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6 Attitudes

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KEY TERMS

- affective component of attitude
- attitude
- attitude functions
- attitude–behaviour relation
- attitudinal ambivalence
- behavioural component of attitude
- cognitive component of attitude
- cognitive dissonance
- ego-defensive function
- evaluative conditioning
- explicit measures of attitude
- implementation intentions
- implicit measures of attitude
- mere exposure effect
- MODE model
- multicomponent model of attitude
- object appraisal function
- one-dimensional perspective of attitudes
- perceived behavioural control
- self-efficacy
- self-monitoring
- self-perception theory
- social adjustment function
- theory of planned behaviour
- theory of reasoned action
- two-dimensional perspective on attitudes
- utilitarian function
- value-expressive function

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ROUTE MAP OF THE CHAPTER

The study of attitudes is at the core of social psychology. Attitudes refer to our evaluations of issues, people, groups and other types of objects in our social world. Attitudes are important, because they impact both the way we perceive the world and how we behave. For example, a questionable penalty during the World Cup football final is likely to be perceived differently depending upon which team you support. Further, our voting behaviour very much depends on the extent to which we like the different candidates. In this chapter, we introduce the attitude concept. We consider how attitudes are formed and organized and discuss theories explaining why we hold attitudes. We also address how social psychologists measure attitudes, as well as examining how our attitudes help predict our behaviour.

INTRODUCTION

All of us like some things and dislike others. For instance, one person may like the Welsh national rugby team and another person may dislike liver. A social psychologist would say that we possess a positive **attitude** towards the Welsh rugby team and a negative *attitude* towards liver. Understanding differences in attitudes across people and uncovering the reasons why people like and dislike different things has long interested social psychologists. Indeed, over 70 years ago, Gordon Allport (1935, p. 798) asserted that the attitude concept is 'the most distinctive and indispensable concept in . . . social psychology'. That statement remains equally valid today; the study of attitudes remains at the forefront of social psychological research and theory.

attitude an overall evaluation of a stimulus object.

In this chapter, we introduce a number of important issues regarding the attitude concept. First, we define the term 'attitude'. We will show that expressing an attitude involves making an evaluative judgement about an attitude object. Second, we devote attention to the content of attitudes. We will show that attitudes have cognitive, affective and behavioural components; that is, attitudes can be *based* on beliefs, feelings and behaviours, while also *shaping* beliefs, feelings and behaviours. In discussing the content of attitudes, we focus on these components as *antecedents* of an attitude. Third, we consider the structure of attitudes. We will show that attitudes can be organized and structured in different ways. Fourth, we consider the psychological functions or needs that are served by attitudes. We will show that people hold attitudes for a number of reasons. Fifth, we introduce how attitudes are measured, concentrating on direct and indirect strategies that psychologists have developed to measure attitudes. We will show that attitudes can be measured in many ways. Finally, we review research that has addressed a key question for attitude researchers: under what circumstances do attitudes predict behaviour? We will show that our attitudes and opinions are quite effective in predicting how we behave.

Given the importance of attitudes in understanding how we think, feel and behave, it is not surprising that there are numerous links between attitudes and many of the other topics covered in this textbook. For example, self-esteem can be conceptualized as one's attitude toward the self (see Chapter 5), and attitudes have obvious links to the study of persuasion and behaviour change, advertising (Chapter 7), social influence (Chapter 8), and the study of prejudice (Chapter 14).

WHAT IS AN ATTITUDE?

How can we best define an attitude?

A logical starting point is to define what we mean by the term *attitude*. We define an attitude as 'an overall evaluation of an object that is based on cognitive, affective and behavioural information' (Maio & Haddock, 2010, p. 4). Inherent in this definition is the idea that reporting an attitude involves the expression of an *evaluative judgement* about a stimulus object. In other words, reporting an attitude involves making a decision concerning liking versus disliking, approving versus disapproving, or favouring versus disfavouring a particular issue, object or person.

An attitude, when conceptualized as an evaluative judgement, can vary in two important ways (see Eagly & Chaiken, 1993; Maio & Haddock, 2010). First, attitudes can differ in *valence*, or direction. Some attitudes that a person possesses are positive (e.g. 'I like ice-cream'), others are negative (e.g. 'I dislike liver'; Figure 6.1), and

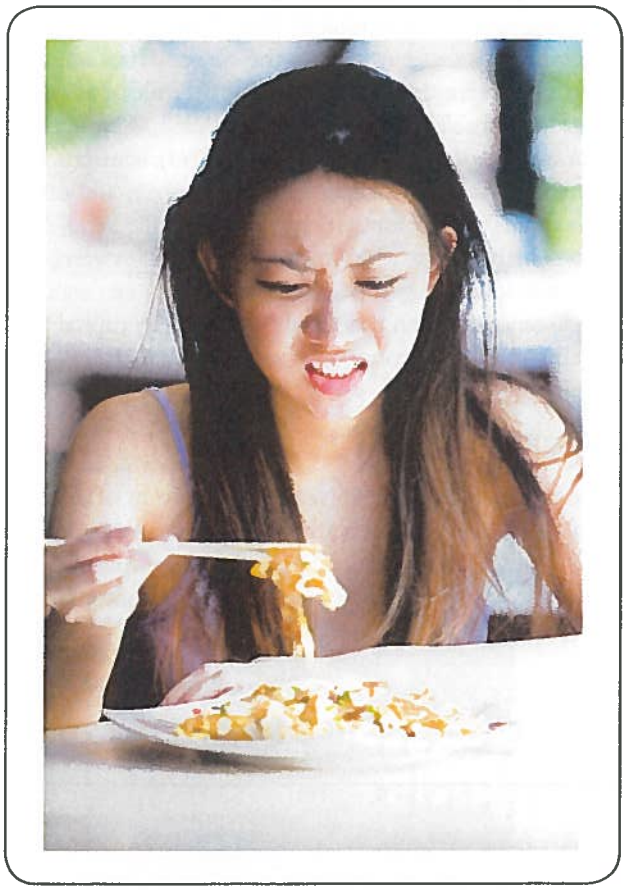

FIGURE 6.1 *Some people are certain of a strong dislike and will express this spontaneously.*

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LEADER IN THE FIELD

Alice Eagly (b. 1938) completed her undergraduate degree at Radcliffe College before pursuing a PhD at the University of Michigan (1965). Her research on attitude change (with Shelly Chaiken; see Leader in the Field, Chapter 7) led to the development of the heuristic–systematic model of persuasion (see Chapter 7). Together, Eagly and Chaiken (1993) wrote *The Psychology of Attitudes*, arguably the most comprehensive volume written on the attitude concept. In addition to her research on the psychology of attitudes, Eagly has made enormous contributions to our understanding of the psychology of gender.

LEADER IN THE FIELD

Mark Zanna, FRSC (b. 1944) completed his undergraduate and PhD degrees at Yale University. He started his academic career at Princeton University, before moving (in 1975) to the University of Waterloo, where he is currently University Professor of Psychology. In over 200 publications, his research on topics such as attitude content, attitude structure and attitude–behaviour relations have had an enormous impact on the field. Further, Zanna and colleagues have applied conceptualizations of attitude to increase our understanding of concepts such as prejudice, discrimination and how attitude models can be used to influence health-related behaviour.

yet others are neutral ('I neither like nor dislike eating fried foods'). Second, attitudes can differ in *strength*. For example, two people (Geoff and Greg) may both have a negative attitude to liver, but one, Geoff, is rather uncertain about his attitude, and his view comes to mind quite slowly, while the other, Greg, is certain of his strong dislike, and his view is expressed spontaneously when anyone mentions liver ("Yuck!"). You will learn more about different aspects of attitude strength later in this chapter.

Until now, we have used different examples when describing our own attitudes. This leads to an important question – can *anything* be the object of an attitude? Basically, any stimulus that can be evaluated along a dimension of favourability can be conceptualized as an attitude object. As noted by Eagly and Chaiken (1993), some attitude objects are abstract concepts (e.g. 'liberalism'), and others are concrete (e.g. a computer) (see Leader in the Field, Alice Eagly). Furthermore, one's own self (e.g. self-esteem) and other individuals (e.g. a particular politician) can serve as attitude objects, as can social policy issues (e.g. capital punishment) and social groups (e.g. people from Canada).

Summary

Reporting an attitude involves the expression of an evaluative judgement about a stimulus object. Attitudes differ in valence and strength, and any stimulus that can be evaluated along a dimension of favourability can be conceptualized as an attitude object.

THE CONTENT OF ATTITUDES

What are the bases of attitudes?

So far we have seen that attitudes can be thought of as an overall evaluation (e.g. like–dislike) of an attitude object. This perspective has generated a number of conceptual models of the attitude concept. Historically, one of the most influential models of attitude has been the **multicomponent model** (Zanna & Rempel, 1988; see Maio & Haddock, 2010, for a review; also Leader in the Field, Mark Zanna). According to this perspective (see Theory Box 6.1 and Figure 6.2), attitudes are summary evaluations

multicomponent model of attitude a model of attitude that conceptualizes attitudes as summary evaluations that have cognitive, affective and behavioural antecedents.

THEORY BOX 6.1

THE MULTICOMPONENT MODEL OF ATTITUDE

The multicomponent model of attitudes (Zanna & Rempel, 1988) proposes that attitudes are overall evaluations of an attitude object that are derived from cognitive, affective and behavioural information. *Cognitions* refer to thoughts and beliefs about an attitude object (e.g. a particular politician is intelligent and values individual freedom). *Affective* information refers to feelings associated with an attitude object (e.g. blood donation may make an individual feel anxious and scared). *Behavioural* information refers to behaviours we have performed (or might perform in the future) with respect to an attitude object (e.g. signing a petition against the practice of factory farming).

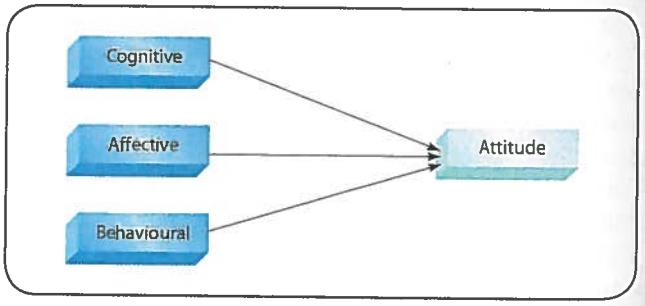

FIGURE 6.2 *The multicomponent model of attitude.*

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of an object that have *cognitive*, *affective* and *behavioural* antecedents. A number of researchers have considered how these three antecedents contribute to the formation and expression of attitudes.

The cognitive component of attitudes

cognitive component of attitude beliefs, thoughts and attributes associated with an attitude object.

The **cognitive component of attitudes** refers to beliefs, thoughts and attributes we associate with a particular object. In many cases, a person's attitude might be based primarily upon a consideration of the positive and negative attributes of the attitude object (Figure 6.3). For example, when one of us bought a new car a few years ago, he devoted considerable attention to factors such as different vehicles' safety records, fuel economy, resale value and repair costs. In this example, he formed attitudes towards the different cars via a conscious consideration of the positive and negative attributes of each car. Cognitions have an impact on many types of attitudes. Within the study of intergroup attitudes (see Chapters 4 and 14), stereotypes are usually considered as beliefs about the attributes possessed by a particular social group. Further, many studies have revealed that possessing negative stereotypes about a group of people is associated with having a prejudicial attitude towards the group (e.g. Esses, Haddock, & Zanna, 1993; Kawakami, Dion, & Dovidio, 1998; see Maio, Haddock, Manstead, & Spears, 2010).

Cognitions, in the form of beliefs, are a key part of one approach to attitudes, which argues that attitudes are derived from more elementary cognitions about the attitude object. Specifically, Fishbein and Ajzen's (1975) expectancy–value approach describes an attitude towards an object as the sum of 'expectancy × value' products. Expectancies are beliefs or subjective probabilities that the object possesses a certain attribute; these beliefs may range from 0 to 1 in strength. Values, or evaluations, are ratings of the attributes, normally from −3 to +3. An attitude object will be evaluated positively if it is seen as leading to, or associated with, positive things and as helping to avoid negative things. Only salient beliefs count towards the overall attitudes; these are beliefs that a person considers most relevant. We can illustrate the model by computing a person's attitude towards the game of golf. This person might think that golf is (1) a valuable form of exercise, (2) a good way to see friends, and (3) frustrating. Each of these beliefs will have both an expectancy and a value. For example, exercise might have a high expectancy (.9) and positive evaluation (+3); seeing friends might

FIGURE 6.3(a) and (b) *Attitudes towards different cars might be based on the positive and negative characteristics of each car.*
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be perceived as having a lower expected outcome (.7) that is somewhat positive (+2); while frustration is (thankfully!) somewhat infrequent (.3) but very negative (–3). The individual's overall attitude towards golf is computed by summing the belief–evaluation products (e.g. 2.7 + 1.4 – .9 = 3.2).

The affective component of attitudes

affective component of attitude the feelings or emotions associated with an attitude object.

The **affective component of attitudes** refers to feelings or emotions associated with an attitude object. Affective responses influence attitudes in a number of ways. A primary way in which feelings influence attitudes is due to affective reactions that are aroused in the individual after exposure to the attitude object. For instance, many people indicate that spiders make them feel scared. These negative affective responses are likely to produce a negative attitude towards spiders.

Feelings can become associated with attitude objects in several ways. A number of researchers have used **evaluative conditioning** paradigms to assess how pairing affective information with an attitude object can produce a positive or negative attitude. For example, Krosnick, Betz, Jussim, and Lynn (1992) conducted a study in which they presented participants with a series of pictures of an unfamiliar person. Importantly, each picture was preceded by an affect-arousing image that was presented at a subliminal level, that is, at very brief exposure below the threshold necessary for conscious encoding (see Chapter 4). For some participants, these images were negative (e.g. a bucket of snakes, a bloody shark), while for other participants these images were positive (e.g. a pair of kittens, a couple getting married). After seeing the pictures of the unfamiliar person, participants indicated their overall attitude toward this individual, as well as their evaluation of the target's personality characteristics and physical attractiveness. As can be seen in Figure 6.4, Krosnick et al. found that participants who received subliminal presentations of the positive images liked the individual more compared with participants who received subliminal presentations of the negative images. Not only were participants' attitudes affected by the subliminal presentations, so too were their perceptions of the target person's attributes and physical attractiveness.

evaluative conditioning changes the liking for a stimulus by repeatedly pairing it with another more polarized positive or negative stimulus.

In addition to evaluative conditioning and subliminal priming, another way in which affect guides attitudes comes from research by Zajonc and colleagues (e.g. Kunst-Wilson & Zajonc, 1980; Monahan, Murphy, & Zajonc, 2000; Murphy & Zajonc, 1993; Zajonc, 1968; see also Leader in the Field, Robert Zajonc). These researchers argue that attitudes are formed on the basis of affective responses that precede conscious thought. To test this hypothesis, studies have examined how **mere exposure** to stimuli can influence an attitude. In these studies, different types of unfamiliar stimuli (e.g. various Chinese characters) are presented to participants a certain number of times. The stimuli are then shown again to participants along with other, novel stimuli (e.g. new characters), and participants' attitudes towards the familiar and unfamiliar stimuli are measured. A large number of studies have revealed that stimuli that have been presented many times are liked more than stimuli that have not been seen before. For instance, in one study by Zajonc (1968), participants were initially shown 12 different Chinese characters. During this exposure phase, each character was shown either 25 times, 10 times, five times, twice, once or not at all. Later, participants were asked to indicate how much they liked each character. The results of this study are presented in Figure 6.5. As can be seen, participants' attitudes towards the characters became more positive the more times the character had been seen at the exposure phase. Researchers have replicated these findings in many domains (see Maio & Haddock, 2010; see also Chapter 11). The mere exposure

mere exposure effect increase in liking for an object as a result of being repeatedly exposed to it.

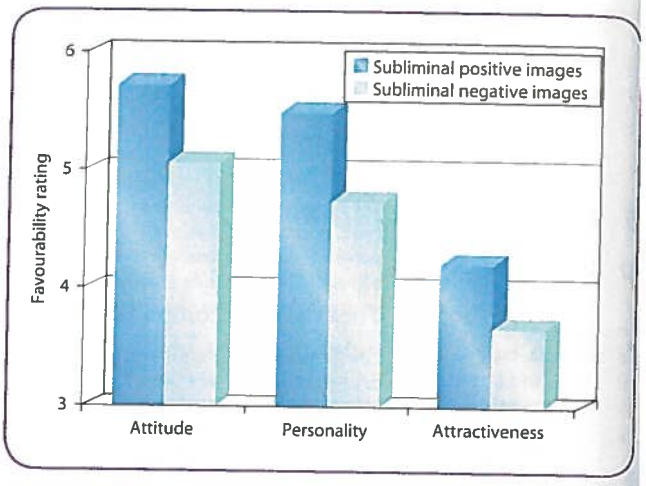

FIGURE 6.4 *The influence of subliminal priming on social perceptions.*

Source: Adapted from Krosnick et al., 1992. Reproduced with permission from SAGE Publications Ltd.

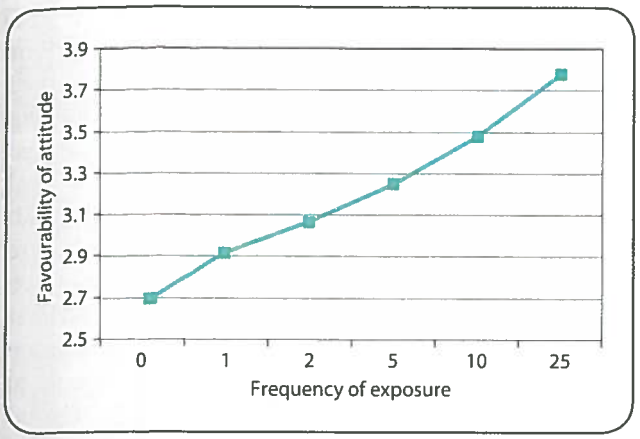

FIGURE 6.5 *The influence of repeated exposure on attitudes.*

Source: Adapted from Zajonc, 1968. Copyright © 1968 by the American Psychological Association. Adapted with permission. *Journal of Personality and Social Psychology, 9,* 1–27. The use of APA information does not imply endorsement by APA.

LEADER IN THE FIELD

Robert Zajonc (1923–2008) was born in Lodz, Poland. After the Nazis invaded Poland he was dispatched to a labour camp in Germany. He escaped, twice, joined the French Resistance and studied at the University of Paris. When the war ended, he worked for the United Nations Relief and Rehabilitation Administration in Paris. He completed his PhD at the University of Michigan (1955), where he remained until 1994. Zajonc's research covered many areas relevant to the psychology of attitudes. His work on the mere exposure effect led to the development of an influential programme of study exploring how affective processes influence attitudes and actions. This research led Zajonc to consider the role of unconscious processes in determining preferences and behaviour.

phenomenon helps explain why we sometimes come to like classical music melodies that we hear repeatedly, even when we are unable to recall the artist who composed the music or any details of our prior experiences hearing it.

More recent research has demonstrated that mere exposure can increase positive affect and that the effects can transfer to novel stimuli that have not been encountered. For example, in one experiment, Monahan et al. (2000) found that repeated subliminal exposure of one set of stimuli elicited more positive mood during a subsequent presentation of similar stimuli. In another experiment, these researchers found that repeated subliminal exposure caused more liking for new stimuli that were similar to the old ones (e.g. both were Chinese ideographs) than for new stimuli that were of a different category (e.g. different shapes). This result suggests that repeated exposure can create *general* positive affect, which can then be attached to new objects that are similar to the old ones.

The behavioural component of attitudes

The **behavioural component of attitudes** refers to behaviours we have performed (or might perform in the future) with respect to an attitude object. The role of behavioural processes in relation to attitudes can take on different forms. As a starting point, behaviours can serve as an antecedent of attitudes. For instance, people might infer that they have a negative attitude towards nuclear power plants if they recall having previously signed a petition against having a nuclear power plant built near their neighbourhood.

behavioural component of attitude past behaviours (also present and future anticipated behaviours) associated with an attitude object.

The idea that people might infer their attitudes on the basis of their previous actions was developed by Bem. According to Bem's (1972) **self-perception theory**, individuals do not always have access to their opinions about different objects (see also Nisbett & Wilson, 1977). Bem argued that this is especially likely when the person's attitude is particularly weak or ambiguous. Many studies have shown results consistent with this reasoning. For example, Chaiken and Baldwin (1981) asked participants to complete a questionnaire containing items that were framed in a way to suggest to people that they did perform pro-environment behaviours (e.g. picking up the garbage of others) with either high or low frequency. After completing this task, participants indicated their attitude towards the environment. The results were consistent with self-perception theory. Participants who were led to infer that they performed pro-environmental behaviours with great frequency reported more favourable attitudes than did participants who were led to infer that they performed pro-environmental behaviours less frequently. Furthermore, this effect was obtained only among those individuals who, prior to the experiment, had weak attitudes about environmental matters.

self-perception theory the theory assumes that when inner states are ambiguous, people can infer these states by observing their own behaviour.

Research has shown that the mere *belief* in having performed a behaviour is sufficient to shape attitudes. Albarracín and Wyer (2000) tested the effects of beliefs about past behaviour by leading participants to believe that, without being aware of it, they had expressed

either support for a particular position or opposition to it. Because participants had not actually engaged in such behaviour, the research tested directly the effects of merely *believing* that one has behaved in a certain way. As expected, participants reported attitudes that were consistent with the alleged past behaviour.

Behaviours may also influence strongly held attitudes, but in a different way. Festinger (1954) proposed that people can change their attitudes in order to be consistent with behaviours that they have performed. For example, people might convince themselves that they like several boring tasks if they have just been given a small (rather than large) payment to tell others that the tasks are great (i.e. to engage in counter-attitudinal behaviour; Festinger & Carlsmith, 1959). Many experiments support Festinger's hypothesis that this effect occurs because the counter-attitudinal behaviour induces **cognitive dissonance**. Cognitive dissonance is an aversive state, which motivates individuals to reduce it (e.g. Zanna & Cooper, 1974; Zanna, Higgins & Taves, 1976). This motivation will be stronger the greater the dissonance. One way to reduce dissonance is to change one's attitude towards the behaviour. This will be discussed in more detail in Chapter 7, which focuses on how attitudes can be changed.

cognitive dissonance an aversive state which motivates individuals to reduce it.

Behaviours can also serve as an antecedent of attitudes in a more direct way. Research has demonstrated that performing a behaviour that has evaluative implications or connotations influences the favourability of attitudes. For example, Briñol and Petty (2003) conducted a study in which participants believed they were participating in a consumer research study on the quality of headphones. Participants were informed that a headphone manufacturer was interested in determining how headphones performed when listeners were engaged in various movements such as dancing and jogging. Briñol and Petty (2003) had participants move their heads in either an up-and-down motion (nodding the head) or a side-to-side motion (shaking the head) as they listened to an editorial played over the headphones. When the arguments contained in the editorial were strong, it was expected that moving one's head in an up-and-down motion would lead participants to be more positive about the position being advocated in the message, because nodding is a motion that is commonly associated with agreement. The results revealed that participants were more likely to agree with the content of a highly persuasive appeal when they moved their heads up and down as compared to side to side (see also Briñol & Petty, 2008; Wells & Petty, 1980).

The enactment of other types of behaviour also affects the favourability of individuals' attitudes. For example, Cacioppo, Priester and Berntson (1993) asked participants to engage in either arm flexion (moving one's hand towards the body – a behaviour associated with approach) or arm extension (moving one's hand away from the body – a behaviour associated with avoidance) while viewing a variety of unfamiliar Chinese characters. Later in the experiment, when asked to rate the characters, Cacioppo et al. (1993) found that characters viewed during arm flexion were rated more positively than those viewed during arm extension. Taken together, in both the Briñol and Petty (2003) and Cacioppo et al. (1993) studies, a direct physical behaviour initiated by individuals influenced the favourability of their attitude.

Of course, in addition to serving as an antecedent of attitudes, behaviours can also reflect or express a person's attitude (see e.g. Bohner & Wänke, 2002; Eagly & Chaiken, 1993). For instance, an individual's positive attitude toward a particular politician might be reflected in their decision to vote for that candidate. Similarly, intending to write to your local member of parliament stating your opposition to an increase in university tuition fees can express your negative attitude toward this issue. Later in the chapter we will discuss in more detail how attitudes are often reflected in behaviour.

How related are the components of attitudes?

Usually, if you possess positive beliefs about an object, your feelings about the object and behaviours relevant to the object are also likely to be positive. At the same time, there is plenty of evidence suggesting that these antecedents are unique. For example, research has shown that people's attitudes toward some issues or objects (e.g. blood donation) tend to be based on affect, whereas people's attitudes toward other issues or objects (e.g. a new printer) tend to be based on cognitive and behavioural information. More recent research has revealed that some people are more likely to possess cognition-based attitudes, whereas other people are more likely to have affect-based attitudes (see Huskinson & Haddock, 2004; see later in the chapter for a discussion of the role of behaviour). Furthermore, whether someone forms their attitudes on the basis of their beliefs or their feelings has important implications (see Research Close-Up 6.1).

ATTITUDE CONTENT AND PERSUASION

RESEARCH CLOSE-UP 6.1

Haddock, G., Maio, G. R., Arnold, K., & Huskinson, T. L. H. (2008). Should persuasion be affective or cognitive? The moderating effects of need for affect and need for cognition. *Personality and Social Psychology Bulletin, 34*, 769–778.

Introduction

In the 1970s a series of famous television advertisements shown in North America featured former professional athletes exalting their preference for a particular brand of beer. While some of the athletes noted that the beer was *less filling* than other beers, others replied that it *tasted great*. The first component of the message highlighted a positive belief about the beverage (i.e. its low caloric intake), whereas the second component highlighted a positive affective response associated with the beverage (i.e. its taste). Which part of the message would you find more persuasive? Perhaps it depends on whether your attitudes tend to be based more upon the content of your beliefs or more upon the content of your feelings.

Haddock and colleagues (2008) tested whether individuals whose attitudes tend to be based more on cognition or affect would be more or less persuaded by an appeal that was either cognitive or affective in nature. Based on previous research, they predicted that individuals with affect-based attitudes would be more persuaded by an affect-based appeal compared to a cognition-based appeal, whereas individuals with cognition-based attitudes would be more persuaded by a cognition-based appeal compared to an affect-based appeal.

Method

Participants

Twenty-four students (16 women and 8 men) took part for psychology course credit.

Design and procedure

The basic design included two factors: whether a person's attitudes were based more on cognition or affect, and whether they received a persuasive appeal that was cognitive or affective. The basis of a person's attitudes as cognitive or affective was determined by their responses on two scales: (1) the need for cognition scale (Cacioppo & Petty, 1982), which measures individuals' tendency to engage in and enjoy effortful processing (see Individual Differences 7.1, Chapter 7); and (2) the need for affect scale (Maio & Esses, 2001), which measures individuals' tendency to seek out emotional experiences. Participants high in need for cognition and low in need for affect were conceptualized as being cognition-based, while participants high in need for affect and low in need for cognition were conceptualized as being affect-based.

In the experiment, participants were informed that they would be evaluating a new beverage called 'Power-Plus'. Half of the participants were randomly assigned to receive an affect-based appeal, and the other half to receive a cognition-based appeal. Participants in the affect-based appeal condition tasted a sample of a pleasant tasting, unfamiliar beverage. The affect within the appeal is derived from the pleasant feeling resulting from having tasted the beverage. Participants in the cognition-based appeal condition read a set of strong and positive attributes about the drink. For instance, they were told that the drink was made from natural ingredients and contained real fruit extracts. Immediately after either tasting or reading about Power-Plus, participants indicated their attitude toward the beverage using a series of nine-point semantic differential scales (*good – bad; positive – negative; like – dislike*).

Results and discussion

The results of the study provided support for the researchers' hypothesis that the effectiveness of cogent affect- and cognition-based persuasive messages depends on individual differences in need for affect and need for cognition (see Figure 6.6). As expected, an affect-based message was more persuasive among individuals with an affect preference (i.e. individuals high in need for affect and low in need for cognition), whereas a cognition-based message was more persuasive among individuals with a cognition preference (i.e. individuals low in need for affect and high in need for cognition). These results demonstrate how the content of an attitude influences persuasion (see also Mayer & Tormala, 2010).

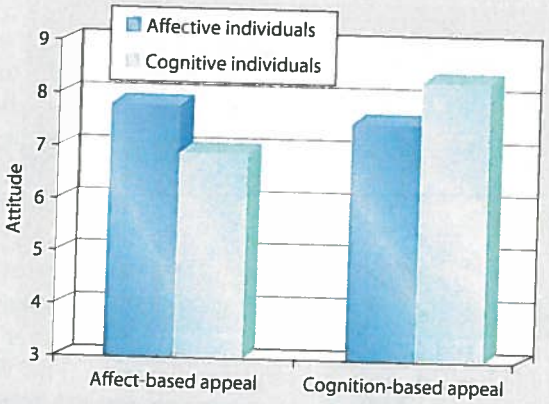

FIGURE 6.6 *The influence of affective–cognitive preference and appeal type on attitudes.*

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Summary

Attitudes have cognitive, affective and behavioural components. The cognitive component refers to beliefs, thoughts and attributes associated with an attitude object. The affective component refers to feelings or emotions associated with an attitude object. The behavioural component refers to past behaviours with respect to an attitude object.

LEADER IN THE FIELD

John Cacioppo (b. 1951) obtained his PhD from the renowned social psychology programme at the Ohio State University in 1977. He held academic posts at Notre Dame University and the University of Iowa before returning to the Ohio State University as Professor of Psychology. His research (much of it in a highly productive collaboration with Richard Petty, see Leader in the Field, Richard E. Petty, in Chapter 7) has had an enormous impact on different areas of the study of attitudes, such as attitude structure, attitude content and attitude change. He is currently Tiffany and Margaret Blake Distinguished Service Professor of Psychology and Director of the Center for Cognitive and Social Neuroscience at the University of Chicago. His numerous awards include the Scientific Impact Award from the Society for Experimental Social Psychology (2009), the Distinguished Scientific Contribution Award from the American Psychological Association (2002), and the Campbell Award (for Distinguished Scientific Contributions to Personality and Social Psychology) from the Society for Personality and Social Psychology (2000).

THE STRUCTURE OF ATTITUDES

What are the two basic perspectives on attitude structure?

In addition to considering the content of attitudes, another important issue concerns how positive and negative evaluations are organized within and among the cognitive, affective and behavioural antecedents of attitudes. It is typically assumed that the existence of positive beliefs, feelings and behaviours inhibits the occurrence of negative beliefs, feelings and behaviours. For example, this framework suggests that an individual with positive beliefs, feelings and behaviours about the Welsh rugby team is unlikely to have negative beliefs, feelings and behaviours about this team. In other words, according to this **one-dimensional perspective on attitudes**, the positive and negative elements are stored in memory at opposite ends of a single dimension, and people tend to experience either end of the dimension or a location in-between.

one-dimensional perspective on attitudes a perspective that perceives positive and negative elements as stored along a single dimension.

two-dimensional perspective on attitudes a perspective that perceives positive and negative elements as stored along separate dimensions.

This one-dimensional view is opposed by a **two-dimensional perspective on attitudes**, which suggests that positive and negative elements are stored along two separate dimensions (Cacioppo, Gardner, & Berntson, 1997; see Leader in the Field, John Cacioppo). One dimension reflects whether the attitude has few or many positive elements, and the other dimension reflects whether the attitude has few or many negative elements. This view proposes that people can possess any combination of positivity or negativity in their attitudes. Consistent with the one-dimensional view, attitudes may consist of few positive and many negative elements, few negative and many positive, or few positive and few negative (i.e. a neutral position). Inconsistent with the one-dimensional view, attitudes might occasionally subsume both positive *and* negative elements, leading to **attitudinal ambivalence**. Ambivalence occurs when a person both likes and dislikes an attitude object. For example, someone might love the taste of chocolate cake, but dislike its effects on their waistline. The two-dimensional perspective explicitly allows for this ambivalence to occur, whereas the one-dimensional perspective does not.

attitudinal ambivalence a state that occurs when an individual both likes and dislikes an attitude object.

The one-dimensional and two-dimensional perspectives are presented in Figure 6.7. The top panel shows the one-dimensional view of attitudes. Person X, who is plotted on an axis depicting the one-dimensional view, would be slightly negative. The single axis does not permit one to mark Person X as being both negative and positive. The bottom panel of Figure 6.7 shows the two-dimensional view of attitudes, with one axis (vertical) representing variability in negative evaluations, and the other axis (horizontal) depicting variability in positive evaluations. From this perspective, a person can possess high amounts of both negativity and positivity towards an object. For example, Person Y could be considered highly ambivalent.

Which perspective is superior? In one important way, the two-dimensional perspective is advantageous, because it allows for the same patterns of positivity and negativity as the one-dimensional view, while also allowing for ambivalence. For instance, it is difficult to interpret the meaning of the neutral point in one-dimensional

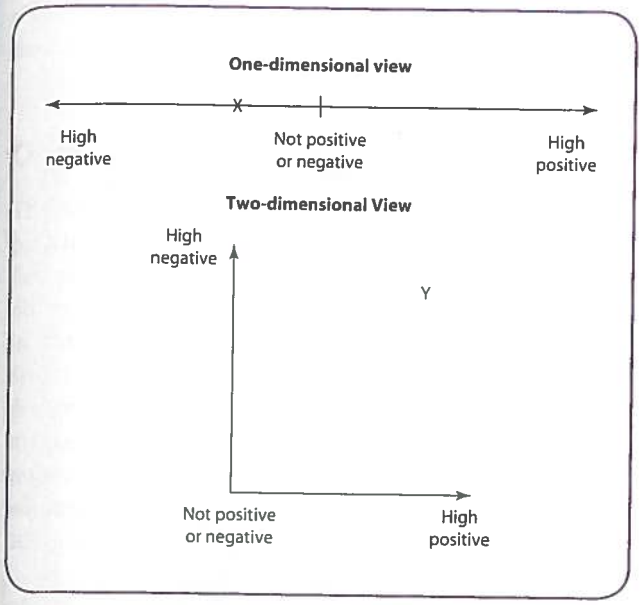

FIGURE 6.7 *The one-dimensional and two-dimensional perspectives on attitudes.*

Source: Reproduced by permission of SAGE Publications, London, Los Angeles, New Delhi and Singapore, from Haddock and Maio, 2009, The Psychology of Attitudes and Attitude Change (© SAGE, 2009).

scales for assessing attitudes (Kaplan, 1972). Imagine that people were asked to report their attitude towards eating fried foods on a nine-point scale that ranged from '1 – *extremely unfavourable*' to '9 – *extremely favourable*' as the end points, with '5 – *neither unfavourable nor favourable*' in the middle. If someone indicated that their attitude was neutral (e.g. '*neither favourable nor unfavourable*'), it is halfway between the most extreme positive response option (e.g. '*extremely favourable*') and the most extreme negative response option (e.g. '*extremely unfavourable*'). People could choose this option because it is a compromise between many positive and negative elements of their attitude (e.g. they have many positive and negative feelings, thoughts and behaviours regarding eating fried foods) *or* because they have no positive or negative elements whatsoever (e.g. they have never eaten fried foods).

Summary

An important issue related to attitudes concerns how positive and negative evaluations are organized within and among the cognitive, affective and behavioural antecedents of attitude. The one-dimensional view postulates that the positive and negative elements are stored as opposite ends of a single dimension. The two-dimensional view postulates that positive and negative elements are stored along two separate dimensions.

WHY DO WE HOLD ATTITUDES?

What are the most basic psychological needs served by attitudes?

Individuals hold attitudes for a variety of reasons. For example, our attitudes towards the Welsh rugby team developed from many of our friends and colleagues supporting the same team (Figure 6.8). In contrast, our attitudes towards abortion are based on the value we place on an individual's freedom of choice and the sanctity of human life (Figure 6.9). Over the years, attitude researchers have devoted considerable attention to understanding the needs or functions that are fulfilled by attitudes.

The most prominent models of **attitude functions** were developed almost 50 years ago (Katz, 1960; Smith, Bruner, & White, 1956). Based on the empirical evidence, we see five functions as particularly important. The **object appraisal function** refers to the ability of attitudes to serve as energy-saving devices by allowing us to summarize the positive and negative attributes of objects in our social world. For example, knowing that you like a certain brand of cereal helps you make a decision when entering the supermarket aisle packed with dozens of choices. Further, attitudes can help people to

attitude functions the psychological needs fulfilled by an attitude.

object appraisal function when attitudes help serve as an energy-saving device.

FIGURE 6.8 *Attitudes towards, e.g., the Welsh rugby team may be developed from friends supporting the same team.*

Source: © mitzy. Used under licence from Shutterstock.

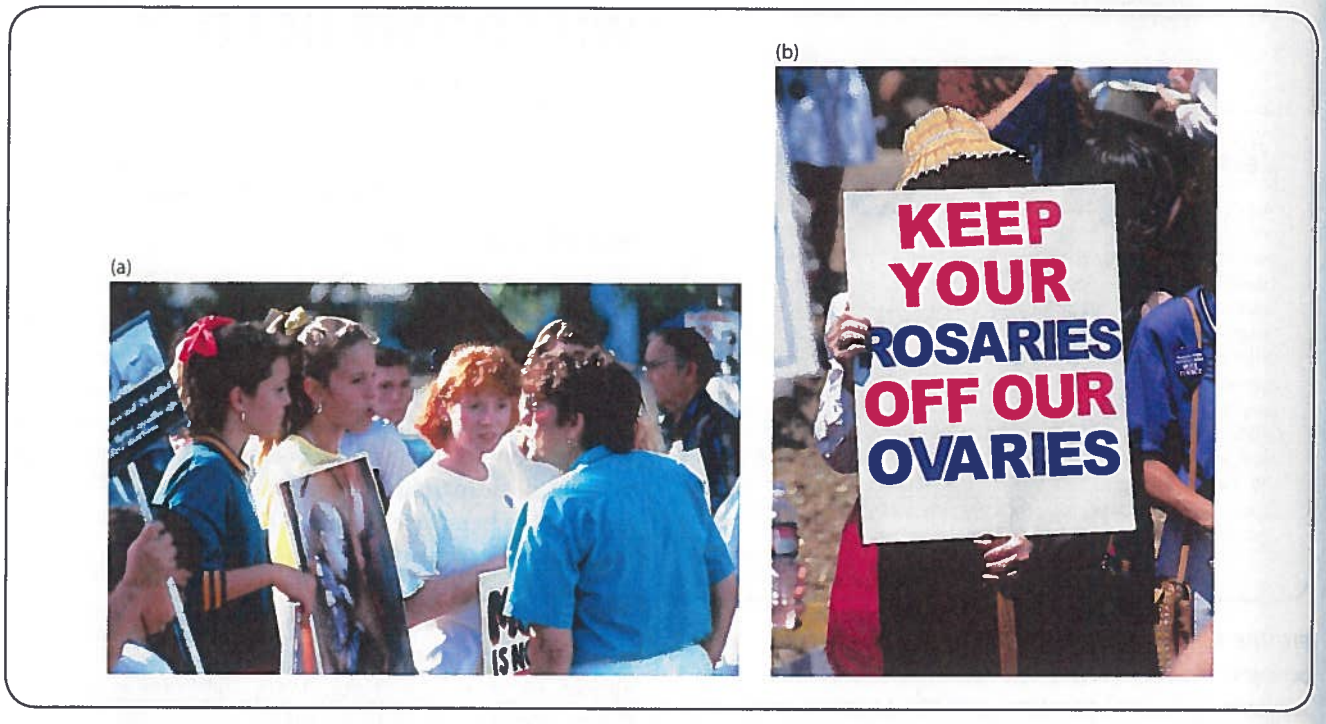

FIGURE 6.9(a) and (b) *Attitudes towards abortion might be based on freedom of choice and sanctity of human life.*
Source: (a) © Robert E Daemmrich. Used under licence from Getty Images; (b) Jonathan Nourok. Used under licence from Getty Images.

approach things that are beneficial for them and avoid things that are harmful to them (Maio, Esses, Arnold, & Olson, 2004). Related to the object appraisal function is the **utilitarian function**. This function exists in attitudes that maximize rewards and minimize punishments obtained from attitude objects. **Social adjustment** is fulfilled by attitudes that help us to identify with people we like and to dissociate from people we dislike. For example, individuals may buy a certain soft drink because it is endorsed by their favourite singer. The **ego-defensive function** exists in attitudes that serve to protect an individual's self-esteem. For example, bad golfers might develop an intense dislike for the game because their poor performance threatens their self-esteem. Finally, attitudes may serve a **value-expressive function**, such that an attitude may express an individual's self-concept and central values. For example, a person might cycle to work because she values health and wishes to preserve the environment (Figure 6.10).

utilitarian function when attitudes help us maximize rewards and minimise costs.

social adjustment function when attitudes help us identify with liked others.

ego-defensive function when attitudes help to protect our self-esteem.

value-expressive function when attitudes help express our values.

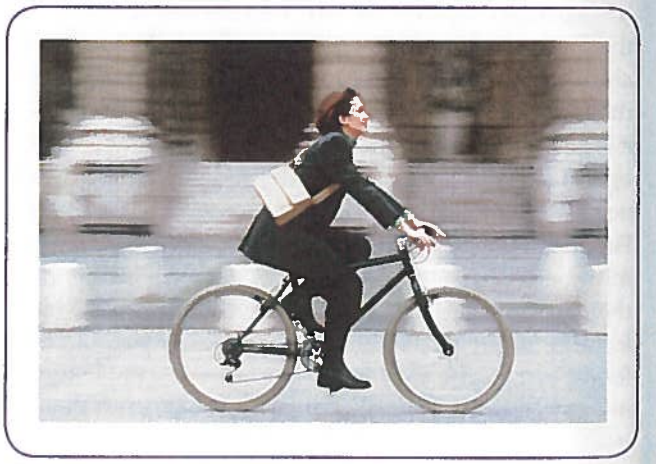

FIGURE 6.10 *A person might cycle to work because she values health and wishes to preserve the environment.*
Source: © PhotoAlto/Teo Lannie. Used under licence from Getty Images.

A number of themes have developed from research on attitude functions since the emergence of these theoretical perspectives. Here, we focus on two important developments. First, evidence implies that strongly held attitudes fulfil an object-appraisal function. Second, evidence reveals an important distinction between attitudes fulfilling a utilitarian function and those fulfilling

a value-expressive function. In the following sections we describe some research behind these observations.

Object appraisal

The object-appraisal function of Smith et al. (1956) perhaps best explains why people form attitudes in the first place. This function suggests that attitudes classify objects in the environment for the purposes of action. In their description of the object-appraisal function, Smith et al. suggested that attitudes are *energy-saving devices*, because attitudes make attitude-relevant judgements faster and easier to perform. Two programmes of research have directly supported this line of reasoning, while suggesting important caveats. First, Fazio (1995, 2000) argued that the object-appraisal function should be more strongly served by attitudes that are high in accessibility. This prediction is based on the assumption that strong attitudes guide relevant judgements and behaviour, whereas weak attitudes will have little effect during judgement and behaviour processes. Consistent with this hypothesis, research has shown that highly accessible attitudes increase the ease with which people make attitude-relevant judgements (Figure 6.11). For example, people who have accessible attitudes towards an abstract painting have been shown to be subsequently faster at deciding whether they prefer the painting over another painting (see Fazio, 2000).

FIGURE 6.11 *How accessible is your attitude towards an abstract painting?*

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A second programme of research has revealed that the strength of the object-appraisal motivation is influenced by differences across people in the need for closure (Kruglanski, 1989). People high in the need for closure like to have a definite answer on some topic, while people low in the need for closure are comfortable with ambiguity. As applied to the study of attitudes, object-appraisal reflects the notion that attitudes can provide such 'answers', because attitudes help people to make decisions about attitude objects. As a result, a high need for closure should increase the desire to form and maintain attitudes. Kruglanski and colleagues have found support for this hypothesis in a number of studies (e.g. Kruglanski, Webster, & Klem, 1993).

Utilitarian versus value-expressive attitudes

Several researchers have argued for a distinction between utilitarian (or instrumental) and value-expressive attitudes (e.g. Herek, 1986; Prentice, 1987; Sears, 1988). Utilitarian attitudes can be thought of as instrumental in helping people achieve positive outcomes and avoiding negative outcomes, whereas value-expressive attitudes express concerns about self-image and personal values. Many lines of research support the distinction between utilitarian and value-expressive attitudes; we will consider just two. First, some attitude objects elicit attitudes that are associated primarily with one or the other of these functions. For example, Shavitt (1990) found that people's thoughts about air conditioners and coffee focus on the utility of the objects, whereas thoughts about greeting cards and national flags tend to focus on the objects' capacity to symbolize the self and social values.

Second, evidence indicates that people are more persuaded by messages containing arguments that match the primary function of their attitudes than by messages containing arguments that do not match the primary function of their attitudes (see Research Close-Up 6.1, P. 179). For example, Shavitt (1990) found that utilitarian advertisements for products about which people held utilitarian attitudes (e.g. an air conditioner) were more persuasive than symbolic advertisements for such instrumental products. Similarly, Snyder and DeBono (1985) found that individual differences in **self-monitoring** affected

self-monitoring an individual difference variable measuring the extent to which people vary their behaviour across social situations (low self-monitors) versus behaving consistently (high self-monitors).

the persuasiveness of different types of advertisements. *Self-monitoring* (Snyder, 1974, 1987) refers to differences in how people vary their behaviour across social situations (see Individual Differences 6.1). While high self-monitors are oriented to situational cues and finely tune their behaviour to the situation in which they find themselves, low self-monitors tend to behave in ways that are consistent with their core values and tend not to adapt their behaviour to the situation in which they find themselves. As applied to advertising, Snyder and DeBono predicted that high self-monitors might be more influenced by advertisements that convey the positive images associated with using a particular product, while low self-monitors might be more influenced by advertisements that feature the quality of a product.

To test this hypothesis, Snyder and DeBono (1985) presented participants with one of two versions of an advertisement for a particular brand of whisky. In both versions of the advertisement, there was a picture of a whisky bottle resting on a set of architects' plans for a house. In one version of the advertisement (image-based), the picture was accompanied by the phrase 'You're not just moving in, you're moving up'. In the second version of the advertisement (quality-based), the same photo was accompanied by the phrase 'When it comes to great taste, everyone

INDIVIDUAL DIFFERENCES 6.1

SELF-MONITORING

Self-monitoring refers to differences in how people vary their behaviour across social situations (Snyder, 1974). High self-monitors are oriented to situational cues and tune their behaviour to the social situation, whereas low self-monitors tend to behave in ways that are consistent with their values and tend not to mould their behaviour to the social situation. Self-monitoring is assessed by a scale developed by Snyder (1974). For each item, respondents are asked whether the statement is true or false as applied to them. Try it yourself, scoring instructions are below.

1. I find it hard to imitate the behaviour of other people.
2. My behaviour is usually an expression of my true inner feelings, attitudes and beliefs.
3. At parties and social gatherings, I do not attempt to do or say things that others will like.
4. I can only argue for ideas in which I already believe.
5. I can make impromptu speeches even on topics about which I have almost no information.
6. I guess I put on a show to impress or entertain people.
7. When I am uncertain how to act in a social situation, I look to the behaviour of the others for cues.
8. I would probably make a good actor.
9. I rarely seek the advice of my friends to choose movies, books, or music.
10. I sometimes appear to others to be experiencing deeper emotions than I actually am.
11. I laugh more when I watch a comedy with others than when alone.
12. In a group of people I am rarely the centre of attention.
13. In different situations and with different people, I often act like a very different person.
14. I am not particularly good at making other people like me.
15. Even if I am not enjoying myself, I often pretend to be having a good time.
16. I'm not always the person I appear to be.
17. I would not change my opinions in order to please someone or to win their favour.
18. I have considered being an entertainer.
19. In order to get along and be liked, I tend to be what people expect me to be rather than anything else.
20. I have never been good at games like charades or improvisational acting.
21. I have trouble changing my behaviour to suit different people and different situations.
22. At a party I let others keep the jokes and stories going.
23. I feel a bit awkward in company and do not show up quite as I feel I should.
24. I can look anyone in the eye and tell a lie with a straight face (if for a right end).
25. I may deceive people by being friendly when I really dislike them.

Give yourself one point (a) every time you said true to statements 5, 6, 7, 8, 10, 11, 13, 15, 16, 18, 19, 24, and 25, and (b) every time you said false to items 1, 2, 3, 4, 9, 12, 14, 17, 20, 21, 22, and 23. Add these values to calculate your self-monitoring score.

Snyder (1987) reported that across a range of samples, the mean score was approximately 12.5. Put differently, after reverse scoring, low self-monitors score between 0 and 12, while high self-monitors score between 13 and 25.

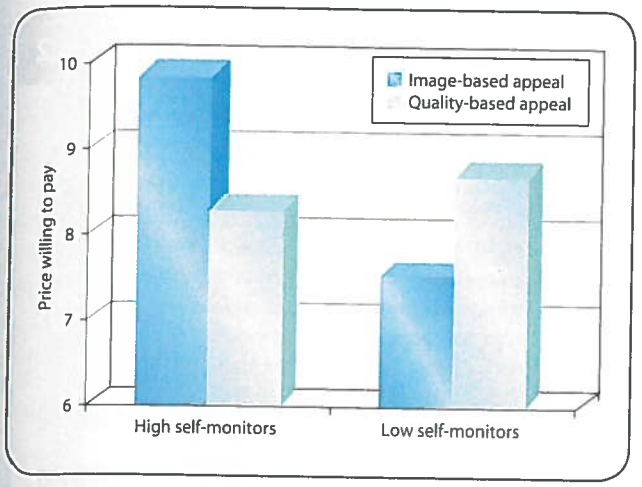

FIGURE 6.12 *The influence of self-monitoring and appeal type on willingness to pay for a consumer product.*

Source: Adapted from Snyder and DeBono, 1985. Copyright © 1985 by the American Psychological Association. Adapted with permission. *Journal of Personality and Social Psychology, 49,* 586–597. The use of APA information does not imply endorsement by APA.

draws the same conclusion'. Researchers predicted that high self-monitors would be more persuaded by the image-based appeal, while low self-monitors would be more persuaded by the quality-based appeal. The results of the study are shown in Figure 6.12. As predicted, Snyder and DeBono (1985) found that high self-monitors were willing to pay more for the whisky when presented with the image-based appeal, whereas low self-monitors were willing to pay more when presented with the quality-based appeal. Further research has demonstrated that these 'match the message to the function' effects occur because people devote more attention to convincing arguments that match the function of their attitude than to convincing arguments that do not match the function of their attitude (Petty & Wegener, 1998).

Summary

Individuals hold attitudes for a variety of reasons. Among the functions, the object-appraisal function is especially important, as it suggests that attitudes serve as energy-saving devices that make judgements easier and faster to perform. There is also an important distinction between instrumental and value-expressive attitudes. Knowing the primary function of an attitude is important, because attempts at attitude change are more likely to be successful when the persuasive appeal matches the function of the attitude.

LINKING ATTITUDE CONTENT, STRUCTURE AND FUNCTION

Content, structure, function and attitude strength

One important question that is relevant to the content, structure and function of attitudes is the extent to which attitudes differ in their strength. As mentioned at the beginning of the chapter, we feel more strongly about some topics than about others. *Attitude strength* has been conceptualized in many different ways (see Individual Differences 6.2). For example, individuals can simply be asked how *certain* they are of their attitude, as well as how *important* their attitude is to them personally (see Haddock, Rothman, Reber, & Schwarz, 1999). The strength of an attitude can also be measured by assessing its distance from the middle of a scale. This type of index, known as attitude *extremity*, has been found to have many important outcomes (see Abelson, 1995). Finally, we can conceive of attitude strength in terms of how easy it is to retrieve an attitude from memory; easily retrievable attitudes are referred to as being highly *accessible* (Fazio, 1995).

Strong attitudes differ from weak attitudes in a number of ways. Krosnick and Petty (1995) argue that there are four key manifestations of strong attitudes. First, strong attitudes are *more persistent*. That is, they are more stable over time (Visser & Krosnick, 1998). Second, strong attitudes are *more resistant to change*. When faced with a persuasive appeal, strong attitudes are less likely to change than weak attitudes (Petty, Haugtvedt, & Smith, 1995). Third, strong attitudes are *more likely to influence information processing*. Research has revealed that people devote greater attention to information that is relevant to strong versus weak attitudes (Houston & Fazio, 1989). Finally, strong attitudes are *more likely to guide behaviour*. Put simply, we are more likely to act upon strong versus weak attitudes. We return to this last issue later in the chapter.

Summary

Attitude content, attitude structure and attitude function are inexorably linked. Centrally relevant to these concepts is attitude strength. Attitudes vary in the degree to which they are persistent over time, resistant to change, influential in guiding information processing and influential in predicting behaviour.

INDIVIDUAL DIFFERENCES 6.2

ATTITUDE STRENGTH

The strength of an attitude can be conceptualized and measured in different ways (see Petty & Krosnick, 1995). Some of the most prominent conceptualizations include attitude accessibility, attitude certainty, attitude extremity, attitude importance, attitude intensity and knowledge. While these conceptualizations are related to each other, they are usually seen as different properties of attitude strength, as they sometimes have different antecedents and consequences (see Maio & Haddock, 2010). Listed below are examples of how these concepts (and the strength of an attitude) were used to assess the strength of a person's attitude toward gay men (from Vonofakou, Hewstone, & Voci, 2007). For each item, respondents indicate an answer using a scale that might range from zero (*'not at all'*) to six (*'extremely'*). Try it yourself.

1. How certain are you about your feelings towards gay men?
2. How sure are you that your opinion about gay men is correct?
3. How definite are your views about gay men?
4. How important are gay men to you personally?
5. How much do you personally care about gay men?
6. How often do you discuss gay men with others?
7. How often do gay men come up during informal conversations?
8. How often in the past year have you talked about gay men?
9. How often do you think about gay men?
10. How often have you thought about gay men in the past year?

In a sample of 85 British undergraduates, Vonofakou et al. (2007) found a mean score of 2.85 (SD = .89).

THE MEASUREMENT OF ATTITUDES

What are explicit and implicit measures of attitude?

Attitudes, like most constructs in psychology, are not directly observable. For instance, we cannot see that a person holds a positive attitude towards red sports cars. Rather, attitudes have to be inferred from the individual's responses to questions about these vehicles (Fazio & Olson, 2003). As a result, social psychologists have needed to develop different methods to measure attitudes. In this section of the chapter, we describe some of the most commonly used techniques that have been developed. For forms of attitude measurement other than those discussed here (e.g. psychophysical measures, behavioural measures), see Eagly and Chaiken (1993) and Fazio and Olson (2003).

explicit measures of attitude measures that directly ask respondents to think about and report an attitude.

implicit measures of attitude measures that assess spontaneous evaluative associations with an object, without relying on a verbal report.

In introducing different types of attitude measures, we have differentiated them on the basis of whether they are **explicit** or **implicit**. Psychologists usually think of explicit measures as those that require respondents' conscious attention to the construct being measured, whereas implicit measures are those that do not require this conscious attention. At a basic level, explicit measures of attitude are those that *directly* ask respondents to think about and report their attitude, whereas implicit measures of attitude are those that assess attitudes *without* directly asking respondents for a verbal report of their attitude (Fazio & Olson, 2003).

Explicit measures of attitudes

The majority of attitude measures can be conceptualized as explicit indicators. Most often, these measures have been self-report questionnaires, in which participants are asked to respond to direct questions about their opinions towards the object in question. For example, if a group of researchers was interested in knowing a respondent's attitude towards abortion, they might ask the question 'What is your attitude towards abortion?' In the following section, we describe two explicit measures of attitude: Likert scales and the semantic differential.

Likert scales Likert (1932) introduced a measure of attitude based upon summated ratings. In this approach, statements are written in such a way that responses indicate either a favourable or unfavourable attitude. An example of a Likert scale to assess attitudes towards euthanasia is presented in Figure 6.13. For each item, respondents are asked to indicate their degree of agreement or disagreement. As you read the items presented in Figure 6.13, you will notice that items can be written such that a strong positive attitude towards euthanasia will

The following statements are part of a survey on public attitudes. There are no right or wrong answers, only opinions. For each statement, indicate the number that best represents your personal opinion by using the following scale:

If you *strongly disagree* with the statement, indicate 1
If you *disagree* with the statement, indicate 2
If you *neither disagree nor agree* with the statement, indicate 3
If you *agree* with the statement, indicate 4
If you *strongly agree* with the statement, indicate 5

(1) I think euthanasia should be made legal. ____

(2) I would support a referendum for the institution of euthanasia. ____

(3) Euthanasia should never be used. ____

(4) Euthanasia is appropriate when someone wants to die. ____

(5) I am against the use of euthanasia in all circumstances. ____

FIGURE 6.13 *An example of a Likert scale to access attitudes towards euthanasia.*

Source: Adapted from Haddock et al. (2008) with permission from SAGE Publications Ltd.

Please respond to each scale by placing an 'x' in the space that best represents your opinion.

EUTHANASIA

BAD:__:__:__:__:__:__:__:GOOD
NEGATIVE:__:__:__:__:__:__:__:POSITIVE
DISLIKE:__:__:__:__:__:__:__:LIKE

FIGURE 6.14 *A semantic differential scale to measure attitudes towards euthanasia.*

Source: Adapted from Haddock et al. (2008) with permission from SAGE Publications Ltd.

produce either a '*strongly agree*' response (e.g. to item 1) or a '*strongly disagree*' response (e.g. to item 3). Researchers create items that are worded in opposite directions in order to help avoid response sets (i.e. the tendency for a respondent to agree or disagree with all items on a scale).

How are Likert scales scored? In a questionnaire like the one shown in Figure 6.13, each response alternative is allocated a score (in this case from 1 to 5). Usually, a low score is taken to indicate a strong negative attitude and a high score is taken to indicate a strong positive attitude. Thus, for item 1, an individual who strongly disagrees with the statement would be allocated a score of 1, while a person who strongly agrees would be given a score of 5. For item 3 the procedure is reversed because the item is worded in the opposite direction to item 1. Scores for this item are recoded such that an individual who strongly disagrees with the statement is expressing a positive attitude (and hence is allocated a score of 5 for that item), whereas an individual who strongly agrees with that item is expressing a negative attitude (and thus is allocated a score of 1). To the extent that the items assess the same construct (i.e. a respondent's attitude), correlations among responses to each item should be high. If they are sufficiently high, scores on the individual items are averaged to form a single attitude score.

Semantic differential scales A large amount of research is aimed at testing whether people hold more positive attitudes towards some attitude objects (e.g. abortion) than others (e.g. capital punishment). To address questions concerning the attitudes that people hold about a variety of attitude objects, it was necessary to develop methodologies that would allow researchers to measure attitudes towards many attitude objects along a common scale. Among the efforts to develop such a technique, the method that has been the most influential is the semantic differential approach (Osgood, Suci, & Tannenbaum, 1957). An example of a semantic differential scale is presented in Figure 6.14. In this technique, participants are given a set of bipolar adjective scales, each of which is separated into a number of categories (typically 5, 7 or 9, with the middle category representing the neutral point). Participants are asked to rate the attitude object by indicating the response that best represents their opinion. The bipolar adjectives typically include general evaluative terms such as 'favourable–unfavourable', 'good–bad' and 'like–dislike'. Similar to Likert scales, correlations among the items should be positive (to the extent that they measure the same attitude). If they are sufficiently high, they can be combined to form a single attitude score.

Issues relevant to the explicit measurement of attitudes

Historically, explicit measures of attitudes have dominated empirical research on the psychology of attitudes. Despite their wide appeal, however, a number of concerns have been raised over their use. For example, individuals might sometimes be unaware of their attitude towards an object (Fazio, Jackson, Dunton, & Williams, 1995; Greenwald & Banaji, 1995; Nisbett & Wilson, 1977). Further, research has demonstrated that subtle differences in the way in which items are presented can

influence responses to direct measures of attitude (see Haddock & Carrick, 1999; Schwarz, 1999).

Probably the most important criticism of direct measures of attitude is that they can be affected by people's motivation to give socially desirable responses (see Chapter 2). This refers to deliberate attempts to misrepresent (or fake) responses in a way that allows respondents to present themselves in a favourable way (Paulhus & John, 1998). To the extent that the researcher is interested in studying attitudes towards sensitive issues and/or issues that highlight norms of political or social appropriateness, people's responses might not necessarily reflect their true opinion, but instead may reflect a desire to present themselves in a positive manner. For example, in many cultures it is considered socially inappropriate to express a prejudicial attitude towards ethnic minorities. The use of explicit, direct measures of attitude in such contexts may not provide an accurate report of attitude, as respondents may be reluctant to be perceived as prejudiced.

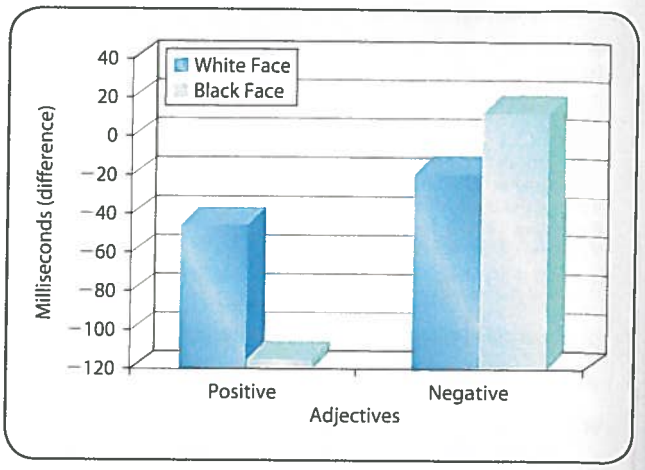

FIGURE 6.15 *Mean scores for positive and negative adjectives preceded by Black and White faces. A positive score represents facilitation, a negative score represents inhibition.*

Source: Adapted from Fazio et al., 1995. Copyright © 1995 by the American Psychological Association. Adapted with permission. *Journal of Personality and Social Psychology, 69,* 1013–1027. The use of APA information does not imply endorsement by APA.

Implicit measures of attitudes

In an attempt to minimize problems associated with direct measures of attitude, social psychologists have developed a number of indirect or implicit response strategies. We describe here two of the most common measures, the evaluative priming technique (see Fazio et al., 1995) and the Implicit Association Test (IAT; Greenwald, McGhee & Schwartz, 1998).

Evaluative priming Fazio (1995) defines an attitude as an association in memory between an attitude object and a summary evaluation. According to Fazio, these associations vary in strength, and the strength of the association determines the accessibility of an attitude. Let us describe this perspective more concretely by using an example. One of us *really* hates Brussels sprouts. Even thinking about Brussels sprouts sets off an immediate and strong negative reaction within him. He also *really* dislikes rice cakes, but his reaction is not as automatic. Fazio's model would suggest that the negative attitude towards Brussels sprouts is more accessible than the negative attitude towards rice cakes, because the association in memory between 'Brussels sprouts' and 'dislike' is stronger than the association between 'rice cakes' and 'dislike'.

According to Fazio, the strength of these associations should affect how quickly an individual responds to an evaluative word after having been briefly presented with the attitude object. In a typical study of this process, a participant is seated in front of a computer. The attitude object is briefly presented on the computer screen (e.g. the term 'Brussels sprouts') and then replaced by an evaluative adjective (e.g. 'disgusting'). The participant's task is to indicate the valence of the adjective as quickly as possible. That is, the participant indicates whether the *adjective* means something positive or negative, *not* whether the attitude object itself is good or bad. Of primary interest is the speed with which the participant makes this response. In our example, the presentation of 'Brussels sprouts' should produce faster responses to negative adjectives and slower responses to positive adjectives. Furthermore, if the person hates Brussels sprouts more than rice cakes, this facilitation/inhibition should be more pronounced when the person is presented with 'Brussels sprouts' than with 'rice cakes'.

Researchers have used this approach in studies of numerous attitude objects, including attitude objects that might elicit social desirability concerns on explicit measures. For example, Fazio et al. (1995) adapted the evaluative priming paradigm to study prejudicial attitudes. In this study, participants were instructed that their task was to indicate the meaning of positive and negative adjectives (see Leader in the Field, Russell Fazio). However, prior to the presentation of each individual adjective, participants were briefly shown a photo of a black or white person. As shown in Figure 6.15, Fazio et al. (1995) found facilitation of positive adjectives by prior presentation of a white versus black person, but facilitation of negative adjectives by prior presentation of a black versus white person, Thus, in this study, a negative attitude towards black people was represented by differences in the time required by white participants to categorize positive and negative adjectives after the presentation

LEADER IN THE FIELD

Russell Fazio (b. 1952) completed his undergraduate degree at Cornell University before completing a PhD at Princeton University in 1978. He started his academic career at Indiana University, where he worked until 2001. He currently holds the Harold E. Burtt Chair in Psychology at the Ohio State University. In over 130 publications, his research on topics such as attitude accessibility, attitude-behaviour relations and attitude measurement has been highly influential in the field.

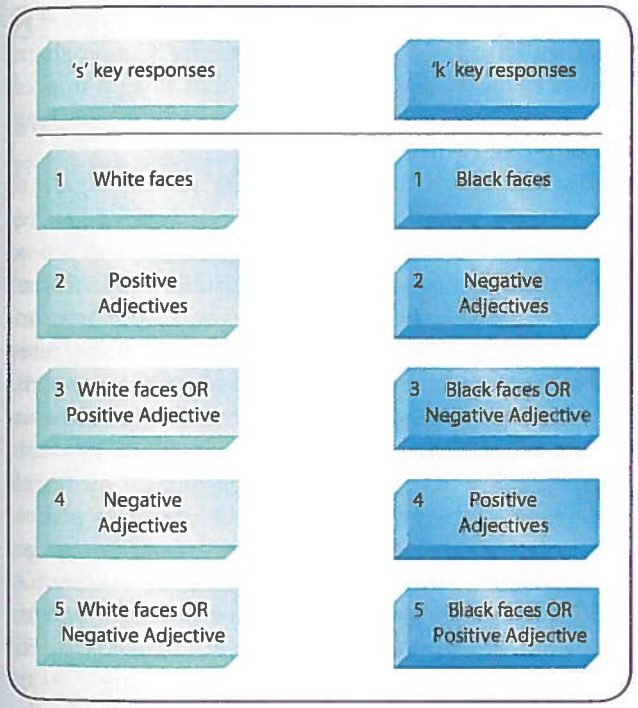

FIGURE 6.16 *The procedure of the five block Implicit Association Test.*

Source: Adapted from Haddock et al. (2008) with permission from SAGE Publications Ltd.

of images of the black versus white individuals (black participants did not show this tendency). Further, white participants who showed the pattern most strongly were more likely to show more negative behaviour towards a black experimenter in the study. Thus, these differences in response times were easily interpretable as reflecting a negative attitude towards black individuals.

The Implicit Association Test Another important indirect procedure is the Implicit Association Test (IAT; Greenwald et al., 1998). For ease of presentation, we will work through an example of procedures that would use the IAT to assess racial attitudes. This example is shown in Figure 6.16. In a typical IAT study, participants are seated at a computer and asked to classify attitude objects and adjectives. As originally designed, an IAT study generally involves five separate blocks. In *block 1* of a racial attitude IAT, participants are presented with a variety of pictures of white and black individuals. Participants would be instructed to make one response (e.g. press the 's' key on a keyboard) when they see a white face and make a different response (e.g. press the 'k' key) when they see a black face. They are asked to perform this task (and all others in the test) as quickly as possible. There might be anywhere from 20–40 trials within this block (and subsequent blocks).

In *block 2*, participants are presented with a variety of positive and negative adjectives. Again, they would be asked to make one response (press the 's' key) when a positive adjective appears on the screen and a different response (press the 'k' key) when a negative adjective appears on the screen. The purpose of these blocks is to train participants to link a category (e.g. a picture of a white face or a positive adjective) with a response (pressing the 's' key). In *block 3*, participants are instructed that they will see faces or adjectives and that they are to press the 's' key when they see a white face *or* a positive adjective, and press the 'k' key when they see a black face *or* a negative adjective. *Block 4* is similar to block 2, but this time the responses are reversed, such that a participant now presses the 's' key when a negative word appears and the 'k' key when a positive word appears. This block is necessary to train participants to make the opposite link to that already measured. *Block 5* is similar to block 3, but this time participants are to press the 's' key when a white face or a negative adjective appears, and the 'k' key when a black face or a positive adjective appears. The key blocks are 3 and 5 – they measure the strength of association between an attitude object (in this case racial groups) and evaluations.

How does research yield an attitude score from the two key blocks of the IAT (3 and 5)? Imagine an individual who is racially prejudiced. For this individual, the task in block 3 should be quite simple. If the person favours white individuals to black individuals, trials in which white faces are associated with positive adjectives and black faces are associated with negative adjectives should be relatively easy, and hence produce faster responses, because the links between these categories and the evaluations are congruent. Let's imagine that our participant's mean response time to trials in this block is 700 ms. In contrast, responses in block 5 should take longer for this participant. Given the person's preference for white individuals over black individuals, trials that associate black faces with positivity and white faces with negativity should be relatively difficult, and hence require more time to elicit a response.

Let's imagine that the individual's mean response time for this block is 1200 ms. Thus, our participant's mean response time for block 3 is shorter than that for block 5 by 500 ms. This difference is referred to as the 'IAT effect' (see Greenwald, Nosek & Banaji, 2003; Greenwald et al., 1998, for additional details about computing IAT effects).

The IAT and other implicit measures have become increasingly popular among attitude researchers (see Fazio & Olson, 2003). These types of measures have gained popularity because they assess attitudes without the necessity of asking the participant for a direct verbal report. As noted earlier, part of their appeal is due to the belief that responses on these measures are less likely to be affected by socially desirable responding (see Fazio & Olson, 2003). That said, implicit measures of attitude have also been the source of some criticism.

For example, a number of researchers have argued that the (sometimes) low correlation found between implicit and explicit measures of attitude implies that they assess different constructs (see Karpinski & Hilton, 2001). Other criticisms have focused on *how* implicit measures assess attitudes. For instance, Olson and Fazio (2004) argue that a personalized version of the IAT (one in which the positive and negative judgements are personalized; for example, using 'I like' and 'I don't like' versus 'pleasant' and 'unpleasant') is better than a version that can be influenced by factors such as cultural norms (e.g. if most people prefer one category over another, this might be reflected in a general IAT). As research on implicit measures of attitude continues to progress, the debate around implicit measures will surely continue. Our own view is that implicit measures of attitude have much to offer, in that they have allowed social psychologists to generate novel and important questions about the underlying causes of human behaviour. They have also been especially useful in providing researchers with a tool for carrying out research on socially sensitive attitudes, where research participants might not always be willing to give their true explicit attitudes (e.g. prejudice). Later in the chapter we will show how explicit and implicit measures of attitude are important for predicting different types of behaviour.

Are attitude measures reliable and valid?

A sound measure must be both reliable and valid (see Chapter 2). In the context of attitude measurement, reliability has two important meanings. First, reliability in the sense of *internal consistency* refers to whether the individual items are assessing the same psychological construct. Items that assess the same construct should be positively correlated. Second, *test–retest reliability* refers to consistency in scores across time. A sound attitude measure should produce similar scores across repeated testing (in the absence of any true attitude change).

A number of studies have investigated the reliability of explicit and implicit measures of attitude. Explicit measures have been shown to exhibit high reliability. For example, semantic differential scales using the evaluative dimensions of 'good–bad', 'positive–negative' and 'favourable–unfavourable' exhibit high internal consistency (Huskinson & Haddock, 2004) and test–retest reliability (see Lord, 2004, for a more detailed discussion). Given their more recent introduction, less research has been conducted assessing the reliability of implicit measures of attitude. However, a paper by Cunningham, Preacher, and Banaji (2001) found that several implicit measures possessed reasonably high internal consistency and test–retest correlations.

The *validity* of a measure refers to the degree to which it assesses the construct it is designed to assess. A number of studies have investigated the validity of explicit and implicit measures of attitude. Explicit measures of attitude have been shown to be valid. For example, Haddock, Zanna, and Esses (1993) demonstrated that a semantic differential measure of attitudes towards gay men was highly predictive of a subsequent measure of anti-gay discrimination (see Eagly & Chaiken, 1993, for more examples). Regarding implicit measures, researchers have found that implicit measures possess (1) convergent validity (i.e. scores on different measures are related to each other) and (2) predictive validity (i.e. implicit measures predict other scores that they ought to; see Cunningham et al., 2001; Fazio & Olson, 2003). For example, Cunningham et al. (2001) found that scores on evaluative priming and IAT measures of racial prejudice were highly related to each other and formed a single latent construct. Also, one particularly compelling study used functional magnetic resonance imaging (fMRI) technology to assess brain activity in response to different stimuli. Phelps et al. (2000) found that an IAT measure of white participants' racial prejudice was highly predictive of amygdala activation when they viewed pictures of unknown black individuals (the amygdala is an area of the brain associated with emotional processing). In this research, pronounced amygdala activation in response to black faces was associated with strong implicit prejudice towards African Americans.

Summary

Attitudes can be measured in a number of ways. Attitude measures can be distinguished on the basis of whether

they are *explicit* (i.e. direct) or *implicit* (i.e. indirect). Explicit measures of attitude directly ask respondents to think about and report an attitude, whereas implicit measures of attitude are those that assess attitudes *without* directly asking respondents for a verbal report of their attitude. Explicit and implicit measures are both useful tools in attempts to understand and predict human behaviour (see Social Psychology Beyond the Lab 6.1).

DO ATTITUDES PREDICT BEHAVIOUR?

What factors influence the degree to which attitudes predict behaviour?

Common sense would dictate that attitudes should predict behaviour. For example, one would expect that an individual who possesses a positive attitude towards the environment would engage in recycling behaviour. Similarly, it seems sensible to predict that a student who strongly supports saving endangered animals will make an annual donation to the World Wildlife Fund. However, is the link between attitudes and behaviour this simple?

In addressing this question, we wish to start by turning back time and visiting the United States of America in the early 1930s. A college professor named Richard LaPiere was travelling across America with a young Chinese couple. At the time, there was widespread anti-Asian prejudice in the United States. As a result of this prejudice, LaPiere was concerned that he and his travelling companions would be refused service in hotels and restaurants. Much to his surprise, only once (in over 250 establishments) were they not served. A few months after the completion of the journey, LaPiere sent a letter to each of the visited establishments and asked whether they would serve Chinese visitors. Of the establishments that replied, only one indicated that it would serve such a customer, with over 90 per cent stating that they definitely would not (the rest were undecided). While there are a number of methodological problems with LaPiere's (1934) study (e.g. there was no way of ensuring that the individual who answered the letter was the same person who served LaPiere and his friends), it is a reminder that people's behaviour might not necessarily follow from their attitudes.

Let us now move ahead 30 years on from this study. By the late 1960s, a number of studies had examined the relation between attitudes and behaviour. In 1969, Wicker reviewed the findings of these studies. He reached a rather sobering conclusion: attitudes were a relatively poor predictor of behaviour. Across almost 40 studies that were conducted before 1969, Wicker found that the average correlation between attitudes and behaviour was a modest .15. This finding led a number of social psychologists to question the value of the attitude concept. It was argued that if attitudes do not guide actions, then the construct is of limited use.

Attitude researchers responded to this criticism by devoting greater attention to the study of *when* and *how* attitudes predict behaviour. In the last 30 years, research findings have led to a more optimistic conclusion – attitudes do predict behaviour, under certain conditions. In a meta-analytic review of the literature, Kraus (1995) compared the results of over 100 studies on the **attitude–behaviour relation**. He found that the average correlation between opinions and actions was .38, a value much higher than that obtained by Wicker (1969). This difference in correlations could be explained in various ways. First, more modern research might be using better measures of attitudes and/or behaviours. For example, some measures from early initial studies lacked reliability and validity. Second, modern researchers might be using better techniques for testing their predictions. Returning to LaPiere's (1934) study, it is possible that the measures of attitudes and behaviour did not come from the same individual. Third, contemporary researchers might be doing a better job of examining situations *when* attitudes are highly predictive of behaviour. In this section of the chapter, we first consider a number of variables that influence *when* attitudes predict behaviour, and then introduce models that have been developed to understand *how* attitudes predict behaviour.

attitude–behaviour relation the degree to which an attitude predicts behaviour.

When do attitudes predict behaviour?

(1) When there is correspondence between attitudinal and behavioural measures A number of early attempts to assess the attitude–behaviour relation (included in Wicker's, 1969, review) were plagued by methodological problems. Specifically, in many of these studies there was a low degree of *correspondence* between the measures of attitude and behaviour. Returning to LaPiere's (1934) research, his measure of attitude asked respondents to indicate whether they would serve 'members of the Chinese race'. This statement is quite broad in comparison to the measure of behaviour, which involved service being offered to a highly educated, well-dressed Chinese couple accompanied by an American

college professor. Had the attitude measure been more specific (e.g. 'Would you serve a highly educated, well-dressed Chinese couple accompanied by an American college professor?'), the relation between attitudes and behaviour in LaPiere's (1934) study might have been more pronounced.

Ajzen and Fishbein (1977) proposed the idea that there needs to be high correspondence between measures of attitude and behaviour. They stated that measures of attitude and behaviour need to correspond in four key ways: action, target, context and time. The *action* element refers to the behaviour being performed (e.g. recycling glass). The *target* element refers to the target of the behaviour (e.g. a particular brand of coffee, a political candidate). The *context* element refers to the environment in which the behaviour is performed (e.g. whether the behaviour is performed alone or in the presence of others). Finally, the *time* element refers to the time frame in which the behaviour is performed (e.g. whether the behaviour is to be performed immediately or in one year's time). Ajzen and Fishbein (1977) argued that a measure of attitude will be most effective in predicting behaviour when both measures correspond on these four elements. Correspondence can also be achieved when a broad attitude measure is used to predict an aggregated index of behaviour (see Weigel & Newman, 1976).

The importance of correspondence between measures of attitude and behaviour was also demonstrated in a study by Davidson and Jaccard (1979). These researchers were interested in predicting women's use of birth control pills. In this study, women were asked a number of questions about their attitudes, ranging from questions that were very general (their attitude towards birth control) through somewhat specific (their attitude towards birth-control pills) to very specific (their attitude towards using birth-control pills during the next two years). Two years after participants responded to these attitude questions, they were contacted by the researchers and asked to indicate if they had used birth-control pills in the previous two years. The researchers predicted that the correlation between attitudes and behaviour would increase as the measures became more correspondent. The results of this study supported these authors' predictions. To start with, the general attitude measure did not predict behaviour ($r = .08$), probably because this measure was too general in relation to the measure of behaviour. The question that was somewhat specific did a better job of predicting behaviour ($r = .32$); this item had the advantage of matching the behavioural measure with respect to the target. Finally, the most specific question was very effective in predicting behaviour ($r = .57$), because the attitude measure was highly correspondent with the measure of behaviour with respect to two key elements: target and time. Consistent with the results of this study, the meta-analysis by Kraus (1995), noted earlier, found that the attitude–behaviour correlation was higher when there was greater correspondence between measures.

(2) It depends upon the domain of behaviour Research has also demonstrated that the relation between attitudes and behaviour differs as a function of the topic under investigation. In his review of the literature, Kraus (1995) found that topics varied in the degree to which opinions predicted actions. At one extreme, the relation between political party attitudes and voting behaviour tends to be very high. For example, in an investigation conducted during the 1984 American presidential election, Fazio and Williams (1986) measured attitudes towards the President of the United States at that time, Ronald Reagan. Approximately five months later, they measured whether participants voted for Reagan or his opponent. Despite the time lag between measures, the correlation between voters' initial attitude towards Reagan and their subsequent voting behaviour was an impressive .78. At the other extreme, Kraus (1995) noted that there was a low correlation between individuals' attitudes towards blood donation and the act of donating blood. At first glance, it is perhaps not surprising that this is a behavioural domain where one might expect a low attitude–behaviour relation. It may be that a low relation arises because the behaviour of donating blood is much more difficult to enact than the simple expression of one's attitude through a behaviour like voting.

(3) It depends upon the strength of the attitude As mentioned earlier in the chapter, attitudes differ in their strength. For instance, one person may absolutely love the music of Bruce Springsteen; another may feel less strongly. As we already know, attitude researchers would say that one person has a very strong positive attitude towards the music of Bruce Springsteen, while the other has a weak attitude. Which person once drove all night to see Bruce Springsteen perform live – for the eighth time? Not surprisingly, it is the one with the strong attitude.

A number of studies have demonstrated that strong attitudes are more likely than weak attitudes to predict behaviour. For instance, returning to the study of Fazio and Williams (1986), recall that they found a very high correlation between political attitudes and voting behaviour (Figure 6.17). This study also contained a measure of attitude strength – the accessibility of the participants' initial attitude. Some participants had very accessible (i.e. strong) attitudes towards Reagan, whereas other participants' attitudes were less accessible (i.e. weak). Fazio and Williams (1986) found that the correlation between attitudes and behaviour was significantly greater among those individuals whose attitudes towards Reagan were high in accessibility. Similar results have been found in

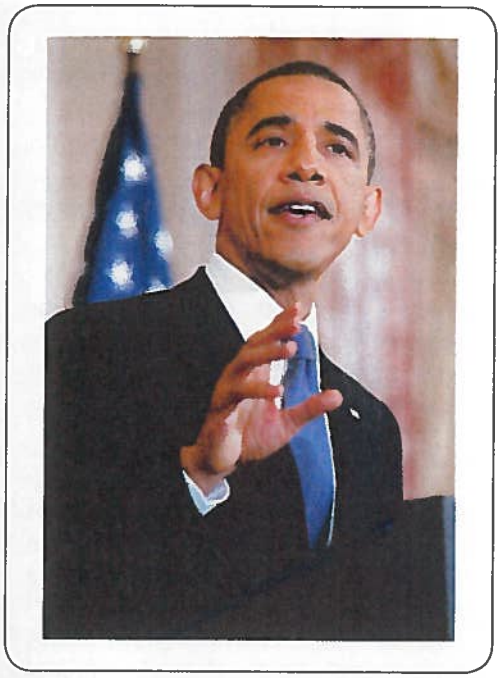

FIGURE 6.17 *Do attitudes towards politicians predict voting behaviour?*

Source: © Chip Somodevilla/Pool/ABACAUSA.COM. Used under licence from Press Association Images.

many other studies using different operationalizations of attitude strength (see Eagly & Chaiken, 1993; Holland, Verplanken, & Van Knippenberg, 2002; Kraus, 1995; see also Research Close-Up 6.2), leading to the conclusion that strong attitudes are more likely than weak attitudes to predict behaviour.

(4) The role of person variables The final set of variables we wish to consider concerns differences across people in the tendency to behave in line with their actions. In addition to examining how situations influence behaviour, social psychologists are interested in understanding how personality differences help account for our actions, and how the attitude–behaviour link may vary in different samples of people (see Chapter 1).

With respect to the attitude–behaviour relation, a number of researchers have examined how various personality constructs moderate the degree to which opinions influence actions. The personality construct most frequently tested as a moderator of the attitude–behaviour relation is *self-monitoring* (Snyder, 1974, 1987). As discussed earlier in the chapter, self-monitoring refers to differences across people in how they vary their behaviour across social situations. A number of studies have investigated whether the relation between attitudes and

SOCIAL PSYCHOLOGY BEYOND THE LAB 6.1

ATTITUDES AND PUBLIC OPINION SURVEYS

Given the importance of attitudes in understanding behaviour, it is not surprising that they have an enormous impact 'beyond the lab'. One area where attitudes and attitude measurement is very important is in the context of public opinion surveys. The use of public opinion surveys is widespread – across continents and across issues. For instance, public opinion surveys are often used to gauge the public's attitudes toward things like their national government, views on core social issues or policies (such as environmental attitudes or attitudes toward capital punishment), even to assess levels of happiness in a country and how happiness might change over time.

These opinion surveys will usually be carried out by public companies (e.g. the Gallup organization in the United States; IPSOS-MORI or YouGov in the United Kingdom) or through government organizations (e.g. the Office for National Statistics in the United Kingdom). Often, these surveys will be developed by individuals with a background in social psychology, and their methodology will almost certainly have been informed by advances made by social psychologists. Public opinion surveys might be completed over the phone, via post, or more recently, via the Internet.

One particularly interesting development has been the application of response time methodologies to public opinion surveys. Research by John Bassili and colleagues (e.g. Bassili, 1993, 1996; Bassili & Fletcher, 1991) has utilized computer-assisted telephone interviewing (CATI) to integrate contemporary attitudes research with public opinion surveys. The methodology involves the use of a computer clock that can provide millisecond accuracy in the timing of responses and a voice-recognition framework that converts an individual's responses into signals that trigger the clock after the interviewer asks a question. Using the CATI approach in a survey of Canadians' opinions, Bassili (1993) tested how two operationalizations of attitude strength, attitude accessibility and attitude certainty, might predict the discrepancy between an individual's voting intentions and their actual voting behaviour. The results showed that the response-time measure of accessibility was a significant predictor of the discrepancy between people's voting intentions and their actual voting behaviour. For example, the more accessible the attitude, the lower the discrepancy between voting intentions and voting behaviour.

ATTITUDES CAN PREDICT AND FOLLOW BEHAVIOUR

RESEARCH CLOSE-UP 6.2

Holland, R.W., Verplanken, B., & Van Knippenberg, A. (2002). On the nature of attitude–behavior relations: The strong guide, the weak follow. *European Journal of Social Psychology, 32*, 869–876.

Introduction

This study considers the circumstances under which (1) attitudes predict behaviour and (2) behaviour predicts attitudes. The authors review evidence demonstrating both causal pathways. First, they review a number of studies demonstrating that attitudes influence behaviour (some of these studies are discussed in this chapter). Second, they review a number of studies derived from self-perception theory and dissonance theory (see Chapter 7) demonstrating that attitudes can sometimes be inferred from past behaviour. Holland et al. suggest that the concept of attitude strength is crucial to understanding when attitudes predict behaviour (as opposed to behaviour predicting attitudes). Specifically, Holland et al. postulate that strong attitudes are more likely than weak attitudes to predict behaviour, whereas weak attitudes are more likely than strong attitudes to follow from behaviour.

Method

Participants

One hundred and six students participated in the study.

Design and procedure

The study had a correlational design and was split into two sessions, with an interval of one week. In session 1, participants completed measures assessing the favourability and the strength of their attitudes towards Greenpeace. Attitude favourability was measured by the question 'How positive or negative is your attitude towards Greenpeace?'; one of the attitude strength items was 'How certain are you about your attitude towards Greenpeace?' One week later, participants returned for an unrelated study. At the end of this unrelated study, they were paid the equivalent of about £3. Immediately after being paid, participants were told that the experimenter was also conducting a small study for Greenpeace. Importantly, participants were also informed that they could choose to donate money to Greenpeace. After making their decision whether or not to donate money, the experimenter asked participants to complete a short questionnaire, which included an assessment of their attitude towards Greenpeace (also in session 2).

The *attitude–behaviour* relation was derived by comparing the favourability of participants' attitude at time 1 with the amount of money they donated at time 2. The *behaviour–attitude* relation was derived by comparing the amount of money participants donated at time 2 with the measure of attitude that was taken immediately after the donation behaviour.

Results and discussion

As expected, the researchers found that attitude strength was crucial for understanding when attitudes predict behaviour, as opposed to when behaviour predicts attitudes. The results are shown in Figure 6.18. First, participants were split at the median score on attitude strength, to form two equal-sized groups of those with 'strong' versus 'weak' attitudes (this procedure is known as a 'median split'). With respect to the *attitude–behaviour* relation, strong attitudes at time 1 predicted behaviour at time 2; weak attitudes did not. On the other hand, with respect to the *behaviour–attitude* relation, weak attitudes were greatly influenced by behaviour; strong attitudes were not.

The findings of Holland et al. (2002) provided support for their main hypotheses. When participants held strong attitudes about Greenpeace, the favourability of their attitude predicted whether or not they subsequently donated to the organization. When participants held weak attitudes about Greenpeace, their attitude was shaped by (i.e. inferred from) their donation behaviour. This study makes an important contribution to our understanding of the bi-dimensional causal relations between attitudes and behaviour.

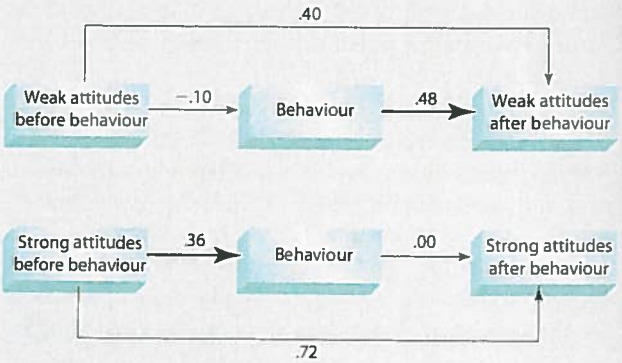

FIGURE 6.18 *Regression coefficients showing the effects of weak and strong attitudes on the attitude–behaviour and behaviour–attitude relations.*

Source: Adapted from Holland et al., 2002. Reproduced with permission from John Wiley & Sons Ltd.

behaviour is more pronounced for low self-monitors than for high self-monitors. In one study testing this proposal, Snyder and Kendzierski (1982) investigated attitudes towards affirmative action (policies that give special advantages to members of disadvantaged groups, such as women and ethnic minorities). These researchers gave students who favoured or opposed affirmative action the opportunity to participate in a social situation that supported the behavioural expression of a positive attitude towards this issue. The results revealed that, among low self-monitors, people's attitude towards affirmative action predicted their decisions to participate, or not. However, among high self-monitors, the behavioural decision was unrelated to the favourability of their attitude.

Another relevant variable that affects the size of the attitude–behaviour relation is the nature of the participants involved in the research. Research has found that students show lower attitude–behaviour relations compared to non-students. For example, Kraus (1995) observed that the average correlation between attitudes and behaviour was .34 in studies that used student samples; the correlation was .48 in studies with non-student samples. This difference might be attributable to the observation that university students tend to have less crystallized attitudes compared to older individuals (see Sears, 1986; Visser & Krosnick, 1998).

Do explicit and implicit measures of attitude predict different types of behaviour?

Explicit and implicit measures of attitude are both useful tools in attempts to predict human behaviour. Indeed, a number of researchers have explored whether explicit and implicit measures of attitude predict different types of behaviour. It has been suggested that explicit measures of attitude should be more likely to predict a deliberative (i.e. thoughtful) behaviour, whereas implicit measures of attitude should be more likely to predict more spontaneous (i.e. automatic) behaviour. For example, Dovidio, Kawakami, Johnson, Johnson, and Howard (1997) examined how explicit and implicit measures of prejudice predict deliberative and spontaneous discriminatory behaviours. In one experiment, participants completed explicit and implicit measures of their attitudes toward African Americans (Dovidio et al., 1997). The explicit measure was a questionnaire consisting of items such as 'Discrimination against black people is no longer a problem in the United States', whereas the implicit measure consisted of a response latency task. After completing these measures, participants were met by a second experimenter who asked participants to complete an ostensibly unrelated study. In this other study, participants were asked a series of questions by a black female and white female. The interviews were programmed, such that both interviewers' questions were posed in a well-rehearsed manner.

After completing the interview, participants evaluated both interviewers. Their response to these questions served as the deliberative measure of behaviour. The spontaneous measure of behaviour was derived from participants' non-verbal behaviour during the interaction, which had been videotaped. Two non-verbal measures were considered – participants' eye contact with the experimenters and the frequency with which participants blinked. Less eye contact and more frequent blinking are indicators of less favourable behaviour. Further, these behaviours are seen as spontaneous, because they are difficult to consciously monitor and control.

Dovidio et al. (1997) expected that the explicit measure of prejudice would best predict participants' deliberative evaluations of their interactions with the black and white experimenters, while the implicit measure of prejudice would best predict participants' spontaneous behaviours toward the black and white experimenters. The results were consistent with predictions. Only the explicit measure of prejudice was correlated with participants' conscious assessment of their interaction, while only the implicit measure of prejudice was correlated with participants' non-verbal behaviour.

Models of attitude–behaviour relations

In addition to understanding *when* attitudes predict behaviour, social psychologists have developed a number of models to explain *how* attitudes predict behaviour. In this section of the chapter, we describe three models: Fishbein and Azjen's (1975) *theory of reasoned action* (as well as its extension, the theory of planned behaviour), Fazio's (1990) *MODE model* and Strack and Deutsch's (2004) *RIM model*.

The theory of reasoned action and theory of planned behaviour As its name suggests, the **theory of reasoned action** (Fishbein & Ajzen, 1975) is a model that was developed to predict deliberative (i.e. planned) behaviour. According to this model (see Theory Box 6.2 and Figure 6.19), the immediate predictor (or determinant) of individuals' behaviour is their *intention*.

theory of reasoned action a model in which behaviour is predicted by behavioural intentions, which are determined by attitudes and subjective norms.

Put simply, if you *intend* to recycle glass bottles, you are likely to engage in this behaviour. Within the original conceptualization of the model, Fishbein and Ajzen proposed that there were two determinants of intentions: attitudes and subjective norms. The *attitude* component refers to the individual's attitude towards the behaviour – whether the person thinks that performing the behaviour is good or bad. A person's attitude towards a behaviour (e.g. recycling glass) is a function of the expectancy that the behaviour will produce a desired consequence (helping the environment) *and* the value attached to this consequence (it is good to help the environment). According to the model, an individual's attitude is derived by multiplying the expectancy and value for each consequence and summing these values (see explanation of expectancy–value models of attitude in the earlier section on the cognitive component of attitudes).

Subjective norms refer to an individual's beliefs about how significant others view the relevant behaviour. Like the attitude component, subjective norms are perceived to be derived from two factors that are multiplied and then summed. Specifically, the subjective norm component is a function of normative beliefs (how important others expect the individual to act) and the individual's motivation to comply with these expectations. Returning to our example, subjective norms will be high if your family and close friends have positive expectations towards recycling glass and you are motivated to comply with these expectations.

While the theory of reasoned action did a commendable job in predicting behaviour, it soon became clear that individuals' actions were also influenced by whether or not they felt they *could* perform the relevant behaviour. For example, if an individual wanted to change his dietary habits by eating a healthier diet, a positive attitude and positive subjective norms are unlikely to produce the desired behaviour change if he is unable to restrain himself from eating sweets, chocolates and fish and chips. Social psychologists use the term **self-efficacy** to refer to beliefs about one's ability to carry out certain actions required to attain a specific goal.

self-efficacy beliefs about one's ability to carry out certain actions required to attain a specific goal (e.g. that one is capable of following a diet, or to help someone).

In light of how these types of self-efficacy factors can influence our actions (see Bandura, 1977), the theory of reasoned action was revised to include the notion that behavioural prediction is affected by whether people believe that they can perform the relevant behaviour. This revision is captured by the concept of **perceived behavioural control**. The inclusion of this concept led Ajzen (1991; see also Ajzen & Madden, 1986) to name the revised model the **theory of planned behaviour**. According to this model (see Theory Box 6.2 and Figure 6.20), perceived behavioural control, in addition to attitudes and subjective norms, determines behavioural intentions. Perceived behavioural control itself is determined by control beliefs (individuals' perceptions about whether they have the resources and opportunities required to perform the behaviour).

perceived behavioural control the notion that behavioural prediction is affected by whether people believe that they can perform the relevant behaviour.

theory of planned behaviour an extension to the theory of reasoned action that includes the concept of perceived behavioural control.

Perceived behavioural control influences behaviour in two ways. First, it is postulated to have a direct causal influence on behavioural intentions. This implies that individuals' intention to engage in a particular behaviour is affected by their perceived confidence in their ability to perform the action. Second, perceived behavioural control can also have a direct effect on behaviour. This relationship is dependent upon actual control of the relevant action, that is, whether the behaviour can, in reality, be performed. Put simply, while individuals may believe that they can perform the relevant behaviour, their perception may not be accurate.

The theory of reasoned action and theory of planned behaviour are the most frequently tested models of attitude–behaviour relations. The predictions derived from the models have received strong empirical support. For example, a review by Albarracín, Johnson, Fishbein, and Muellerleile (2001) compared the results of over 90 studies

LEADERS IN THE FIELD

Martin Fishbein (1936–1997) and **Icek Ajzen** (b. 1942). Martin Fishbein received his undergraduate degree in psychology and economics at Reed College and his PhD in 1961 at UCLA. He then accepted a position in social psychology and communication at the University of Illinois, where he stayed until 1997 to become distinguished university professor at the Annenberg School for Communication. In 1963 he published his important expectancy-value theory of attitudes, and in a 1967 article on attitudes and the prediction of behaviour he first described what later became known as the 'theory of reasoned action'. Also in 1966, Icek Ajzen, who had completed his undergraduate degree at the Hebrew University of Jerusalem, joined Fishbein at Illinois to pursue a PhD, which he finished in 1969. Their collaboration continued after Ajzen accepted a position at the University of Massachusetts (Amherst), where he remained throughout his career. In 1975 they published their landmark volume *Belief, Attitude, Intention and Behavior*, in which the theory of reasoned action appeared in its present form. Another landmark publication was their article on the relationship between attitude and behaviour, published in 1977. Ajzen later extended the theory of reasoned action into the theory of planned behaviour, which has now replaced the theory of reasoned action as the dominant social psychological model for the prediction of behaviour.

THEORY BOX 6.2

THE THEORY OF REASONED ACTION

The theory of reasoned action (Fishbein & Ajzen, 1975; see Leaders in the Field, Martin Fishbein and Icek Ajzen) and the theory of planned behaviour (Ajzen, 1991) were developed to predict reasoned, deliberative behaviour. According to the theory of reasoned action, the immediate predictor (or determinant) of individuals' behaviour is their *intention*. As the model was originally conceived, intentions were determined by two factors, attitudes and subjective norms. The *attitude* component refers to the individual's attitude toward the behaviour – whether the person thinks that performing the behaviour is good or bad, while *subjective norms* refer to an individual's beliefs about how significant others view the relevant behaviour (see Figure 6.19).

The theory of planned behaviour (see Figure 6.20) extends the theory of reasoned action by including the idea that individuals' actions are also influenced by whether they feel they can perform the relevant behaviour. Accordingly, the theory of planned behaviour added the concept of *perceived behavioural control*. This concept is conceptualized as influencing behaviour in two possible ways, by having a direct effect on behavioural intentions, and by directly influencing behaviour.

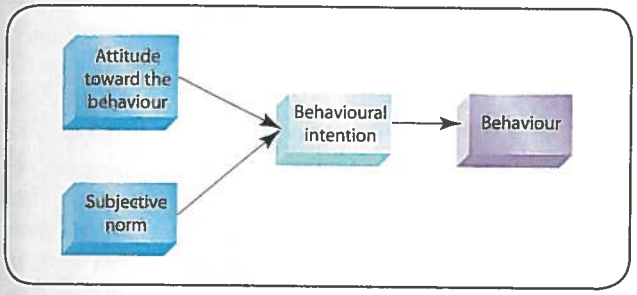

FIGURE 6.19 *The theory of reasoned action.*

Source: Adapted from Haddock et al. (2008) with permission from SAGE Publications Ltd.

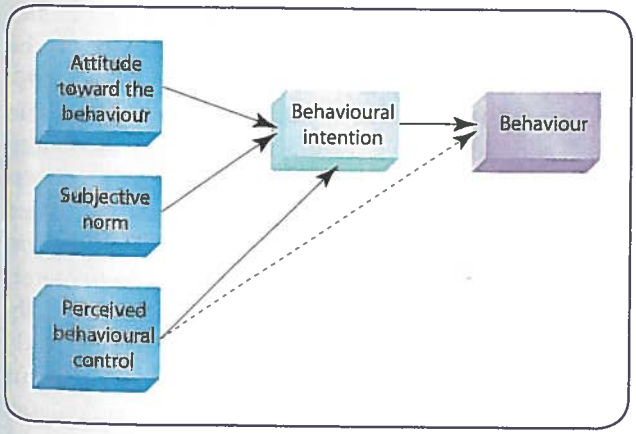

FIGURE 6.20 *The theory of planned behaviour.*

Source: Adapted from Haddock et al. (2008) with permission from SAGE Publications Ltd.

and demonstrated that the models are effective in predicting condom use. Similar findings supporting the models have been found in reviews of other behavioural domains (see e.g. Armitage & Conner, 2001).

A large number of research programmes have used the reasoned action/planned behaviour framework to help understand how additional types of environmental issues influence behaviour. One key issue pertinent to the reasoned action/planned behaviour approach that has received considerable attention concerns *how* behavioural intentions are translated into behaviour. An important development relevant to this issue is the concept of **implementation intentions** (Gollwitzer, 1999; Gollwitzer & Sheeran, 2006). Implementation intentions are conceptualized as 'if–then' plans that specify a behaviour that one will need to perform in order to achieve a goal and the context in which the behaviour will occur (Sheeran, 2002). That is, implementation intentions take the form of mindsets in which an individual attempts to specify where and when a behaviour will be enacted, in the form of 'When I encounter the situational context A, I will perform behaviour B' (Gollwitzer & Brandstätter, 1997). For example, a student might say to herself 'On the first day of the new semester, when I return from Christmas holidays, I will start revising for my exams'.

implementation intentions 'if–then' plans that specify a behaviour that one will need to perform in order to achieve a goal, and the context in which the behaviour will occur.

Numerous studies have demonstrated that forming an implementation intention increases the likelihood that an individual will perform a desired behaviour. In one study, Orbell, Hodgkins, and Sheeran (1997) considered whether the formation of an implementation intention would increase the likelihood that women would perform breast self-examination (BSE). Participants in an intervention group were asked to indicate where and when they would perform BSE, whereas participants in a control group did not receive these instructions. The results of the study revealed that the formation of an implementation intention was effective in eliciting the desired behaviour. For example, one month after the intervention, 64 per cent of participants in the intervention group reported having performed BSE, compared to 14 per cent in the control group (see Gollwitzer & Sheeran, 2006; Sheeran, Milne, Webb, & Gollwitzer, 2005, for extensive reviews of implementation intentions).

Relevant to research on implementation intentions is work that has studied the role of habits in predicting behaviour. Research has demonstrated that habitual behaviours are behaviours that are linked to situational cues (see Aarts & Dijksterhuis, 2000). From a social psychological perspective, habits are more than just behaviours that we perform frequently. Of greater relevance is the idea that habits are *automatic* behaviours, in the sense that they occur without awareness and are difficult to control (see Verplanken, 2006; Verplanken & Orbell, 2003; see also Chapter 4). Many studies have found that habits can play an important role in predicting future behaviour. For example, a field study in the Netherlands considered the degree to which habits and other variables from the theory of planned behaviour predicted travel behaviour (Verplanken, Aarts, Van Knippenberg, & Moonen, 1998). The travel behaviour included decisions about whether to take a bicycle, bus, car or train to work. At the start of the study, participants completed measures of habit strength (e.g. frequency of past behaviour), attitudes, subjective norms, and behavioural intentions about their travel choice. For the next week, participants kept a diary that recorded how often they drove their car and used other forms of transport. The results revealed that habits were highly predictive of behaviour, even predicting behaviour after behavioural intentions and perceived behavioural control were taken into account. Further, the study found that behavioural intentions were uniquely predictive of behaviour only when participants' habits were weak. This suggests that when habits were strong, they were enough to be the main predictor of future behaviour.

Finally, we wish to highlight yet another interesting way in which automatic processes may be important in evaluative judgements: the operation of motives or goals. Goals are linked to the idea of intentions. Goals can be considered cognitive representations that can be primed by environmental cues, and then influence behaviour without the person realizing it. In the last two decades, researchers have addressed how automatically triggered goals influence evaluations and behaviour. There is now a large volume of research that has demonstrated how evaluations and behaviour are influenced by cues and primes without people being aware of them (for reviews, see Custers & Aarts, 2005; Veltkamp, Aarts, & Custers, 2009). For example, in one particularly interesting study, Bargh, Gollwitzer, Lee-Chai, Barndollar, and Trötschel (2001) activated the goal of achievement by unobtrusively priming some participants with words such as 'succeed' and 'achieve'. This was done by having participants complete a word-search puzzle task that contained a number of achievement-relevant words. Subsequent to this task, participants completed another puzzle task in which participants had to find words that were hidden within the puzzle. The researchers were interested in determining whether the unobtrusive priming of the goal of achievement would lead participants to perform better (i.e. achieve more) compared to participants who had not been previously primed with the goal of achievement. Bargh and colleagues (2001) found that participants who had been unobtrusively primed with achievement performed better in locating hidden words than control participants.

The MODE model Not all behaviour is deliberative and planned. Quite often we act spontaneously without consciously thinking of what we intend to do. When our behaviour is spontaneous, the theory of planned behaviour may not provide a proper conceptualization of behavioural prediction (see Fazio, 1990). In an attempt to uncover how attitudes influence spontaneous behaviour, Fazio (1990) developed the ***MODE* model** of attitude–behaviour relations. MODE refers to *M*otivation and *O*pportunity as *DE*terminants of behaviour.

MODE model a model of attitude–behaviour relations in which motivation and opportunity are necessary to make a deliberative consideration of available information.

At a basic level, the MODE model suggests that, if individuals have *both* sufficient motivation *and* opportunity, they may base their behaviour on a deliberative consideration of the available information. However, when either the motivation or the opportunity to make a reasoned decision is low, only attitudes that are highly accessible will predict spontaneous behaviour. A number of studies by Fazio and colleagues have supported the MODE model (see e.g. Sanbonmatsu & Fazio, 1990; Schuette & Fazio, 1995). For example, Schuette and Fazio (1995) considered how attitude accessibility and motivation influence the extent to which people process information in a biased way. Schuette and Fazio asked university students to evaluate two research studies on the effectiveness of the death penalty as a crime deterrent. One study supported the idea that capital punishment is an effective crime deterrent; the second study reached the opposite conclusion. Before participants looked at the studies, Schuette and Fazio manipulated the accessibility of each participant's attitude toward the death penalty. Some participants expressed their attitude once (low accessibility), whereas others expressed their attitude six times (high accessibility). To manipulate motivation, some participants were told that their conclusions would be compared to those made by an expert panel. Participants in the low motivation condition did not receive this information.

The results revealed that the relation between individuals' prior attitude and their judgement about the study depended on both the accessibility of the participants' attitude and their level of motivation. Participants evaluated the articles in line with their own attitude when their

attitude was highly accessible and their motivation was low. In this case, their highly accessible attitude served as a cue that biased their perceptions. However, when participants were highly motivated, or when they had expressed their attitude only one time, attitudes were not correlated with evaluations of the studies. In these conditions, being motivated can lead individuals to overcome the potential biases of their attitude, even if it is accessible. When respondents are not motivated, expressing an attitude just once does not make it sufficiently accessible for it to influence their perceptions.

The RIM model A recent model relevant to the link between attitudes and behaviour has been developed by Strack and Deutsch (2004). Their *reflective–impulsive model* (RIM) proposes that behaviour is controlled by two interacting systems: a reflective system that guides and elicits behaviour via a reasoned consideration of available information, and an impulsive system that guides and elicits behaviour through more automatic associative links. The reflective system can be seen as involving processes that resemble how people respond to explicit measures of attitude, whereas the impulsive system involves processes that bear greater resemblance to implicit measures of attitude. Indeed, Strack and Deutsch suggest that the reflective system should have a greater influence on deliberative behaviour, while the impulsive system should have a greater influence on spontaneous behaviour. Consistent with the ideas proposed in the RIM model, studies have demonstrated that explicit and implicit measures of attitude predict different types of behaviour (as discussed earlier in the chapter).

Summary

On the whole, attitudes do a reasonable job of predicting behaviour. The degree to which attitudes predict behaviour depends upon factors such as the level of correspondence across measures, the domain of behaviour, attitude strength and personality factors. The theory of reasoned action and its extension, the theory of planned behaviour, have received strong support as models for predicting deliberate behaviour. The MODE model suggests that motivation and opportunity are necessary to make a deliberative consideration of available information. The RIM model proposes that behaviour is controlled by two interacting systems: a reflective system and an impulsive system.

CHAPTER SUMMARY

- *What is an attitude?* An attitude is an overall evaluation of an attitude object.
- *Can we have attitudes about anything?* Anything that can be evaluated along a dimension of favourability can be conceptualized as an attitude object.
- *What are the bases of attitudes?* Attitudes have affective, cognitive and behavioural antecedents. All three antecedents contribute to our overall evaluation of an object.
- *Is the structure of an attitude best considered to be one-dimensional or two-dimensional?* The two-dimensional perspective is advantageous as it allows for attitude ambivalence.
- *Why do we hold attitudes?* Attitudes serve a variety of functions, the most important of which is the object appraisal function.
- *Why is it useful to know the function of an attitude?* Knowing the function of an attitude is important because attempts to change an attitude are more likely to be successful when the persuasive appeal matches the attitude's function.
- *Does it matter if an attitude is strong or weak?* Yes – strong attitudes are more stable over time, more resistant to change and more likely to guide both information processing and behaviour.
- *What is the difference between explicit and implicit measures of attitude?* Explicit measures directly ask respondents to think about and report their attitude, whereas implicit measures do not.
- *Do explicit and implicit measures predict different types of behaviour?* Research has shown that explicit measures are more effective in predicting deliberative behaviour, whereas implicit measures are more effective in predicting spontaneous behaviour.
- *Do attitudes predict behaviour?* On the whole, attitudes do a reasonable job of predicting behaviour. The degree to which attitudes predict behaviour depends on a number of factors, including correspondence, the domain of behaviour, the strength of an attitude and person variables.
- *How do attitudes predict behaviour?* A number of models have been developed to understand how attitudes predict behaviour. The most influential models are the theory of planned behaviour and the MODE model.

SUGGESTIONS FOR FURTHER READING

Albarracín, D., Johnson, B. T., & Zanna, M. P. (Eds.). (2005). *Handbook of attitudes*. Mahwah, NJ: Erlbaum. This volume offers an advanced review of the field of attitudes research.

Cialdini, R. B. (2008). *Influence: Science and practice (5th ed.)*. Boston, MA: Allyn & Bacon. This volume offers an accessible look at research on social influence.

Crano, W., & Prislin, R. (Eds.). (2009). *Attitudes and persuasion*. New York: Psychology Press. This volume reviews different streams of research on attitudes and attitude change.

Eagly, A. H., & Chaiken, S. (1993). *The psychology of attitudes*. Fort Worth, TX: Harcourt Brace Jovanovich. This volume provides a comprehensive review of research that laid the foundation for the progress that has been made in the past two decades.

Fazio, R. H., & Olson, M. A. (2003). Implicit measures in social cognition research: Their meaning and use. *Annual Review of Psychology, 54*, 297–327. This paper reviews advances that have been made concerning implicit measures of attitude.

Fazio, R. H., & Petty, R. E. (Eds.). (2007). *Attitudes: Structure, function, and consequences*. Hove, UK: Psychology Press. This volume comprises a collection of important published papers on attitude structure, attitude content and the attitude–behaviour relation.

Haddock, G., & Maio, G. R. (Eds.). (2004). *Contemporary perspectives on the pychology of attitudes*. Hove, UK: Psychology Press. This volume reviews a number of contemporary research programmes on the psychology of attitudes.

Maio, G. R., & Haddock, G. (2010). *The psychology of attitudes and attitude change*. London: Sage. This volume provides a comprehensive and accessible overview of research and theories relevant to the psychology of attitudes.

Maio, G. R., & Olson, J. M. (Eds.). (2000). *Why we evaluate: Functions of attitudes*. Mahwah, NJ: Erlbaum. This volume is a comprehensive examination of research on attitude functions.

Petty, R. E., & Cacioppo, J. T. (1986). *Communication and persuasion: Central and peripheral routes to attitude change*. New York: Springer. This volume highlights the research that was conducted in the development of the highly influential Elaboration Likelihood Model of persuasion.

Petty, R. E., Fazio, R. H., & Briñol, P. (Eds.). (2009). *Attitudes: Insights from the new implicit measures*. New York: Psychology Press. This volume highlights different research programmes regarding implicit measures of attitude.

Wittenbrink, B., & Schwarz, N. (Eds.). (2007). *Implicit measures of attitudes*. New York: Guilford. This volume provides an overview of different perspectives on the utility of implicit measures of attitude.