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Attitudes and Attitude Change

Influencing Thoughts, Feelings, and Behaviour

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MARCH 1997. Quebec police were stunned when they learned that five people had committed suicide in Saint-Casimir, a village west of Quebec City. The people who died were members of the Solar Temple cult (discussed in Chapter 1). The cult was led by Luc Jouret and his right-hand man, Joseph Di Mambro. Those who joined the Solar Temple cult were mainly wealthy professionals, including the mayor of Richelieu, Quebec, his wife, people in upper management positions at Hydro-Québec, a journalist, and a civil servant. Jouret was a charismatic spiritual leader with formidable powers of persuasion. A cult member interviewed by *Maclean's* reported, "He asked all of us to empty our bank accounts" (Laver, 1994). She and her husband sold their property in Switzerland and handed over the proceeds—$300 000—to Jouret. Others followed suit. Most disturbing of all, Jouret convinced cult members that the world was about to be destroyed by fire and that the only salvation was to take a "death voyage" by ritualized suicide to the star Sirius, where they would be reborn.

The cult attracted worldwide attention in October 1994, when buildings used by Jouret and his followers in a small village in Switzerland, and a chalet owned by Di Mambro in Morin Heights, Quebec, erupted in flames. Swiss firefighters discovered a chapel in which 22 cult members, cloaked in ceremonial robes, lay in a circle, with their faces looking up at a Christ-like figure resembling Jouret. In Morin Heights, police found the bodies of cult members clad in ceremonial robes and wearing red and gold medallions inscribed with the initials *T. S.* (Temple Solaire). At the end of the day, the death toll was 53 people, including several children. It is believed that both Jouret and Di Mambro died in the Swiss fires. So did the mayor of Richelieu, Quebec, and his wife (Laver, 1994).

Sadly, the 1994 deaths did not put an end to the cult. Some of the remaining followers continued to take death voyages. Although Quebec police believed that the Solar Temple had run its course by 1997, the five suicides in Saint-Casimir brought the total to 74 deaths in Canada and Europe over a five-year period.

How could intelligent, rational people be persuaded to hand over their money and even their lives to a charismatic leader? As we shall discuss in this chapter, people can be swayed by appeals to their fears, hopes, and desires. We will also show that once people change their attitudes, a powerful process of self-justification sets in. People feel a strong need to justify their decisions, and in the process of doing so, become even more committed to their decision. But first, what exactly is an attitude, and how is it changed? These questions, which are some of the oldest in social psychology, are the subject of this chapter.

The Nature and Origin of Attitudes

Each of us *evaluates* our worlds. We form likes and dislikes of virtually everything we encounter; indeed, it would be odd to hear someone say, "My feelings toward anchovies, snakes, chocolate cake, and Stephen Harper are

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Summary

Attitude
An evaluation of a person, object, or idea

completely neutral." Simply put, **attitudes** are evaluations of people, objects, or ideas (Ajzen & Fishbein, 2005; Banaji & Heiphetz, 2010; Bohner & Dickel, 2010; Crano & Prislin, 2006; Eagly & Chaiken, 2007; Olson & Zanna, 1993). Attitudes are evaluative in that they consist of a positive or negative reaction toward someone or something. Sometimes people actually experience ambivalence, or "mixed feelings." For example, research conducted at the University of Waterloo has shown that some people have ambivalent attitudes toward feminists—they see feminists in both positive and negative terms (MacDonald & Zanna, 1998)—and toward issues such as capital punishment and abortion (Newby-Clark, McGregor, & Zanna, 2002). According to research conducted at the University of Western Ontario, some of us have ambivalent attitudes toward Canada's Native people (Bell & Esses, 1997, 2002) and toward Asian immigrants to Canada (Maio, Bell, & Esses, 1996). Our point is that people are not neutral observers of the world but constant evaluators of what they see. We can elaborate further on our definition of an attitude by stating more precisely what we mean by an "evaluation." An attitude is made up of three components:

Luc Jouret, leader of the Order of the Solar Temple cult, died in the 1994 mass murder–suicide along with 52 other cult members.

Michel Ponomareff/Ponopresse

- an *affective* component, consisting of emotional reactions toward the attitude object (e.g., another person or a social issue),
- a *cognitive* component, consisting of thoughts and beliefs about the attitude object, and
- a *behavioural* component, consisting of actions or observable behaviour toward the attitude object.

Where Do Attitudes Come From?

Although attitudes have affective, cognitive, and behavioural components, any given attitude can be based more on one type of experience than another, as shown in an extensive research program conducted primarily with students at the University of Waterloo (Esses, Haddock, & Zanna, 1993; Haddock & Zanna, 1994, 1998; Haddock, Zanna, & Esses, 1993, 1994; Zanna & Rempel, 1988). We discuss this work in more detail in this section.

Affectively Based Attitude
An attitude based primarily on people's emotions and feelings about the attitude object

Affectively Based Attitudes An attitude based more on emotions and feelings than on an objective appraisal of pluses and minuses is called an **affectively based attitude** (Breckler & Wiggins, 1989; Zanna & Rempel, 1988). Sometimes we simply like a certain brand of car, regardless of whether it gets good gas consumption or whether it has enough cupholders. Occasionally we even feel very positive about something—such as another person—in spite of having negative beliefs. An example is falling in love with someone despite knowing that the person has a history of being untrustworthy.

As a guide to which attitudes are likely to be affectively based, consider the topics that etiquette manuals suggest should not be discussed at a dinner party: politics, sex, and religion. People seem to vote more with their hearts than their minds—for example, basing their decision to vote for a political candidate on how they feel about the person or the party, rather than on a well-reasoned evaluation of the policies (Abelson, Kinder, Peters, & Fiske, 1982; Granberg & Brown, 1989; Westen, 2007). The nephew of one of the authors (Beverley Fehr) learned this first-hand when he was campaigning for a political candidate in Calgary. One of the questions he asked when he knocked on people's doors was whether they were happy with the Conservative candidate currently serving in that riding. A frequent response in this Conservative stronghold was, "Yes. I think he's doing a great job." The member of Parliament in that riding was actually a woman! (Incidentally, this was one of the few ridings that remained conservative in the 2015 election.)

Where do affectively based attitudes come from? One source is people's values, such as their religious and moral beliefs. Attitudes about such issues as abortion, the death penalty, and premarital sex are often based on one's value system more than a cold examination of the facts. The function of such attitudes is not so much to paint an accurate picture of the world as to express and validate one's basic value system (Hodson & Olson, 2005; Murray, Haddock, & Zanna, 1996; Schwartz, 1992;

Attitudes toward abortion, the death penalty, and premarital sex are examples of affectively based attitudes that are likely to be based on people's value systems.

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Smith, Bruner, & White, 1956). For example, in a study conducted at the University of Western Ontario, Maio and Olson (1995) varied the message on posters soliciting donations for cancer research. In the value-expressive condition, the poster read, "Save people's lives, help researchers find a cure for cancer and *help others live*"; in the non-value condition, the message ended with "and *protect your future*." For participants in the value-expressive condition (help others live), there was a positive correlation between altruistic values and having favourable attitudes toward donating to cancer research. In contrast, in the non-values condition (protect your future), there was no relation between altruistic values and attitudes toward donating money.

Affectively based attitudes also can result from a sensory reaction such as liking the taste of chocolate (despite its calorie count) or an aesthetic reaction, such as admiring a painting or liking the lines and colour of a car.

Affectively based attitudes have three things in common:

1. they do not result from a rational examination of the issues;
2. they are not governed by logic (e.g., persuasive arguments about the issues seldom change an affectively based attitude);
3. they are often linked to people's values, so that trying to change them challenges those values.

Cognitively Based Attitudes Sometimes our attitudes are based primarily on the relevant facts, such as the objective merits of an automobile. How many litres of gas per 100 kilometres? Does it have air conditioning? To the extent that a person's evaluation is based primarily on beliefs about the properties of an attitude object, it is a **cognitively based attitude**. The purpose of this kind of attitude is to classify the pluses and minuses of an object so we can quickly tell whether it is worth our while to have anything to do with it (Katz, 1960; Murray et al., 1996; Smith et al., 1956). Consider your attitude toward a utilitarian object such as a vacuum cleaner. Your attitude is likely to be based on your beliefs about the objective merits of particular brands, such as how well they vacuum up dirt and how much they cost—not on how sexy they make you feel! How can we tell whether an attitude is more affectively or cognitively based? See the accompanying Try It! exercise on the next page for one way of measuring the bases of people's attitudes.

Cognitively Based Attitude

An attitude based primarily on a person's beliefs about the properties of an attitude object

Behaviourally Based Attitudes A **behaviourally based attitude** stems from people's observations of how they behave toward an attitude object. This may seem a little odd—how do we know how to behave if we don't already know how we feel?

Behaviourally Based Attitude

An attitude based primarily on observations of how one behaves toward an attitude object

According to Daryl Bem's (1972) *self-perception theory* (discussed in Chapter 5), under certain circumstances people don't know how they feel until they see how they behave. Suppose, for example, that you asked a friend how much she enjoys exercising. If she replies, "Well, I guess I like it, because I always seem to be going for a run or heading over to the gym," we would say she has a behaviourally based attitude. Her attitude is based more on an observation of her own behaviour than on her cognition or affect.

Explicit Versus Implicit Attitudes

Explicit Attitudes
Attitudes that we consciously endorse and can easily report

Implicit Attitudes
Attitudes that are involuntary, uncontrollable, and at times unconscious

Once an attitude develops, it can exist at two levels. **Explicit attitudes** are ones we consciously endorse and can easily report; they are what we think of as our evaluations when someone asks us a question such as "What is your opinion on imposing carbon taxes?" or "What is your opinion on imposing carbon taxes, compared with that of other students at your university or college?" (Olson, Goffin, & Haynes, 2007). People can also have **implicit attitudes**, which are involuntary, uncontrollable, and at times unconscious evaluations (Bassili & Brown, 2005; Fazio & Olson, 2003; Gawronski & Bodenhausen, 2012; Gawronski & Payne, 2010; Nosek, Hawkins, & Frazier, 2012; Rydell & Gawronski, 2009; Wilson, Lindsey, & Schooler, 2000).

TRY IT! Affective and Cognitive Bases of Attitudes

Complete this questionnaire to see how psychologists measure the affective and cognitive components of attitudes.

1. Record the number on each scale that best describes your feelings toward snakes:

hateful	−3	−2	−1	0	1	2	3	loving
sad	−3	−2	−1	0	1	2	3	delighted
annoyed	−3	−2	−1	0	1	2	3	happy
tense	−3	−2	−1	0	1	2	3	calm
bored	−3	−2	−1	0	1	2	3	excited
angry	−3	−2	−1	0	1	2	3	relaxed
disgusted	−3	−2	−1	0	1	2	3	accepting
sorrowful	−3	−2	−1	0	1	2	3	joyful

2. Record the number on each scale that best describes the traits or characteristics of snakes:

useless	−3	−2	−1	0	1	2	3	useful
foolish	−3	−2	−1	0	1	2	3	wise
unsafe	−3	−2	−1	0	1	2	3	safe
harmful	−3	−2	−1	0	1	2	3	beneficial
worthless	−3	−2	−1	0	1	2	3	valuable
imperfect	−3	−2	−1	0	1	2	3	perfect
unhealthy	−3	−2	−1	0	1	2	3	wholesome

Once you have answered these questions, sum all your responses to Question 1 and all your responses to Question 2. These scales were developed by Crites, Fabrigar, and Petty (1994) to measure the affective and cognitive components of attitudes. Question 1 measures the affective component of your attitude toward snakes; you were asked to rate your feelings about them. Question 2 measures the cognitive component of attitudes; you were asked to rate your beliefs about the characteristics of snakes. Most people's attitudes toward snakes are more affectively than cognitively based. If this was true of you, your total score for Question 1 should depart more from zero (in a negative direction, for most people) than your total score for Question 2.

Now, substitute "vacuum cleaners" for "snakes" for Questions 1 and 2, and mark the scales again. Most people's attitudes toward a utilitarian object such as a vacuum cleaner are more cognitively than affectively based. If this was true of you, your total score for Question 2 should depart more from zero than your total score for Question 1.

People can have explicit and implicit attitudes toward the same subject. Explicit attitudes are those we consciously endorse and can easily report; implicit attitudes are involuntary, uncontrollable, and, at times, unconscious.

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Consider Sam, a white, middle-class university student who genuinely believes that all races are equal and who abhors any kind of racial bias. This is Sam's explicit attitude in the sense that it is his conscious evaluation of members of other races that governs how he chooses to act. For instance, consistent with his explicit attitude, Sam recently signed a petition in favour of affirmative action policies at his university. However, Sam has grown up in a culture in which there are many negative stereotypes about minority groups, and it is possible that some of these negative ideas have seeped into him in ways of which he is not fully aware (Devine, 1989a). When he is around First Nations' people, for example, perhaps some negative feelings are triggered automatically and unintentionally. If so, he has a negative implicit attitude toward First Nations people, which is likely to influence behaviours he is not monitoring or controlling, such as how nervously he acts around them (Dovidio, Kawakami, & Gaertner, 2002; Greenwald, Poehlman, Uhlmann, & Banaji, 2009). (We will discuss such automatic prejudice in Chapter 12).

A variety of techniques have been developed to measure people's implicit attitudes. One of the most popular is the Implicit Association Test (IAT; Gawronski & Bodenhausen, 2005; Greenwald, McGhee, & Schwartz, 1998; Greenwald & Nosek, 2001), in which people categorize words or pictures on a computer. (Rather than going into detail about how this test works, we encourage you to visit a website where you can take the test yourself and read more about how it is constructed: https://implicit.harvard.edu/implicit.)

Research on implicit attitudes is in its infancy, and psychologists are actively investigating the nature of these attitudes, how to measure them, and their relation to explicit attitudes (Briñol & Petty, 2012; Fazio & Olson, 2003; Gawronski & Bodenhausen, 2012; Kruglanski & Dechesne, 2006). For example, University of Western Ontario researchers Bertram Gawronski and Etienne LeBel (2008) found that implicit and explicit attitudes tend to be positively correlated when people are asked to reflect on their feelings about an attitude object (e.g., how they feel about Coke versus Pepsi), but are not necessarily related when they are asked to focus on cognitions about the attitude object (e.g., listing reasons why they prefer Coke or Pepsi; Gawronski & LeBel, 2008). As to the question of where implicit attitudes come from, Rudman, Phelan, and Heppen (2007) found evidence that implicit attitudes are rooted more in people's childhood experiences, whereas explicit attitudes are rooted more in their recent experiences. We will return to a discussion of implicit attitudes in Chapter 12 as they apply to stereotyping and prejudice.

When Do Attitudes Predict Behaviour?

It might seem that once we know someone's attitudes, it would be easy to predict their behaviour. Knowing, for example, that someone holds positive attitudes toward a politician should enable you to predict whether that person will vote for that politician in the next election. Right? Actually, the relation between attitudes and behaviour is not nearly so simple as shown in a classic study. In the early 1930s, Richard LaPiere (1934) embarked on a sightseeing trip across the United States with a young Chinese couple. Because prejudice against Asians was commonplace among Americans at that time, he was apprehensive about how his Chinese friends would be treated. At each hotel, campground, and restaurant they entered, LaPiere worried that his friends would confront anti-Asian prejudice and that they would be refused service. Much to his surprise, of the 251 establishments he and his friends visited, only one refused to serve them.

After his trip, LaPiere wrote a letter to each establishment that he and his friends had visited, asking if it would serve a Chinese visitor. Of the many establishments who

replied, only one said it would. More than 90 percent said they definitely would not (the rest said they were undecided). People's attitudes—as expressed in their response to LaPiere's written inquiry—were in stark contrast to their actual behaviour toward LaPiere's Chinese friends.

LaPiere's study was not, of course, a controlled experiment. As he acknowledged, there are several possible reasons why his results did not show consistency between people's attitudes and behaviour. For example, he had no way of knowing whether the proprietors who answered his letter were the same people who had served him and his friends. Further, people's attitudes could have changed in the months that passed between the time they served the Chinese couple and the time they received the letter. Nonetheless, the lack of correspondence between people's attitudes and what they actually did was so striking that we might question the assumption that behaviour routinely follows from attitudes. Indeed, when Allan Wicker (1969) reviewed dozens of more methodologically sound studies, he reached the same conclusion: People's attitudes are poor predictors of their behaviour.

How can this be? Does a person's attitude toward Asians or political candidates really tell us nothing about how he or she will behave? How can we reconcile LaPiere's findings—and other studies like it—with the fact that many times behaviour and attitudes *are* consistent? Stay tuned for the answer.

The Theory of Planned Behaviour

Theory of Planned Behaviour

A theory that the best predictors of a person's planned, deliberate behaviours are the person's attitudes toward specific behaviours, subjective norms, and perceived behavioural control

In subsequent research, social psychologists have discovered that attitudes can actually predict behaviours quite well—but only under certain conditions (DeBono & Snyder, 1995; Fazio, 1990; Zanna & Fazio, 1982). What are these conditions? According to the **theory of planned behaviour** (Ajzen & Albarracin, 2007; Ajzen & Fishbein, 1980, 2005; Ajzen & Sexton, 1999; Fishbein & Ajzen, 1975), the best predictor of people's planned, deliberate behaviour is their intention (i.e., whether they intend to perform the behaviour in question), which, in turn, is determined by three things: their attitudes toward the specific behaviour, their subjective norms, and their perceived behavioural control (see Figure 6.1). Let's consider each of these in turn.

Specific Attitudes The theory of planned behaviour holds that only *specific attitudes* toward the behaviour in question can be expected to predict that behaviour. In one study, researchers asked a sample of married women about their attitudes toward birth control pills, ranging from the general (the women's attitude toward birth control) to the specific (their attitude toward using birth control pills during the next two years; see Table 6.1). Two years later, the women were asked whether they had used birth control pills at any time since the last interview. As Table 6.1 shows, the women's general attitude toward birth control did not predict their use of birth control at all. This general attitude did not take into account other factors that could have influenced their decision, such as concern about the long-term effects of the pill and their attitudes toward other forms of birth control. The more specific the question was about the

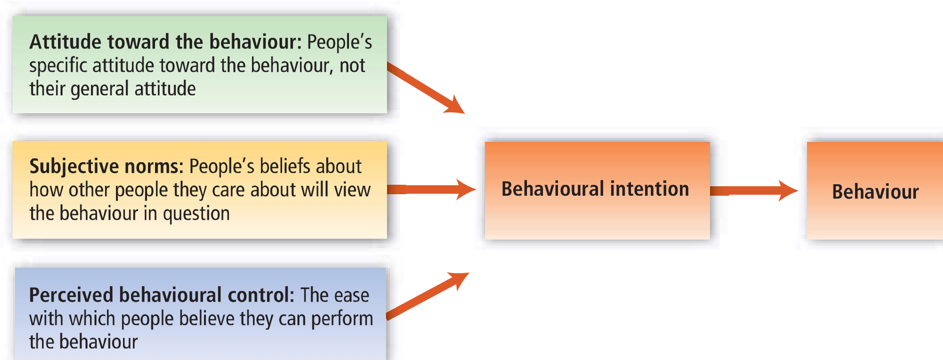


FIGURE 6.1

The Theory of Planned Behaviour

According to this theory, the best predictors of people's behaviours are their behavioural intentions. The best predictors of their intentions are their attitudes toward the specific behaviour, their subjective norms, and their perceived control of the behaviour.

(Adapted from Ajzen & Fishbein, 1980)

TABLE 6.1 Specific Attitudes Are Better Predictors of Behaviour*

Different groups of women were asked about their attitudes toward birth control. The more specific the question, the better it predicted their actual use of birth control.

Attitude Measure	Attitude Behaviour Correlation
Attitude toward birth control	0.08
Attitude toward birth control pills	0.32
Attitude toward using birth control pills	0.53
Attitude toward using birth control pills during the next two years	0.57

*If a correlation is close to 0, there is no relationship between the two variables. The closer the correlation is to 1, the stronger the relationship between attitudes and behaviour.

Source: Adapted from Davidson & Jaccard, 1979.

act of using birth control pills, the better this attitude predicted their actual behaviour (Davidson & Jaccard, 1979).

This study helps explain why LaPiere (1934) found such inconsistency between people's attitudes and behaviours. His question to the proprietors—whether they would serve "members of the Chinese race"—was very general. Had he asked a much more specific question—such as whether they would serve an educated, well-dressed, well-to-do Chinese couple accompanied by a white American professor—the proprietors might have given an answer that was more in line with their behaviour.

Subjective Norms In addition to measuring attitudes toward the behaviour, we also need to measure people's subjective norms—their beliefs about how the people they care about will view the behaviour in question (see Figure 6.1). To predict someone's intentions, it can be as important to know these beliefs as to know his or her attitudes. For example, suppose we want to predict whether Kristen intends to go to a heavy metal concert. We happen to know that she can't stand heavy metal music. Based on her negative attitude, we would probably say she won't go. Suppose, however, that we also know that Kristen's best friend, Malcolm, really wants her to go. Knowing this subjective norm—her belief about how a close friend views her behaviour—we might make a different prediction.

Perceived Behavioural Control Finally, as seen in Figure 6.1, people's intentions are influenced by perceived behavioural control, which is the ease with which people believe they can perform the behaviour. If people think it is difficult to perform the behaviour, such as sticking to a gruelling exercise regimen, they will not form a strong intention to do so. If people think it is easy to perform the behaviour, such as remembering to buy milk on the way home from work, they are more likely to form a strong intention to do so.

Considerable research supports the idea that asking people about these determinants of their intentions—attitudes toward specific behaviours, subjective norms, and perceived behavioural control—increases the ability to predict their behaviour. Most of this research has focused on behaviours related to health and fitness, such as remaining smoke-free among Quebec high school students (Hill, Boudreau, Amyot, Dery, & Godin, 1997) and University of Prince Edward Island students (Murnaghan, Blanchard, Rodgers, La Rosa, Macquarrie, MacClellan, & Gray, 2009), and staying away from injection drugs among a sample of street youth in Montreal (Roy et al., 2001). In addition, the theory has been used to promote exercise among women and men living in Alberta (Courneya & Friedenreich, 1997, 1999; McCormack, Friedenreich, Giles-Corti, Doyle-Baker, & Shiell, 2013; McCormack, Spence, Berry, & Doyle-Baker, 2009; Trinh, Plotnikoff, Rhodes, North, & Courneya, 2012) and Victoria, British Columbia (Kliman & Rhodes, 2008); participation in exercise classes

for the elderly offered at the University of Western Ontario (Estabrooks & Carron, 1999); and intentions to engage in physical activity, rather than watch television, among university student and community samples in Victoria (Rhodes & Blanchard, 2008). Some studies have examined multiple health behaviours, such as exercising, maintaining a low-fat diet, and stopping smoking among Quebec women and men (Godin, Bélanger-Gravel, Amireault, Vohl, & Pérusse, 2011; Nguyen, Beland, Otis, & Potvin, 1996) and exercising, eating fruits and vegetables, and not starting smoking among students in grades 7 to 9 in Prince Edward Island (Murnaghan, Blanchard, Rodgers, La Rosa, Macquarrie, MacClellan, & Gray, 2010). To give a final example, Mummery and Wankel (1999) used the theory of planned behaviour to predict whether a cycle of intensive training would be completed by 116 competitive swimmers (aged 11 to 18 years) from swimming clubs throughout Canada. Consistent with the theory, swimmers who had positive attitudes toward the training cycle, who believed that important people in their life wanted them to complete it, and who believed that they were capable of doing so were most likely to report that they intended to complete the upcoming cycle of training. Importantly, swimmers with these intentions also were the most likely to actually complete their training.

More recently, the theory of planned behaviour has been applied in other areas, such as predicting whether people will engage in pro-environmental behaviours, such as reducing car use, as tested in a sample of office workers in Victoria (Abrahmse, Steg, Gifford, & Vlek, 2009). At the University of Western Ontario, Norman and colleagues (2010) used the theory to predict behavioural intentions toward people with mental illness (e.g., schizophrenia, depression). To assess behavioural intentions, they asked questions such as “Would you recommend this person for a job?”; “Would you support this person marrying someone in your family?” and so on. Consistent with the theory, specific attitudes and subjective norms (perceived behavioural control was not assessed) were found to predict behavioural intentions among university students and community service club members (Norman, Sorrentino, Windell, Ye, Szeto, & Manchanda, 2010).

Finally, we note that culture may play a role in the importance placed on these determinants of behavioural intentions. In a recent study, Hosking and colleagues (2009) predicted that personal attitudes would be a stronger predictor of behavioural intentions in individualistic cultures, whereas social norms would be a stronger predictor of intentions in collectivist cultures. These predictions were tested in large samples of smokers in two Southeast Asian countries and four Western countries (including Canada). It turned out that, as predicted, personal attitudes toward smoking predicted intentions to quit more strongly in Western countries than in Southeast Asian countries. Contrary to predictions, however, the influence of social norms did not vary significantly by culture. The researchers conclude that even in individualistic countries, such as Canada, we are still influenced by how we think the important people in our lives view our behaviour (Hosking, Borland, Yong, Fong, Zanna, Laux, & Omar, 2009).

Next we focus on how the theory of planned behaviour applies to an important social issue: persuading people to engage in safer sex.

The Theory of Planned Behaviour: Implications for Safer Sex

There is one area in which people’s attitudes are often inconsistent with their behaviour, even though the consequences can be fatal. The inconsistency takes the form of having positive attitudes toward using condoms, expressing intentions to use condoms, but then failing to actually use them in sexual encounters (Hynie & Lydon, 1996). For example, in a study conducted with patrons of various dating bars in southern Ontario, nearly 100 percent of the participants agreed with statements such as “If I were to have sex with someone I just met, I would have no objections if my partner suggested that we use a condom” (Herold & Mewhinney, 1993). However, these favourable attitudes toward condom use did not translate into safer sex practices. Only 56 percent of the people at the bar who engaged in casual sex had used a condom in their most recent sexual encounter. Even more frightening, a mere 29 percent of the women and men

who had engaged in casual sex in the past year reported that they always used a condom.

Why would people with positive attitudes toward condom use risk their health by not using condoms? Perhaps the theory of planned behaviour can provide some clues. As you'll recall, according to this theory, attitudes are not the only predictor of behaviour. Subjective norms, perceived behavioural control, and behavioural intentions also play a role. Can these variables help us understand why people so often fail to use condoms, despite having positive attitudes toward condom use? Let's take a look at some studies.

If people fear a negative reaction, they are less likely to raise the issue of condom use with a potential sexual partner.

Sexual Education Resource Centre, Manitoba

Subjective Norms People's beliefs about how others view the behaviour in question are an important determinant of their behaviour. One study found that 65 percent of the students at a high school in Nova Scotia believed that their sexually active friends use condoms (Richardson, Beazley, Delaney, & Langille, 1997). Such beliefs should promote condom use. Indeed, there is evidence that whether university students use condoms depends on the norms for sexual behaviour that operate among their friends (Winslow, Franzini, & Hwang, 1992). For example, researchers at York University and Queen's University found that social norms (the belief that others in one's social group think that using condoms is important) predicted intentions to use condoms. Importantly, subjective norms also predicted actual condom use, as reported in a follow-up study six weeks later (Hynie, MacDonald, & Marques, 2006). Of course, social norms may vary depending on the situation. For example, students from various universities in eastern Ontario on "break loose" vacations in Daytona Beach, Florida, report that it is more acceptable to have casual sex while on such vacations than while at home (Maticka-Tyndale, Herold, & Mewhinney, 1998, 2001; Mewhinney, Herold, & Maticka-Tyndale, 1995). Unfortunately, the norm of permissive sexuality that evolves in such settings is accompanied by a low rate of condom use (Eiser & Ford, 1995).

Our beliefs about how our sexual partner feels about condom use is another example of a subjective norm. If we anticipate a negative reaction from our partner, we are less likely to use condoms. Several studies conducted in Montreal have shown that women, in particular, anticipate a negative reaction from their partner if they provide condoms (Hynie & Lydon, 1995; Maticka-Tyndale, 1992).

Perceived Behavioural Control If people think it is difficult to perform a behaviour, they will not form strong intentions to do so. At first glance, using condoms might seem like an easy thing to do. However, that is actually not the case. A study conducted with sexually active students at the University of British Columbia found that those who were embarrassed about buying condoms bought them less often than did those who were not embarrassed (Dahl, Gorn, & Weinberg, 1998). Further, in a series of studies conducted at McGill University, it was found that people can feel awkward about bringing up the topic of condoms during a sexual encounter (Hynie, Lydon, Cote, & Wiener, 1998; Hynie & Lydon, 1996). In short, the more difficult you find it to perform behaviours such as buying condoms or bringing up the topic with your partner, the less likely you are to actually use them.

Behavioural Intentions The importance of intentions in predicting condom use has been demonstrated in studies of the Latin American community in Montreal, the English-speaking Caribbean community in Toronto, and the South Asian community in Vancouver (Godin, Maticka-Tyndale, Adrien, Manson-Singer, Willams, & Cappon, 1996), as well as in a survey of first-year university students across Canada (Hawa, Munro, & Doherty-Poirier, 1998). What factors might affect people's intentions to use condoms? Researchers at the University of Waterloo and at Queen's University (MacDonald & Martineau, 2002; MacDonald, Fong, Zanna, & Martineau, 2000; MacDonald, Zanna, & Fong, 1996) have found a number of answers to this question. One factor is mood. In a study conducted with female university students, MacDonald and Martineau (2002) found that participants who were in a bad mood were more likely to report intentions to engage in sexual intercourse without a condom than those who were in a good mood. Women who were low in self-esteem were especially

likely to intend to engage in unprotected sex when they were in a bad mood. The researchers suggest that people with low self-esteem who are experiencing negative mood may be especially worried about the threat of rejection and therefore may be less likely to insist on condom use.

Tara MacDonald and colleagues have also found that for both women and men, alcohol intoxication is associated with lower intentions to use condoms—even among those who have positive attitudes toward condom use (MacDonald et al., 1996; MacDonald et al., 2000). The researchers explain that when people are intoxicated, their ability to process information is impaired, such that they are able to focus only on the most immediate aspects of the situation (e.g., short-term pleasure) rather than on the long-term consequences of their actions. These findings are alarming, given that alcohol is present in many of the settings in which people are likely to encounter cues that promote casual sex (e.g., bars, parties, vacations; Maticka-Tyndale et al., 1998, 2001).

In summary, even the most positive of attitudes toward condom use do not guarantee that people will practise safer sex. The theory of planned behaviour suggests that other variables must be taken into account as well, including subjective norms, perceived behavioural control, and behavioural intentions.

How Do Attitudes Change?

As we have seen, attitudes do not necessarily translate into behaviour. However, this fact does not stop people from trying to change our attitudes, hoping our behaviour will follow. Advertisers, for example, assume that changing people's attitudes toward products will result in increased sales, and politicians assume that positive feelings toward a candidate will result in a vote for that candidate on election day. But what is the best way to change people's attitudes? As you'll see next, this question has fascinated social psychologists for decades. Here are some of their answers.

Persuasive Communications and Attitude Change

Suppose the Canadian Cancer Society has given you a five-figure budget to come up with an anti-smoking campaign that could be used nationwide. You have many decisions ahead of you. Should you pack your public service announcement with facts and figures? Or should you take a more emotional approach in your message, including frightening visual images of diseased lungs? Should you hire a famous movie star to deliver your message, or a Nobel Prize–winning medical researcher? Should you take a friendly tone and acknowledge that it is difficult to quit smoking, or should you take a hard line and tell smokers to (as the Nike ads put it) "just do it"? You can see the point—it's not easy to figure out how to construct a truly **persuasive communication**, one that advocates a particular side of an issue.

Persuasive Communication

Communication (e.g., a speech or television advertisement) advocating a particular side of an issue

Fortunately, social psychologists have conducted many studies on what makes a persuasive communication effective, beginning with Carl Hovland and colleagues (Hovland, Janis, & Kelley, 1953). These researchers conducted experiments on the conditions under which people are most likely to be influenced by persuasive communications. In essence, they studied "who says what to whom," looking at the *source of the communication* (e.g., how expert or attractive the speaker is); the *communication itself* (e.g., the quality of the arguments; whether the speaker presents both sides of the issue); and the *nature of the audience* (e.g., which kinds of appeals work with hostile versus friendly audiences). Because these researchers were at Yale University, this approach to the study of persuasive communications is known as the **Yale Attitude Change Approach**.

Yale Attitude Change Approach

The study of the conditions under which people are most likely to change their attitudes in response to persuasive messages; researchers in this tradition focus on "who said what to whom"—that is, on the source of the communication, the nature of the communication, and the nature of the audience

This approach has yielded a great deal of useful information on how people change their attitudes in response to persuasive communications. Some of this information is summarized in Figure 6.2. Regarding the source of the communication, for example, research has shown that speakers who are credible, trustworthy, attractive, or likeable

The Yale Attitude Change Approach

The effectiveness of persuasive communications depends on who says what to whom.

Who: The Source of the Communication

- Credible speakers (e.g.,those with obvious expertise) persuade people more than speakers lacking in credibility (Hovland & Weiss,1951; Jain & Posavac, 2000).
- Attractive speakers (whether because of physical or personality attributes) persuade people more than unattractive speakers do (Eagly & Chaiken, 1975; Petty, Wegener, & Fabrigar, 1997).

What: The Nature of the Communication

- People are more persuaded by messages that do not seem to be designed to influence them (Petty & Cacioppo,1986; Walster & Festinger,1962).
- Is it best to present a one-sided communication (one that presents only arguments favouring your position) or a two-sided communication (one that presents arguments for and against your position)? In general,two-sided messages work better,if you are sure to refute the arguments on the other side (Crowley & Hoyer, 1994; Igou & Bless, 2003; Lumsdaine & Janis, 1953).
- Is it best to give your speech before or after someone arguing for the other side? If the speeches are to be given back to back and there will be a delay before people have to make up their minds,it is best to go first. Under these conditions, there is likely to be a *primacy effect,* where in people are more influenced by what they hear first. If there is a delay between the speeches and people will make up their minds right after hearing the second one, it is best to go last. Under these conditions,there is likely to be a *recency effect,* where in people remember the second speech better than the first one (Haugtvedt & Wegener, 1994; Miller & Campbell, 1959).

To Whom: The Nature of the Audience

- An audience that is distracted during the persuasive communication will often be persuaded more than one that is not (Festinger & Maccoby, 1964; Albarracin & Wyer, 2001).
- People low in intelligence tend to be more influenceable than people high in intelligence, and people with moderate self-esteem tend to be more influenceable than people with low or high self-esteem (Rhodes & Wood,1992).
- People are particularly susceptible to attitude change during the impressionable ages of 18 to 25. Beyond those ages, people's attitudes are more stable and resistant to change (Krosnick & Alwin,1989; Sears, 1981).

FIGURE 6.2
The Yale Attitude Change Approach

are more persuasive than those who are not. In a study on the effects of speaker credibility, students at the University of Waterloo listened to a tape-recorded speech in which it was argued that vigorous exercise is actually harmful (Ross, McFarland, Conway & Zanna, 1983). Participants in the credible condition were told that the speaker was Dr. James Rundle, a world authority on the effects of exercise; those in the non-credible condition were told that the speech was delivered by a local representative of the Fat Is Beautiful organization. As you might expect, participants were more influenced by the message when it was attributed to a credible source. More recent research conducted at the University of Alberta shows that people are more likely not only to remember arguments from a credible source, but also to change their behaviour accordingly (Jones, Sinclair, & Courneya, 2003).

Research inspired by the Yale Attitude Change approach has been important in identifying the determinants of effective persuasion. However, it has not been clear which aspects of persuasive communications are most important—that is, when one factor should be emphasized over another. For example, let's return to that job you have with the Canadian Cancer Society—it wants to see your ad next month! If you were to read the many Yale Attitude Change studies, you would find much useful information about who should say what to whom in order to construct a persuasive communication. However, you might also find yourself saying, "Gee, there's an awful lot of information here, and I'm not sure where I should place the most emphasis. Should I worry most about who delivers the ads? Or should I worry more about the content of the message itself?"

Elaboration Likelihood Model

The theory that there are two ways in which persuasive communications can cause attitude change: the *central route* occurs when people are motivated and have the ability to pay attention to the arguments in the communication, and the *peripheral route* occurs when people do not pay attention to the arguments but are instead swayed by surface characteristics (e.g., who gave the speech)

Central Route to Persuasion

The case in which people elaborate on a persuasive communication, listening carefully to and thinking about the arguments, which occurs when people have both the ability and the motivation to listen carefully to a communication

Peripheral Route to Persuasion

The case in which people do not elaborate on the arguments in a persuasive communication but are instead swayed by peripheral cues

The Central and Peripheral Routes to Persuasion Some well-known attitude researchers have asked the same questions: When is it best to stress factors central to the communication—such as the strength of the arguments—and when is it best to emphasize factors peripheral to the logic of the arguments—such as the credibility or attractiveness of the person delivering the speech? An answer is provided by an influential theory of persuasive communication known as the **elaboration likelihood model** (Petty & Cacioppo, 1986; Petty & Wegener, 1999; Petty, Cacioppo, Strathman, & Priester, 2005). This theory specifies when people will be influenced by what the speech says (i.e., the logic of the arguments) and when they will be influenced by more superficial characteristics (e.g., who gives the speech or how long it is).

According to elaboration likelihood model, under certain conditions, people are motivated to pay attention to the facts in a communication and so will be most persuaded when these facts are logically compelling. That is, sometimes people elaborate on what they hear, carefully thinking about and processing the content of the communication. Petty and Cacioppo (1986) call this the **central route to persuasion**. Under other conditions, people are not motivated to pay attention to the facts; instead they notice only the surface characteristics of the message, such as how long it is and who is delivering it. Here people will not be swayed by the logic of the arguments, because they are not paying close attention to what the communicator says. Instead, they are persuaded if the message—such as the fact that it is long or is delivered by an expert or attractive communicator—makes it seem reasonable. This is called the **peripheral route to persuasion**, because people are swayed by things peripheral to the message itself.

What determines whether people take the central versus the peripheral route to persuasion? The key is whether people have the motivation and ability to pay attention to the facts. If people are truly interested in the topic and thus motivated to pay close attention to the arguments *and* if they have the ability to pay attention—for example, if nothing is distracting them—they will take the central route (see Figure 6.3). If people are bored, tired, or otherwise not able to concentrate, they will tend to take the peripheral route. For example, researchers at Brock University found that people were more likely to take the central route when the message was presented in clear, comprehensible language; they relied on the peripheral route when arguments were presented using complicated, jargon-laden language (Hafer, Reynolds, & Obertynski, 1996). In more recent research conducted with students at the University of Alberta, it was found that when under cognitive load (performing a demanding counting task), participants were persuaded by peripheral factors such as the likeability of the source rather than the strength of the arguments (Sinclair, Moore, Mark, Soldat, & Lavis, 2010). Similarly, researchers at the University of Calgary and at Brock University found that when participants were under cognitive load, they evaluated "hypocritical" companies (e.g., a cigarette manufacturing company campaigning to decrease rates of smoking among youth) less negatively than participants who were not under cognitive load and therefore were able to process the information and recognize the incongruity (White & Willness, 2009). Finally, according to research conducted with Canadian and American university students, when people have positive perceptions of a brand (i.e., positive perceptions of the country in which it is manufactured, such as a plasma television from Japan versus Peru), they take the peripheral route and are not influenced by central route information such as the pluses and minuses of the product (Carvalho, Samu, & Sivaramakrishnan, 2011).

To sell a product, it is effective to have a credible, trustworthy celebrity, such as Jane Lynch, provide an endorsement.

Diane Bondareff/AP Images

Now that you know that persuasive communication can change people's attitudes in either of two ways—via the central or the peripheral route—you may be wondering what difference it makes. So long as people change their attitudes, should any of us care how they got to that point? If we are interested in creating long-lasting attitude change, we should care a lot. People who base their attitudes on a careful analysis of the arguments are more likely to maintain this attitude over time, are more likely to behave consistently with this attitude, and are more resistant to counter-persuasion than people who base their attitudes on peripheral cues

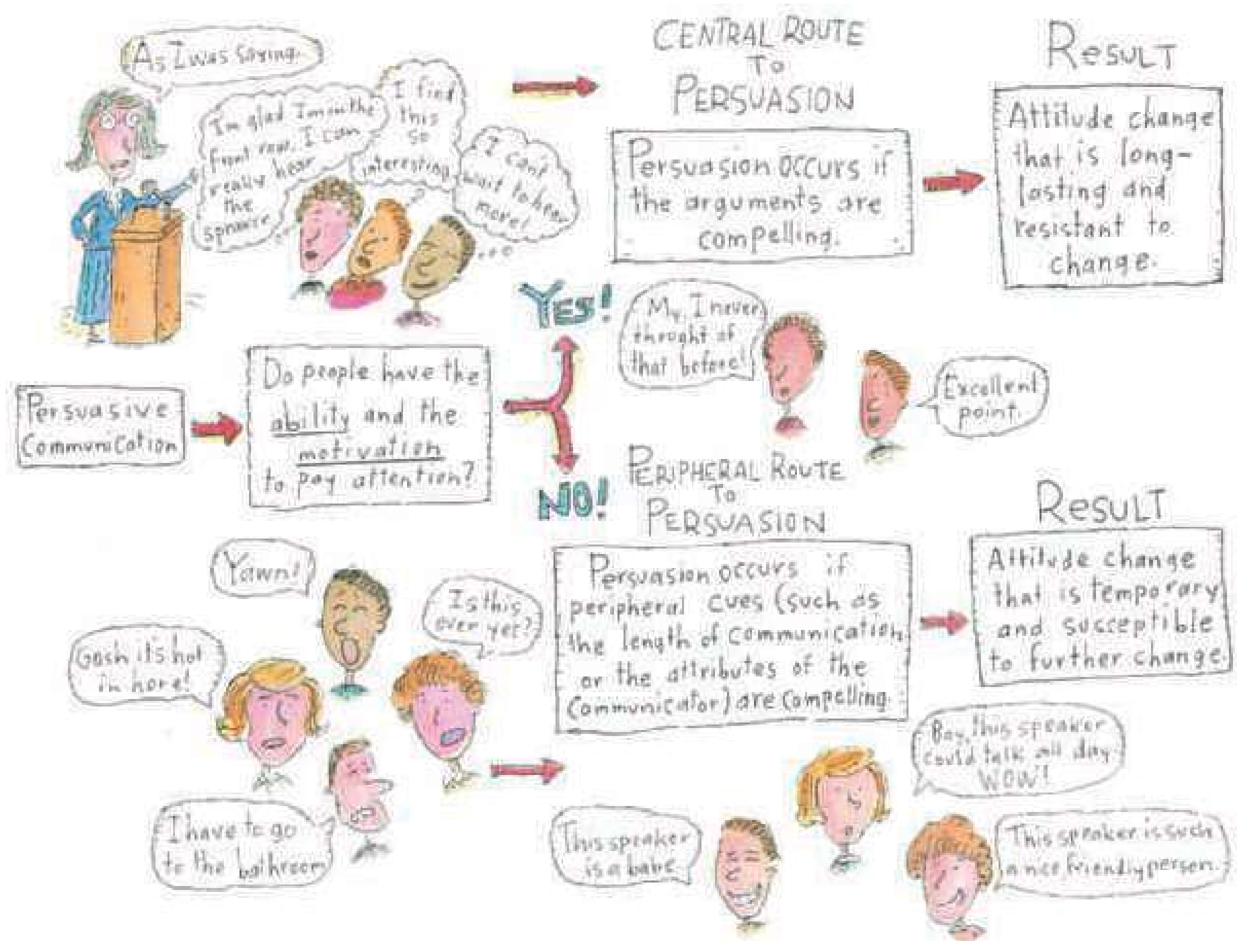


FIGURE 6.3

The Elaboration Likelihood Model

The elaboration likelihood model describes how people change their attitudes when they hear persuasive communications.

(Chaiken, 1980; Mackie, 1987; Martin, Hewstone, & Martin, 2003; Perlini & Ward, 2000; Petty, Haugvedt, & Smith, 1995; Petty & Wegener, 1999).

Fear and Attitude Change

Now you know exactly how to construct your ad for the Canadian Cancer Society, right? Well, not quite. Before people will consider your carefully constructed arguments, you have to get their attention. If you are going to show your anti-smoking ad on television, for example, how can you be sure that people will watch your ad rather than head for the refrigerator? One way to get people's attention is to scare them. This type of persuasive message is called a **fear-arousing communication**. Public service ads often take this approach by trying to scare people into practising safer sex, wearing their seat belts, and staying away from drugs. As mentioned in Chapter 1, in 2000, the Canadian government began to place frightening images on cigarette packages—larger and more graphic than those used anywhere else in the world. In February 2011, Health Canada released even more graphic images, covering 75 percent of the outside panel of a cigarette package. It was announced that fear-producing images and messages would also be displayed on the inside of cigarette packages, making Canada the first country in the world to do so. Clearly, the Canadian government is convinced that the best way to get people to stop smoking is to make them terrified of the consequences. (Interestingly, when the United States decided to follow Canada's lead, they

Fear-Arousing Communication

A persuasive message that attempts to change people's attitudes by arousing their fears

Health Canada requires that all cigarette packs display pictures that warn about the dangers of smoking. Do you think this ad would scare people into quitting?

Shaun Best/Reuters/Landov

faced several lawsuits from the tobacco industry. At the time of writing, these lawsuits are ongoing.)

But does fear actually induce people to change their attitudes? It depends on whether the fear influences people's ability to pay attention to and process the arguments in a message. If people believe that listening to the message will teach them how to reduce this fear, they will be motivated to analyze the message carefully and will likely change their attitudes via the central route (Petty, 1995; Rogers, 1983).

Consider a study in which a group of smokers watched a graphic film depicting lung cancer and then read pamphlets with specific instructions on how to quit smoking (Leventhal, Watts, & Pagano, 1967). These people reduced their smoking significantly more than did people who were shown only the film or only the pamphlet. Why? Watching the film scared people and giving them the pamphlet reassured them that there was a way to reduce this fear—by following the instructions on how to quit. Seeing only the pamphlet didn't work very well, because there wasn't the fear to motivate people to read it carefully. Seeing only the film didn't work very well either, because people were likely to tune out a message that raised fear but did not give information about how to reduce it. This may explain why some attempts to frighten people into changing their attitudes and behaviour fail: They succeed in scaring people but do not provide specific recommendations for them to follow. When specific recommendations are offered, people will be more likely to accept them, particularly if they are feeling vulnerable and worried that they are at risk for experiencing the feared event (Aronson, 2008; Das, de Wit, & Stroebe, 2003; de Hoog, Stroebe, & de Wit, 2005; Ruiter, Abraham, & Kok, 2001).

There is evidence that fear might also be effective in preventing people from starting to smoke. For example, Sabbane, Bellavance, and Chebat (2009) asked teenagers in Montreal who were non-smokers (a small number were occasional smokers) to evaluate a website that displayed an image of diseased gums and teeth with the text "Smoking causes mouth disease." Other participants saw websites with only the text or only an image of a package of cigarettes (with no warning image). Participants who were exposed to the frightening image plus the text were more likely to report intentions not to smoke than participants in the other two conditions. Presumably, the text alone did not evoke a sufficient level of fear to be effective.

Fear-arousing communications also will fail if they are so strong that they are overwhelming. If people are scared to death, they will become defensive, deny the importance of the threat, and be unable to think rationally about the issue (Janis &

Feshbach, 1953; Liberman & Chaiken, 1992). For example, in a study conducted by researchers in Australia and at the University of Calgary, male and female drivers were exposed to frightening ads depicting the consequences of speeding or driving drunk. Young male drivers claimed that the ads would be effective in promoting safer driving for other people but did not influence them. Not surprisingly, these participants were less likely to report intentions not to speed or drink and drive (compared to female drivers who saw the ads; Lewis, Watson, & Tay, 2007).

According to researchers at Concordia University and McGill University, humour can be an effective tool for reducing distress among people who find fear-producing messages especially threatening. In a series of studies, Conway and Dubé (2002) showed that for those who were most threatened by the fear-producing messages, the use of humour resulted in greater attitude change and intention to enact the desired behaviours (e.g., using sunscreen to avoid skin cancer, using condoms to avoid HIV) than did nonhumorous messages.

So, if you have decided to arouse people's fear in your ad for the Canadian Cancer Society, keep these points in mind: First, try to create enough fear to motivate people to pay attention to your arguments, but not so much fear that people will tune out or distort what you say. You may even want to throw in a bit of humour for the benefit of those who find fear-inducing messages especially distressing. Second, include some specific recommendations about how to stop smoking, so people will be reassured that paying close attention to your arguments will help them reduce their fear.

Advertising and Attitude Change

How many times, in a given day, does someone attempt to change your attitudes? Be sure to count every advertisement you see or hear, because advertising is nothing less than an attempt to change your attitude toward a consumer product, be it a brand of laundry detergent, a type of automobile, or a political candidate. Don't forget to include ads you get in the mail, calls from telemarketers, and signs you see on the sides of buses, as well as those ever-present television commercials and ads that pop up on websites. Even in our most private moments, we are not immune from advertisements, as witnessed by the proliferation of advertisements placed in public washrooms—above the hand dryers and even on the inside doors of washroom stalls. A curious thing about advertising is that most people think it works on everyone but themselves (Wilson & Brekke, 1994). However, it turns out that we are influenced by advertising more than we think. Indeed, there is substantial evidence indicating that advertising works—when a product is advertised, sales tend to increase (Capella, Webster, & Kinard, 2011; Lodish, Abraham, Kalmenson, Lievelsberger, Lubetkin, Richardson, & Stevens, 1995; Wells, 1997; Wilson, Houston, & Myers, 1998).

Tailoring Advertisements to People's Attitudes Which types of ads work the best? It depends on the type of attitude we are trying to change. As we saw earlier, some attitudes are based more on beliefs about the attitude object (cognitively based attitudes), whereas others are based more on emotions and values (affectively based attitudes). Several studies have shown that it is best to fight fire with fire. If an attitude is cognitively based, try to change it with rational arguments; if it is affectively based, try to change it using emotion (Fabrigar & Petty, 1999; Snyder & DeBono, 1989). In one study, for example, Sharon Shavitt (1990) gave people advertisements for different kinds of consumer products. Some of the items were "utilitarian" products, such as air conditioners and coffee. People's attitudes toward such products tend to be based on an appraisal of the utilitarian aspects of the products (e.g., how energy-efficient an air conditioner is) and thus are cognitively based. Other items were designated as "social identity products," such as perfume and greeting cards. People's attitudes toward these types of products are based more on their values and concerns about their social identity and so are more affectively based.

As seen in Figure 6.4, people reacted most favourably to the ads that matched the type of attitude they had. If people's attitudes were cognitively based (e.g., toward air

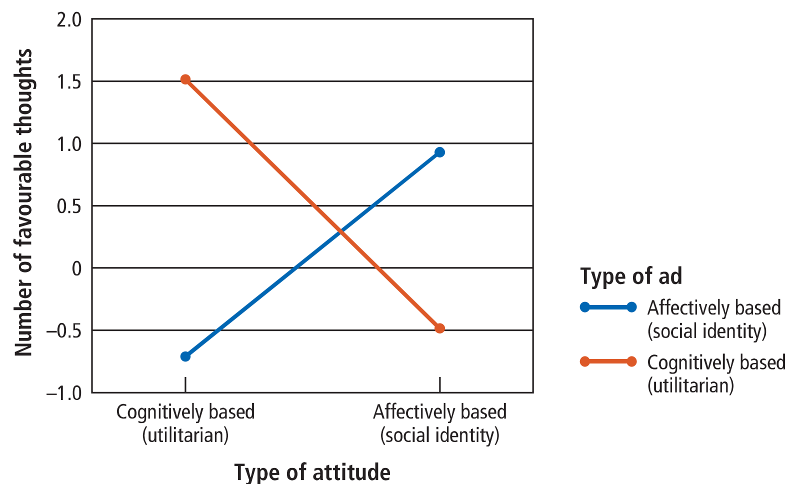


FIGURE 6.4

Effects of Affective and Cognitive Information on Affectively and Cognitively Based Attitudes

When people had cognitively based attitudes (e.g., toward air conditioners and coffee), cognitively based advertisements that stressed the utilitarian aspects of the products worked best. When people had more affectively based attitudes (e.g., toward perfume and greeting cards), affectively based advertisements that stressed values and social identity worked best. (The higher the number, the more favourable the thoughts people listed about the products after reading the advertisements.)

(Adapted from Shavitt, 1990)

conditioners or coffee), the ads that focused on the utilitarian aspects of these products were most successful. If people's attitudes were more affectively based (e.g., toward perfume or greeting cards), the ads that focused on values and social identity concerns were most successful. Thus, if you ever get a job in advertising, the moral is to know what type of attitude most people have toward your product, and then tailor your advertising accordingly.

Research by Haddock and colleagues (2008) suggests that you also should pay attention to individual differences in people. It turns out that those who are high in need for cognition (people who like to spend time actively thinking about things) are more likely to be persuaded by cognitively based messages, whereas people who are high in need for affect are more likely to be persuaded by affectively based messages. For example, in one study in this series, participants who were high in need for cognition reported the most positive attitudes toward lemphurs (a fictional animal) when given "the facts" (e.g., lemphurs are social animals who closely care for their offspring), whereas those who were high in need for affect reported the most positive attitudes when lemphurs were described in ways that induced positive emotions (e.g., lemphurs make beautiful sounds that emulate a kitten purring; Haddock, Maio, Arnold, & Huskinson, 2008).

Do you think this ad will work better with people who have affectively based or cognitively based attitudes toward cars? In general, ads work best if they are tailored to the kind of attitude they are trying to change. Given that this ad seems to be targeting people's emotions (indeed, it doesn't present any information about the car, such as its safety record, gas mileage, or reliability), it will probably work best on people whose attitudes are affectively based.

Bill Aron/PhotoEdit

Culture and Advertising As we discussed in Chapter 5, there are differences in people's self-concept across cultures: Western cultures tend to stress independence and individualism, whereas many collectivist (e.g., Asian) cultures stress interdependence. Sang-pil Han and Sharon Shavitt (1994) reasoned that these differences in self-concept might also reflect differences in the kinds of attitudes people have toward consumer products. Perhaps advertisements that stress individuality and self-improvement might work better in Western cultures, whereas advertisements that stress one's social group might work better in Asian cultures. To test this hypothesis, the researchers created ads for the same product that stressed either independence (e.g., an ad for shoes said, "It's easy when you have the right shoes") or interdependence (e.g., "The shoes for your family") and showed them to Americans and Koreans. Americans were persuaded most by the ads stressing independence; Koreans were persuaded most by the ads stressing interdependence. Han and Shavitt (1994) also analyzed actual magazine advertisements in the United States and Korea, and found that these ads were, in fact, different. American ads tended to emphasize individuality, self-improvement, and benefits of the product for the individual consumer, whereas Korean ads tended to emphasize the family, concerns about others, and benefits for one's social group. More recently, researchers in Canada and China designed advertisements for digital

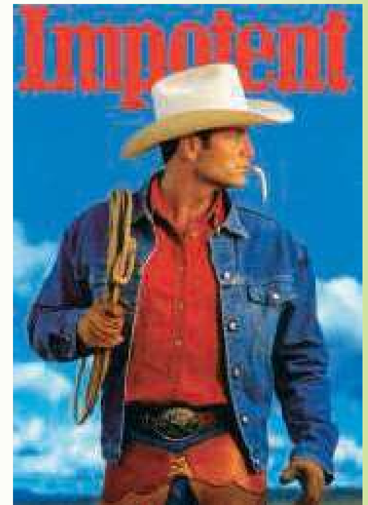
CONNECTIONS

Do Media Campaigns to Reduce Drug Use Work?

Smoking and drinking are common in movies, and sometimes public figures admired by youth glamourize the use of drugs and alcohol. Advertising, product placement, and the behaviour of admired figures can have powerful effects on people's behaviour, including tobacco and alcohol use (Pechmann & Knight, 2002; Saffer, 2002). This raises an important question: Do public service ads designed to reduce people's use of drugs such as alcohol, tobacco, and marijuana work?

By now you know that changing people's attitudes and behaviour can be difficult, particularly if people are not very motivated to pay attention to a persuasive message or are distracted while trying to pay attention. If persuasive messages are well crafted, they can have an effect, however, and we have seen many successful attempts to change people's attitudes in this chapter. What happens when researchers take these techniques out of the laboratory and try to change real-life attitudes and behaviour, such as people's attraction to and use of illegal drugs?

A meta-analysis of studies that tested the effects of a media message (conveyed via television, radio, electronic, and print media) on substance abuse (including illegal drugs, alcohol, and tobacco) in youths was encouraging (Derzon & Lipsey, 2002). After a media campaign that targeted a specific substance, such as tobacco, kids were less likely to use that substance. Television and radio messages had bigger effects than messages in the print media (Ibrahim & Glantz, 2007).



A recent meta-analysis showed that public campaigns to reduce drug use can work. Do you think this ad is effective, based on what you have read in this chapter?

California Department of Public Health

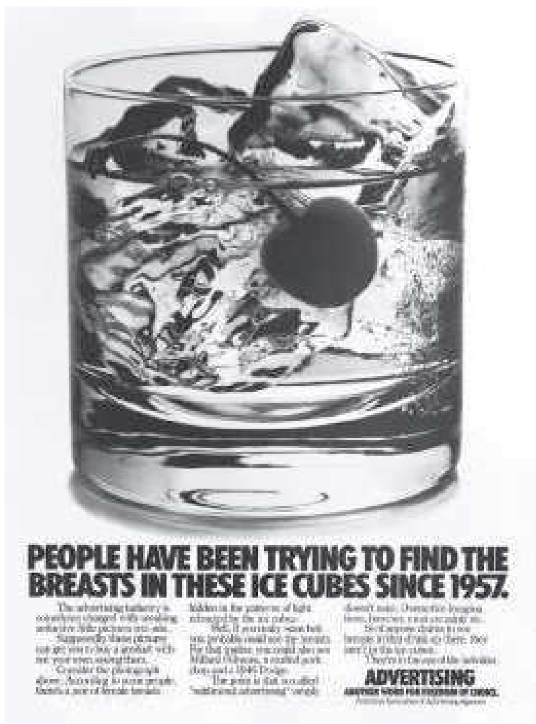
cameras that were intended to appeal to people in individualist cultures ("Achieve Genuine Self-Expression") or collectivist cultures ("Share the Joy with Those You Love"). These ads were evaluated by North American consumers, who as predicted, responded more favourably to the individualist ads than to the collectivist ads (Teng, Laroche, & Zhu, 2007). A recent meta-analysis confirms that advertisements contain more individualistic content in Western cultures such as North America and more collectivistic content in countries such as Japan, Korea, China, and Mexico (Morling & Lamoreaux, 2008).

Subliminal Advertising: A Form of Mind Control? We cannot leave the topic of advertising without discussing one of its most controversial topics: the use of **subliminal messages**—defined as words or pictures that are not consciously perceived but that supposedly influence people's judgments, attitudes, and behaviour. A majority of the public believes that these messages can unknowingly shape attitudes and behaviour (Zanot, Pincus, & Lamp, 1983). Given the near-hysterical claims that have been made about subliminal advertising, it is important to discuss whether it really works.

Subliminal Messages
Words or pictures that are not consciously perceived but that supposedly influence people's judgments, attitudes, and behaviours

In the late 1950s, James Vicary supposedly flashed the messages "Drink Coca-Cola" and "Eat popcorn" during a movie and claimed that sales at the concession stand skyrocketed. According to some reports, Vicary made up these claims (Weir, 1984). But that was not the last attempt at subliminal persuasion. Wilson Bryan Key (1973, 1989), who has written several bestselling books on hidden persuasion techniques, maintains that advertisers routinely implant sexual messages in print advertisements, such as the word *sex* in the ice cubes of an ad for gin, and male and female genitalia in everything from pats of butter to the icing in an ad for cake mix. In addition, there is a large market for audiotapes containing subliminal messages to help people lose weight, stop smoking, improve their study habits, raise their self-esteem, and even shave a few strokes off their golf scores.

To give a more recent example, in 2007, the Canadian Broadcasting Association filmed video slot machines placed in casinos in Ontario. Why? When the film was



There is no scientific evidence that implanting sexual images in advertising boosts sales of the product. The public is very aware of the technique, however—so much so that some advertisers have begun to poke fun at subliminal messages in their ads.

shown in slow motion, it was revealed that the winning hand (five of the same symbols) was flashed for one-fifth of a second. The Ontario Lottery and Gaming Corporation responded by ordering that these machines be removed. The fear was that subliminally flashing the winning hand would persuade gamblers to spend more time at that machine. The company that made the machines claimed that they were not attempting to send subliminal messages to induce people to gamble more, but, rather, the flashing of the winning symbols was a computer glitch.

Are subliminal messages actually effective? Do they really make us more likely to buy consumer products, help us to lose weight, and stop smoking or cause us to spend more money on video slot machines?

Debunking the Claims About Subliminal Advertising Few of the proponents of subliminal advertising have conducted scientific studies to back up their claims. Fortunately, social psychologists have conducted careful, controlled experiments on subliminal perception, allowing us to evaluate the sometimes outlandish claims that are being made. Simply stated, there is no evidence that the types of subliminal messages used in everyday life have any influence on people's behaviour. Hidden commands to eat popcorn do not cause us to line up at the concession stand and buy popcorn any more than we normally would do, and the subliminal commands on self-help tapes do not (unfortunately!) help us to quit smoking or lose a few pounds (Broyles, 2006; Merikle, 1988; Pratkanis, 1992; Trappey, 1996). For example, one study randomly assigned people to listen to a subliminal self-help tape designed to improve memory or one designed to improve self-esteem. Neither of the tapes had any effect on people's memory or self-esteem (Greenwald, Spangenberg, Pratkanis, & Eskenazi, 1991). Even so, participants were convinced that the tapes had worked, which is why subliminal tapes are such a lucrative business.

Evidence for Subliminal Influence in the Lab You may have noticed that we said subliminal messages don't work when encountered in "everyday life". However, there is evidence that people can be influenced by subliminal messages under carefully controlled laboratory conditions (Dijksterhuis & Aarts, 2002; Dijksterhuis, Aarts, & Smith, 2005; Verwijmeren, Karremans, Stroebe, & Wigboldus, 2011). Recall that in Chapter 5 we discussed research by Baldwin, Carrell, and Lopez (1990), who flashed slides of a scowling program director, a friendly post-doctoral student, or a disapproving-looking pope so quickly that they were not consciously perceived. Nevertheless, these images did have the predicted effects on participants' self-evaluations.

Does this mean that advertisers will figure out how to successfully use subliminal messages in everyday life? Maybe, but it hasn't happened yet. To get subliminal effects, researchers have to ensure that the illumination of the room is just right, that people are seated just the right distance from a viewing screen, and that nothing else is occurring to distract them as the subliminal stimuli are flashed. Research conducted at the University of Waterloo shows that people also have to be motivated to accept the persuasive message (Strahan, Spencer, & Zanna, 2002). For example, in one of these studies, participants in the experimental condition were subliminally primed with words such as *dry* and *thirsty*. Participants in a control condition were subliminally exposed to neutral words. Later, those in the experimental group were more persuaded by an advertisement for "Superquencher" drinks than those in the control group. But even in the laboratory there is no evidence that subliminal messages can get people to act counter to their wishes, values, or personalities, making them march off to the supermarket to buy drinks when they're not thirsty or vote for candidates they despise.

Ironically, the hoopla surrounding subliminal messages has obscured a significant fact about advertising: Ads are more powerful when we can consciously perceive them. As we have discussed, there is ample evidence that the ads people encounter in

TRY IT! Advertising and Mind Control

Here is an exercise on people's beliefs about the power of advertising that you can try on your friends. Ask 10 or so friends the following questions—preferably friends who have not had a course in social psychology! See how accurate their beliefs are about the effects of different kinds of advertising.

1. Do you think you are influenced by subliminal messages in advertising? (Define subliminal messages for your friends as words or pictures that are not consciously perceived but that supposedly influence people's judgments, attitudes, and behaviours.)
2. Do you think you are influenced by everyday advertisements that you perceive consciously, such as television ads for laundry detergent and painkillers?
3. Suppose you had a choice to listen to one of two speeches that argued against a position you believe in, such as whether marijuana should be legalized. In Speech A, a person presents several arguments against your position. In Speech B, all of the arguments are presented subliminally—you will not perceive anything consciously. Which speech would you rather listen to, A or B?

Tally results for each person in a table like the one below:

Question 1	Question 2	Question 3
Yes	Yes	Yes
No	No	No

Show off your knowledge to your friends. Ask them why they are more wary of subliminal messages than everyday advertising, when it is everyday advertising and not subliminal messages that changes people's minds. Why do you think people are most afraid of the kinds of ads that are least effective? What does this say about people's awareness of their own thought processes?

everyday life and perceive consciously can have substantial effects on their behaviour—even though they do not contain subliminal messages. It is interesting that people fear subliminal advertising more than they do regular advertising, when regular advertising is so much more powerful (Wilson et al., 1998). (Test the power of advertising with your friends or fellow students with the accompanying Try It! exercise.)

Resisting Persuasive Messages

By now, you are no doubt getting nervous (and not just because the chapter hasn't ended yet!). With all of these clever methods to change your attitudes, are you ever safe from persuasive communications? Indeed you are, or at least you can be, if you use some strategies of your own. Here's how to ensure that all of those persuasive messages that bombard you don't turn you into a quivering mass of constantly changing opinion.

Attitude Inoculation

One approach is to get people to consider the arguments for and against their attitude before someone attacks it. The more people have thought about pro and con arguments beforehand, the better they can ward off attempts to change their minds by using logical arguments. William McGuire (1964) demonstrated this by using what he called **attitude inoculation**—the process of making people immune to attempts to change their attitudes by exposing them to small doses of the arguments against their position. Having considered the arguments beforehand, people should be relatively immune to the effects of the communication—just as exposing them to a small amount of a virus can inoculate them against exposure to the full-blown viral disease. For example, in one study, McGuire (1964) "inoculated" people by giving them brief, weak arguments against beliefs that most members of a society accept uncritically, such as the idea that we should brush our teeth after every meal. Two days later, people came back and read a much stronger attack on the truism, one that contained a series of logical arguments about why brushing your teeth too frequently is a bad idea.

Attitude Inoculation
The process of making people immune to attempts to change their attitudes by exposing them to small doses of the arguments against their position

The people who had been inoculated against these arguments were much less likely to change their attitudes compared to a control group who had not been. Why? Those inoculated with weak arguments had the opportunity to think about why these arguments were unfounded and were therefore in a better position to contradict the stronger attack they heard two days later. The control group, never having considered why people should or should not brush their teeth frequently, was particularly susceptible to the strong communication arguing that they should not.

The logic of McGuire's inoculation approach can be extended to real-world situations such as peer pressure. Consider Jake, a 13-year-old who is hanging out with some classmates, many of whom are smoking cigarettes. The classmates begin to make fun of Jake for not smoking and dare him to take a puff. Many 13-year-olds, faced with such pressure, would cave in. But suppose we immunized Jake to such social pressures by exposing him to mild versions of them and showing him ways to combat these pressures. We might have him role-play a situation in which a friend calls him a wimp for not smoking a cigarette and teach him to respond by saying, "I'd be more of a wimp if I smoked it just to impress you." Would this help him resist the more powerful pressures exerted by his classmates?

Several programs designed to prevent smoking in adolescents suggest that it would. For example, McAlister and colleagues (1980) used a role-playing technique with seventh graders much like the one described above. The researchers found that these students were significantly less likely to smoke three years after the study, compared with a control group that had not participated in the program. This result is encouraging and has been replicated in similar programs designed to reduce smoking and drug use (Botvin & Griffin, 2004; Chassin, Presson, & Sherman, 1990; Hoffman, Monge, Chou, & Valente, 2007).

Inoculation is also effective in resisting attacks on our attitudes. Bernard, Maio, and Olson (2003) had participants at the University of Western Ontario generate various kinds of arguments supporting the value of equality. A control group was not required to generate any arguments. Later, those who had formulated arguments were less likely to be persuaded by messages attacking the value of equality. Importantly, there is evidence that if people are able to resist an attack on their attitudes, they may actually come to hold those attitudes with greater certainty as a result (Tormala & Petty, 2002).

Being Alert to Product Placement

When an advertisement comes on during a television show, people often press the mute button on the remote control (or the fast-forward button if they've recorded the show). To counteract this tendency to tune out, advertisers look for ways of displaying their wares during the show itself, referred to as *product placement*. In other words, companies pay the makers of a television show or movie to incorporate their product into the script. In the hit movie *Iron Man*, example, more than 40 products were shown, including both Apple and Well computers, cars made by Audi, Ford, and Rolls-Royce, and the magazines *Vanity Fair* and *Rolling Stone*. In an analysis of the impact of product placement, researchers at Arizona State University and at McMaster University examined daily stock returns for firms whose products were featured in successful movies aired in 2002. The firms analyzed in this study gained an average of $296.5 million in market value following the release of a film that showcased their products (Wiles & Danielova, 2009).

One reason that product placement is so successful is that people do not realize that someone is trying to influence their attitudes and behaviour. People's defences are down; they generally don't think about the fact that someone is trying to influence their attitudes, and they don't generate counter-arguments (Burkley, 2008; Levitan & Visser, 2008). Children can be especially vulnerable. One study found that the more often children in grades 5 to 8 had seen movies in which adults smoked cigarettes, the more positive were their attitudes toward smoking (Sargent et al., 2002; Wakefield, Flay, & Nichter, 2003). Not surprisingly, parents object to the placement of products in children's films, particularly unethical products such as cigarettes, alcohol, and fast

food, as found in a study conducted in Canada and in the United Kingdom (Hudson, Hudson, & Peloza, 2008). In fact, nearly half of the respondents felt that product placement in films is more objectionable than traditional television commercials. In the same vein, researchers at universities in Ontario and Manitoba found that, at least under some circumstances, telling people that a radio program they were listening to had been paid for by a particular brand that was featured on the show caused them to evaluate the product and the radio show more negatively (Wei, Fischer, & Main, 2008).

This leads to the question of whether forewarning people that someone is about to try to change their attitudes is an effective tool against product placement or persuasion more generally. It turns out that it is. Several studies have found that warning people about an upcoming attempt to change their attitudes makes them less susceptible to that attempt. When people are forewarned, they analyze what they see and hear more carefully and as a result are likely to avoid attitude change. Without such warnings, people pay little attention to the persuasive attempts and tend to accept them at face value (Knowles & Linn, 2004; Sagarin & Wood, 2007; Wood & Quinn, 2003). So, before sending the kids off to the movies, it is good to remind them that they are likely to encounter several attempts to change their attitudes.

Product placement, in which a commercial product is incorporated into the script of a movie or television show, has become common practice.

AF archive/Alamy

Changing Our Attitudes Because of Our Behaviour: The Theory of Cognitive Dissonance

We have been focusing on persuasion—those times when other people attempt to change your attitudes. But there is another route to attitude change that might surprise you. Sometimes people change their attitudes not because another person is trying to get them to do so but, rather, because their own behaviour prompts them to do so. How does this happen? As we discuss next, this can happen when people behave in ways that contradict, or are inconsistent with, their attitudes. This realization produces discomfort. One way to alleviate the discomfort is for people to change their attitudes and bring them in line with their behaviour. Let's take a look at how this process works.

Leon Festinger was the first to investigate the precise workings of this powerful phenomenon, and he elaborated his findings into what is arguably social psychology's most important and most provocative theory: the theory of cognitive dissonance (Festinger, 1957). **Cognitive dissonance** is defined as the uncomfortable feeling we experience when our behaviour is at odds with our attitudes or when we hold attitudes that conflict with one another. Dissonance most often occurs whenever we do something that makes us feel stupid or immoral (Aronson, 1968, 1969, 1992, 1998). It always produces discomfort, and because discomfort is unpleasant, we are motivated to take steps to reduce it (Zanna & Cooper, 1974). How do we know this is the case? Take a moment to place yourself in the following situation.

Cognitive Dissonance

A feeling of discomfort caused by the realization that one's behaviour is inconsistent with one's attitudes or that one holds two conflicting attitudes

If you are like most university students, the idea of taking a class at 6:30 a.m. isn't particularly inviting. Imagine, however, that you are asked to write an essay in favour of 6:30 a.m. classes and that your arguments might affect whether your university actually adopts such a policy. As you start writing, you begin to experience an uneasy feeling, the kind of discomfort that social psychologists refer to as cognitive dissonance. You really do not want your classes to begin at 6:30 a.m.; yet, here you are, formulating compelling arguments for why such a policy should be implemented. This is just the situation in which some students at the University of Alberta found themselves, and

most of them showed classic dissonance reduction—they changed their attitudes to become consistent with the position they were endorsing (Wright, Rule, Ferguson, McGuire, & Wells, 1992). In other words, they decided that the idea of 6:30 a.m. classes wasn't so bad after all.

That's not the whole story, however. Before writing the essay, some participants were given a drug—supposedly to improve memory—and were told either that the drug would have no side effects or that the drug would make them tense. The researchers expected that participants who were told the drug would make them tense would not experience dissonance because they would attribute their uneasy feelings to the drug ("Oh, right—I took a pill that's supposed to make me feel tense; that's why I'm feeling this way"). And if they weren't experiencing dissonance, they wouldn't need to change their attitudes, would they? Indeed, participants in this condition were most likely to retain their negative views toward 6:30 a.m. classes, despite writing an essay promoting such a policy.

Given that the experience of dissonance is unpleasant and uncomfortable, we will take steps to alleviate the discomfort. How? As we saw in the Wright and colleagues (1992) study, one option is to attempt to justify our behaviour through changing one of the dissonant cognitions. Most often, this takes the form of changing our attitudes to bring them in line with our behaviour. A recent study conducted by researchers at the University of Manitoba and at Queen's University found that we are especially likely to take this route when the attitude in question isn't particularly important to us. If the attitude matters and we've just focused on how important it is, we are less likely to reduce dissonance by changing that attitude (Starzyk, Fabrigar, Soryal, & Fanning, 2009). But that still leaves us with other options. We could reduce dissonance by changing our behaviour to bring it in line with the dissonant cognition. We could also attempt to justify our behaviour by adding new cognitions. These different ways of reducing dissonance are illustrated in Figure 6.5.

To illustrate, let's look at a behaviour that millions of people engage in several times a day—smoking cigarettes. If you are a smoker, you are likely to experience dissonance because you know that this behaviour can produce a painful, early death.

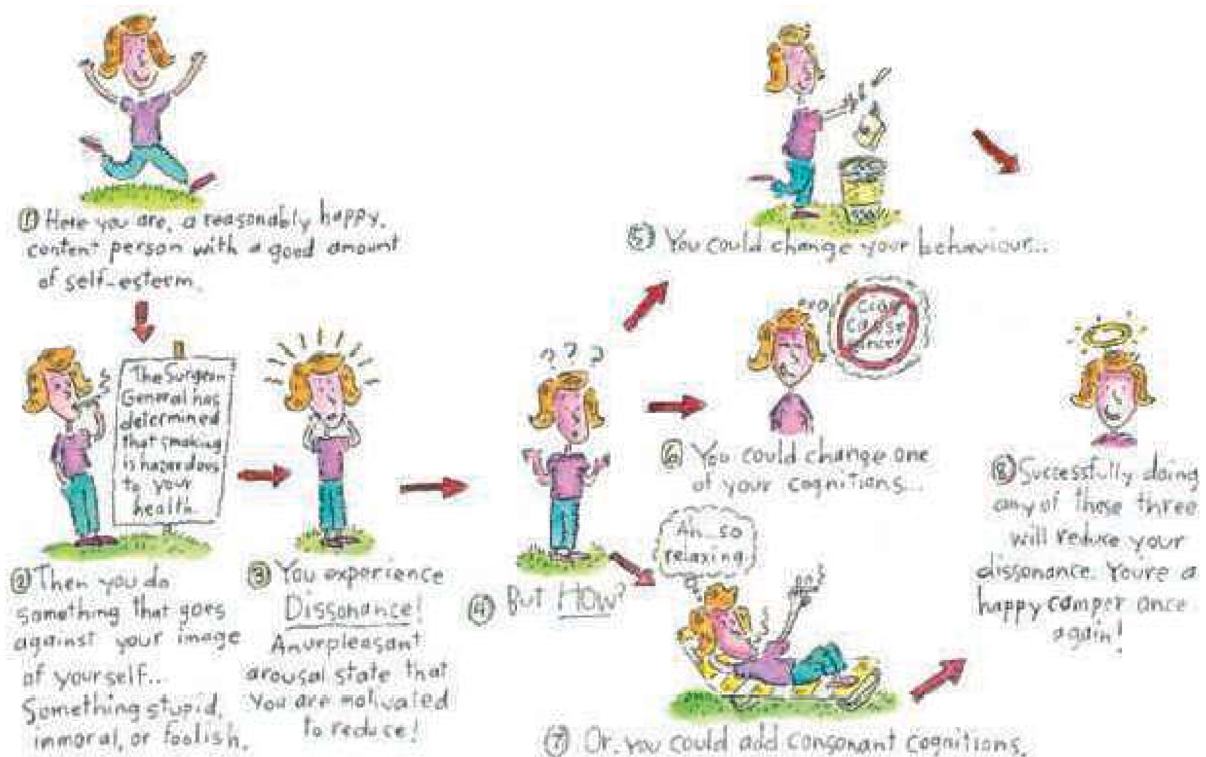


FIGURE 6.5
How We Reduce Cognitive Dissonance

How can you reduce this dissonance? The most direct way is to change your behaviour—to give up smoking. Your behaviour would then be consistent with your knowledge of the link between smoking and cancer. While many people have succeeded in doing just that, it's not easy—many have tried to quit and failed. What do these people do? It would be wrong to assume that they simply swallow hard and prepare to die. They don't. Instead, they try to reduce their dissonance in a different way: by convincing themselves that smoking isn't as bad as they thought.

This boy may be thinking, "There's nothing wrong with putting on a little extra weight. After all, some professional football players weigh more than 140 kilograms and earn millions of dollars a year. Pass the fries."

Digital Vision/Thinkstock/Getty Images

Smokers can come up with pretty creative ways to justify their smoking. Some succeed in convincing themselves that the data linking cigarette smoking to cancer are inconclusive. Others will add new cognitions—for example, the erroneous belief that filters trap most of the harmful chemicals, thus reducing the threat of cancer. Some will add a cognition that allows them to focus on the vivid exception: "Look at old Sam Carouthers—he's 90 years old, and he's been smoking a pack a day since he was 15. That proves it's not always bad for you." Still others will add the cognition that smoking is an extremely enjoyable activity, one for which it is worth risking cancer. Others even succeed in convincing themselves that, all things considered, smoking is worthwhile because it relaxes them, reduces nervous tension, and, in this way, actually improves their health.

These justifications may sound silly to the non-smoker. That is precisely our point. People experiencing dissonance will often go to extreme lengths to reduce it. We did not make up the examples of denial, distortion, and justification listed above; they are based on actual examples generated by people who have tried and failed to quit smoking. Similar justifications have been generated by people who try and fail to lose weight, who refuse to practise safer sex, or who receive bad news about their health (Aronson, 1997b; Croyle & Jemmott, 1990; Goleman, 1982; Kassarjian & Cohen, 1965; Leishman, 1988). To escape from dissonance, people will engage in quite extraordinary rationalizing.

Decisions, Decisions, Decisions

Every time we make a decision, we experience dissonance. Why? Let's pretend that you are trying to decide which of two attractive people to date: Chris, who is funny and playful, but a bit irresponsible, or Pat, who is interesting and smart, but not very spontaneous. You agonize over the decision but eventually decide to pursue a relationship with Pat. After you've made the decision, you will experience dissonance because, despite Pat's good qualities, you did choose to be with someone who is not very spontaneous and you turned down someone who is playful and funny. We call this **post-decision dissonance**.

Post-Decision Dissonance

Dissonance that is inevitably aroused after a person makes a decision; such dissonance is typically reduced by enhancing the attractiveness of the chosen alternative and devaluing the rejected alternatives

Cognitive dissonance theory predicts that to feel better about the decision, you will do some mental work to try to reduce the dissonance. What kind of work? You would convince yourself that Pat really was the right person for you and that Chris actually would have been a lousy choice. An early experiment by Jack Brehm (1956) illustrates this phenomenon. Brehm posed as a representative of a consumer testing service and asked women to rate the attractiveness and desirability of several kinds of appliances, such as toasters and coffee makers. Each woman was told that as a reward for having participated in the survey she could have one of the appliances as a gift. She was given a choice between two of the products she had rated as being equally attractive. After she made her decision, her appliance was wrapped up and given to her. Twenty minutes later, each woman was asked to re-rate all of the products. Brehm found that after receiving the appliance of their choice, the women rated its attractiveness somewhat higher than they had done the first time. Not only that, but they

Once we have committed a lot of time or energy to a cause, it is nearly impossible to convince us that the cause is unworthy.

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drastically lowered their rating of the appliance they had decided to reject. In other words, following a decision, to reduce dissonance, we change the way we feel about the chosen and not chosen alternatives—cognitively spreading them apart in our own minds to make ourselves feel better about the choice we made.

Much of the research conducted since Brehm's classic study has adopted this methodology. Participants first evaluate a set of items; they then are given a choice between two items they found attractive; once they have made their choice, they again rate the items to see if their evaluations have changed. A consistent finding is that people rate the chosen item more positively and the rejected item more negatively than they did before making their decision (Gilbert & Ebert, 2002). Research conducted at the University of Western Ontario has demonstrated that these effects occur even when people's evaluations are assessed at an implicit (unconscious) level (Gawronski, Bodenhausen, & Becker, 2007).

The Permanence of the Decision Decisions vary in terms of how permanent they are—that is, how difficult they are to revoke. It is a lot easier, for instance, to go back to a car dealership to exchange a defective new car for another one than to extricate yourself from an unhappy marriage: the more permanent and less revocable the decision, the greater the need to reduce dissonance.

In a simple but clever experiment, Knox and Inkster (1968) intercepted people at the Exhibition Park Race Track in Vancouver who were on their way to place $2 bets and asked them how certain they were that their horses would win. The investigators also intercepted other bettors just as they were leaving the $2 window, after having placed their bets, and asked them the same question. Almost invariably, people who had already placed their bets gave their horses a much better chance of winning than did those who had yet to place their bets. Since only a few minutes separated one group from another, nothing "real" had occurred to increase the probability of winning; the only thing that had changed was the finality of the decision—and thus the dissonance it produced.

Once an individual makes a final and irrevocable decision, he or she has a greater need to reduce dissonance. At the racetrack, for example, once bettors have placed their bet, their certainty is greater than it is immediately before they've placed it.

G. P. Bowater/Alamy

The Decision to Behave Immorally Needless to say, life is made up of much more than decisions about kitchen appliances and racehorses: often our decisions involve moral and ethical issues. When is it okay to lie to a friend, and when is it not? When is an act stealing, and when is it borrowing? Resolving moral dilemmas is a particularly interesting area in which to study dissonance. Believe it or not, dissonance reduction following a difficult moral decision can cause people to behave either more *or less* ethically in the future—it can actually change their system of values.

Take the issue of cheating on an exam. Suppose you are a third-year university student taking the final exam in a chemistry course. You have always wanted to be a surgeon and you know that your admission to medical school depends heavily on how well you do in this course. The key question on the exam involves some material you know well, but you experience acute anxiety and draw a blank. You simply cannot think. You happen to be sitting behind the smartest person in the class and notice that she has just written down her answer to this question. You could easily read it if you

chose to. Time is running out. What do you do? Your conscience tells you it's wrong to cheat—and yet if you don't cheat, you are certain to get a poor grade. And if you get a poor grade, there goes medical school.

Regardless of whether you decide to cheat, you are doomed to experience dissonance. If you cheat, your cognition that "I am a decent, moral person" is dissonant with your cognition that "I have just committed an immoral act." If you decide to resist temptation, your cognition that "I want to become a surgeon" is dissonant with your cognition that "I could have acted in a way that would have ensured a good grade and admission to medical school, but I chose not to. Wow, was that stupid!"

In this situation, some students decide to cheat; others decide not to. What happens to the students' attitudes about cheating after their decision? For students who decide to cheat, an efficient path of dissonance reduction would be to adopt a more lenient attitude toward cheating, convincing themselves that it is a victimless crime that doesn't hurt anybody, and that everybody does it, so it's not really that bad. Students who manage to resist the temptation to cheat also could reduce dissonance by changing their attitude about the morality of the act—but this time in the opposite direction. That is, to justify giving up a good grade, they would have to convince themselves that it is dishonest and immoral to cheat and that only a despicable person would do such a thing.

After he cheats, he will try to convince himself that everybody would cheat if they had the chance.

Yellow Dog Productions/The Image Bank/Getty Images

The dissonance reduction that occurs for these students—regardless of whether they cheated—is not merely a rationalization of their behaviour but an actual change in their system of values; individuals faced with this kind of choice will undergo either a softening or a hardening of their attitudes toward cheating on exams, depending on whether they decided to cheat.

These speculations were put to the test by Judson Mills (1958) in a classic experiment performed at an elementary school. Mills first measured the attitudes of sixth graders toward cheating. He then had them participate in a competitive exam, offering prizes to the winners. The situation was arranged so it was almost impossible to win without cheating. Moreover, Mills made it easy for the children to cheat on the exam and created the illusion that they could not be detected. Under these conditions, as one might expect, some of the students cheated and others did not. The next day, the sixth graders were again asked to indicate how they felt about cheating. Children who had cheated became more lenient toward cheating, and those who had resisted the temptation to cheat adopted a harsher attitude toward cheating.

Dissonance and the Brain

Neuroscientists have tracked brain activity to discover what parts of the brain are active when a person is in a state of dissonance and motivated to do something to reduce it (E. Harmon-Jones, 2010; E. Harmon-Jones, C. Harmon-Jones, Fearn, Sigelman, & Johnson, 2008). Using fMRI technology, they can monitor neural activity in specific areas while people are experiencing various kinds of dissonance; for example, while rating their preference for things they had chosen and those they rejected, while arguing that the uncomfortable scanner experience was actually quite pleasant, or while they are confronted with some unwelcome information. The areas of the brain that are activated during dissonance include the striatum and other highly specific areas within the prefrontal cortex, the site prominently involved in planning and decision making (Izuma et al., 2010; Qin et al., 2011; van Veen, Krug, Schooler, & Carter, 2009).

In a study of people who were required to process dissonant or consonant information about their preferred presidential candidate while in an fMRI scanner, Drew Westen and colleagues (2006) found that the reasoning areas of the brain virtually shut down when people were confronted with dissonant information. The emotion circuits of the brain lit up happily when consonance was restored. As the researchers put it, people twirl the "cognitive kaleidoscope" until the pieces fall into the

Going through a lot of effort to become a soldier will increase the recruit's feelings of cohesiveness and pride in the corps.

(Adapted from Aronson & Mills, 1959)

Image IHC88-12-2, Canadian Forces, National Defence. Reproduced with the permission of the Minister of Public Works and Government Services, 2011

pattern they want to see, and then the brain repays them by activating circuits involved in pleasure (Westen, Kilts, Blagov, et al., 2006).

The Justification of Effort

Suppose you expend a great deal of effort to get into a particular club, and it turns out to be a totally worthless organization, consisting of boring, pompous people engaged in trivial activities. You would feel pretty foolish, wouldn't you? This situation would produce a fair amount of dissonance; your cognition that you are a sensible, adept human being is dissonant with your cognition that you worked hard to get into a worthless club. How would you reduce this dissonance? You might start by finding a way to convince yourself that the club and the people in it are nicer, more interesting, and more worthwhile than they appeared to be at first glance. Activities and behaviours are open to a variety of interpretations; if people are motivated to see the best in people and things, they will tend to interpret these ambiguities in a positive manner. We call this the **justification of effort**—the tendency for individuals to increase their liking for something they have worked hard to attain.

Justification of Effort

The tendency for individuals to increase their liking for something they have worked hard to attain

In a classic experiment, Elliot Aronson and Judson Mills (1959) explored the link between effort and dissonance reduction. In this study, university students volunteered to join a group that would meet regularly to discuss various aspects of the psychology of sex. To be admitted to the group, they volunteered to go through a screening procedure. For one-third of the participants, the procedure was extremely demanding and unpleasant; for a second one-third of participants, it was only mildly unpleasant; and the final one-third was admitted to the group without undergoing any screening procedure. Each participant was then allowed to listen in on a discussion being conducted by the members of the group they would be joining. The discussion was arranged so it was as dull and bombastic as possible. After the discussion was over, each participant was asked to rate it in terms of how much he or she liked it, how interesting it was, how intelligent the participants were, and so forth.

As you can see in Figure 6.6, the results supported the predictions. Participants who underwent little or no effort to get into the group did not enjoy the discussion very much. They were able to see it for what it was—a dull and boring waste of time. Participants who went through a severe initiation, however, succeeded in convincing themselves that the same discussion, though not as scintillating as they had hoped, was dotted with interesting and provocative tidbits, and therefore, in the main, was a worthwhile experience. In short, they justified their effortful initiation process by interpreting all the ambiguous aspects of the group discussion in the most positive manner possible.

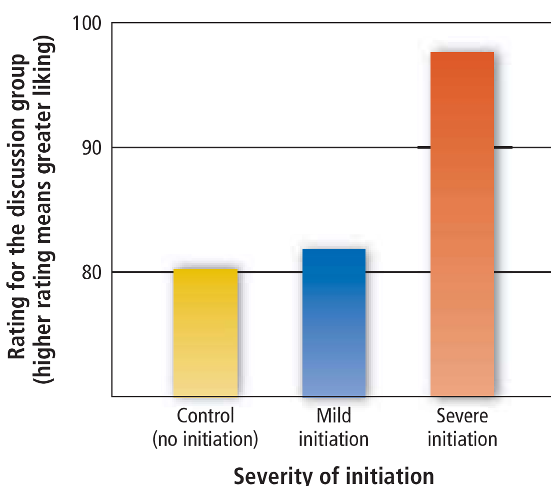

FIGURE 6.6

The Tougher the Initiation, the More We Like the Group

The more effort we put into gaining group membership, the more we like the group we have just joined.

To turn to a real-life example, think about the tremendous cost, effort, and sacrifice involved in raising a child. How do parents justify the huge expenditure of time, money, and other resources? Based on what you know about cognitive dissonance theory, you are probably in a position to make a prediction, which is exactly what University of Waterloo researchers did. In the study, parents in the dissonance condition were given information on how much it costs to raise a child until 18 years of age. Other parents were given the same information, but also were told that adult children often support their aging parents, such that parents in old age frequently are more financially secure than elderly people without children. It was predicted that parents in the cost condition would experience dissonance and would reduce it by idealizing parenthood. Indeed, these parents expressed greater agreement with statements such as "There is nothing more rewarding in life than raising a child" than parents in the control condition who

were given information about costs and the long-term benefits of having children (Eibach & Mock, 2011). In a follow-up study, the researchers found that parents for whom dissonance was created by reminding them of the costs of raising a child also were more likely to claim that there was nothing they would rather do than spend time with their children!

In summary, if a person agrees to go through an effortful, difficult, or an unpleasant experience to attain some goal or object, that goal or object becomes more attractive. As we mentioned in Chapter 1, it is not unusual for people in the military or on sports teams to be subjected to barbaric, cruel hazing rituals. On the face of it, you might expect that the victims of hazings would despise those who made them suffer. However, by now you are probably in a better position to understand the reactions of people such as Dave Tremblay. When Dave Tremblay, a former Quebec Nordiques prospect, joined the Pickering Panthers of the Ontario Hockey Association, he was blindfolded, shaved, and forced to sit in a hot liniment that badly burned his genitals. A few years later, he was hazed again when he received a hockey scholarship from a U.S. university. That time, he was sick for days, suffering from alcohol poisoning. How does he remember the teammates who inflicted this cruelty on him? Remarkably, with fondness: "They came by and checked on us when it was over .... They didn't just beat the crap out of us and leave us" (O'Hara, 2000). If it weren't for cognitive dissonance theory, such a reaction would be difficult to understand!

Internal Versus External Justification

Imagine your best friend invites you to the first performance of a band that he has proudly put together. The vocalist is awful, the bass player shows little talent, and as it turns out, your friend should have kept up with his saxophone lessons. Afterward, your friend excitedly asks you how you enjoyed the band. How do you respond? You hesitate. Chances are you go through something like the following thought process: "Jeremy seems so happy and excited. Why should I hurt his feelings and possibly ruin our friendship?" So you tell Jeremy that the band was great. Do you experience much dissonance? We doubt it. Your belief that it is important not to cause pain to people you like provides ample **external justification** for having told a harmless lie.

External Justification

A person's reason or explanation for dissonant behaviour that resides outside the individual (e.g., to receive a large reward or avoid a severe punishment)

What happens, on the other hand, if you say something you don't really believe and there isn't a good external justification for doing so? That is, what if Jeremy sincerely needed to know your opinion of the band because he was thinking of quitting school to devote his life to music? If you still tell him the band was great, you will experience dissonance. When you can't find external justification for your behaviour, you will attempt to find **internal justification**—that is, you will try to reduce dissonance by changing something about your attitudes or behaviour.

Internal Justification

The reduction of dissonance by changing something about oneself (e.g., one's attitude or behaviour)

Counter-Attitudinal Advocacy How can you do this? You might begin looking for positive aspects of the band—some evidence of creativity or potential that might be realized with a little more practice or a few new talented band members. If you look hard enough, you will probably find something. Within a short time, your attitude toward the band will have moved in the direction of the statement you made—and that is how saying becomes believing. The official term for this is **counter-attitudinal advocacy**. It occurs when we state an opinion or attitude that runs counter to our private belief or attitude. When we do this with little external justification, we start to believe the lie we told.

Counter-Attitudinal Advocacy

The process that occurs when a person states an opinion or attitude that runs counter to his or her private belief or attitude

This proposition was first tested in a groundbreaking experiment by Leon Festinger and J. Merrill Carlsmith (1959). In this experiment, university students were induced to spend an hour performing a series of excruciatingly boring and repetitive tasks. The experimenter then told them that the purpose of the study was to determine whether people would perform better if they had been told in advance that the tasks were interesting. They were each informed that they had been randomly assigned to the control condition—that is, they had not been told anything in advance. However, he explained, the next participant, a young woman who was just arriving in the anteroom,

"How do I look?" your friend asks. Do you tell him the truth? Chances are you don't. Your concern about his feelings provides enough external justification for telling a white lie, so you experience little dissonance.

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was going to be in the experimental condition. The experimenter said that he needed to convince her that the task was going to be interesting and enjoyable. Since it was much more convincing if a fellow student rather than the experimenter delivered this message, would the participant do so? With this request, the experimenter induced the participants to lie about the task to another student.

Half of the students were offered $20 for telling the lie (a large external justification), while the others were offered only $1 for telling the lie (a very small external justification). After the experiment was over, an interviewer asked the lie-tellers how much they had enjoyed the tasks they had performed earlier in the experiment. The results validated the hypothesis. Students who had been paid $20 for lying—that is, for saying that the tasks had been enjoyable—rated the activities as the dull and boring experiences they were. But those who were paid only $1 for saying that the task was enjoyable rated the task as significantly more enjoyable. In other words, people who had received an abundance of external justification for lying told the lie but didn't believe it, whereas those who told the lie without a great deal of external justification succeeded in convincing themselves that what they said was closer to the truth.

Using Counter-Attitudinal Advocacy to Tackle Social Problems Can research on counter-attitudinal advocacy be used to solve social problems? Would it be possible, for example, to get people to endorse a policy favouring a minority community and then see whether attitudes become more positive toward that community? Absolutely. In an important set of experiments, Mike Leippe and Donna Eisenstadt (1994, 1998) demonstrated that laboratory experiments on counter-attitudinal advocacy can be applied directly to important societal problems—in this case, race relations and racial prejudice. They induced white students at an American university to write a counter-attitudinal essay publicly endorsing a controversial proposal at their university—to double the funds available for academic scholarships for African-American students. Because the total funds were limited, this meant cutting by half the scholarship funds available to white students. As you might imagine, this was a highly dissonant situation. How might they reduce dissonance? The best way would be to convince themselves that they really believed deeply in that policy. Moreover, dissonance theory would predict that their general attitude toward African-American people would become more favourable and much more supportive. And that is exactly what was found.

In a more recent experiment along the same lines, Son Hing, Li, and Zanna (2002) focused on "aversive racists" (people who report not being prejudiced on questionnaire measures but turn out to be prejudiced when more unconscious measures such as the IAT are used). In the study, the experimental group first wrote essays about why it was important to treat minority students fairly. They were later instructed to write about two situations in which they reacted to an Asian person more negatively than they thought they should have. This created feelings of hypocrisy, and, therefore, dissonance. Subsequently, this group of students showed evidence of a reduction in prejudicial behaviour. Specifically, they recommended a smaller budget cut to the Asian Student Association at the University of Waterloo than did participants in a control condition. Hypocrisy induction also has been effective in reducing German prejudice toward Turks (Heitland & Bohner, 2010).

In the past two decades, this aspect of dissonance theory—the induction of hypocrisy—also has been applied to another important societal issue: the prevention of HIV/AIDS (terminology taken from original research) and other sexually transmitted diseases. As we discussed earlier in this chapter, although college and university students are aware that HIV/AIDS is a serious problem, a surprisingly small percentage use condoms every time they have sex. Is there anything that can be done about this? Elliot Aronson and colleagues (Aronson et al., 1991; Stone, Aronson, Crain, Winslow, & Fried, 1994) have had considerable success at convincing people to use condoms by employing a variation of the counter-attitudinal advocacy paradigm. They asked university students to compose a speech describing the dangers of AIDS and advocating the use of condoms every single time a person has sex. (Note that since the time of this research, in developed countries, the threat of contracting AIDS has reduced because

there are now medications that slow the progress of HIV. However, there is still no cure.) In one condition, the students merely composed the arguments. In another condition, the students composed the arguments and then recited them in front of a video camera, after being informed that the videotape would be played to an audience of high school students. In addition, half of the students in each condition were made mindful of their own failure to use condoms by having them make a list of the circumstances in which they had found it particularly difficult, awkward, or impossible to use them.

Essentially, then, the participants in one condition—those who made a video for high school students after having been made mindful of their own failure to use condoms—were in a state of high dissonance. This was caused by them being made aware of their own hypocrisy; they were fully aware of the fact that they were preaching behaviour to high school students that they themselves were not practising. To remove the hypocrisy, they would need to start practising what they were preaching. And that is exactly what Aronson and colleagues found. Later, when the students were given the opportunity to purchase condoms very cheaply, those in the hypocrisy condition were the most likely to buy them. A follow-up telephone interview several months after the experiment demonstrated that the effects were long-lasting. People in the hypocrisy condition reported far greater use of condoms than did those in the control conditions.

Creating dissonance by inducing hypocrisy has been effective in reducing a wide range of other pressing social problems. For example, Stice and colleagues have developed a dissonance-based intervention to address body dissatisfaction and eating disorders. This intervention has proven to have positive, long lasting effects (McMillan, Stice, & Rohde, 2011; Stice, Rohde, Shaw, & Gau, 2011; Stice, Marti, Spoor, Presnell, & Shaw, 2008). Dissonance reduction also has been used to combat road rage (Takaku, 2006).

It turns out that hypocrisy induction is even effective when used with young children. More specifically, Morrongiello and Mark (2008) used hypocrisy induction to get children to refrain from engaging in risky, unsafe behaviours on school playground equipment. Hypocrisy was induced by having schoolchildren in Guelph, Ontario, make a list of risky playground behaviours that they had previously engaged in. They were then asked to sign a "Safe Play on Playgrounds" poster and to make a radio commercial promoting safe play. Children for whom dissonance was created by making them aware of their hypocrisy later reported that they intended to engage in far fewer risky behaviours than children in a control group. This effect held at a one-month follow up (Morrongiello & Mark, 2008).

We end by noting that recent research suggests that hypocrisy induction may be especially effective with people who have high self-esteem. In a study aimed at quitting smoking, researchers at the University of Western Ontario found that people with high self-esteem were more likely than people with low self-esteem to reduce dissonance in the most direct way, namely by stopping smoking (Peterson, Haynes, & Olson, 2008). Similarly, a study that created dissonance by confronting drivers with the environmental costs of driving rather than using public transportation found that people with high self-esteem expressed a willingness to change their behaviour and use public transportation, whereas those with low self-esteem were more likely to rationalize their driving (e.g., arguing that environmental concerns are exaggerated; Holland, Meertens, & Van Vugt, 2002).

The Power of Mild Punishment If you really want to stop someone from behaving badly (e.g., trying to stop a bully from beating up little kids) you should dish out punishment—and make sure it is severe enough to have a deterrent effect. Right? Not so according to dissonance theory. Dissonance theory would predict just the opposite. Give the bully mild punishment. Then, when the bully stops beating up little kids, dissonance is created. "I like beating up little kids, but I'm not doing it. Why?" He doesn't have a convincing answer to this question because the threat is so mild it doesn't produce a superabundance of justification. This is referred to as **insufficient punishment**. This dissonance can be reduced by deciding "I guess I stopped because it's really not that much fun after all." In contrast, if this bully had received severe punishment, he or she would have ample external justification for having stopped ("I'm not beating up kids because I'll get kicked out of school if a teacher sees me"). In this

Insufficient Punishment

The dissonance aroused when individuals lack sufficient external justification for having resisted a desired activity or object, usually resulting in individuals devaluing the forbidden activity or object

case, the behaviour may decrease, but probably only when a teacher isn't around. In other words, true attitude change hasn't taken place.

These ideas were put to the test by Elliot Aronson and J. Merrill Carlsmith (1963) in an experiment with preschoolers. In this study, the experimenter first asked each child to rate the attractiveness of several toys. He then pointed to a toy that the child considered to be among the most attractive and told the child that he or she was not allowed to play with it. Half of the children were threatened with mild punishment (the experimenter said he would be annoyed) if they disobeyed; the other half were threatened with severe punishment (the experimenter said he would be very angry, would take their toys away, and would never come back again). The experimenter then left the room for several minutes to provide the children with the time and opportunity to play with the other toys and to resist the temptation of playing with the forbidden toy. None of the children played with the forbidden toy.

Parents can intervene to stop bullying after it takes place, but what might they do to make it less likely to happen in the future?

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The experimenter then returned to the room and asked each child to rate how much he or she liked each of the toys. Initially, all the children had wanted to play with the forbidden toy but, during the temptation period, all of them had refrained from playing with it. Clearly, the children were experiencing dissonance. How did they respond? The children who had received a severe threat had ample justification for their restraint. They knew why they hadn't played with the toy and therefore they had no reason to change their attitude toward it. These children continued to rate the forbidden toy as highly desirable; indeed, some even found it more desirable than they had before the threat.

But what about the others? Without much external justification for avoiding the toy—they had little to fear if they played with it—the children in the mild threat condition needed an *internal* justification to reduce their dissonance. Before long, they succeeded in convincing themselves that the reason they hadn't played with the toy was that they didn't really like it. They rated the forbidden toy as less attractive than they had at the beginning of the experiment. Subsequent research showed that these effects are quite long-lasting (Freedman, 1965). The implications for child rearing are fascinating. Parents who use punishment to encourage their children to adopt positive values should keep the punishment mild—barely enough to produce a change in behaviour—and the values will follow.

How can we induce this child to give up playing with an attractive toy?

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The Aftermath of Bad Deeds

Imagine that you realize that your actions have hurt another person. How would you react? Would you be especially kind to this person to make up for your transgression? Sadly, that is not what dissonance theory would predict. According to dissonance theory, when we hurt someone, we come to dislike or hate that person as a way of justifying our cruelty. This phenomenon was demonstrated in an early experiment performed by Keith Davis and Edward E. Jones (1960). Participants watched a young man (a confederate) being interviewed and then provided him with an analysis of his shortcomings as a human being. Specifically, the participants were told to tell the young man that they believed him to be a shallow, untrustworthy, boring person. The participants succeeded in convincing themselves that they didn't like the victim of their cruelty—after the fact. In short, after saying things they knew were certain to hurt him, they convinced themselves that he deserved it. They found him less attractive than they had prior to saying the hurtful things to him.

These effects can operate on quite a subtle level, as when we tell disparaging jokes about particular groups. Even though it may seem like harmless fun, we end up evaluating the group more negatively as a means of justifying our put-downs, as demonstrated in a program of research conducted at the University of Western Ontario (Hobden & Olson, 1994; Maio, Olson, & Bush, 1997). For example, participants who were asked to recite disparaging jokes about Newfoundlanders later reported more negative stereotypes of this group than those who recited nondisparaging jokes.

Do people in real-world situations also use dissonance to justify cruel actions toward another human being? Sadly, the answer appears to be yes. In March 1993, Canadian soldiers from the elite Canadian Airborne Regiment on a peacekeeping mission in Somalia captured 16-year-old Shidane Arone trying to sneak into their compound. He was tied up, savagely beaten, and tortured to death. A court martial later learned that one of the soldiers beat Arone with a wooden riot baton, a metal pipe, and his feet and fists. Other soldiers joined in. According to newspaper reports, the young Somali boy's cries of "Canada, Canada, Canada" as he drifted in and out of consciousness could be heard across the compound. Canadians were shocked and deeply disturbed by this incident. Perhaps most shocking was that the soldiers posed for "trophy" photographs—in one photograph, soldiers posed beside the unconscious Somali boy; in another photograph, a soldier held the boy's head up by jamming a wooden baton into his bloody mouth; still others showed a soldier holding a gun to Arone's head. What was so chilling about these photographs was the broad smiles on the soldiers' faces. As James Travers, the editor of the *Ottawa Citizen*, commented, "They not only tortured, beat, and killed him, but were obviously playing when they did this" (Boadle, 1994). How could anyone gleefully torture and murder a 16-year-old boy? By deciding that he deserved it. It may seem absurd to suggest that Canadian peacekeepers could convince themselves that an unarmed, civilian boy deserved to be beaten to death for trying to enter their compound. However, as various inquiries into this tragedy revealed, some of the higher-ranking officers had issued orders to "abuse" any Somali intruders. While the soldiers who committed these atrocities were aware that it was illegal to torture or kill anyone they captured, the fact that some of their superiors advocated punishing intruders appears to have been all the justification they needed. In short, the soldiers may have convinced themselves that Arone deserved what he got.

Another way in which people reduce dissonance for having committed cruel acts is to derogate or dehumanize their victim. According to the report of the Somalia Commission of Inquiry, the Canadian soldiers referred to the Somali people as "gimmes," "smufties," and "nignogs" (Canada, 1997). Unfortunately, history keeps repeating itself. In 2005, Americans in charge of the Abu Ghraib prison near Baghdad tortured and killed Iraqi prisoners. The images of torture and humiliation bore a chilling resemblance to the photos of Shidane Arone. One of the striking similarities was the dehumanization of the victims—the prisoners were shown naked, with hoods over their faces, or crawling on all fours with leashes around their necks.

Ironically, success at dehumanizing the victim virtually guarantees a continuation or even an escalation of the cruelty. It becomes easier to hurt and kill "subhumans" than to hurt and kill fellow human beings. Reducing dissonance in this way has sobering future consequences: It increases the likelihood that the atrocities people are willing to commit will become greater and greater through an endless chain of violence followed by self-justification (in the form of dehumanizing the victim), followed by greater violence and still more intense dehumanization. In this manner, unbelievable acts of human cruelty—such as the Nazi Final Solution that led to the murder of 6 million European Jews, the murders of 2 million Cambodians in Pol Pot's killing fields in the 1970s, and the massacre of 600 000 Tutsis in Rwanda in 1994—can occur. Unfortunately, such atrocities are not a thing of the past but are as recent as today's newspaper. (At the time of writing, the news headlines are dominated by the beheadings of Western journalists, foreign aid workers, and Syrian soldiers by members of the terrorist group ISIS. The terrorists believe that their victims deserve their inhumane treatment.)

Avoiding the Rationalization Trap

Rationalization Trap
The potential for dissonance reduction to produce a succession of self-justifications that ultimately result in a chain of stupid or immoral actions

Self-Affirmation Theory
A theory suggesting that people will reduce the impact of a dissonance-arousing threat to their self-concept by focusing on and affirming their competence on some dimension unrelated to the threat

The tendency to reduce dissonance by justifying our behaviour can lead us into an escalation of rationalizations that can be disastrous. We call this the **rationalization trap**—the potential for dissonance reduction to produce a succession of self-justifications that ultimately results in a chain of stupid or irrational actions. The irony, of course, is that to avoid thinking of ourselves as stupid or immoral, we set the stage to increase our acts of stupidity or immorality.

Is there a way that people can be persuaded not to rationalize their behaviour when they make mistakes? A clue as to how such behaviour might come about can be found in research on self-affirmation (Steele, 1988; Cohen, Aronson, & Steele, 2000). **Self-affirmation theory** suggests that people can reduce the impact of a dissonance-arousing threat to their self-concept by focusing on and affirming their competence on some dimension unrelated to the threat.

Suppose that Mary spread a vicious rumour about a co-worker so that he wouldn't get a supervisory position that she wanted. But before she had an opportunity to derogate her victim, she was reminded of the fact that she had recently donated several units of blood to Canadian Blood Services or that she had recently received a high score on her physics exam. This self-affirmation would likely provide her with the ability to resist engaging in typical dissonance-reducing behaviour. In effect, Mary might be able to say, "It's true—I just did a cruel thing. But I am also capable of some really fine, intelligent, and generous behaviour." By now there is a large body of evidence showing that if—prior to the onset of dissonance—you provide people with an opportunity for self-affirmation, they will generally grab it (McConnell & Brown, 2010; Steele, 1988). According to a recent series of studies conducted by researchers at universities in the United States and Canada, self-affirmation has beneficial effects (e.g., participants score higher on an integrity scale) even when it is created implicitly (i.e., outside of conscious awareness; Sherman et al., 2009).

But can self-affirmation actually serve as a cognitive buffer, protecting a person from caving in to temptation and committing a cruel or immoral act? In an early experiment on cheating (Aronson & Mettee, 1968), university students were first given a personality test, and then given false feedback that was either positive (i.e., aimed at temporarily raising self-esteem) or negative (i.e., aimed at temporarily lowering self-esteem), or they received no information at all. Immediately afterward, they played a game of cards in which, to win a large pot, they could easily cheat without getting caught. The results were striking. Students in the high self-esteem condition were able to resist the temptation to cheat to a far greater extent than were the students in the other conditions. In short, a temporary boost in self-esteem served to inoculate these students against cheating, because the anticipation of doing something immoral was more dissonant than it would otherwise have been. Thus, when they were put in a tempting situation, they were able to say to themselves, "Terrific people like me don't cheat." And they didn't (see also Aronson, Cohen, & Nail, 1999; Spencer, Josephs, & Steele, 1993; Steele, Spencer, & Lynch, 1993).

Recent studies conducted by University of British Columbia researchers point to another promising approach for avoiding the rationalization trap (Aquino, Reed, Thau, & Freeman, 2007). In this research, participants were primed with moral identity words (e.g., *caring*, *honest*, *helpful*) or in the control condition, with positive, but not moral, words (e.g., *happy*, *open-minded*). Participants also were asked to write stories about themselves by using these words. Later, they were exposed to pictures and newspaper articles about prisoner abuses in Abu Ghraib prison and at Guantanamo Bay. Those whose moral identity was made salient (i.e., brought to the forefront of their minds) subsequently reported more negative emotions in response to these abuses than those in the control condition.

Thus, there is evidence that affirming people in some way (e.g., boosting their self-esteem) or reminding them of their morals may reverse the rationalization trap. We find these results encouraging.

Dissonance, Self-Affirmation, and Culture According to Heine and Lehman (1997a), the experience of dissonance may be unique to cultures in which the self is defined as independent. If the focus in a culture is on the individual (as in North America), it becomes important for the individual to behave in ways that are consistent with his or her attitudes, because the person's behaviour is seen as diagnostic of what he or she is really like. On the other hand, if the self is defined in relation to others, as is the case in Asian cultures, behaviour is more likely to be tailored to the demands of the group. As a result, people in Asian cultures might experience little dissonance when their attitudes and behaviours are inconsistent. Heine and Lehman (1997a) tested this idea by conducting a study in which students at the University of British Columbia and Japanese students visiting Vancouver signed up for a marketing research survey. First, the researchers administered a bogus personality test. Then participants were asked to rate the desirability of 10 CDs. In the meantime, their personality tests supposedly had been scored. Some participants received positive personality feedback and others received negative feedback. (Participants in a control group did not receive any personality feedback.) Next, participants were given a choice between their fifth- and sixth-ranked CDs. After they made their selection, they were asked to again rate all 10 CDs.

Canadian participants in the control group showed classic dissonance reduction—they rated the chosen CD higher than they had previously and the rejected CD lower than they had previously. However, consistent with self-affirmation theory, those who received positive personality feedback did not engage in dissonance reduction. Because they had been reminded of what wonderful people they were, and they did not feel a need to reduce dissonance by changing their ratings of the CDs. Those who received negative feedback were especially likely to engage in dissonance reduction.

What about the Japanese participants? They did not show dissonance reduction in any of the conditions. Japanese students felt as badly as Canadian students did about the negative personality feedback and were more likely than the Canadian participants to believe that it was accurate. However, they did not reduce dissonance by changing their ratings of the CDs, even under these circumstances.

In an interesting twist, Hoshino-Browne and colleagues (2005) examined whether East Asians might experience dissonance when they have to make a decision that affects a member of their group. In this research, students at the University of Waterloo and at Kyoto University in Japan rated the 10 dishes they would prefer most at a new Chinese restaurant (the self condition) or rated the 10 dishes a close friend would prefer (the friend condition). Later, participants were shown coupons for the fifth- and sixth-ranked dishes and were told to select one. Those in the self condition were asked to once again rate their preferences for all of the dishes; those in the friend condition rated their friend's preferences. European-Canadian participants showed classic post-decision dissonance in the self condition—they now rated the dish for which they had chosen the coupon more positively and the "rejected" dish (i.e., the coupon for the dish they didn't select) more negatively than they had before. East Asian participants did not show this effect. However, in the friend condition, the results were opposite—here European-Canadians did not show evidence of dissonance reduction, but Asian participants did. In other words, European-Canadians tended to justify their decisions when they made choices for themselves, whereas East Asians tended to justify their decisions when they made choices for a close other (Hoshino-Browne et al., 2005).

In follow-up studies, the researchers examined the role of two different types of self-affirmation in reducing dissonance—either an independent self-affirmation (e.g., writing about a value that uniquely describes you) or an interdependent self-affirmation (writing about why a certain value is held by you and your family members). As you can probably guess, an independent self-affirmation diminished the need for dissonance reduction among European-Canadians; an interdependent self-affirmation diminished the need for dissonance reduction among East Asians. Interestingly, both kinds of self-affirmation were effective for bicultural participants (i.e., East Asians living in Canada who strongly identified with both cultures). Hoshino-Browne and colleagues (2005) conclude that for self-affirmation to protect people from engaging in dissonance reduction, it is important to affirm a culturally valued trait.

The Solar Temple Revisited

At the beginning of this chapter, we raised a vital question regarding the followers of Luc Jouret and Joseph Di Mambro of the Solar Temple. How could intelligent people allow themselves to be led into what, to the overwhelming majority of us, is obviously senseless and tragic behaviour—resulting in mass murder–suicides? Needless to say, the situation is a complex one; there were many factors operating, including the charismatic, persuasive power of each of these leaders, the existence of a great deal of social support for the views of the group from other members of the group, and the relative isolation of each group from dissenting views, producing a closed system—a little like living in a room full of mirrors.

In addition to these factors, we are convinced that the single most powerful force was the existence of a great deal of cognitive dissonance. You know from reading this chapter that when individuals make an important decision and invest heavily in that decision in terms of time, effort, sacrifice, and commitment, the result is a strong need to justify those actions and that investment. The more they sacrifice and the harder they work, the greater the need to convince themselves that their views are correct; indeed, they may even begin to feel sorry for those who do not share their beliefs. The members of the Solar Temple cult sacrificed a great deal for their beliefs; they abandoned their friends and families, relinquished their money and possessions, and if they were female, subjected themselves to sexual exploitation. All of these sacrifices served to increase their commitment to the cult. Those of us who have studied the theory of cognitive dissonance were not surprised to learn that intelligent, respected, professional people could be persuaded that through death by fire, they could escape the imminent apocalypse on Earth and be reborn on the star Sirius. To begin to question these beliefs would have produced too much dissonance to bear. Although tragic and bizarre, the death voyages of the Solar Temple members are not unfathomable. They are simply an extreme manifestation of a process—cognitive dissonance—that we have seen in operation over and over again.

USE IT! **How Would You Use This?**

You have a friend who drives after drinking. You keep telling him that this activity is dangerous. He says he can handle it. How could you get him to change his behaviour?

Hint: Think about the research on getting students to practise safe sex (use condoms); think about the "hypocrisy induction."

Summary

- **The Nature and Origin of Attitudes** An attitude is a person's enduring evaluation of people, objects, and ideas.
  - **Where Do Attitudes Come From?** Affectively based attitudes stem more from people's emotions and values. Cognitively based attitudes stem more from people's beliefs about the properties of the attitude object. Behaviourally based attitudes are formed according to people's actions toward the attitude object.
  - **Explicit Versus Implicit Attitudes** Once an attitude develops, it can exist at two levels. Explicit attitudes are those we consciously endorse and can easily report. Implicit attitudes are involuntary, uncontrollable, and at times unconscious.
- **When Do Attitudes Predict Behaviour?** Under what conditions will people's attitudes dictate how they actually behave?
  - **The Theory of Planned Behaviour** According to the theory of planned behaviour, the best predictors of people's behaviours are their intentions to perform the behaviour. Intentions, in turn, are a function of people's attitude toward the specific act in question, subjective norms (people's beliefs about how others view the

behaviour in question), and how much people believe they can control the behaviour.

- **The Theory of Planned Behaviour: Implications for Safer Sex** The theory of planned behaviour is useful in understanding why people frequently express positive attitudes toward using condoms but often fail to use them. People are unlikely to use condoms if (1) they believe that their peers are not using condoms or that their partner would disapprove (*subjective norms*); (2) they find it embarrassing to buy condoms or bring up the topic with their partner (*perceived behavioural control*); and (3) if their intentions to use condoms are undermined (e.g., by excessive alcohol consumption).

■ **How Do Attitudes Change?** Social psychologists have examined several ways in which people's attitudes can be changed. Attitudes often change in response to social influence.

- **Persuasive Communications and Attitude Change** Attitudes can change in response to a persuasive communication. According to the Yale Attitude Change Approach, the effectiveness of a persuasive communication depends on aspects of the communicator, or source of the message; aspects of the message itself (e.g., its content); and aspects of the audience. The elaboration likelihood model specifies when people are persuaded more by the strength of the arguments in the communication and when they are persuaded more by surface characteristics. When people have both the motivation and ability to pay attention to a message, they take the central route to persuasion, in which they pay close attention to the strength of the arguments. When they have low motivation or ability, they take the peripheral route to persuasion, in which they are swayed by surface characteristics, such as the attractiveness of the speaker.
- **Fear and Attitude Change** Fear-arousing communications can cause lasting attitude change if a moderate amount of fear is aroused and people believe they will be reassured by the content of the message.
- **Advertising and Attitude Change** The many advertisements that we are bombarded with in the course of a day are intended to change our attitudes. Social psychologists have conducted research to evaluate which advertising techniques are most effective. Appeals to emotion work best if the attitude is based on affect; appeals to utilitarian features (pluses and minuses of the product) work best if the attitude is based on cognition. There is no evidence that subliminal messages in advertisements have any influence on people's behaviour. Subliminal influences have been found, however, under controlled laboratory conditions.

■ **Resisting Persuasive Messages** Researchers have studied a number of ways that people can use to avoid being influenced by persuasive messages.

- **Attitude Inoculation** One way is to expose people to small doses of arguments against their position, which makes it easier for them to defend themselves against a persuasive message they hear later.
- **Being Alert to Product Placement** Increasingly, advertisers are paying to have their products shown prominently in television shows and movies. Forewarning people about attempts to change their attitudes, such as product placement, makes them less susceptible to attitude change.

■ **Changing Our Attitudes Because of Our Behaviour: The Theory of Cognitive Dissonance** According to cognitive dissonance theory, people experience discomfort (dissonance) when they behave in ways that are inconsistent with their attitudes or when they hold two conflicting attitudes. To reduce the dissonance, people either (1) change their behaviour to bring it in line with their cognitions about themselves, (2) justify their behaviour by changing one of their cognitions, or (3) attempt to justify their behaviour by inventing new cognitions.

- **Decisions, Decisions, Decisions** Decisions arouse dissonance because they require choosing one thing and not the other. The thought that we may have made the wrong choice causes discomfort. After the choice is final, the mind diminishes the discomfort through solidifying the case for the item chosen.
- **Dissonance and the Brain** Recent research shows that dissonance and dissonance reduction are reflected in the way that the brain processes information. The cognitive/decision making areas of the brain are activated during dissonance; once dissonance is reduced, the emotion/pleasure areas light up.
- **The Justification of Effort** People tend to increase their liking for something they have worked hard to attain, even if the thing they attained is not something they would otherwise like. This explains, for example, the intense loyalty the initiated feel for a team or a group after undergoing hazing.
- **Internal Versus External Justification** When people express an opinion counter to their attitudes (counter-attitudinal advocacy) for low external justification (e.g., a small reward), they find an internal justification for their behaviour, coming to believe what they said. In other words, they change their attitudes so that they are in line with their behaviour. The internal process of self-justification has a much more powerful effect on an individual's long-term values and behaviours than a situation in which the external justifications are evident. If people avoid doing something desirable for insufficient punishment, they will come to believe that the activity wasn't that desirable after all. Thus, mild punishment is more effective at getting people to refrain from negative behaviours than severe punishment.
- **The Aftermath of Bad Deeds** If we do harm to another, to reduce the threat to our self-image that could come from doing a bad deed, we tend to justify the bad deed by derogating the victim. That is, we come to believe that the victim deserved the harm or, in more extreme cases, that he or she is less than human. Reducing dissonance in this way can result in a rationalization trap, whereby we set the stage for increasing acts of stupidity or immorality.
- **Avoiding the Rationalization Trap** According to self-affirmation theory, we can avoid the rationalization trap by reminding ourselves of our competencies in other areas. It is also useful to remind ourselves that we are good and decent people.

  In Western, individualistic cultures, people experience dissonance when they make decisions for themselves; in Eastern, collectivist cultures, people experience dissonance when they make decisions for close others. Independent self-affirmations reduce dissonance in individualistic cultures; interdependent self-affirmations reduce dissonance in collectivist cultures.