *fixed mindset* believe that personality and intelligence are unchangeable. People who hold the fixed mindset, compared to a growth mindset, are more likely to rely on stereotypes when forming impressions of individuals

from marginalized groups and are also more likely to believe that personality traits are biologically predetermined (Hong et al., 2004; Levy et al., 1998). Similarly, when someone with a fixed mindset observes a person engaging in a negative behavior, they assume the person has negative characteristics and deserves to be punished. However, people with growth mindsets are more likely to consider multiple factors for the behavior and respond to the person in a way that might change the undesirable behavior, such as talking to the person (Dweck et al., 1995).

These two implicit personality mindsets can also influence how people view their own life experiences. For example, David Yeager and his colleagues (2014) found that during the transition to high school, students who had a growth mindset were better able to deal with being socially excluded than those students with a fixed mindset. Furthermore, students with the fixed mindset, compared to those with a growth mindset, reported greater stress, poorer health, and lower grades during their freshman year in high school. For students, these two mindsets appear to influence academic achievement, such that students with growth mindsets have slightly better academic achievement than those with fixed mindsets (Sisk et al., 2018). Fortunately, experimental research testing interventions suggests that training students to have a growth mindset about intelligence can promote academic achievement. Both high school students and first-year college students who initially held a fixed mindset showed improved academic performance after they participated in brief interventions informing them that intelligence is not fixed, but rather, is malleable (Broda et al., 2018; Yeager et al., 2014). Such growth mindset training appears to be especially beneficial for students who are at high risk for academic failure or who are from low socioeconomic status groups (Burnette et al., 2022; Paunesku et al., 2015; Sisk et al., 2018). Furthermore, training *teachers* in growth mindsets results in improved adolescent students' grades (Porter et al., 2022). These findings suggest that viewing intellectual skills as something that can be developed and modified can translate into actual academic gains.

What is your own implicit personality theory about intelligence? How might this mindset influence your academic-related behaviors, such as studying, asking professors for help, and coping with setbacks in challenging courses?

4.3e We Often Seek Information to Confirm Our First Impressions.

Our tendency to view others in a way that is internally consistent causes us to also selectively seek information about them. This tendency to seek information that supports our beliefs while ignoring disconfirming information is known as the **confirmation bias** (Hart et al., 2009).

In one experiment testing the confirmation bias during first encounters, Mark Snyder and William Swann (1978) asked research participants to find out whether the person with whom they were about to interact was an introvert or an extrovert, depending on the experimental condition. Consistent with the confirmation bias, the questions that participants asked their interaction partners were biased in the direction of the original question.

"For a man always believes more readily that which he prefers."

—Francis Bacon, English Renaissance author, 1561–1626

For instance, if they had been asked to find out whether the person was an introvert, they asked questions such as, "What do you dislike about loud parties?" or "In what situations do you wish you could be more outgoing?" However, in the extrovert condition, they asked questions such as, "How do you liven things up at a party?" or "What kinds of situations help

you to meet new people?" Because most people can recall both introverted and extroverted incidents from their past, the interaction partners' answers provided confirmatory evidence for either personality trait. Experiments like this indicate that one barrier to accurate social judgments can be our tendency to search for information that will confirm our beliefs more energetically than we pursue information that might refute them (Edwards & Smith, 1996).

We are more likely to engage in the confirmation bias when the situation we are analyzing is one in which we are personally invested and the possible solution is agreeable to us rather than threatening (Dawson et al., 2002). Faced with an agreeable possible solution we are motivated to confirm it and ask ourselves, "Can I believe this?" In such situations, our standards of judgment are rather permissive, paving the way for the confirmation bias. On the other hand, when the possible solution is threatening or disagreeable, we adopt a more stringent standard of judgment and instead ask, "Must I believe this?" This latter question prompts more critical analysis, increasing the likelihood that any flaws or limitations in the available evidence will be discovered (Ditto et al., 1998). Such confirmation seeking not only leads to mistakes about individuals but also perpetuates incorrect stereotypes about social groups (Yzerbyt et al., 1996).

"When you look for the bad in mankind expecting to find it, you surely will."

—Abraham Lincoln, 16th US president, 1809–1865

confirmation bias

The tendency to seek information that supports our beliefs while ignoring disconfirming information

Section Summary

- First impressions are often based on nonverbal behavior.
- We reliably identify seven primary emotions: anger, disgust, fear, happiness, surprise, sadness, and contempt.
- Nonconscious mimicry is automatically activated, and it fosters affiliation and rapport.
- Women and men differ in expressing and detecting emotional states.
- Detecting deception in others is very difficult, but there are some useful cues.

- Central traits exert more influence in personality impressions than peripheral traits.
 - Implicit personality theories influence how we view others and ourselves.
 - Confirmation bias occurs when we seek information that verifies our beliefs.
-

4.4 How Do We Construct Causal Explanations for Events?

During the pandemic, Deb's daughter, Millie, was invited to a friend's eighth birthday party. The community COVID-19 levels in her neighborhood at that time were high, so the birthday party invitation was for an outside "garden party." On the day of the party the weather was unusually hot for Wisconsin and the birthday girl's parents decided to allow the children to play inside the house. Unfortunately, one of the party attendees was sick, the girls were not masked, and not surprisingly the following week Millie came down with a terrible cold that spread to the whole family. Deb was frustrated that the entire family had to follow quarantine and testing procedures. In trying to make sense of this incident, what factors would you rely on to determine responsibility for the spread of the virus (which fortunately turned out not to be COVID-19) and how might that determination influence your feelings about the people involved?

This type of situation was common during the pandemic and how people responded was dependent on a number of factors. Research findings suggest that people responded with more anger and less sympathy, and they placed more blame on the "transmitter" of a virus if that person was aware they had COVID-19 and chose to enter the social setting (Yao & Siegel, 2021). Furthermore, people who felt anger, rather than sympathy, and placed responsibility on the "transmitter" of the virus, were also more likely to report that the person should be punished for spreading the virus. These findings suggest that how people determine causal explanations for others' behaviors can have important implications for their own feelings and behavior.

4.4a We Rely Upon Particular Information When Explaining People's Actions.

Everybody has a general theory of human behavior—what Fritz Heider (1958) called a *naïve psychology*—and we use it to search for explanations to social events. In searching for understanding, we focus not only on people's personalities but also consider the situational context. Our desire to understand and explain social events is strongest when the events are the actions of other people and are unexpected, unusual, or distressing (Kanazawa, 1992). The process by which we use such information to make inferences about the causes of behavior or events is called **attribution** (Heider, 1958; Ichheiser, 1934, 1943).

In seeking attributions, people are motivated by two primary needs: the need to form a logical view of the world and the need to gain control of the environment. Being able to predict how people are going to behave goes a long way in satisfying both of these needs. If we can adequately explain and predict the actions of others, we will be much more likely to view the world as logical and controllable than if we have no clue as to their intentions and dispositions. In satisfying these two needs, we try to act like *naïve scientists*, carefully testing our hypotheses about the behavior of others.

attribution

The process by which people use information to make inferences about the causes of behavior or events

Locus of Causality

In making causal attributions, by far the most important judgment concerns the *locus of causality* (Jones & Davis, 1965). According to Heider, people broadly attribute a given action either to internal states or external factors. An **internal attribution** (also called *person attribution*) consists of any explanation that locates the cause as being internal to the person, such as personality traits, moods, attitudes, abilities, or effort. An **external attribution** (also called *situation attribution*) consists of any explanation that locates the cause as being external to the person under scrutiny, such as the actions of others, the nature of the situation, or luck. In the party example, you might make an internal attribution and argue that the party hosts were reckless in letting the children gather inside the house. Alternatively, you might make an external attribution and explain moving inside was due to the hot weather conditions. For attribution theorists, whether the explanation is correct or not is not the issue. Their task is not to determine the *true* cause of events but rather to explain how people *perceive* the causes.

Stability of Causality

Besides making internal or external distinctions, people also attempt to determine whether causes are *stable*. Stable causes are permanent and lasting, while unstable causes are temporary and fluctuating. This stable/unstable dimension is independent of the direction of causality. Some causes, called *dispositional*, are both internal and stable (“She insulted me because she is rude”). Other causes are considered to be internal but unstable (“She insulted me because she has a cold”). Likewise, some causes are seen as external and stable (“She insulted me because I, the external factor, rub people the wrong way”), while others are perceived as external and unstable (“She insulted me because the weather conditions that day made her job very difficult”).

4.4b The Covariation Model Explains Attributions Based on Three Types of Information.

One foundational theory that specifically attempts to explain attributions based on observing people over time, across situations, and in comparison to others’ actions is Harold Kelley’s (1967) **covariation model**. According to Kelley, when making attributions, people use the *covariation principle*, meaning they assume that for something to be the cause of a particular behavior, it must be present when the behavior occurs and absent when it does not occur. In other words, the presumed cause and observed effect must “covary.” If your boyfriend or girlfriend becomes cold and irritable only when you spend extended time with others, that is high covariation. If he or she is only occasionally cold and irritable when you spend extended time with others, that is low covariation. In attempting to assign a cause to the cold and irritable behavior, you would observe its covariation with as many potential causes as possible and attribute the effect to the cause with which it has the greatest covariance.

In describing the locus of causality, Kelley elaborated on the internal/external dimension by further distinguishing external attributions in terms of the *entity* and *circumstances*. The *entity* is the object toward which the actor’s behavior is directed and can be another person or a thing. *Circumstances* are simply the conditions in which actions or events occur.

In assessing covariation, Kelley stated that people rely on three kinds of information. *Consensus* information deals with the extent to which others react the same way to some stimulus or entity as the person whose actions we are attempting to explain. *Consistency*

internal attribution

An attribution that locates the cause of an event in factors internal to the person, such as personality traits, moods, attitudes, abilities, or effort

external attribution

An attribution that locates the cause of an event in factors external to the person, such as luck, other people, or the situation

covariation model

An attribution theory that describes how we make judgments about people’s actions by observing them over time (consistency information), across situations (distinctiveness information), and in comparison to others’ actions (consensus information)

information concerns the extent to which the person reacts to this stimulus or entity in the same way on other occasions. Finally, *distinctiveness* information refers to the extent to which the person reacts the same way to other, different stimuli or entities. Kelley's theory predicts that people are most likely to attribute another person's behavior to internal and stable (dispositional) causes when consensus and distinctiveness are low but consistency is high. On the other hand, circumstance attributions are most likely when consensus and consistency are low and distinctiveness is high. When all three kinds of information are high, people are likely to make entity attributions.

As a way to further explain this theory, the following example might be helpful. Over the years, both of us have had the experience of having a student fall asleep in class while we are lecturing. Naturally, we wonder why. Did the student have a bad night's sleep (circumstance attribution)? Is this a lazy and unmotivated student (internal attribution)? Are we that boring (entity attribution)? In Table 4–2, we've outlined how Kelley's theory might predict specific attributions about this behavior. The covariation model predicts that we would seek an attribution by gathering consensus, consistency, and distinctiveness information. For consensus, we would look at the behavior of our other students: Is everybody on the verge of dozing off in our class? For consistency, we would consider this student's past classroom behavior: How attentive (or at least awake) has the student appeared in previous class sessions? For distinctiveness, we would gather information about the student's behavior in other professors' classes: Does the student fall asleep only in my class?

Table 4–2 Why Did the Student Fall Asleep in My Class?

Condition	Consensus	Available Information Consistency	Distinctiveness	Attribution
1	Low—No other students fall asleep in my class	High—The student has fallen asleep in previous classes of mine	Low—The student falls asleep in other professors' classes	Internal: The student is lazy
2	High—Many students fall asleep in my class	High—The student has fallen asleep in previous classes of mine	High—The student doesn't fall asleep in other professors' classes	Entity: I'm a boring professor
3	Low—No other students fall asleep in my class	Low—The student hasn't fallen asleep in previous classes of mine	High—The student doesn't fall asleep in other professors' classes	Circumstance: The student didn't sleep well last night

For an internal attribution to be made (Condition 1: The student is lazy), there must be evidence for low consensus and distinctiveness and high consistency. This attribution would be likely if none of the other students nod off, the student falls asleep in other professors' classes, and the student has fallen asleep in some of my previous classes as well. For an entity attribution to be made (Condition 2: I'm a boring professor), there must be evidence of high consensus, distinctiveness, and consistency. This attribution is likely if many students fall asleep in my class, and this particular student doesn't fall asleep in other professors' classes, even though the student consistently dozes off in mine. A circumstance attribution would likely be made if consensus and consistency are low but distinctiveness is high (Condition 3). So if no one else is dozing off and the student hasn't fallen asleep in previous classes of mine, or in other professors' classes, some unusual circumstance must have caused this behavior. Perhaps the student didn't get enough sleep last night.

How accurate is the covariation model in explaining the attribution process? Empirical studies generally support its basic assumptions (Chen et al., 1988; Windschitl & Wells, 1997). However, when making dispositional attributions about an actor's actions, we appear to primarily focus on information that can be obtained by attending to the actor (Was his or her behavior distinctive or consistent?). In contrast, our external attributions are more influenced by consensus information.

4.4c There Are Biases in the Attribution Process.

Attributional theories have advanced our understanding of how we make inferences about the causes of behavior. However, these theories typically assume that the attribution process is highly rational. If people do follow logical principles in assigning causality to events, this cognitive process—likened by some to a computer program—has a few interesting and all-too-illogical human “bugs.”

In Chapter 1, we discussed the *self-serving bias*, which involves assigning an internal locus of causality for our positive outcomes and an external locus for our negative outcomes. A desire to enhance or protect self-esteem is the most agreed-upon explanation for this particular attributional bias. Given our discussion in Chapter 3 concerning the high value placed on self-esteem in individualist cultures, it should not be surprising to learn that individualists are more likely to exhibit the self-serving bias than collectivists (Heine & Lehman, 1999, Mezulis et al., 2004).

The Fundamental Attribution Error

As discussed in Chapter 1, behavior is generally caused by an interaction between an individual's internal characteristics and external factors. However, when explaining other people's actions, we tend to locate the cause in their dispositional characteristics rather than in situational factors. Lee Ross (1977) named this tendency to overestimate the impact of dispositional causes and underestimate the impact of situational causes on other people's behavior the **fundamental attribution error**.

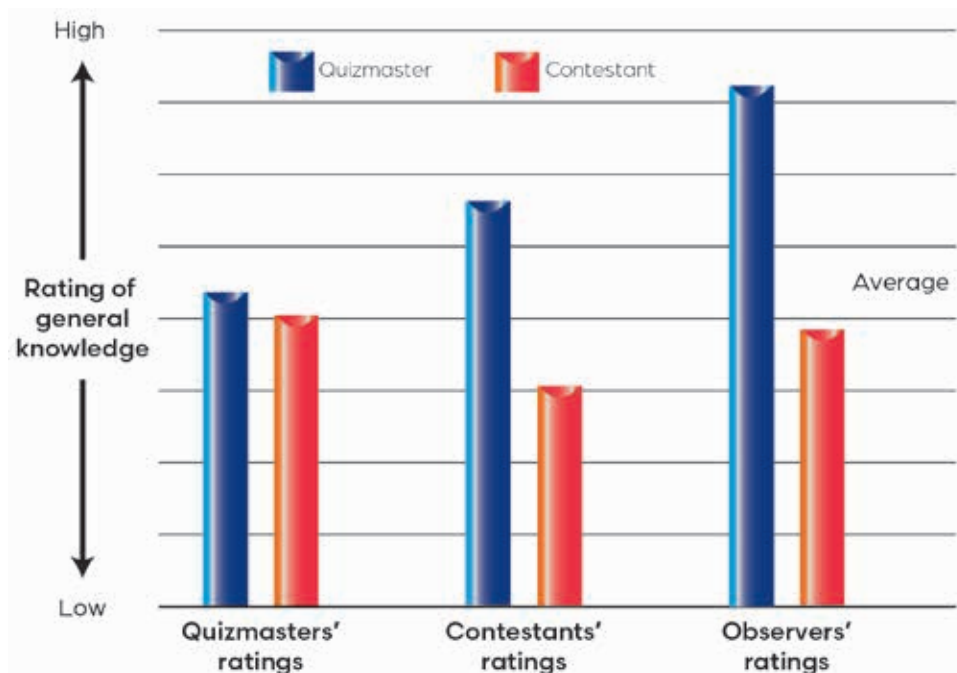
In one classic study to investigate this cognitive bias, Ross and his colleagues (Ross et al., 1977) devised a simulated TV quiz game in which students were randomly assigned to serve in the role of “quizmaster” or “contestant.” The quizmasters were told to think up 10 challenging but fair questions, and the contestants were told to answer as many as possible. Under such conditions, the quizmasters were able to devise some rather tough questions; on average, the contestants answered only 4 of the 10 questions correctly. Despite the fact that the quizmaster role gave students playing that part a decided advantage, the contestants failed to discount or take this external factor into account in assigning a causal explanation for the quiz show's results. As you can see in Figure 4–2, contestants saw the quizmasters as far more knowledgeable than themselves. Observers who watched the game, but who were not directly involved in the outcome, also rated the quizmasters as more knowledgeable than the contestants.

fundamental attribution error

The tendency to overestimate the impact of dispositional causes and underestimate the impact of situational causes on other people's behavior

Figure 4-2 Fundamental Attribution Error and the TV Quiz Game

Even though students playing the role of quizmaster held a decided advantage over contestants, the contestants failed to discount or take this external factor into account in assigning a causal explanation for the quiz show's results. Like the observers, the contestants judged the quizmasters as more knowledgeable than themselves. What might explain this fundamental attribution error?



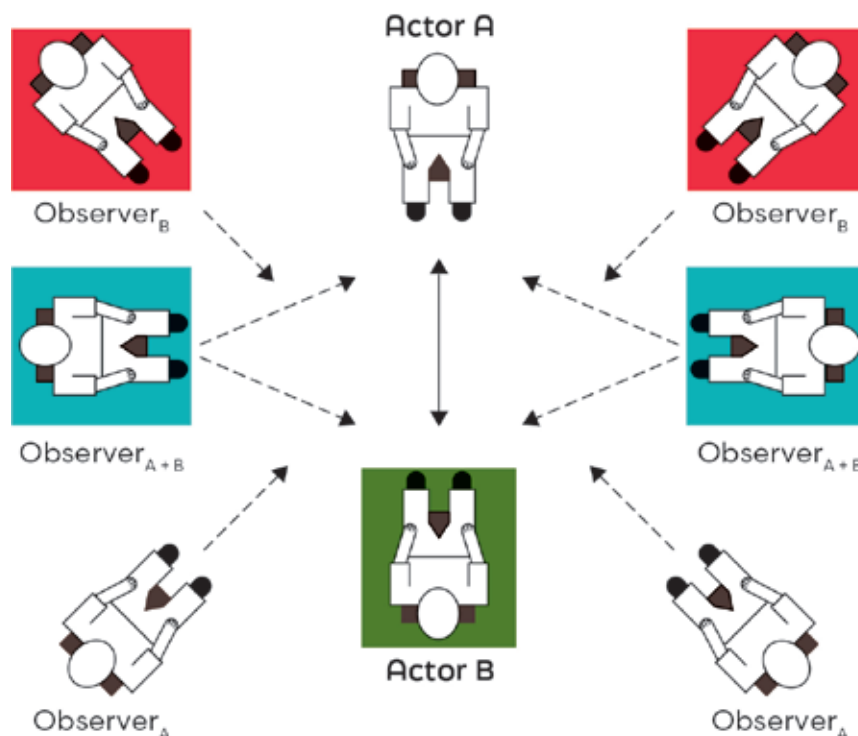
Data source: "Social Roles, Social Control and Biases in Social-Perception Process," by L. Ross et al., 1977, *Journal of Personality and Social Psychology*, 35(7), pp. 485-494.

Why do we engage in this sort of systematic bias? One possibility is that we prefer making dispositional attributions because locating the cause of people's behavior in their attitudes and personalities gives us greater confidence that we can accurately predict their future behavior. Thus, our desire for predictability may make us more susceptible to the fundamental attribution error. A second possibility has to do with what is most noticeable to us as social perceivers. When we observe a person in a social setting, what is often most *perceptually salient* is that particular person: his or her dynamic movements, distinctive voice, and overall physical presence. In comparison, the relatively static situational forces that may actually cause those behaviors are often less salient and therefore less likely to be factored into the attribution equation.

Shelley Taylor and Susan Fiske (1975) tested this hypothesis by varying the seating arrangements of six people who observed two actors engaging in a carefully staged, 5-minute conversation. In each session, observers were seated so they faced actor A, actor B, or both. This seating arrangement is illustrated in Figure 4-3. Following the conversation, the observers were asked questions about the two actors to determine whom they thought had the most impact on the conversation. Results indicated that whichever actor the observers faced was the one they judged as the more dominant member of the dyad. Further research has confirmed perceptual salience as a contributing factor to the fundamental attribution error (Krull & Dill, 1996; Lassiter et al., 2002).

Figure 4-3 Perceptual Salience and the Fundamental Attribution Error

This is the seating arrangement for the two actors and six observers in the perceptual salience study. Taylor and Fiske (1975) found that observers rated the actor they could see most clearly as being the dominant contributor to the conversation. How do these findings help explain the fundamental attribution error?



Adapted from "Point of View and Perceptions of Causality," by S. E. Taylor and S. T. Fiske, 1975, *Journal of Personality and Social Psychology*, 32(3), pp. 439-445.

For many years, social psychologists believed that people throughout the world exhibited the fundamental attribution error equally. Yet as more research was conducted in non-Western cultures, it became clear that this particular attribution error was less common in collectivist than individualist cultures. For example, Joan Miller (1984) found that South Asian Indians made more situational attributions when explaining people's everyday behavior, whereas North Americans were much more likely to make dispositional attributions. Faced with such findings, social psychologists began wondering *why* culture affects the fundamental attribution error. Is it because collectivists are less attentive than individualists to how attitudes and personality traits (dispositions) can shape behavior? Or is it due to individualists being less attentive than collectivists to how situational forces can influence behavior?

Subsequent research found that collectivists are just as likely as individualists to take into account people's dispositions when explaining their behavior (Choi et al., 1999; Miyamoto & Kitayama, 2002). Where they differ is in their awareness of the situation's power or the social context (Owe et al., 2013). Collectivists are more attentive to how situational factors may influence people's behavior, and that is apparently why they are less susceptible to the fundamental attribution error. A compelling illustration of this cultural difference is a study conducted by Ara Norenzayan and Richard Nisbett (2000) in which American and Japanese college students were shown an animated underwater scene

featuring small fish, frogs, and snails, along with plants, rocks, coral, and some larger, faster-moving focal fish—the stars of the show (see Figure 4–4). After this viewing, participants were asked to recall what they had seen. Both American and Japanese participants equally recalled details of the focal fish, but the Japanese recalled 60% more background features than did the Americans, and the Japanese reported more relationships (e.g., “the frog beside the coral” or “the small fish near the plant”).

Figure 4–4 Cultural Differences in Attentional Focus

When shown an underwater scene similar to this scene, Americans and Japanese equally recalled the focal fish, but the Japanese recalled 60% more background features. How do these results relate to the fact that the fundamental attribution error is more pronounced in individualist cultures than in collectivist cultures?



It appears that this cultural difference is rooted in different views of the self (Chua et al., 2005). As stated in Chapter 3, individualists view the self as internally driven and relatively uninfluenced by situational forces (the independent self). In contrast, collectivists view the self as dependent on the group and strongly influenced by social obligations (the interdependent self). The interdependent self fosters a greater appreciation of how personal and situational factors interact in shaping behavior, which is essentially how social psychology understands social behavior. Based on these findings, some social psychologists suggest that the type of naive psychology that members of collectivist cultures naturally develop leads to more accurate attributions than are typically made in individualist cultures (Lieberman et al., 2005).

However, as you recall from our discussion in Chapter 3 (section 3.2a), cultures do not create people with rigidly independent or interdependent selves. Situational factors can trigger spontaneous self-concepts in people that run counter to the independent self or interdependent self fostered by their culture (Kühnen & Oyserman, 2002). When this occurs in people whose typical self-views are independent, their situationally induced interdependent self will likely foster a greater awareness of how the interaction of dispositional and situational factors influences others' behaviors. Likewise, when collectivists' thoughts are temporarily shifted to an independent self-view, their social judgments are more likely to suffer from the fundamental attribution error (Hong et al., 2000, 2003).

Whether perceptual salience, individualism, or a combination of these and other factors explain the fundamental attribution error, this particular bias can have significant social consequences. Attributing the behavior of others to internal factors allows social perceivers to block actors' attempts to deny responsibility for negative events with which they are associated (Inman et al., 1993). For example, the tendency to disregard situational forces in explaining the plight of victims within our society (rape survivors, people who are experiencing homelessness, people from marginalized groups, etc.) can result in less sympathy because we hold these people responsible for their condition due to "bad" dispositions (Adolfsson et al., 2020; Sperry & Siegel, 2013).

Actor–Observer Effect

When explaining the actions of others, we are likely to give more weight to internal (dispositional) factors, but when explaining our own behavior, we tend to give more weight to external (or situational) factors. This tendency to attribute our own behavior to external causes, but that of others to internal factors, is known as the **actor–observer effect** (Jones & Nisbett, 1972; Karasawa, 1995).

Why does the actor–observer effect occur? As with the fundamental attribution error, a likely possibility is perceptual salience. While engaged in a particular activity, the actor's attention is typically turned outward toward the situation, but the observer's attention is likely focused on the actor. Thus, what is salient for the actor (the situation) and what is salient for the observer (the actor) differs due to their perspectives in viewing the event. Consider being in a social interaction with someone who is also using their phone ("phubbing"). Research indicates that people dislike it when a partner "phubs" them during a social interaction and they subsequently rate the social interaction as less enjoyable (Barrick et al., 2022). Yet, the majority of people report phubbing others and believing that their own use of the phone does not have a similar negative impact on their friend's enjoyment of the interaction. This appears to occur, in part, because people are more likely to attribute their own phone use to prosocial situational factors, such as looking something up online to show the friend. The actor–observer effect appears to operate most often when people are explaining recent events in their lives. When explaining events that took place long ago or when predicting events that will occur in the distant future, actors generally make dispositional attributions just like observers (Pronin & Ross, 2006). In such circumstances, situational factors are less salient and even less available in memory or the imagination than is the "self as actor." In other words, people generally adopt an observer perspective rather than an actor perspective when explaining distant events in their lives. Furthermore, this effect is strongest when understanding negative events, such as failures, rather than when understanding positive events such as success (Malle, 2006). This suggests that the actor–observer effect might actually be a type of self-serving bias. That is, we seek to understand our successes and failures in a way that makes us feel good about ourselves; failures are due to the circumstance, but successes are due to internal dispositions.

actor–observer effect

The tendency for people to attribute their own behavior to external causes but that of others to internal factors

dual-process models of attribution

Theories of attribution that propose that people initially engage in a relatively automatic and simple attributional assessment but then later consciously correct this attribution with more deliberate and effortful thinking

4.4d Making Attributions Involves Both Automatic and Deliberate Thinking.

Although the covariation model and other attribution theories provide insights into how we make sense of our social world, they conceive of human beings as *naïve scientists* who are highly rational and logical information processors, heavily relying on explicit cognition. In essence, these theories reflect the classic "cold" perspective in social psychology (see Chapter 1, section 1.2b). Many social psychologists now contend that **dual-process models of attribution**, involving both explicit cognition and implicit cognition, best

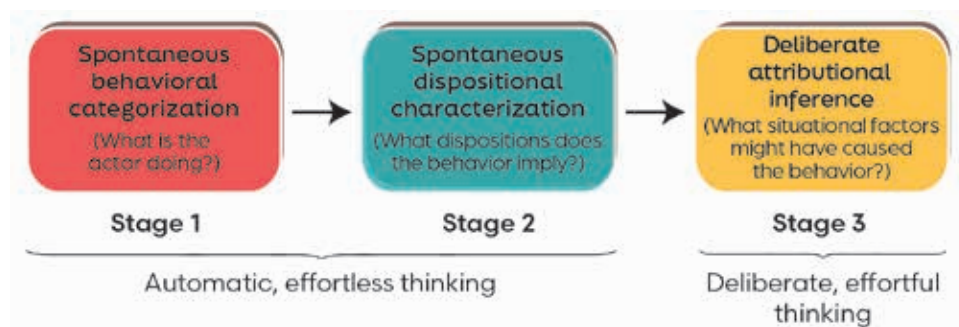
explain the attribution process. The dual-process model reflects the “warm look” of social cognition in social psychology (again, section 1.2b).

According to this dual-process model, automatic and simple attributional assessments typically occur first and are then sometimes followed by more deliberate and effortful analysis (Newman, 2001). Adjustments of initial judgments are most likely to occur among people who doubt their ability to understand the reasons for others’ actions (Weary et al., 2006). Furthermore, people from individualist cultures are more likely to make spontaneous trait inferences than are people from collectivist cultures (Shimizu et al., 2017). Regardless of culture, the initial step in the social judgment process involves spontaneous and relatively effortless thinking (Van Hiel et al., 2008), while the second step involves a deliberate and often more effortful adjustment of the first judgment.

As an example of how this process works, let’s return to the “birthday party” incident in which Deb is frustrated that the party apparently spread a virus to the attendees. As depicted in Figure 4–5, in the first stage of Deb’s attributional thinking she would spontaneously categorize the party hosts’ behavior (“Whoa! That was a terrible decision during a pandemic!”). In the second stage, she would make an initial dispositional inference (“I think they are reckless!”). While the first and second stages in this process are automatic and relatively effortless, the third stage is much more deliberate and requires a good deal of cognitive effort. In the third stage, Deb began to consider possible situational factors that might explain the hosts’ behavior: “Maybe the hot weather concerned them and they thought that was a bigger threat to the children’s health.” “Maybe they recognized that the party attendees are also in class and eat their snacks and lunch together without masks, and this is really no different.” “Maybe they assumed all of the parents would keep home a child who is sick.” When we are distracted, too busy, or unmotivated, we may not engage in this second judgmental process because correcting the initial, spontaneous dispositional characterization of other people’s behavior is cognitively demanding. In individualist cultures, when we don’t engage in deliberate attributional inference, our explanations of other people’s actions are likely to fall prey to the fundamental attribution error (Uleman, 1999). However, the tendency to commit this error is greatly reduced when we take the time to engage in more effortful thinking (Deutsch et al., 2006).

Figure 4–5 A Dual-Process Model of Attribution

Many contemporary attribution theorists contend that when trying to explain others’ behaviors, people from individualist cultures often automatically focus on dispositional factors initially and then later consciously correct this attribution to better account for situational factors. How does this attribution process proceed for people in collectivist cultures?



Section Summary

- Locus of causality (internal or external) is the most important judgment in making attributions.
- The covariation model describes how we explain behavior by using information about consistency, distinctiveness, and consensus.
- The attribution process is characterized by cognitive biases that cause judgmental errors.
The fundamental attribution error is the tendency to make internal versus external attributions and is more common in individualist cultures than in collectivist cultures.
The actor-observer effect is the tendency to make external attributions for our own behavior but internal attributions for others.
- The attribution process involves both automatic and deliberate thinking; more deliberate and effortful thinking may correct for some of our attributional biases.

Applications

How Do You Explain Negative Events in Your Life?

People differ in their attributional style, which can affect how they respond to uncontrollable life events (Abramson et al., 1978). Reactions to uncontrollable events are determined by three types of attributions: *internal versus external*, *stable versus unstable*, and *global versus specific* (that is, whether the event extends to many spheres of life or is confined to one sphere). Those who make *internal* attributions for uncontrollable events tend to experience more negative self-esteem. Individuals who make *stable* and *global* attributions for uncontrollable events are more likely to feel helpless in future events. When all three types of negative attributions are habitually used to explain stressful events in one's life, this attributional tendency is called the **pessimistic explanatory style**. People from cultures around the world who fit this pattern have been found to be at greater risk for negative mental health outcomes, such as depression, and this association is especially strong for women and adolescents, two groups of people who are already at risk for depression (Bernstein et al., 2021; Hu et al., 2015). For people with a pessimistic explanatory style, an unfortunate event has an internal cause ("It's my fault"), a stable cause ("It will always be this way"), and a global cause ("It's this way in many different situations"). In contrast, when something positive happens to them, they tend to make external, unstable, and specific attributions.

An attributional style that contrasts sharply to the pessimistic style is the **optimistic explanatory style**. Optimists tend to explain negative events in terms of an external cause ("It's someone else's fault"), an unstable cause ("It won't happen again"), and a specific cause ("It's just in this one area"). On the other hand, when faced with positive events, optimists explain them by making internal, stable, and global attributions (Forgeard & Seligman, 2012; Seligman, 1991). Compared to people with pessimistic explanatory styles, people with optimistic explanatory styles appear to have better mental health and are less likely to experience suicidal behaviors (Hirsch & Rabon, 2015). Do you think you tend to have an optimistic or a pessimistic explanatory style regarding good and bad events? Spend a few minutes answering the questions in *Self/Social Connection Exercise 4–2*.

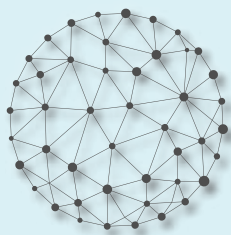
pessimistic explanatory style

A habitual tendency to attribute negative events to internal, stable, and global causes, and positive events to external, unstable, and specific causes

optimistic explanatory style

A habitual tendency to attribute negative events to external, unstable, and specific causes, and positive events to internal, stable, and global causes

(continues)



Self/Social Connection Exercise 4-2

Do You Have a Pessimistic or an Optimistic Explanatory Style?

To gain insight into how you tend to explain life events, imagine yourself in the two situations described below. Recognizing that events often have many causes, if these situations happened to you, what do you think would be the primary cause of each? Answer questions a to c about each situation by circling a number from 1 to 5 for each question.

Situation 1

While eating at a restaurant, your dinner companion appears bored.

- a. Is this outcome caused by you, by the other person, or by the circumstances?

Completely caused by other people or circumstances 1 2 3 4 5 *Completely caused by me*

- b. Will this cause be present in the future?

Will never be present again 1 2 3 4 5 *Will always be present*

- c. Is this cause unique to this situation, or does it also affect other areas of your life?

Affects just this situation 1 2 3 4 5 *Affects all situations in my life*

Situation 2

You receive an award for a university or community project.

- a. Is this outcome caused by you, by the other people, or by the circumstances?

Completely caused by other people or circumstances 1 2 3 4 5 *Completely caused by me*

- b. Will this cause be present in the future?

Will never be present again 1 2 3 4 5 *Will always be present*

- c. Is this cause unique to this situation, or does it also affect other areas of your life?

Affects just this situation 1 2 3 4 5 *Affects all situations in my life*

Scoring

For the negative outcome (Situation 1), high scores (4, 5) on questions a to c describe an internal, stable, and global attribution (pessimistic explanatory style). Low scores (1, 2) on these same questions describe an external, unstable, and specific attribution (optimistic explanatory style). For the positive outcome (Situation 2), high scores on questions a to c again describe an internal, stable, and global attribution, but now this indicates an optimistic explanatory style. Low scores indicate a pessimistic explanatory style.

Adapted from "The Attributional Style Questionnaire (ASQ)," by C. Peterson et al., 1982, *Cognitive Therapy and Research*, 6(3), pp. 287–299.

(continued)

Christopher Peterson and Martin Seligman conducted a series of studies to better understand the relationship between explanatory style and illness. In one of their first studies, the researchers measured college students' attributional style and asked them to list all illnesses they had experienced during the previous month (Peterson & Seligman, 1987). Students also completed this illness measure one year after the initial testing. Results indicated that even after controlling for the number of illnesses reported at the first session, students with an optimistic explanatory style reported fewer illnesses and fewer visits to a physician for diagnosis or treatment of an illness than did those with a pessimistic style.

In an archival investigation, the researchers used the responses that 99 male college graduates gave in 1946 to an open-ended questionnaire about their wartime experienc-

"The optimist sees the rose and not its thorns; the pessimist stares at the thorns, oblivious to the rose."

—Kahlil Gibran, Lebanese-American poet, 1883–1931

es to classify them in terms of their degree of pessimistic explanatory style (Peterson et al., 1988). Although style did not predict

health in young adulthood—when nearly all the men were healthy—there was a link between explanatory style and illness by age 45, when health became more variable. After this age, the men who had a pessimistic explanatory style in their youth tended to have more health problems than those who had a more optimistic outlook.

In a second archival study, Peterson and Seligman (1987) investigated the deceased members of the Baseball Hall of Fame who had played between 1900 and 1950. First, they searched the sports pages of old newspapers for the explanations these players gave of their successful and unsuccessful performances. Next, they had independent judges rate these quotes for internality, stability, and globality. Finally, they recorded the age at which each baseball player had died. Results indicated that players who made internal, stable, and global explanations for bad events died at a younger age; those who explained positive events as being due to external, unstable, and specific factors also died at a younger age.

Regarding deaths by disease, additional research indicates that optimists may have better immune systems than pessimists, making them less susceptible to diseases. For example, one study found that optimists have higher numbers of helper T-cells that mediate immune reactions to infection than pessimists (Segerstrom et al., 1998). Combined with the previous results from the college sample and the first archival study, these findings suggest that pessimists may be more stress-prone than optimists (Bennett & Elliott, 2005). A central feature in this susceptibility to stress appears to be the beliefs that people develop about why both positive and negative events occur in their lives.

Fortunately, people with a pessimistic explanatory style can be taught to change their self-attributions



(Shutterstock)

Does an optimistic explanatory style increase the lifespan of people over that of a pessimistic explanatory style? Archival research of the deceased members of the Baseball Hall of Fame by Peterson and Seligman (1987) suggest this may be the case.

through cognitive therapy (Meevissen et al., 2011). Typically, this therapy involves keeping a diary of daily successes and failures, and identifying how you contributed to your successes and how external factors caused your failures. Essentially, it trains people to do what most of us do naturally: engage in the self-serving bias (see Chapter 1, section 1.2a) and imagine better possible selves. In an experimental intervention designed to modify attribution processes, Kelly Peters and her coworkers (2011) randomly assigned participants to read scenarios where outcomes to tasks were interpreted either through an optimistic or a pessimistic explanatory style. In other words, participants were "trained" to look at successes and failures through one of these two contrasting explanatory styles. Participants then worked on a stressful and challenging anagram task that was designed for them to fail to complete successfully. Participants who had been trained in the optimistic explanatory style were significantly more likely than those trained in the pessimistic explanatory style to adopt an optimistic explanation for their failure, by attributing it to external, unstable, and specific factors. Furthermore, those in the optimistic intervention group were significantly less likely to report a depressed mood following their failure compared to those in the pessimistic intervention group. This set of findings has good clinical promise. For instance, in a study of adolescents experiencing elevated social anxiety, providing them with optimistic attribution training resulted in reductions in their social anxiety, general anxiety, depression, and negative social behaviors (Lisk et al., 2018). The lesson to be learned from this research on explanatory style is one of the basic truths of social psychology: your social thinking will profoundly influence your emotions and actions.

The Big Picture



Whether it is in first impressions, attributions, or how we generally try to make sense of our social world, problems can arise at many points in the social judgment process. Adding to this complexity is the fact that sometimes our judgments are under the control of automatically activated evaluations that occur without our awareness. Because of these and other considerations, rational models are often inadequate in reliably describing the social-judgment process. Sometimes judgments must be made very quickly and do not allow for careful observation and logical analysis. At other times, information in our social world is so unreliable, biased, and incomplete that a rational analysis is not possible. In such situations, we typically rely on heuristics and other mental shortcuts as a means to judge our world.

You may be wondering how we survive in a complex and ever-changing world, given that we are predisposed to make such a wide variety of errors. One thing to keep in mind is that our social world is much more flexible and dynamic than the static and artificial laboratory conditions that often characterize social psychological research (Schliemann et al., 1997). In a laboratory study, once a research participant makes a judgmental error, it becomes a data point—frozen in time. However, in the course of everyday life people are constantly revising their social assessments due to feedback from the environment. As a result of this flexibility, many of the social judgment errors committed in the “real world” are corrected through normal interaction with others (Fiske & Haslam, 1996). For example, you may meet someone and, based on that limited encounter, form a certain impression. Another person, upon hearing of that impression, may provide new meaningful information that redefines your initial impression. This evolution of social reality is ongoing and can be extremely forgiving of individual judgmental errors, so that you can arrive at “efficient definitions” of others that can be used in the social world.

A second thing to keep in mind is how social cognitive theorists conceive of us as social thinkers. What motivates us in a given situation often determines whether we make careful and rational decisions or quick and sloppy ones. Unlike computers, we have an investment in our self-beliefs and our beliefs about others (Ames, 2004). This psychological fact makes motivational biases likely in social thinking. Through such biases, we can often justify our self-concepts and our worldviews, making it possible for us to more confidently engage in social interaction and meet daily challenges.

Anthony Greenwald (1980), in an analysis of how the self figures into the social cognition equation, makes this very point. He argues that cognitive biases serve very useful and self-protective functions. Likening the self to a totalitarian government, Greenwald states that both are designed to manage (and distort) information so as to maintain a stable and efficiently functioning system. The distortion of reality is functional for both the self and the dictatorship. If this biasing did not occur, the system—either self or governmental—would likely collapse.

In the final analysis, our social judgments should not be expected to be any more accurate or efficient than our self-judgments. When we are faced with contradictory information, our inclination is to distort or explain away the contradictions. These distortions may well have functional value—allowing us to maintain a set of beliefs and perceptions about the world that have proven useful and efficient in making everyday decisions. Just as there are individual differences in the accuracy of self-assessments, there are variations in people’s ability to judge their social surroundings. A key factor in increasing accuracy both about the self and about others is *curiosity* (Hartung & Renner, 2011). When analyzing the complex and changing nature of both the self and the surrounding social world, being both eager for new information and willing to learn from others will greatly increase your likelihood of making smart personal and social judgments.

Key Terms

actor-observer effect	147	internal attribution	141
anchoring and adjustment heuristic	121	nonconscious mimicry	130
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availability heuristic	120	optimistic explanatory style	149
central traits	137	person perception	127
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Websites

Accessed through <https://www.bvtlab.com/sop9>

Websites for this chapter focus on social cognition and person perception topics, including social categorization, stereotyping, counterfactual thinking, nonverbal communication, and the history of attribution theory.

➤ Association for Psychological Science

This web page maintained by the Association for Psychological Science contains new social cognition articles in such areas as judgment and decision-making, social categorization, stereotyping, and person memory.

➤ Nonverbal Communication Web Page

Dane Archer's web page will introduce you to the topic of nonverbal communication and give you a chance to try to guess the meaning of some real nonverbal communication.

➤ Facial Analysis Website

Is that smile real or fake?

This website examines research at the Massachusetts Institute of Technology regarding how to detect a real from a fake smile.