FIFTH EDITION

Social Psychology

Thomas Gilovich
Cornell University

Dacher Keltner
University of California, Berkeley

Serena Chen
University of California, Berkeley

Richard E. Nisbett
University of Michigan

Attitudes, Behavior, and Rationalization

THROUGHOUT AMERICA'S LONG AND PAINFUL military involvement in Vietnam—a conflict that split the nation into "hawks" and "doves," consumed the energies of three administrations, and ultimately cost the lives of 58,000 U.S. soldiers—the government put a positive spin on the enterprise. But despite the government's many positive pronouncements about the war effort, many government officials had doubts. Their reservations often surfaced when key decisions needed to be made, such as whether to increase the number of U.S. soldiers stationed in South Vietnam or whether to initiate a bombing campaign against North Vietnam.

Lyndon Johnson, the U.S. president responsible for the largest buildup of American troops in Vietnam, used an interesting tactic to deal with those in his administration who had begun privately to express such reservations (Halberstam, 1969). Johnson would send the doubters on a "fact-finding" mission to Vietnam, nearly always accompanied by a group of reporters. This might seem like a risky move on Johnson's part, because if any of these doubters expressed their concerns to the press, the administration's policies would be undermined. Johnson knew, however, that they wouldn't express their dissent publicly and, moreover, when confronted by criticism of the war by reporters, would actually be put in the position of publicly *defending* administration policy. This public endorsement, Johnson reasoned, would serve to lessen their doubts and help transform them into advocates. Known as an unusually savvy politician, President Johnson was using some very clever psychology—psychology we'll explore in this chapter—to win support for his Vietnam policy.

Johnson's strategy highlights some important questions about the consistency between attitudes and behavior, especially whether the consistency between the
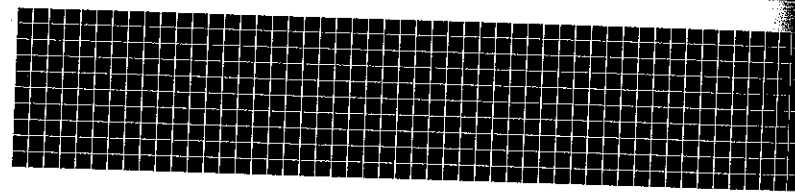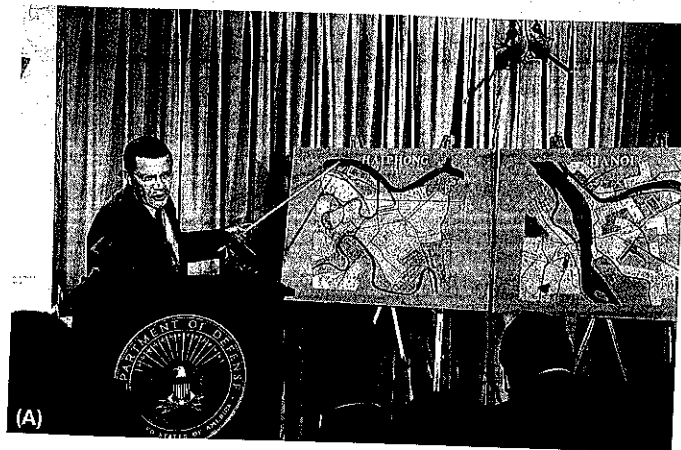
Despite continuing problems in fighting the Vietnam War, U.S. President Lyndon Johnson publicly declared that things were going well and insisted that his advisers and cabinet members publicly express their support and confidence. (A) U.S. Secretary of Defense Robert McNamara had reservations about the war that may have been alleviated by the constant necessity of defending it. Here he is shown briefing the press on U.S. air attacks. (B) To bolster morale, Johnson himself spoke to American troops in South Vietnam while U.S. General William Westmoreland, South Vietnamese General Nguyen Van Thieu, South Vietnamese Premier Nguyen Coo Ky, and U.S. Secretary of State Dean Rusk looked on.

two is the result of attitudes influencing behavior or behavior influencing attitudes. Both types of influence occur. Attitudes influence behavior: those with strong pro-environment attitudes are more likely to vote Green or Democratic than Republican. But behavior influences attitudes as well: environmentally minded individuals who drive gas-guzzling cars tend to convince themselves that automobile exhaust contributes very little to air pollution or global warming—or that they don't drive that much anyway.

Which is stronger: the effect of attitudes on behavior or the effect of behavior on attitudes? It's a difficult question to answer, but decades of research on the topic have shown that the influence of attitudes on behavior is a bit weaker than most people suspect, and the influence of behavior on attitudes is much stronger than most suspect. So President Johnson was right: get skeptics to publicly endorse the policy, and they will be skeptics no longer.

This chapter examines what social psychologists have learned about the consistency between attitudes and behavior. The chapter also examines two "consistency theories" that explain why people tend to maintain consistency among their attitudes and between their attitudes and behavior. ∎

Components and Measurement of Attitudes

Let's start with the basics: What are attitudes, and how are they measured? Attitudes can have multiple components, and researchers use a variety of different methods to measure them.

Three Components of Attitudes

attitude An evaluation of an object in a positive or negative fashion that includes three components: affect, cognition, and behavior.

An **attitude** is an evaluation of an object along a positive-negative dimension. At their core, then, attitudes involve *affect* (emotion)—how much someone likes or dislikes an object, be it a politician, a landscape, an athletic shoe, a dessert,

or oneself. Nearly every object triggers some degree of positive or negative emotion, which constitutes the affective component of the attitude somebody has toward it (Bargh, Chaiken, Raymond, & Hymes, 1996; Cacioppo & Berntson, 1994; Fazio, Sanbonmatsu, Powell, & Kardes, 1986; Zanna & Rempel, 1988).

But attitudes also involve *cognitions*—thoughts that typically reinforce a person's feelings (Breckler, 1984; Eagly & Chaiken, 1998; Zimbardo & Leippe, 1991). These include knowledge and beliefs about the object, as well as associated memories and images. Your attitude about a favorite city, for example, includes knowledge about its history and its most appealing neighborhoods and landmarks, as well as the special times you've spent there.

Finally, attitudes are associated with specific *behaviors* (Fishbein & Ajzen, 1975). Most generally, the affective evaluation of good versus bad is connected to a behavioral tendency to either approach or avoid (Harmon-Jones, Price, & Harmon-Jones, 2015). Put differently, attitudes alert us to rewarding objects we should approach and to costly or punishing objects we should avoid (Ferguson & Bargh, 2008; Ferguson & Zayas, 2009). When specific attitudes are primed—brought to mind, even unconsciously—people are more likely to behave in ways consistent with the attitude (Chen & Bargh, 1999). Neuroscientific studies indicate that our attitudes activate particular brain regions, areas of the motor cortex, that support specific actions (McCall, Tipper, Blascovich, & Grafton, 2012; Preston & de Waal, 2002). When you see a young child crying or a scrumptious hot fudge sundae, your mind prepares your body for the action of caretaking or consumption.

Measuring Attitudes

Attitudes are most commonly determined through simple self-report measures, such as survey questions. When researchers want to know how participants feel about members of other groups, their romantic partners, a public figure, and so on, they usually just ask them. To do so, they often rely on a Likert scale, named after psychologist Rensis Likert, its inventor. A **Likert scale** lists a set of possible answers with anchors on each extreme—for example, 1 = strongly disagree, 7 = strongly agree. So, for example, to assess attitudes toward the use of cell phones while driving, researchers might have participants respond on a scale of 1 to 7, where 1 is the least favorable answer ("It's never acceptable") and 7 is the most favorable ("It's always acceptable"). You've probably responded to many of these kinds of queries. Yet when it comes to many complex attitudes—such as your attitude toward capital punishment, environmentalism, or hedge fund managers—responses to these sorts of simple scales are likely to miss some important elements.

Consider the following questions: How much do you value freedom? How strongly do you feel about the need to reduce discrimination? How important is a less polluted environment? If an investigator asked these questions of a random selection of individuals, chances are most responses on a Likert scale would be very positive. But surely people differ in the strength and depth of their attitudes

OBJECTS TRIGGER EMOTIONS Like most objects, this image of a tropical beach likely triggers some degree of emotion—presumably positive emotion for most of us.

Likert scale A numerical scale used to assess people's attitudes; a scale that includes a set of possible answers with labeled anchors on each extreme.

toward these issues. How can social psychologists better capture these other dimensions of attitudes?

One approach is to measure the *accessibility* of the attitude—how readily it comes to mind (Fazio, 1995; Fazio & Williams, 1986). To do so, researchers track the time it takes a person to respond to an attitude question—known as the person's **response latency**. Someone who takes less than a second to respond affirmatively to a question such as "Do you approve of how the president is handling the economy?" is likely to have a stronger attitude on this topic than somebody who takes several seconds to respond. In a study conducted five months before Ronald Reagan and Walter Mondale squared off in the 1984 U.S. presidential election, for example, Fazio and Williams (1986) measured how long it took participants to indicate their attitude toward Reagan. Those who responded quickly to the attitude question showed greater consistency between their attitude and how they ultimately voted compared with those who responded relatively slowly.

A second way to assess the strength and importance of someone's attitude is to determine the *centrality* of the attitude to the person's belief system (Krosnick & Petty, 1995). To evaluate attitude centrality, researchers measure a variety of attitudes within a domain and calculate how strongly each one is linked to the others. To illustrate, a researcher might ask your opinions about abortion, stem cell research, fracking, same-sex marriage, sex education in high school, drug legalization, and taxation. If your attitude on a specific topic is very important to you, it should be consistent with your attitudes about certain other issues. For example, if abortion is a defining issue for you, then your view on abortion is likely to be strongly correlated with your attitudes about stem cell research and sex education and perhaps even with your attitudes about same-sex marriage and taxation.

Other ways of measuring attitudes don't rely on explicit self-reports. Investigators often use **implicit attitude measures** when there is reason to believe that people may be unwilling or unable to report their true feelings or opinions (Cameron, Brown-Iannuzzi, & Payne, 2012). Chapter 11, on stereotypes and prejudice, discusses in some detail two widely used implicit measures: affective priming and the implicit association test (IAT; Greenwald, McGhee, & Schwartz, 1998). With both of these measures, people don't realize that their attitudes are being examined. Implicit measures let researchers tap *nonconscious attitudes*—that is, people's immediate evaluative reactions they may not be aware of or that may conflict with their consciously endorsed attitudes. Researchers also sometimes use nonverbal measures, such as degree of physical closeness, as signals of positive attitudes toward others.

Finally, physiological indicators, such as the increased heart rate and sweaty palms associated with fear, can capture people's attitudes. **Box 7.1**, for example, describes how patterns of brain activity recorded from the surface of the scalp reflect the relative strength of positive and negative attitudes (Ito, Larsen, Smith, & CaScioppo, 1998).

response latency The amount of time it takes to respond to a stimulus, such as an attitude question.

implicit attitude measure An indirect measure of attitudes that doesn't involve a self-report.

🔄 LOOKING BACK

Attitudes can have three components: affect, cognition, and behavior. Researchers have developed many ways to measure attitudes, including explicit self-reports, implicit indices, and physiological measures.

FOCUS ON NEUROSCIENCE

Is the Bad Stronger Than the Good?

At the core of our attitudes is a positive or negative response to an attitude object—an old friend's voice, a roommate's messy pile of dishes, the smell of freshly cut grass. Pioneering research by neuroscientist Joseph LeDoux has found that one part of the brain, the amygdala, is central to this initial, core component of our attitudes (LeDoux, 1989, 1993, 1996). After receiving sensory information about a stimulus from the thalamus, the almond-shaped amygdala then provides information about the positive or negative valence, or value, of the object. This evaluation occurs, remarkably, before the mind has categorized the object in question. Thus, even before we fully know what an object is, we have a gut feeling about it. When the amygdala is damaged, animals no longer have appropriate evaluations of objects: they eat feces, attempt to copulate with members of other species, and show no fear of threatening stimuli such as snakes or dominant animals.

LeDoux's research raises an interesting question: Are our quick positive and negative evaluations of stimuli comparable with respect to their strength? Reviews by Shelley Taylor (1991), Paul Rozin and Edward Royzman (2001), Roy Baumeister and his colleagues (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001), and John Cacioppo and Wendi Gardner (1999) have all yielded the same answer: negative evaluations are stronger than positive evaluations. It would certainly make evolutionary sense for an organism to be more vigilant about avoiding harm than seeking pleasure, to be more watchful for danger signs than for cues to opportunity. Food or mating opportunities not pursued today might be realized tomorrow; if a predator is not avoided today, there is no tomorrow. A pronounced negativity bias might therefore increase the chances of survival.

Consider a few generalizations supporting the conclusion that the bad is stronger than the good. Negative stimuli, such as frightening sounds or noxious smells, elicit more rapid and stronger physiological responses than positive stimuli, such as delicious tastes. Losing $20 is more painful than winning $20 is pleasurable.


CONTAMINATION The presence of cockroaches on food spoils a delicious meal. (Note that the meal does not make the cockroaches suddenly seem appetizing.)

Negative trauma, such as the death of a loved one or sexual abuse, can change a person for a lifetime; positive events don't appear to have equivalent effects. Or consider Rozin's observation about contamination: the briefest contact with a cockroach will spoil a delicious meal, but the inverse—making a pile of cockroaches delicious by spicing it up with your favorite foods—is unimaginable (Rozin & Royzman, 2001).

In related work, Tiffany Ito, John Cacioppo, and their colleagues presented participants with positively valenced pictures—pizza or a bowl of chocolate ice cream, for instance; and negatively valenced slides—such as photos of a mutilated face or a dead cat (Ito et al., 1998). As they did so, they recorded the participants' brain activity on the scalp and studied brain regions known to be involved in evaluative responses to stimuli. They discovered a clear negativity bias in evaluation: the negative stimuli generated greater brain activity than the positive or neutral stimuli. In this context, it seems that the bad is indeed stronger than the good.

Predicting Behavior from Attitudes

Most academic discussions of how well attitudes predict behavior begin with a remarkable study conducted by the sociologist Richard LaPiere in the early 1930s (LaPiere, 1934). LaPiere spent two years touring the United States with a young Chinese couple, visiting numerous hotels, camping grounds, restaurants, and cafés. Although prejudice and discrimination against Chinese individuals were common at the time, LaPiere and his traveling companions were denied service by only one of the 250 establishments they visited, leading LaPiere to wonder if maybe anti-Chinese prejudice wasn't so strong after all.
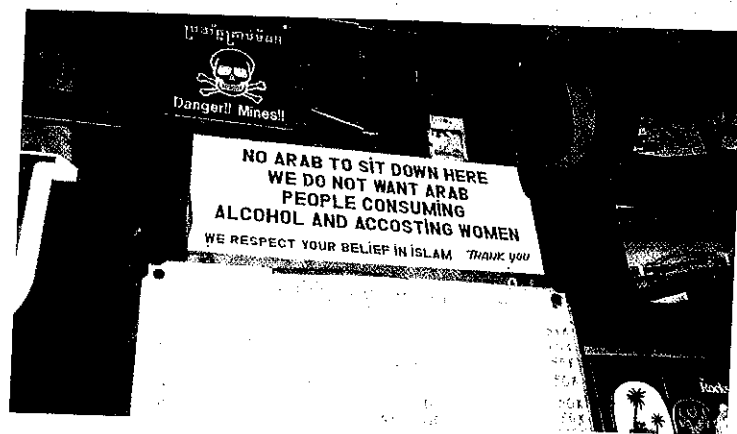
ATTITUDES DON'T ALWAYS PREDICT BEHAVIOR
This bar in Pattaya Beach, Thailand, displays a sign declaring "No Arab to sit down here." The bar owners may indeed intend to block Arabs from their establishment, but if an Arab walked into the bar with some friends, would the owners really forbid the person from sitting down?

To find out, LaPiere wrote to all of the establishments they had visited and asked whether their policy was to serve "Orientals." About 90 percent of the respondents said they wouldn't—a figure stunningly inconsistent with what LaPiere had actually experienced during his earlier tour. This result was unfortunate in human terms because it indicated that anti-Chinese prejudice was indeed rather robust. But it was also unfortunate from the perspective of psychological science because it suggested that attitudes don't predict behavior very well. To a scientific discipline that had treated attitudes as powerful determinants of people's behavior, this news was surprising—and rather unsettling.

Note that this inconsistency wasn't some fluke. Many studies conducted over the next several decades yielded similar results. As a much-cited review in the 1960s of the existing literature on attitudes and behavior concluded: "The present review provides little evidence to support the postulated existence of stable, underlying attitudes within the individual which influence both his verbal expressions and his actions" (Wicker, 1969, p. 75).

Most people find this result surprising because everyday life provides lots of evidence that attitudes and behavior often *do* go together. People who picket abortion clinics have anti-abortion attitudes. People who show up at the local bowling alley have positive attitudes toward the sport. Families with lots of kids usually have favorable attitudes about children. Evidence of a tight connection between attitudes and behavior is all around us. But such evidence indicates only that if people behave a certain way, they probably have positive feelings about that behavior. It doesn't mean that those with a positive attitude toward a given behavior will necessarily behave in a manner consistent with that attitude. What's not so obvious in everyday life are the many instances of, say, people with positive attitudes about bowling who don't bowl or people with favorable attitudes about kids who don't have children.

There are many reasons for failing to act on our attitudes. And once we're aware of all these reasons, the finding that attitudes so often fail to predict behavior may no longer seem so surprising. Furthermore, an awareness of these reasons gives us a better understanding of *when* attitudes are likely to be highly predictive of behavior and when they aren't (Glasman & Albarracín, 2006; Kruglanski et al., 2015).

Attitudes Can Conflict with Other Powerful Determinants of Behavior

Think about the relationship between a person's attitudes about dieting and actual success in sticking to a diet. Would you expect a strong relationship? Probably not. Eating less is determined by so many things other than a person's attitude about dieting, including eating habits, individual physiology, and whether a roommate happens to be pigging out at the moment—not to mention the person's attitudes about things like ice cream, doughnuts, and french fries. What's true about attitudes toward dieting is true about attitudes in general. They all compete with other determinants of behavior. The situationist message

of social psychology (and of this book) suggests that attitudes don't always win out over these other determinants, and hence attitudes aren't always tightly connected to behavior.

One potent determinant of a person's actions that can weaken the relationship between attitudes and behavior is that person's understanding of the prevailing norms of appropriate behavior. You might be dying to share your hilarious commentary about the movie with the guy next to you in the theater, but let's hope you refrain from doing so because you recognize it just isn't done and others—probably including the guy next to you!—would disapprove. Similarly, the hotel and restaurant owners in LaPiere's study may have wanted to turn away the Chinese couple, but refrained from doing so out of concern for how it would look and the scene it might cause.

Introspecting about the Reasons for Our Attitudes

Consider your attitude toward someone to whom you're attracted. Why are you attracted to that person? A number of answers likely spring to mind: "She's cute." "She's ambitious." "He's fun to be with." Sometimes, however, it's not so easy to know exactly why we like someone. It may not be because of specific, readily identifiable attributes; we may simply share some indescribable chemistry. Suppose this is the case and you're asked to come up with reasons why you like your romantic partner. Like most people, you'll probably focus on what is easy to identify, easy to justify, and easy to capture in words—and thus miss the real, but hard-to-articulate, reasons for your attraction. Why does this matter? It turns out that coming up with the (wrong) reasons for an attitude you have can mislead you about what your attitude actually is.

In one test of this phenomenon, Timothy Wilson and his colleagues asked students about the person they were dating. Participants in one group simply gave an overall evaluation of their relationship. Those in another group listed the reasons they felt the way they did and then gave an overall relationship evaluation. The researchers contacted the participants again nine months later and asked about the status of their relationship. The attitudes of participants in the first group, who evaluated the relationship without considering their reasons, were much more accurate predictors of their current relationship status than the attitudes of participants who had introspected about their reasons for liking their partner (Wilson, Dunn, Bybee, Hyman, & Rotondo, 1984). Thinking about why we like someone can mislead us in terms of our true, full attitude toward that person, making the attitude we report after generating reasons not a very good predictor of our subsequent behavior.

Wilson has found that introspecting about the reasons for our attitudes about all sorts of things can undermine how well those attitudes guide our behavior. The cause in all cases is the same: introspection may lead us to focus on the easiest-to-identify reasons for liking or disliking something at the expense of the *real* reasons for our likes and dislikes.
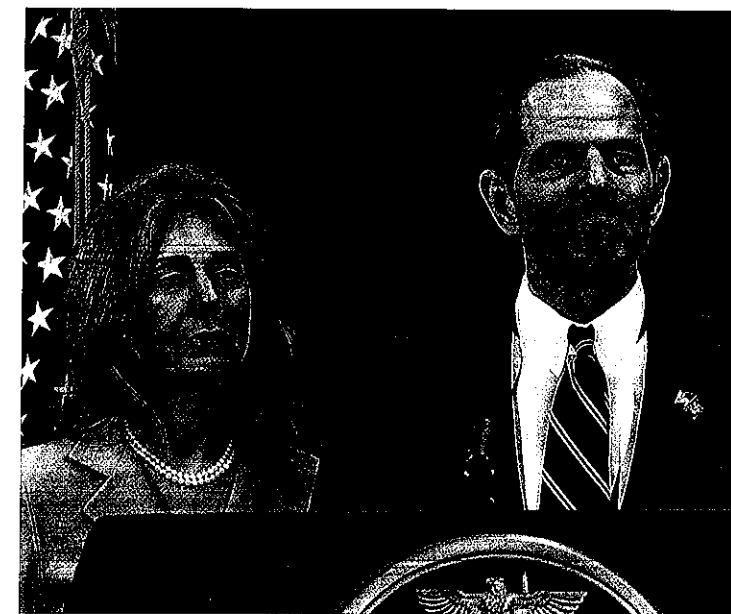
INCONSISTENT ATTITUDES
Attitudes may not be good predictors of behavior because people often have attitudes that conflict with one another. Elliot Spitzer, disgraced former governor of New York, had campaigned on the importance of high ethical standards among public officials and vowed to "change the ethics of Albany." Following reports that he was a frequent customer in a high-priced prostitution operation, he resigned. Did he think his involvement with prostitutes was wrong but did it anyway, or did he view participation in the sex trade as ethically acceptable?

Does this mean that introspection is always (or even typically) harmful? Should we always just go with our gut? Not at all. In deciding whether to launch a military campaign, for example, it's imperative for analysts to exhaustively consider the reasons for and against the campaign. Also, the real reasons for our attitudes are sometimes perfectly easy to identify and articulate, and in those cases introspection produces no rift between the things we *think* are guiding us and those that actually are. The contaminating effect of introspection is limited to those times when the true source of our attitude is hard to pin down, as when the basis of an attitude is largely affective (emotional). In such cases, a cognitive, thoughtful analysis is likely to seize on seemingly plausible but misleading cognitive reasons. When the basis of an attitude is primarily cognitive, however, the search for reasons tends to yield the real reasons, and introspection isn't likely to mislead us about our true attitude or diminish the relationship between our attitude and behavior (Millar & Tesser, 1986; Wilson & Dunn, 1986). Thus, examining your reasons for enjoying a certain artist's work may cause a rift between your expressed attitude and your subsequent behavior, but analyzing why you prefer one digital camera over another probably won't create such a gap.

The Mismatch between General Attitudes and Specific Targets

Typically, the attitudes people express are about general categories, such as the environment, pushy people, French cuisine, or global trade. But the attitude-relevant behavior that researchers typically assess has a more specific focus: donating to Greenpeace, reacting to a specific pushy individual, ordering steak frites, or picketing a meeting of the World Trade Organization. Given this mismatch between general attitudes and specific behaviors, no wonder attitudes don't always predict behavior particularly well.

Studies have shown that highly specific attitudes typically do a better job of predicting specific behaviors, and general attitudes typically do a better job of predicting how a person behaves "in general" (Ajzen, 1987). In LaPiere's study, for example, the attitudes expressed by the various merchants were rather general: whether they would serve Orientals. But the behavior assessed was directed at one specific Chinese couple with a specific demeanor and dressed in a specific fashion. Perhaps the results would have been different if LaPiere had asked the merchants whether they would serve a well-dressed, pleasant Chinese couple. If you want to predict a specific type of behavior accurately, you have to measure people's attitudes toward that specific behavior.

The broader point here is that what most people usually think of as attitudes about different classes of people, places, things, and events are often expressions of attitudes about a prototypical example of a given category. So if we encounter a specific situation or person who doesn't fit the prototype, our behavior probably won't reflect our stated attitude. Our general attitude doesn't apply to *that* particular person. Consider a study in which male college students expressed their attitudes about gay men (Lord, Lepper, & Mackie, 1984). The researchers also elicited from each student his stereotype of the "typical" gay man. Two months later, a different experimenter asked the participants if they would be willing to show some visiting students around campus. One of the visitors, "John B.," was described in such a way that the participants would think he was gay. For half the participants, the rest of the description of John B. was crafted to fit their own

individualized stereotype of a gay man; for the other half, it wasn't. The investigators found that the students' willingness to show John B. around campus—their behavior—was strongly predicted by their attitudes about gay men (those with positive attitudes said they were willing; those with negative attitudes said they were not), but only if John B. matched their prototype of a gay individual. If John B. didn't fit their image of a gay man, their attitudes about gay people didn't predict their behavior (their willingness to show him around campus).

⊖ LOOKING BACK

Attitudes can be surprisingly weak predictors of behavior. The reasons are that attitudes sometimes conflict with social norms about appropriate behavior; examining the reasons for our attitudes can cause confusion about our true feelings; and general attitudes sometimes don't correspond to the specific action being predicted in a given situation.

Predicting Attitudes from Behavior

Many young people resent being sent to church, temple, mosque, or other religious service and often complain, "Why do I have to go? I don't believe any of this stuff." Many of them are told, "It doesn't matter if you believe it. What's important is that you continue with your studies and your prayers." Some resist to the very end and abandon all religious rituals and practices the minute their parents give them permission to opt out. But a remarkable number stick with it and eventually find themselves genuinely holding some of the very religious convictions they once resisted. Over time, mere outward behavior can give way to genuine belief.

The previous section presented the first part of the story about the connection between attitudes and behavior: attitudes can predict behavior, but not as strongly as most people suspect. The second part of the story, as illustrated by the religion example just described, is that behavior can powerfully influence attitudes. Social psychology research over the past half-century has repeatedly shown that people tend to bring their attitudes in line with their actions. How is it that our behavior has such a strong influence on our attitudes? A number of important theories seek to explain this relationship. Referred to collectively as *cognitive consistency theories*, they maintain that the impact of behavior on attitudes reflects the powerful tendency we have to justify or rationalize our behavior and to minimize any inconsistencies between our attitudes and actions. We focus here on the most influential of these theories: cognitive dissonance theory.
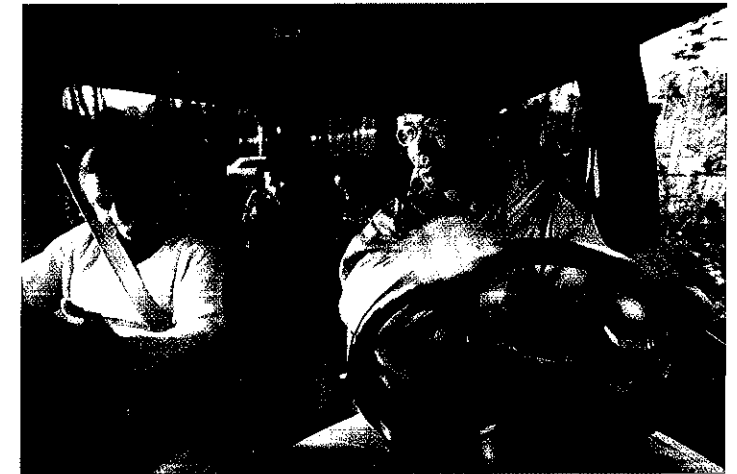
GENERAL ATTITUDES AND SPECIFIC TARGETS
A person with a generally positive attitude about science may not participate in rallies and marches associated with the March for Science movement that was launched in 2017. But someone with more specific attitudes about the importance of science to the health and well-being of the world's population is more likely to join in a rally, like this person marching in a rally in Washington, DC.

BEHAVIOR CAN INFLUENCE ATTITUDES
Many people who consider themselves environmentalists nonetheless drive gas-guzzling SUVs. Driving a vehicle that isn't fuel efficient can lead those who are concerned about the environment to convince themselves that there isn't much connection between fuel efficiency and air pollution or climate change.

Cognitive Dissonance Theory

cognitive dissonance theory The theory that inconsistency between a person's thoughts, sentiments, and actions creates an aversive emotional state (dissonance) that leads to efforts to restore consistency.

Leon Festinger's **cognitive dissonance theory** is one of the most significant theories in the history of social psychology (Festinger, 1957). Festinger maintained that people are troubled by inconsistency between their thoughts, sentiments, and actions and that they'll expend psychological energy to restore consistency. More specifically, he thought that an aversive emotional state—dissonance—is aroused whenever people experience inconsistency between two cognitions. And when the cognitions are about our own behavior ("I just failed to live up to my promise"), we're troubled by the inconsistency between our cognitions and our behavior as well. This unpleasant emotional state motivates efforts to restore consistency—typically by changing the cognition to make it more consistent with the behavior.

What constitutes cognitive inconsistency, and under what conditions does it arise? What are the different ways that people try to get rid of inconsistency? Festinger's theory has inspired a tremendous amount of research aimed at answering such questions. To get a better sense of the kinds of inconsistency people find troubling, as well as a flavor for the diverse phenomena cognitive dissonance theory can explain, let's look at some of the classic experiments on the subject.

"It is our choices . . . that show what we truly are, far more than our abilities."
—J. K. ROWLING, *HARRY POTTER AND THE CHAMBER OF SECRETS*

DECISIONS AND DISSONANCE A mere moment's reflection tells us that all hard decisions cause some feelings of dissonance. Because the decision is hard, the rejected alternative must have some desirable features, the chosen alternative must have some undesirable features—or both. Because these elements are inconsistent with the decision made, the result is dissonance (Brehm, 1956). If you move to Los Angeles from a small town in the Midwest in pursuit of good weather, you'll enjoy the sun, but the hours spent in traffic will probably produce dissonance. According to Festinger, once you've made an irrevocable decision to move to L.A., you'll exert effort to reduce this dissonance. You'll rationalize. You'll tell yourself and your friends how much you've learned from the audiobooks you play in your car during your long commute.

Many experiments have documented this tendency for people to rationalize their decisions. In one study, researchers interviewed bettors at a racetrack, some just before and some just after placing their bets (Knox & Inkster, 1968). The investigators reasoned that the act of placing a bet and irrevocably choosing a particular horse would cause the bettors to reduce the dissonance associated with the chosen horse's negative features (doesn't do well on a wet track) and the positive features of the competing horses (the perfect distance for one horse, the best jockey on another). Dissonance reduction should be reflected in greater confidence on the part of those interviewed right *after* placing their bets, once rationalization has set in. Indeed, bettors who were interviewed right before they placed their bets gave their horses, on average, a "fair" chance of winning; those interviewed after they had placed their bets gave their horses, on average, a "good" chance to win. One participant provided some extra commentary that illustrates the process of dissonance reduction especially well. Having been

interviewed while waiting in line (before placing his bet), he approached another member of the research team after placing his bet and said, "Are you working with that other fellow there? Well, I just told him that my horse had a fair chance of winning. Will you have him change that to a good chance? No, by God, make that an excellent chance." Similar findings have been reported in studies of elections: voters express greater confidence in their candidates when interviewed after they've voted than when interviewed right beforehand (Frenkel & Doob, 1976; Regan & Kilduff, 1988).

Festinger argued that dissonance reduction takes place only after an irrevocable decision has been made—that is, a decision that can't be undone. He maintained, for example, that "there is a clear and undeniable difference between the cognitive processes that occur during the period of making a decision and those that occur after the decision has been made. Reevaluation of alternatives in the direction of favoring the chosen or disfavoring the rejected alternative . . . is a post-decision phenomenon" (Festinger, 1964, p. 30).

The evidence from the betting and election studies supports Festinger's contention. But this seems at odds with other things we know about people. One of humankind's distinguishing characteristics is the ability to anticipate the future. If, in the process of making a decision, we see blemishes associated with what is emerging as our favorite option, why not start the process of rationalization beforehand, to minimize or eliminate dissonance altogether (Wilson, Wheatley, Kurtz, Dunn, & Gilbert, 2004)?

Indeed, more recent research suggests that the same sorts of rationalization and distortion that occur after people make a decision also subconsciously take place *before* they make the decision. Whether choosing restaurants, vacation spots, consumer goods, or political candidates, once people develop a slight preference for one option over the others, they distort subsequent information to support their preference (Brownstein, 2003; Brownstein, Read, & Simon, 2004; Russo, Meloy, & Medvec, 1998; Simon, Krawczyk, & Holyoak, 2004). Thus, the small size of a particular Italian restaurant tends to be rated as a plus by those leaning toward Italian food ("It's nice and intimate") but as a minus by those leaning toward a burger joint ("We won't be able to talk without everyone overhearing us"). So Festinger was right in maintaining that decisions evoke dissonance and then dissonance reduction, but these processes seem to occur more broadly than he anticipated; they take place both before and after decisions are made.

EFFORT JUSTIFICATION The element of dissonance theory that rings most true to many people is the idea that if you pay a high price for something—in dollars, time, or effort—and it turns out to be disappointing, you'll probably experience dissonance. As a result, you're likely to devote mental energy to justifying what you've done; this tendency is known as **effort justification**. This sort of *sweet lemons rationalization* ("It's really not so bad") can be seen in many contexts.

RATIONALIZING DECISIONS, REDUCING DISSONANCE
After placing a bet at the track, as here at the Kentucky Derby, people are likely to concentrate on the positive features of the horse they bet on and downplay any negatives. This rationalization process gives them greater confidence in the choice they made.

effort justification The tendency to reduce dissonance by justifying the time, effort, or money devoted to something that turned out to be unpleasant or disappointing.

LEON FESTINGER
In studying how people bring their attitudes in line with their behavior, Leon Festinger developed cognitive dissonance theory.
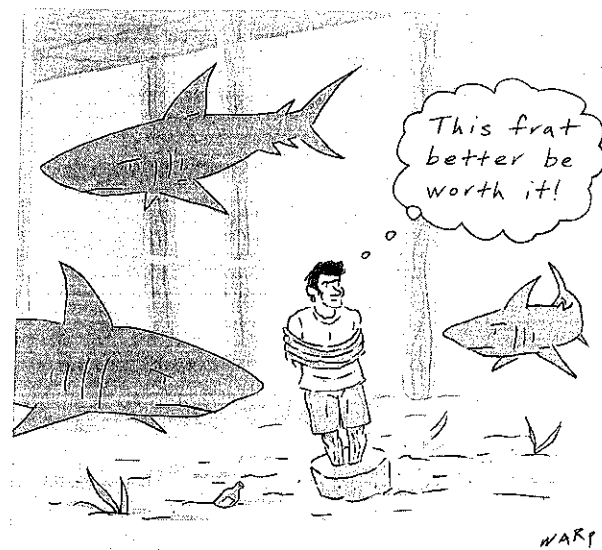
Those who don't have pets often suspect that pet lovers exaggerate the pleasure they get from their animals to offset all the early morning walking, poop scooping, and furniture wrecking. And those who choose not to have children suspect that sleep-deprived, overtaxed parents are fooling themselves when they say that nothing in life brings greater joy (Eibach & Mock, 2011).

Researchers explored the role of dissonance reduction in such situations in an early study in which female undergraduates signed up for an experiment thinking it involved the opportunity to join an ongoing discussion group about sex (Aronson & Mills, 1959). When they arrived, however, the students were told that not everyone can speak freely and comfortably about such a topic, so potential participants had to pass a screening test to join the group. Those assigned to a control condition simply read aloud a list of innocuous words to the male experimenter. Those assigned to a "mild" initiation condition read aloud a list of mildly embarrassing words, such as *prostitute*, *petting*, and *virgin*. Finally, those in a "severe" initiation group read aloud a list of obscene words and a passage from a novel describing sexual intercourse.

All participants were then told they had passed the screening test and could join the group. The group was meeting that very day, but participants were told that because everyone else in the discussion group had been given a reading assignment beforehand, it was best if they just listened in on the discussion. Then, through headphones in a nearby cubicle, they heard a very boring discussion of the sex life of invertebrates. Not only was the topic not what they had in mind when they signed up for a discussion group about sex, but the discussion group members "contradicted themselves and one another, mumbled several non sequiturs, started sentences that they never finished, hemmed, hawed, and in general conducted one of the most worthless and uninteresting discussions imaginable" (Aronson & Mills, 1959, p. 179).

The investigators predicted that the discussion would be boring and disappointing to all the participants, but that it would produce dissonance only for those who had undergone a severe initiation to join the group. The cognition "I suffered to get into this group" is inconsistent with the cognition "This group is worthless and boring." One way for the participants in the severe initiation condition to reduce dissonance would be to convince themselves that the group and the discussion weren't so boring after all. Indeed, when the experimenters asked participants at the end of the study to rate the quality of the discussion they listened to, those in the severe initiation condition rated it more favorably than those in the other two conditions (**Figure 7.1**).

The need to justify "costly" behavior influences people in other areas of life as well. When people pay for consumer goods in ways that feel costly (think cash or check), they end up being more committed to the product and to the company from which they bought it than when they pay in ways that feel less costly

Ratings of discussion group

The participants in the severe initiation condition rated the discussion group most highly, reducing their dissonance.
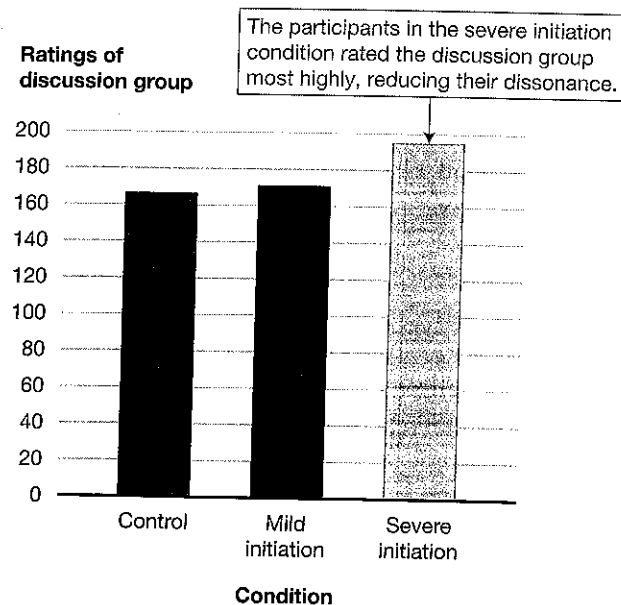
FIGURE 7.1
GROUP INITIATION AND LIKING FOR THE GROUP
This graph shows the different ratings of a discussion group by participants who experienced no initiation (the control condition), a mild initiation, or a severe initiation to join the group.
Source: Adapted from Aronson & Mills, 1959.

# How Cognitive Dissonance Can Make You Like What You Buy

Cognitive dissonance isn't just a laboratory phenomenon. As consumers, businesses, and marketers can attest, it also has widespread influence in real-world contexts, including product choice, consumer satisfaction, and brand loyalty. When a product is more difficult to acquire, people often justify the extra effort by evaluating the product more positively.

For Critical Thinking

1. From the perspective of self-perception theory, why would people evaluate a product differently if they build it themselves? If they pay for it with cash versus credit?

2. What are some potential implications of effort justification in other consumer industries, such as restaurant/dining, travel, and entertainment?

The IKEA Effect

In these studies, some participants assembled IKEA boxes and Lego sets, and then all participants indicated how much they would pay for their own product, a prebuilt product, or someone else's finished product.

How much is the IKEA piece worth to you on a scale of $0–$1?

self-built $0.78   other-built $0.48
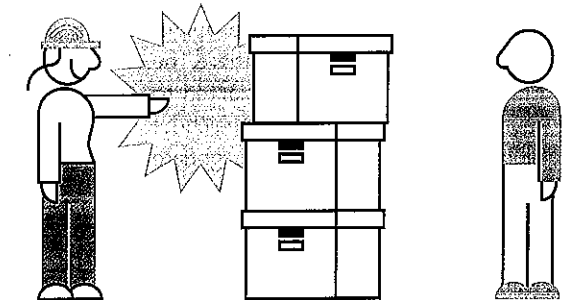
Lego Study

prebuilt set
$0.32 — bid on own set
$0.26 — bid on partner's set

participant-built set
$0.84 — bid on own set
$0.42 — bid on partner's set

Pain as a Function of Payment Method

Participants in this study rated how much subjective pain they felt and the emotional attachment they felt toward a mug when paying for it with either cash (for which the loss of money is more vivid and concrete) or a credit card (abstract).

How painful is it to pay for a mug on a scale of 0–5:

cash 4.09   credit 2.10

What minimum price would you sell the mug for?

cash $6.71   credit $3.83

! BOX 7.2

Not So Fast:
Critical Thinking about Surveys vs. Experiments

Chun Hsien "Michael" Deng, a 19-year-old student at Baruch College in New York City, was excited about joining the school's Pi Delta Psi fraternity. Like everyone else in the pledge class, he went on a weekend retreat to the Pocono Mountains, in Pennsylvania, with the more senior members of the fraternity. While there, he and his fellow pledges were subjected to a "gauntlet"-like hazing ritual in which he was blindfolded and required to negotiate a path while being knocked repeatedly to the ground. Michael suffered a major brain trauma from this hazing ritual, and because his fraternity brothers were slow in seeking medical help, he died shortly after his eventual arrival at a nearby hospital.

Why would a fraternity do such a thing? To be sure, Michael Deng's death was entirely unintentional, and representatives of the national Pi Delta Psi organization condemned the actions of the Baruch College chapter in no uncertain terms. But dangerous hazing rituals like the one that claimed Michael's life remain common. More than 60 students are known to have died in incidents like this in the United States since 2005, at least 10 of them in initiations by a single national fraternity. Why do fraternities continue to engage in such practices?

Cognitive dissonance theory provides one answer. Having pledges undergo a painful initiation ritual can make them, once they've gone through it, more dedicated to the fraternity. After all, it may be hard for someone to walk away from an organization after paying such a stiff price to become a member. Doing so would likely cause a lot of dissonance, which could be reduced by deciding that the fraternity is a wonderful organization, one that is sure to make college a golden time.

FRATERNITY HAZING AND COMMITMENT Fraternities try to increase the commitment of members by having them undergo difficult and embarrassing initiation rituals like the one shown here.

How can we establish that efforts to reduce that dissonance really do lie at the heart of fraternity hazing? Stated differently, how can we determine whether fraternities that have more severe initiations do indeed cultivate more loyalty and enthusiasm among their members? One approach would be to survey members of various fraternities to evaluate their commitment to their fraternity. We could also find out about their initiation practices and have judges, unaware of the purpose of the study, rate them for severity. Do the fraternities with the most severe initiations have the most committed members?

Unfortunately (and we hope you've anticipated this), such a survey-based finding wouldn't be informative. It might mean, as dissonance theorists would expect, that

undergoing a difficult initiation makes a person feel compelled to embrace the fraternity's virtues. But the finding might instead be the result of the best, most desirable fraternities having the "luxury" of subjecting their pledges to severe initiations. Maybe it's just that people wouldn't tolerate a severe initiation to get into a less attractive fraternity. This is the correlation versus cause problem; it plagues many empirical studies, and savvy consumers of research findings know to anticipate it (see Chapter 2). Only a true experiment—wherein people are randomly assigned to either, say, a "mild initiation" versus "severe initiation" condition—could tell us with great confidence whether more painful initiations lead to greater group loyalty than less painful ones.

(think debit or credit cards) (Shah, Eisencraft, Bettman, & Chartrand, 2016). And when people have to assemble a product (think IKEA) before they can enjoy it, they end up enjoying it more (as long as the assembly is successful and doesn't result in a torrent of cursing) (Norton, Mochon, & Ariely, 2012).
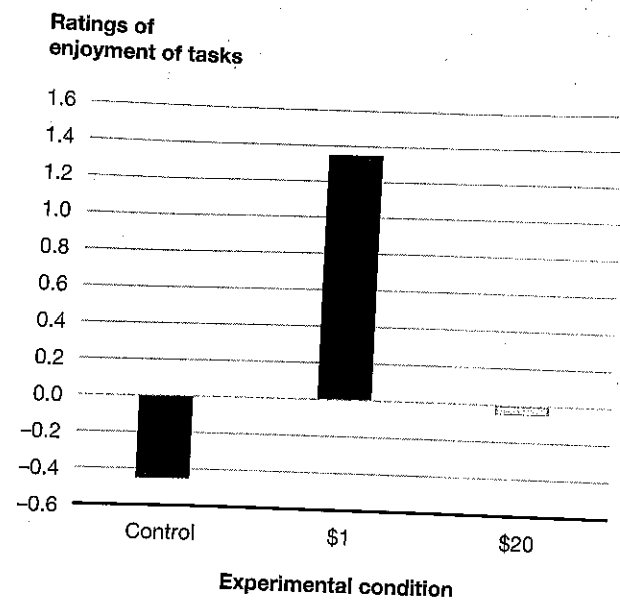
INDUCED COMPLIANCE AND ATTITUDE CHANGE Cognitive dissonance theory can also explain what often happens as a result of **induced (forced) compliance**—that is, when people are induced to behave in a manner that's inconsistent with their beliefs, attitudes, or values. Most people will feel some discomfort with the mismatch between the way they've been induced to behave and their attitudes. One way to deal with the inconsistency—the easiest and most likely way, given that the behavior can't be taken back—is for people to change their original attitudes. This was the idea behind President Johnson's strategy, described in the chapter opening: when skeptics publicly defended the administration's position, the inconsistency between their private reservations and their public comments should lead them to dispel their doubts.

In the first experiment to demonstrate the power of induced compliance to shift people's attitudes, Leon Festinger and Merrill Carlsmith (1959) had participants in a control condition engage in what can only be described as experimental drudgery for an hour (loading spools on a tray over and over, turning pegs on a pegboard one-quarter turn at a time). Immediately afterward, these participants were asked to rate how much they enjoyed the experiment. They gave quite low ratings. No surprise there.

Participants in two other conditions also engaged in the boring task but were subsequently told that the experiment involved how performance on a task is influenced by expectations about it beforehand. These participants were then led to believe they were in a control, "no expectation," condition, but that other subjects were told beforehand the study was either very interesting or boring. Looking rather sheepish, the experimenter then explained that the next participant was about to show up and needed to be told the study was interesting. This was usually done, the experimenter explained, by a confederate posing as a participant. But the confederate was absent, putting the experimenter in a bit of a jam. Would you, the experimenter asked, play the role usually performed by the confederate and tell the next participant that the experiment is interesting? The experimenter offered the participant either $1 or $20 for doing so.

Nearly every participant agreed to the request. In this "play within a play," the true participants believed they were confederates. What was most important to the experiment, and what was readily apparent to the participants, was that they had just been induced to behave in a way that was inconsistent with their true attitude: they lied by saying that a mind-numbingly boring study was interesting. Festinger and Carlsmith predicted that this act would produce dissonance for those participants paid only $1 for the assignment. Their words were inconsistent with their beliefs, and $1 wasn't enough to justify the lie. In contrast, those paid $20 would not have any need to rationalize because the reward was substantial and the lie was of little consequence. To reduce their dissonance, participants in the $1 condition would rationalize their behavior by changing their attitude about the task they had performed. If they convinced themselves the task was interesting after all, their lie wouldn't really be a lie. Consistent with these predictions, when participants in the $1 condition later evaluated their experience, they rated the monotonous tasks more favorably than those in

induced (forced) compliance
Subtly compelling people to behave in a manner that is inconsistent with their beliefs, attitudes, or values in order to elicit dissonance and therefore a change in their original attitudes and values.
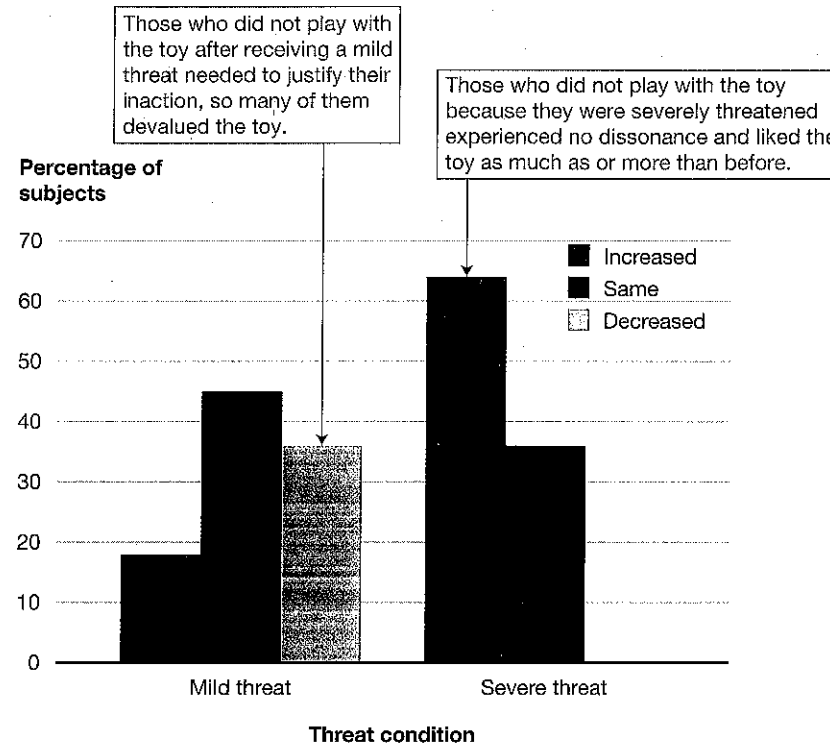
Ratings of enjoyment of tasks

(y-axis: 1.6, 1.4, 1.2, 1.0, 0.8, 0.6, 0.4, 0.2, 0.0, -0.2, -0.4, -0.6)

(x-axis: Control, $1, $20)

Experimental condition

FIGURE 7.2
INDUCED COMPLIANCE AND ATTITUDE CHANGE
Saying something we don't believe, and doing so with little justification ($1 instead of $20), produces dissonance. To reduce this dissonance, in this study the participants in the $1 condition rated the boring task more favorably than participants in the other two conditions, thereby providing some justification for their behavior (they did really lie). Ratings of task enjoyment were made on a −5 (extremely dull and boring) to +5 (extremely interesting and enjoyable) scale.
Source: Adapted from Festinger & Carlsmith, 1959.

the other conditions. Only the participants in the $1 condition rated the activities above the neutral point (**Figure 7.2**).

One takeaway message from this study is that if you want to persuade people to do something (such as take schoolwork seriously, protect the environment, or refrain from using foul language) and you want them to internalize the broader message behind the behavior, you should use the smallest amount of incentive or coercion necessary to get them to do it. In other words, don't go overboard with the incentives. If the inducements are too big, people will justify their behavior accordingly—"it was worth it for the payoff" (like participants in Festinger and Carlsmith's $20 condition)—and they won't have to rationalize their behavior by coming to believe in the broader purpose or philosophy behind it. But if the inducements are just barely sufficient (as in the $1 condition), their need to rationalize will tend to produce attitude change in line with their behavior.

INDUCED COMPLIANCE AND EXTINGUISHING UNDESIRED BEHAVIOR The flip side of this idea involves the use of mild versus severe punishments; this is illustrated by experiments using what is known as the "forbidden toy" paradigm (Aronson & Carlsmith, 1963; Freedman, 1965; Lepper, 1973). In one such study, a researcher showed nursery school children a set of five toys and asked them to say how much they liked each one. He then said he would have to leave the room for a bit, but would be back soon. In the meantime, each child was free to play with any of the toys except his or her second-favorite. Half the kids were told not to play with the forbidden toy because the experimenter would "be annoyed" if they did. This was the "mild threat" condition. In the "severe threat" condition, if the kids played with the forbidden toy, the experimenter "would be very angry" and "would have to take all the toys and go home and never come back again."

While the experimenter was gone, each child was covertly observed, and none played with the forbidden toy. The investigators predicted that not playing with the forbidden toy would produce dissonance, but only for the children in the mild threat condition. For all children, not playing with the toy would be inconsistent with the fact that it was highly desirable, but for those who received the severe threat, the severity of the threat justified not playing with the toy. For children who received only a mild threat, there would be no such justification, producing dissonance, and they would likely resolve the inconsistency by devaluing the toy, convincing themselves it wasn't so great after all.

To find out whether these predictions were correct, the children had to reevaluate all five toys when the experimenter returned. As expected, those in the severe threat condition either didn't change their opinion of the forbidden toy or liked it even more than before (**Figure 7.3**). In contrast, many of those in the mild threat condition viewed the toy less favorably. Thus, the threat of severe punishment will keep children from doing something you don't want them to do; but they will still, later on, want to do it. The threat of mild punishment—if it's just enough of a threat to keep them from doing it—can bring about psychological change, such that they'll no longer be tempted to do what you don't want them to do. Contrary to the old adage, you should spare the rod.

Those who did not play with the toy after receiving a mild threat needed to justify their inaction, so many of them devalued the toy.

Those who did not play with the toy because they were severely threatened experienced no dissonance and liked the toy as much as or more than before.

Percentage of subjects

(y-axis: 70, 60, 50, 40, 30, 20, 10, 0)

Legend: ■ Increased ■ Same ▨ Decreased

(x-axis: Mild threat, Severe threat)

Threat condition

FIGURE 7.3
DEVALUING THE FORBIDDEN TOY
For this study, the graphs show the percentages of children in the mild and severe threat conditions whose opinion of the forbidden toy increased, stayed the same, or decreased.
Source: Adapted from Aronson & Carlsmith, 1963.

When Does Inconsistency Produce Dissonance?

Festinger's original insight was that holding two inconsistent cognitions triggers dissonance. But what constitutes inconsistency? And what's so jarringly unpleasant about inconsistency? These questions lead us to wonder which situations are likely to cause dissonance and which ones aren't.

Eliot Aronson offered an answer. A given inconsistency will arouse dissonance, Aronson argued, if it implicates our core sense of self (Aronson, 1969; Sherman & Gorkin, 1980). People like to think of themselves as rational, morally upright, worthy individuals, and anything that challenges such assessments tends to produce dissonance (Kouchaki & Gino, 2016). Expending great effort to join a boring group calls into question our wisdom and rationality; telling another student that a tedious task is interesting challenges our integrity.

To understand the sorts of cognitions that might challenge our sense of our good judgment and personal character, it's useful to think about when *someone else's* actions make us question *that person's* character and also to think of the justifications someone else could offer that would *prevent* us from questioning that person's judgment or moral fiber. Suppose you ask a tech-savvy friend to help you with a computer problem, but he says no. How harshly would you judge him? The answer probably depends on several factors. First, you wouldn't blame him if he couldn't have acted otherwise—for example, if he was at work and his boss wouldn't let him leave. He had no choice. Second, you probably wouldn't blame him much if he could justify his actions; perhaps he had to study for a really important exam. He *could* have helped out—he had some choice in the matter—but it's clear that doing so would have been really costly for him. Third, you'd probably judge him more or less harshly in rough proportion to how much harm resulted from his failure to help. You'd (understandably) think worse of him if you ended up failing a course because of it than if you were simply prevented

Pascal's Wager: The Birth of Cost-Benefit Analysis and Cognitive Consistency Theory

In a single stroke Blaise Pascal, the seventeenth-century French mathematician and Catholic philosopher, gave an impetus to both modern cost-benefit analysis (comparing the total expected costs and benefits of different options and choosing accordingly) and cognitive consistency theory. Why should people believe in God? *Benefit*: If God exists and we believe in God, we'll probably behave in such a way to guarantee eternal life. *Cost*: Not much, just forgoing a few guilty pleasures and avoiding some sins. Why should people *not* believe in God? *Benefit*: Not much, just going ahead and indulging in those pleasures and sins. *Cost*: Eternal damnation.

Anyone who accepts the logic of these arguments would agree that it would be foolhardy not to wager that God exists and choose to believe in God. The benefits clearly outweigh the costs.

Payoff Matrix for Pascal's Wager

|	God exists	God does not exist
Belief in God	$+\infty$ (infinite gain)	-1 (finite loss)
Disbelief in God	$-\infty$ (infinite loss)	+1 (finite gain)

The problem, however, is that logically concluding that it pays to believe in God may not be enough to make a person truly believe. Pascal recognized that some people will say, "Try as I might, I simply cannot believe. What can I do?" As a solution, Pascal appealed to a version of what we would now call cognitive consistency theory, advising nonbelievers to behave as believers do: pray, light candles, attend church. If they behaved in such a

BLAISE PASCAL

way, Pascal reasoned, their beliefs would change to be consistent with their behavior. Problem solved. (But note that although Pascal was on to something very important about people's need for cognitive consistency, scholars such as Voltaire and Diderot had no difficulty spotting and articulating logical flaws in Pascal's argument for believing in God.)

---

from checking Facebook or surfing the Internet. Finally, you wouldn't blame him much if you'd never told him just how badly you needed his help; after all, he had no way to foresee the harm his refusal might cause.

This analysis of when we hold other people responsible for their actions helps us understand when we will hold *ourselves* responsible for our behavior and experience dissonance as a result. Specifically, this analysis suggests that we ought to experience dissonance whenever we act in ways that are inconsistent with our core values and beliefs and (1) the behavior was freely chosen, (2) the behavior wasn't sufficiently justified, (3) the behavior had negative consequences, and (4) the negative consequences were foreseeable.

FREE CHOICE The critical role of freedom of choice was first demonstrated (and replicated many times) in a study in which college students were offered either $0.50 or $2.50 to write an essay in favor of a state law banning communists from speaking on college campuses (Linder, Cooper, & Jones, 1967). (Since the original experiment was done in the mid-1960s, both payments seem low now;

---
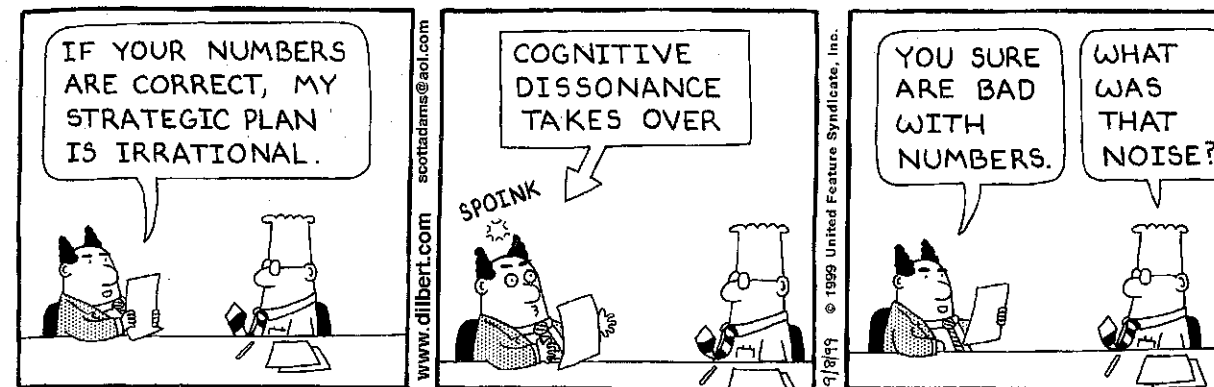
for comparable amounts today, it would be reasonable to multiply by a factor of 8: $4 and $20, respectively.) Because the law was at variance with the U.S. Constitution's guarantee of freedom of speech, nearly all students were opposed to it, and their essays thus conflicted with their true beliefs. For half the participants, their freedom to agree (or decline) to write such an essay was emphasized. For the other half, it was not. There was no dissonance effect among participants for whom their freedom to agree or decline was *not* emphasized. Indeed, those paid $2.50 later expressed attitudes more in favor of the ban than those paid $0.50 (presumably because writing the essay was associated with the good feelings that accompany the larger reward). In the free-choice group, however, the standard dissonance effect was obtained: those paid $0.50 changed their attitude more than those paid $2.50.

INSUFFICIENT JUSTIFICATION This last experiment, like all the induced-compliance studies (including Festinger and Carlsmith's original $1/$20 study), also demonstrates the role of insufficient justification in arousing dissonance. If a person's behavior is justified by a powerful incentive of some sort, even behavior that dramatically conflicts with the person's beliefs won't produce dissonance. Those paid $2.50 (about $20 today) for writing an essay that was inconsistent with their true beliefs felt no pressure to change their attitudes because their behavior was justified by the large cash payment. Those paid only $0.50 (about $4 today) had no such justification and thus felt the full weight of their behavioral inconsistency.

NEGATIVE CONSEQUENCES If nothing of consequence results from actions that are at variance with our attitudes and values, it's easy to dismiss them as trivial. Indeed, studies show that people experience dissonance only when their behavior results in harm of some sort. One such study, using Festinger and Carlsmith's paradigm, induced participants to tell someone (who was actually an associate working with the researchers) that a boring experiment was very interesting by offering either a small or a large incentive for doing so (Cooper & Worchel, 1970). Half the time, the confederate appeared convinced that the boring task was going to be interesting, and half the time the confederate clearly remained unconvinced: "Well, you're entitled to your own opinion, but I don't think I've ever enjoyed an experiment, and I don't think I'll find this one much fun." Note that there were no negative consequences when the person appeared unconvinced: no one was deceived. So, if negative consequences are necessary for the arousal of dissonance, the standard dissonance effect should occur only when the person is convinced and the participant feels like a deceiver. That's exactly

what happened: the boring task was rated more favorably only by participants who were offered little incentive to lie to another person and the person appeared to believe the lie.

FORESEEABILITY We typically don't hold people responsible for harm they've done if the harm wasn't foreseeable. If a dinner guest who is allergic to peanuts becomes ill after eating a dish with peanut sauce, we don't hold the host responsible if the guest never informed the host of the allergy. As this example suggests, it may be the *foreseeability of the negative consequences of our actions that generates* cognitive dissonance. Negative consequences that aren't foreseeable don't threaten a person's self-image as a moral and decent person, so they shouldn't arouse dissonance.

Supporting this reasoning are experiments in which participants are induced to write an essay in favor of a position to which they are opposed (for example, that the size of the freshman class at their university should be doubled). If any negative consequences of such an action (the essays will be shown to a university committee charged with deciding whether to implement the policy) are made known to the participants after the fact, there's no dissonance and hence no attitude change in the direction of the essay they wrote. But if the negative consequences were either foreseen (participants knew beforehand that their letters would be shown to the committee) or foreseeable (they knew ahead of time that their letters *might* be shown to such a committee), the standard dissonance effect was obtained (Cooper, 1971; Goethals, Cooper, & Naficy, 1979).

Self-Affirmation and Dissonance

If dissonance results from threats to people's sense of themselves as rational, competent, and moral beings, it follows that they can ward off dissonance not only by dealing directly with the specific threat itself, but also indirectly by taking stock of their other qualities and core values. As we learned in Chapter 3, Claude Steele and his colleagues have argued that this sort of self-affirmation is a common way for people to cope with threats to their self-esteem (Cohen & Sherman, 2014; Correll, Spencer, & Zanna, 2004; McQueen & Klein, 2006; Steele, 1988). "Sure, I might have violated a friend's confidence, but I'm very empathetic when other people are having difficulties." "I know I drive an SUV, but no one attends church services more regularly than I do." By bolstering themselves in one area, people can tolerate a bigger hit in another.

Recent research has examined how self-affirmation can assuage the need to reduce dissonance in a situation that will be familiar to many of us. Imagine you're having a conversation with someone—a coworker, friend, family member—and in the course of the conversation the person makes a prejudicial remark with which you strongly disagree. Do you confront the person or let the remark pass? Let's be honest: we often let remarks like this slide because confrontation is uncomfortable and can have interpersonal costs (Czopp & Ashburn-Nardo, 2012). But for those of us who think it's important to confront

AFFIRMING THE SELF, WARDING OFF DISSONANCE
This pro-environment couple may ward off any dissonance that might get aroused by their choice to drive an SUV by reminding themselves how devoted they are to their church and its good works.

prejudice, not doing so arouses dissonance, and we start rationalizing our failure to act. And that's exactly what researchers have shown: people who value confronting prejudice but fail to do so end up evaluating the person making the prejudicial remark more favorably—and even reduce the importance they place on confronting prejudice in the first place (Rasinski, Geers, & Czopp, 2013). There's good news though. These researchers also showed that a simple self-affirmation intervention—giving nonconfronters a few minutes to make a list of their positive characteristics—eliminated the need to reduce the dissonance arising from their failure to confront.
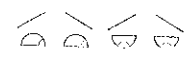
Is Dissonance Universal?

We have discussed cognitive dissonance as if it were a cross-culturally universal phenomenon. Is it? Research on this question has yielded some interesting answers. Using the free-choice, self-affirmation paradigm, researchers asked all the participants in a study to choose between two objects (CDs, in this case) to see if they would exhibit the dissonance effect by rationalizing their decision as the correct one. The researchers, however, first gave some participants self-affirmation in the form of positive feedback on a personality test (Heine & Lehman, 1997). The participants were Japanese and Canadian, and the researchers wanted to see if the dissonance effect was the same in people from these two different cultures. The results for the Canadians were similar to those in earlier studies: they showed a substantial dissonance effect in the control condition, finding previously unnoticed attractions in the chosen CD and previously unnoticed flaws in the unchosen one, but no dissonance effect if they had received positive feedback about their personalities. The Japanese participants, in contrast, were unaffected by the self-affirmation manipulation. More striking still, they showed no dissonance effect in *either* condition, which led the researchers to conclude that dissonance might be a phenomenon unique to Westerners. But using an induced-compliance paradigm, researchers in another study persuaded participants to do something they didn't want to do and found dissonance effects for Japanese participants—if they were led to think that other students were observing their behavior (Sakai, 1981).

As we have emphasized throughout this book, East Asians, along with many other people in the world, are more attuned than Westerners are to other people and their reactions. If East Asians exhibit dissonance effects in the induced-compliance paradigm because they question their actions when others are observing them, then they should also show dissonance effects in the free-choice paradigm if they are led to think about other people's possible reactions to their choice.

This outcome was demonstrated in a study in which investigators had participants choose between two CDs under one of two circumstances (Kitayama, Snibbe, Markus, & Suzuki, 2004). For some participants, hanging right in front of them at eye level was the poster shown in **Figure 7.4** (see p. 226), allegedly a prop from an unrelated experiment. But in actuality, the researchers wanted to see whether the schematic faces in the poster might prime the concept of "social others," thereby prompting the Japanese participants to show a dissonance effect. And that's what happened: in the standard free-choice condition, the Japanese showed no evidence of dissonance reduction, but in the poster condition they did. American participants actually showed the same or even slightly less dissonance reduction in the poster condition than in the standard condition.

FIGURE 7.4

FIGURE 7.4
CULTURE AND PRIMING
This is the poster used by researchers to prime the idea of "social others." The labels were included simply to make the poster look like part of another, unrelated experiment.
Source: Adapted from Kitayama et al., 2004.

Another research team observed a similar effect of social priming when they had participants choose a CD either for themselves or for a friend (Hoshino-Browne, Zanna, Spencer, & Zanna, 2004). Euro-Canadians, as well as Asian-Canadians who only weakly identified themselves as Asians, showed much larger dissonance effects when choosing for themselves than when choosing for a friend; but Asian-Canadians who strongly identified themselves as Asians showed much larger dissonance effects when choosing for a friend than when choosing for themselves.

◀ LOOKING BACK

Behavior can have a powerful influence on attitudes, largely because people like their attitudes to be consistent with their behavior. Inconsistency between cognitions, values, or actions usually produces cognitive dissonance. We can reduce dissonance by changing our attitudes to be in line with our behavior. Dissonance is more pronounced when the inconsistency implies that the self is deficient in some way. Therefore, when we can affirm the self somehow, we are less susceptible to dissonance. Different circumstances arouse dissonance in people of different cultures.

Self-Perception Theory

Like all prominent theories that have been around for a long time, cognitive dissonance theory has faced many theoretical challenges, and there have been numerous critiques. One critique, however, stands out above all others in its impact: Daryl Bem's self-perception theory (Bem, 1967, 1972). The theory began as an alternative account of all of the cognitive dissonance findings, but it has important implications for self-understanding more generally, and it offers novel explanations for many real-life choices and behaviors.

Inferring Our Own Attitudes

According to Bem's **self-perception theory**, people don't always come to know their own attitudes by introspecting about what they think or how they feel about something. Rather, they often look outward, at their behavior and the context in

self-perception theory The theory that people come to know their own attitudes by looking at their behavior and the context in which it occurred and inferring what their attitudes must be.

which it occurred, and *infer* what their attitudes must be. Self-perception works just like social perception. People come to understand themselves and their attitudes in the same way that they come to understand others and their attitudes.

At first this idea seems bizarre—as implausible as the old joke about two behavioral psychologists who've just finished having sex: one turns to the other and says, "That was great for you, how was it for me?" The theory feels wrong on a gut level because we're convinced that sometimes we "just know" how we feel about something, and we don't need to engage in any process of inference to find out. But on closer inspection, self-perception theory makes a lot of sense, in part because Bem concedes that sometimes we can just analyze our thoughts to figure out our attitudes. It's only when our prior attitudes are "weak, ambiguous, and uninterpretable," he argues, that "the individual is functionally in the same position as an outside observer" (Bem, 1972, p. 2).

This caveat is helpful. Most of us can remember times when we figured out how we felt about something by examining our behavior. "I guess I was hungrier than I thought," you might say after downing a second bacon cheeseburger. The key question, then, is whether the inference process that is the focus of self-perception theory applies only to such trivial matters as these or whether the process operates when we grapple with attitudes of substance, such as working on a political campaign or choosing to buy a particular car.

Bem's account of dissonance effects is quite simple. He argues that people aren't troubled by any unpleasant state of arousal like dissonance; they merely engage in a rational inference process. They don't *change* their attitudes; rather, they infer what their attitudes must be. People value what they have chosen more after having chosen it because they infer that "If I chose this, I must like it." People form tight bonds to groups that have unpleasant initiation rituals because they reason that "If I suffered to get this, I must have felt it was worth it." And people who have little incentive to tell someone a task is interesting come to view the task more favorably because they conclude that "There's no other reason I would say this is interesting if it wasn't, so it really must be."

In support of this explanation, Bem showed that when *observer-subjects* (participants who only observe a situation versus actually experiencing it for themselves) read descriptions of dissonance experiments and are asked what attitude a participant would have had, the observer-subjects replicate the attitudes of the actual participants (Bem, 1967, 1972). They assume, for example, that a person who was paid only $1 to say that working on a boring task was interesting would have more favorable attitudes toward the task than a person paid $20. Bem reasoned that if the observers come up with the same inferences about attitudes as the attitudes reported by the actual participants, there's no reason to assume the participants themselves arrived at their beliefs because they were motivated to reduce dissonance.

Reconciling the Dissonance and Self-Perception Accounts

As already noted, cognitive dissonance theory states that the inconsistency between behavior and prior attitudes or values produces an unpleasant physiological state that motivates people to reduce the inconsistency. If there's no unpleasant psychological arousal, there's no attitude change. Self-perception theory, in contrast, contends that no arousal is involved: people coolly and rationally

infer what their attitudes must be in light of their behavior and the context in which it occurred. Therefore, any decisive test to determine which of the two theories is more accurate should focus on whether people experience arousal in the standard dissonance paradigms (for example, the induced-compliance paradigm) and in similar everyday situations.

Considerable evidence indicates that, as dissonance theory predicts, acting at variance with our true beliefs does indeed generate arousal (Elliot & Devine, 1994; Galinsky, Stone, & Cooper, 2000; Harmon-Jones, 2000; Norton, Monin, Cooper, & Hogg, 2003; Waterman, 1969). Dissonance arousal has been detected with explicit, self-report measures (Elliot & Devine, 1994), as well as with more implicit measures, such as recordings of the electromyographic (EMG) activity of facial muscles associated with arousal (Martinie, Oliver, Milland, Joule, & Capa, 2013). And there's evidence that efforts to dispel such arousal and restore consistency motivates the types of attitude change found in dissonance experiments (Harmon-Jones, Brehm, Greenberg, Simon, & Nelson, 1996). It thus appears that dissonance theory is the proper account of the phenomena observed in these experiments (and their real-world counterparts), not self-perception theory.

But self-perception theory and the studies Bem offered in support of his theory capture some important aspects of how the mind works. In fact, a consensus has emerged among social psychologists that dissonance reduction processes and self-perception processes both occur, and both of them influence people's attitudes and broader views of themselves. Dissonance reduction processes are activated when behavior is inconsistent with preexisting attitudes that are clear-cut and of some importance. Self-perception processes, in contrast, are invoked when behavior conflicts with attitudes that are relatively vague or of less import (Chaiken & Baldwin, 1981; Fazio, Zanna, & Cooper, 1977).

This consensus view might make it seem as if self-perception processes are relegated to the trivial fringe of social life. They aren't. Substantial research has made it clear that a surprising proportion of our attitudes *are* rather weak and ambiguous. Although self-perception processes typically influence unimportant attitudes more than important ones, at times they do influence important attitudes—and important subsequent behavior. For example, studies have shown

that we exhibit the self-perception process—inferring our own attitudes by observing our behavior—when it comes to such important areas as whether we're likely to contribute to the public good (Freedman & Fraser, 1966; Uranowitz, 1975), whether we're likely to cheat to reach a goal (Dienstbier & Munter, 1971; Lepper, 1973; see **Box 7.4**, p. 230), our judgments of the precise emotion we're feeling and how strongly we feel it (Dutton & Aron, 1974; Schachter & Singer, 1962), our assessments of our own personality traits (Schwarz et al., 1991), and whether we truly enjoy an activity we have engaged in our entire life (Lepper & Greene, 1978).

In addition, the crux of self-perception theory—that we use whatever cues we have available to us to figure out what we think and how we feel, including knowledge of the surrounding context and how we've acted—fits with a tremendous amount of recent evidence that our thoughts and feelings are affected by, even grounded in, our physical states and bodily movements. This area of inquiry, on "embodied" cognition and emotion, is currently being pursued in many areas of psychology.

The Embodied Nature of Cognition and Emotion

A variety of physical actions are associated with different psychological states. When we're happy, we tend to smile; if we don't like something, we're inclined to push it away; and if we agree with something, we nod our head up and down. This is the behavioral component of attitudes discussed earlier: the motor actions of smiling, pushing, and nodding *are important parts of* our attitudes. As a result, if we're induced to make the bodily movements associated with certain attitudes, beliefs, or emotions, we might come to have, or find it easier to have, those very attitudes, beliefs, or emotions. In other words, in figuring out what we think, feel, or believe, we draw on whatever cues are available to us—including what our body is doing—without being consciously aware that we are doing so.

In one early demonstration of this effect, Gary Wells and Richard Petty (1980) had students ostensibly test a set of headphones by moving their heads up and down or side to side while listening to radio editorials. When later asked about the viewpoints advocated in the editorials, the students indicated that they agreed with them more if they'd listened to them while nodding their heads up and down than if they'd listened while shaking their heads from side to side.

Other researchers have explored the implications of our tendency to push away things we find aversive and pull toward us things we find appealing (see Chapter 1). Because extending the arm is closely associated with negative stimuli (things we want to push away) and flexing the arm is associated with positive stimuli (things we want to pull toward us), being induced to make these bodily movements can have predictable effects on attitudes. In one study, John Cacioppo, Joseph Priester, and Gary Berntson (1993) showed college students a series of 24 Chinese ideographs while they were either pressing down on a table (arm extension) or lifting up on a table from underneath (arm flexion). The students evaluated

The overjustification Effect and Superfluous Rewards

If you dropped in on a family dinner in a foreign country and heard a parent tell a child she had to eat her *pfunst* before she could eat her *pfeffatorst*, you'd immediately conclude that the youngster didn't like *pfunst* but loved *pfeffatorst*. Things people do only to get something else are typically things they don't particularly like. But what happens if the child actually likes *pfunst*? Because the parents are making her eat *pfunst* in order to have the privilege of eating *pfeffatorst*, she might decide maybe *pfunst* isn't so great after all.

Self-perception theory makes just such a prediction, and this tendency to devalue those activities we perform, even if they are pleasing, in order to get something else is known as the *overjustification effect* (Lepper, Greene, & Nisbett, 1973). The initial justification for performing the pleasing activity (eating *pfunst*) is evident: we would do it because it's inherently rewarding—this is the intrinsic reason we do it. But we also do it because there's an external payoff (eating *pfeffatorst*)—this is the extrinsic reason. Because the extrinsic reason would be sufficient to produce the behavior, we might discount the intrinsic reason and conclude that we don't much like the activity for its own sake.

Particularly intriguing evidence for the overjustification effect comes from a study of children's choice of activities in school. Investigators showed two attractive drawing activities to elementary school children. In one condition, the researchers told the children they could first do one drawing activity and then the other. In a second condition, they were told they *must* do one activity *in order to* do the other. (In both conditions, the experimenters counterbalanced which activity came first.) For several days after this initial drawing session, the experimenters put out both drawing activities during the school's free-play period and covertly observed how long the children played with each activity. Those who earlier had simply drawn first with one and then the other played with both activities equally often. But those who earlier had used one *in order to* use the other tended to avoid the former (Lepper, Sagotsky, Dafoe, & Greene, 1982). Their intrinsic interest in the first drawing activity had been undermined.

The overjustification effect has important implications for how rewards should be used in education and raising children. It's common practice, for example, to reward children for reading books, getting good grades, or practicing the piano. That's fine if the child wouldn't otherwise read, study, or practice. But if the child has some interest in these activities to begin with, the rewards might put that interest in jeopardy. In one powerful demonstration of this danger, researchers introduced a set of novel math games into the free-play portion of an elementary school curriculum. As **Figure 7.5** shows, the children initially found the games interesting, as indicated by the amount of time they played with them at the outset of the experiment (baseline phase). Then, for several days afterward, the investigators instituted a "token-economy" program whereby the children could earn points redeemable for prizes by playing with the math games. The more they played, the more points they earned. The token-economy program was effective in increasing how much the children played the games (green bar in the treatment phase). But what happened when the token-economy program was terminated and the children no longer earned points for playing the games? Would they still play with them as much? As the blue bar indicates, they did not. Having once received rewards for these activities, the children came to see the math games as something

Time spent playing with math games (in minutes)
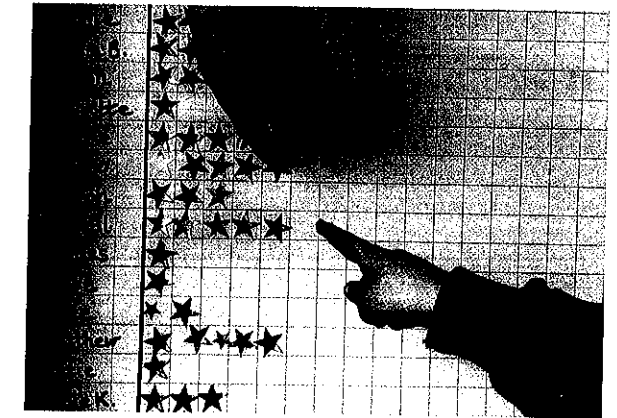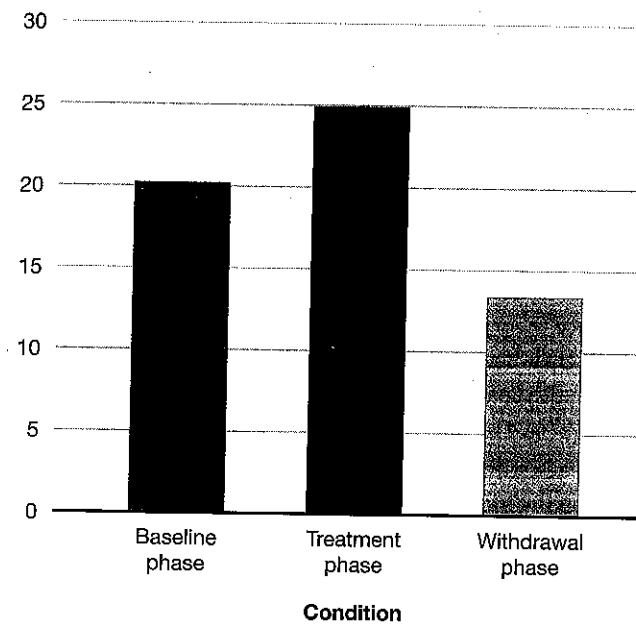
FIGURE 7.5 The Effects of Superfluous Rewards This graph shows the amount of time elementary school children spent playing math games originally (baseline phase), when they received rewards for playing them (treatment phase), and afterward (withdrawal phase).
SOURCE: Adapted from Greene et al., 1976.

to do only to get a reward, and their original interest was diminished (Greene, Sternberg, & Lepper, 1976).

Such findings don't imply that giving out rewards is always a bad thing. People aren't always intrinsically motivated, and when they aren't, rewards are often the best way to get them to do something they would not otherwise do. Rewards can also be administered in ways that minimize their negative impact. For instance, rewards can be performance contingent, or based on how well someone performs. These have been shown to be less likely to decrease interest in an activity than task-contingent rewards, which are simply based on doing a task or not (Deci & Ryan, 1985; Sansone & Harackiewicz, 2000).

---

the ideographs presented while they flexed their arms more favorably than those presented while they extended their arms (see also Chen & Bargh, 1999; Epley & Gilovich, 2004; Friedman & Forster, 2000). Effects like these challenge the idea (as self-perception theory does) that our attitudes, knowledge, and beliefs are stored as abstract propositions or representations in the brain. They support an alternative view that our attitudes and beliefs, and even the most abstract concepts, are partly "embodied" in the physical movements associated with those attitudes, beliefs, or concepts (Barsalou, 2008; Niedenthal, Barsalou, Winkielman, Krauth-Gruber, & Ric, 2005). Part of the attitude of disapproval or the belief that we don't like something is represented in the physical act of pushing away. Even our understanding of sentences like "He raced down the corridor" is grounded in the physical act of running. When people read such a sentence, motor regions associated with running become ever so slightly activated, and when they read "Raymond picked up the Easter egg," brain areas involved in

grasping become activated (Speer, Reynolds, Swallow, & Zacks, 2009). This explains why people who have had Botox injections (which smooth out wrinkles in the face by immobilizing facial muscles) have a harder time processing sentences containing emotion. Without being able themselves to mimic the emotional expressions as they are reading, the very concepts of sad, angry, and so on, are a bit harder to access and comprehend (Havas, Glenberg, Gutowski, Lucarelli, & Davidson, 2010).

Thus, the seemingly abstract, cognitive act of comprehension isn't always abstract. To understand something—whether an abstract proposition, a sentence of text, or a possible future state of the world (like cars being self-driven)—people must mentally "try it on," or simulate it. And what our body is doing or how it's feeling can facilitate or impede the act of simulation, influencing what we think and feel. Consider the finding that people believe more in the reality of global warming and see it as a more serious threat on hotter days than on cooler

days (Li, Johnson, & Zaval, 2011; Risen & Critcher, 2011). In one study, participants were inside a laboratory where the thermostat was set to either 81 or 73 degrees Fahrenheit. Respondents in the warmer room expressed greater belief in global warming. The effect was strong enough that conservatives in a warm room expressed the same concern about the problem as liberals in a cold room. In other words, the effect of the temperature of the room was comparable in magnitude to the effect of political attitudes. It seems, then, that to get a handle on the idea of global warming, we must mentally simulate it, and we do so much more easily when we feel warm (Risen & Critcher, 2011).

← LOOKING BACK

In contrast to cognitive dissonance theory, self-perception theory maintains that people infer their attitudes from their behavior. Experimental evidence, however, has shown that people do experience dissonance arousal and it often motivates attitude change. Nevertheless, researchers have reconciled these two theories by showing that dissonance theory best explains attitude change for preexisting clear-cut attitudes, whereas self-perception theory can explain attitude change for less clear-cut attitudes. Recent research on embodied cognition indicates that people draw on all sources of information—not just the actions they have performed, but also the precise movements of the body—to comprehend ideas and determine their attitudes.

Beyond Cognitive Consistency to Broader Rationalization

The core of dissonance theory is the idea that people find cognitive inconsistency uncomfortable and therefore try to find ways to relieve the discomfort. Other kinds of tension, of course, can also produce uneasiness, and social psychologists have advanced theories about how we respond to these other sources of discomfort. One deals with the uneasiness that arises when thinking about the problems associated with the broader sociopolitical system to which we are committed. Another deals with the extreme anxiety—indeed, the terror—that can accompany thinking about the inevitability of death.

System Justification Theory

Chapter 3 discusses our need to think well of ourselves, or what some have called ego justification motives (Jost, Banaji, & Nosek, 2004; Jost & van der Toorn, 2012). Chapter 11 discusses our need to think well of the groups to which we belong, or group justification motives. But beyond the desire to think highly of our own talents or to take pride in being, say, a Canadian, a Christian, or a conservative, we want to think highly of the larger sociopolitical system we are part of—we want to see it as fair, just, and desirable (Jost & Banaji, 1994; Jost et al., 2004).

Social psychologists who have studied these tendencies recognize that social and political systems don't serve everyone's needs equally. Those who benefit the most from a given system, such as the wealthier and more powerful people in society, have both a psychological motive and an economic incentive to defend the system. People who don't benefit from the system (or are even disadvantaged by it) obviously don't have an economic incentive to defend the system, but they do have a psychological incentive to do so. According to **system justification theory**, believing that the world is or should be fair, combined with abundant evidence of inequality, can generate a fair amount of ideological dissonance. Extolling the virtues of the prevailing system is typically an easier way of reducing that dissonance than bringing about effective change. Protest is hard; justification is easy.

Common observations that seem to support system justification theory are the fact that many women report that they deserve lower pay than men doing the same work (Hogue, DuBois, & Fox-Cardamone, 2010; Jost, 1997; Major, 1994; O'Brien, Major, & Gilbert, 2012) and the fact that low-income groups in the United States don't necessarily support more egalitarian economic policies over the status quo (Fong, 2001; Jost, Pelham, Sheldon, & Sullivan, 2003; Rodriguez-Bailon et al., 2017). Some of the most interesting support for the system justification perspective comes from studies that look at compensatory stereotypes, or beliefs that those who occupy less privileged roles in a society nonetheless derive a number of compensatory benefits: "Low-income people may be poor, but they're happier than the wealthy." "Women may not have much power, but they're nicer, warmer, and more socially connected than men." These stereotypes give ideological support to the status quo, making people more accepting of current gender roles and more accepting of the broader sociocultural status quo (Jost & Kay, 2005; Kay & Jost, 2003).

Terror Management Theory

Humans may be the only organisms who know with certainty that they will die. For many people, thinking about the inevitability of their own death—really pondering it and letting it sink in—brings on a level of anxiety that verges on debilitating. **Terror management theory (TMT)** specifies what people do to deal with the potentially crippling anxiety associated with the knowledge of death, in order to get on with their life.

The most common approach is denial—to maintain that it's only the physical body and this particular earthly existence that will come to an end. Many people, all around the world, believe they will go on living in some form after life on Earth is over. But beyond this common form of what has been called "the denial of death" (Becker, 1973), people can derive some solace from believing that although they personally will cease to exist, many of the things they value will live on. For many, this sort of indirect immortality is achieved by thinking about their parental role. They won't live on, but their children and grandchildren will. This viewpoint may explain why men who are reminded of the inevitability of their own death express an interest in having more children (Wisman & Goldenberg, 2005).
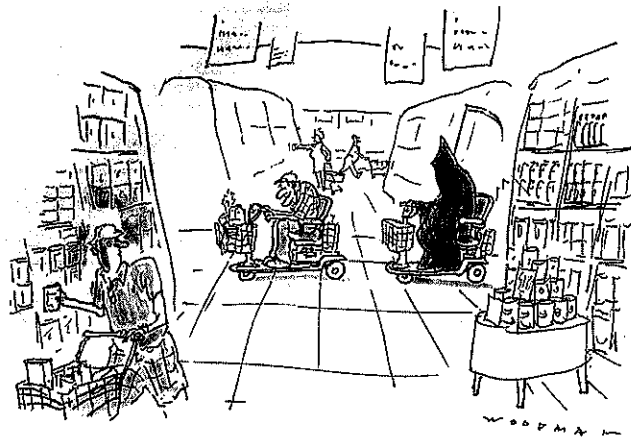
SYSTEM JUSTIFICATION To defend the prevailing sociopolitical system to which they belong, economically disadvantaged people often defend their own disadvantage. For example, sometimes women, such as the nurse shown here, report feeling they deserve to make less money than their male counterparts doing the same work.

system justification theory The theory that people are motivated to see the existing sociopolitical system as desirable, fair, and legitimate.

terror management theory (TMT) The theory that people deal with the potentially crippling anxiety associated with the knowledge of the inevitability of death by striving for symbolic immortality through preserving valued cultural worldviews and believing they have lived up to the culture's standards.

TMT further emphasizes that people try to achieve symbolic immortality by thinking of themselves as connected to a broader culture, worldview, and set of values. We will certainly die at some point, but many of the things we value most—our country; freedom and democracy; Christianity, Judiasm, Buddhism, or Islam; or even our alma mater or favorite sports team—will live on long after we ourselves do. To the extent that people are closely connected to such institutions, they symbolically live on along with them. Indeed, people tend to vigorously embrace their broader worldview and cultural institutions when reminded of their own inevitable death.

But to live on, even symbolically, with a broader cultural institution, we must be a member "in good standing" with the institution—or at least think we are. It's only when we feel good about who we are that we can feel meaningfully connected to the institutions and worldviews we care about and thus feel a sense of symbolic immortality. Terror management theory therefore maintains that we should be especially concerned with striving to achieve and maintain high self-esteem when our mortality is brought to mind, or made salient.

Terror management theorists have tested their ideas by subjecting participants to manipulations intended to make their mortality salient. The most common manipulation is to have participants write out responses to two directives: "Briefly describe the emotions that the thought of your own death arouses in you" and "Jot down, as specifically as you can, what you think will happen to *you* as you physically die." In other studies, participants have been asked to fill out surveys in front of a funeral home—a location associated with death—or they've been shown pictures of fatal car accidents.

Consistent with the tenets of TMT, mortality salience manipulations have been shown to make people more hostile to those who criticize their country (Greenberg et al., 1990), more committed to their ingroups and more hostile to outgroups (Dechesne, Greenberg, Arndt, & Schimel, 2000; Greenberg et al., 1990), more eager to punish those who challenge prevailing laws and established procedures (Rosenblatt, Greenberg, Solomon, Pyszczynski, & Lyon, 1989), and more reluctant to use cultural artifacts such as a crucifix or the U.S. flag for a mundane, utilitarian purpose (Greenberg, Simon, Porteus, Pyszczynski, & Solomon, 1995). Making death salient, in other words, makes people want to uphold the values of the institutions they identify with and that will live on after them.

It isn't hard to think of potential political implications of terror management concerns. For example, in the run-up to the 2004 U.S. presidential election, survey respondents gave their opinions about either the Democratic challenger, John Kerry, or the incumbent Republican, George W. Bush (Landau, Solomon, Greenberg, Cohen, & Pyszczynski, 2004). Some participants responded after their mortality was made salient, and others did so after writing about their experience with dental pain. Because Bush, as the incumbent president, was the head of the country and was seen by many as the leader of the fight against al-Qaeda and other terrorist organizations, the

"The future's uncertain and the end is always near."
—THE DOORS, "ROADHOUSE BLUES"

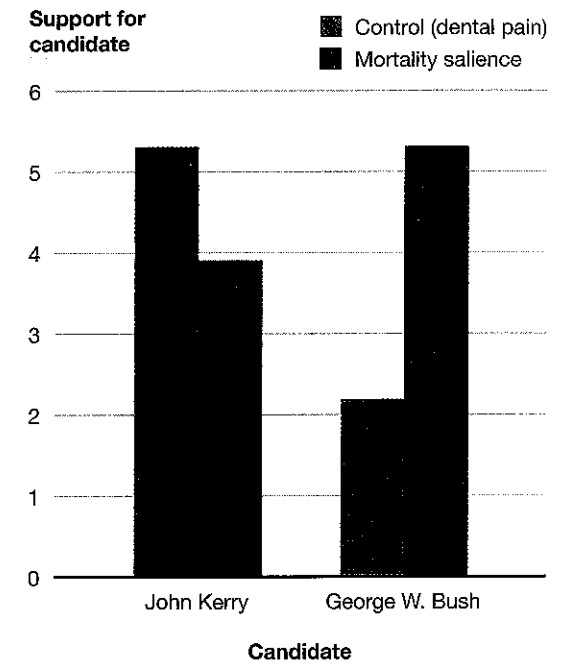**MORTALITY SALIENCE AND NATIONALISM**
This outpouring of nationalist sentiment during this multi-denominational prayer service at Yankee Stadium following the 9/11 attacks on the World Trade Center and the Pentagon may have been partly fueled by the very salient reminder of our own mortality the attacks provided.

investigators predicted that survey respondents would be more favorable to Bush and less favorable to Kerry after a mortality salience manipulation. As **Figure 7.6** indicates, this prediction was confirmed.

There's also support for TMT's contention that mortality salience increases striving for self-esteem (Arndt, Schimel, & Goldenberg, 2003; Kasser & Sheldon, 2000; Taubman-Ben-Ari, Florian, & Mikulincer, 1999). In one study, participants in one condition read an essay stating that the scientific consensus on reports of near-death experiences—such as feelings of leaving and looking down at one's body—is that such sensations are expected, given the makeup of the brain, and they don't suggest in any way the existence of life after death (Dechesne et al., 2003). Participants in another condition read an essay arguing that such reports point to the plausibility of some sort of life after death. Next, all participants received favorable feedback about themselves from unreliable sources, such as horoscopes, and then rated the source's validity. Those who read the essay that cast doubt on life after death rated the feedback as more valid than those who read the essay that encouraged belief in an afterlife. In other words, if we can believe there is life after death, we needn't be so concerned with living on symbolically, so the need for self-esteem is reduced.

⊖ LOOKING BACK

The tendency to rationalize goes beyond our attempts to resolve personal cognitive inconsistencies. We are motivated to see the broader sociopolitical system in which we live as fair and just and good. We're also motivated to deal with the anxiety that comes from being reminded of our mortality, and we often do so by adhering more closely to our worldviews and finding ways to boost our self-esteem.

Support for candidate

■ Control (dental pain)
■ Mortality salience

[Bar chart with y-axis from 0 to 6; x-axis labeled "Candidate" with John Kerry and George W. Bush]

Candidate

FIGURE 7.6
MORTALITY SALIENCE AND SUPPORT FOR CANDIDATES IN THE 2004 U.S. PRESIDENTIAL ELECTION
Survey respondents reported their attitudes toward presidential candidates John Kerry and George W. Bush either under normal survey conditions or after a mortality salience manipulation.
Source: Adapted from Landau et al., 2004.

Chapter Review

SUMMARY

Components and Measurement of Attitudes

- An *attitude* is an evaluation of an object along a positive-negative dimension; it includes three core components: affect (emotion), cognition (thoughts and knowledge), and behavior (the tendency to approach or avoid the object).
- Attitudes can be measured with self-report *Likert scales*. Their strength or importance can be assessed with *response latencies* that capture attitude accessibility (how readily the attitude can become active in an individual's mind). Attitude linkage measures gauge attitude centrality (how closely an attitude is correlated to attitudes about other issues). *Implicit attitude measures* tap into attitudes people are unaware they have or may be unwilling to report.

Predicting Behavior from Attitudes

- It can be hard to predict behavior from attitudes because attitudes can conflict with other powerful determinants of behavior; the reasons underlying our attitudes can be difficult to pinpoint; and attitudes and behaviors may be at different levels of generality.

Predicting Attitudes from Behavior

- Behavior can have substantial effects on attitudes. Cognitive consistency theories emphasize how much people value consistency between their various attitudes and between their attitudes and behavior.
- *Cognitive dissonance theory* is based on the idea that people experience dissonance, or discomfort, when attitudes and behavior are inconsistent. To reduce the dissonance, people try bringing their attitudes in line with their behavior.
- After making a difficult choice between two objects or courses of action, people engage in dissonance reduction by finding new attractions in the chosen alternative and previously undetected flaws in the unchosen alternative.
- People engage in *effort justification* when they exert effort toward some goal and the goal turns out to be disappointing. They justify their expenditure of energy by deciding the goal is truly worthwhile.
- *Induced (forced) compliance* leads to a need to reduce dissonance. When induced to argue for a position at variance with their true attitudes, those who are poorly compensated feel they must justify their behavior and typically do so by changing their attitudes to align better with their behavior.
- Inconsistency between attitudes and behavior should produce dissonance only when there is free choice (or the illusion of it) to engage in the behavior, when there is insufficient justification for the behavior, when the behavior has negative consequences, and when the consequences were foreseeable.
- People can offset or reduce the negative effects of psychological inconsistency, and of threats to self-identity and self-esteem more generally, by engaging in self-affirmation: affirming other important elements of identity, such as values.
- Dissonance is apparently universal, but there are cultural differences in the conditions that prompt people to experience it. The Japanese tend to experience post-decision dissonance only when asked to think about what another person would choose.

Self-Perception Theory

- *Self-perception theory* is based on the premise that people change their attitudes to align with their behavior because they observe their behavior and the circumstances in which it occurs and then infer, just as an observer might, what their attitudes must be.
- Whereas self-perception may play a role in generating the effects in some dissonance experiments, evidence indicates that there is often a motivational component as well. Self-perception appears to account for attitude change when attitudes are weak or unclear to begin with, and more motivated dissonance reduction is invoked when attitudes are more strongly held.
- Bodily sensations are often incorporated into people's judgments about an object or appraisal of a situation.

Beyond Cognitive Consistency to Broader Rationalization

- According to *system justification theory*, people are motivated to justify the broader sociopolitical system of which they are a part. One way is through stereotypes that play up the advantages of belonging to relatively disadvantaged groups, such as the belief that the poor are happier than the rich.

- The certainty of mortality can elicit paralyzing anxiety. *Terror management theory* maintains that people often cope with this anxiety by striving for symbolic immortality through their offspring and through their identification with institutions and cultural worldviews that live on after their own death.

THINK ABOUT IT

1. Consider an attitude object you feel strongly about, something you love or something you hate. Maybe you're passionate about soccer. Perhaps you are staunchly opposed to capital punishment. Describe this attitude along the three elements of affect, cognition, and behavior.

2. Suppose you're an attitude researcher and want to assess participant attitudes about the institution of marriage. Describe three methods you might use in your assessment.

3. You have two close friends who you like very much, Tanya and Amanda. Unfortunately, Tanya can't stand Amanda. This makes your life difficult, as the three of you can never spend time together without Tanya getting irritated. Based on what you learned about cognitive dissonance theory, how might you go about getting Tanya to like Amanda more?

4. Although we readily assume that attitudes relate in meaningful ways to behavior, research suggests they don't always match up. Consider the dentist as the attitude object. Why might attitudes toward the dentist not necessarily predict behavioral responses to the dentist?

5. Suppose you're choosing between two vacation spots you think are equally amazing: Greece and Costa Rica. You have to pick one and elect to go to Costa Rica. Following your decision, Costa Rica starts to sound even more fantastic—zip-lining, cloud forests, and incredible wildlife. In contrast, Greece seems a little less special, it's expensive, and the beaches aren't really that nice. Describe a cognitive dissonance account of this change in your attitude following the decision.

6. Although your son already likes vegetables, you want him to eat even more vegetables. You decide to pay him $1 to spend at the toy store for every portion of vegetables he eats. Given what you learned about self-perception theory, is this a good approach? Why or why not?

The answer guidelines for the think about it questions can be found at the back of the book . . . 👉

ONLINE STUDY MATERIALS

Want to earn a better grade on your test?

Go to **INQUIZITIVE** to learn and review this chapter's content, with personalized feedback along the way.