

# An Introduction to Social Psychology

*Global Perspectives*

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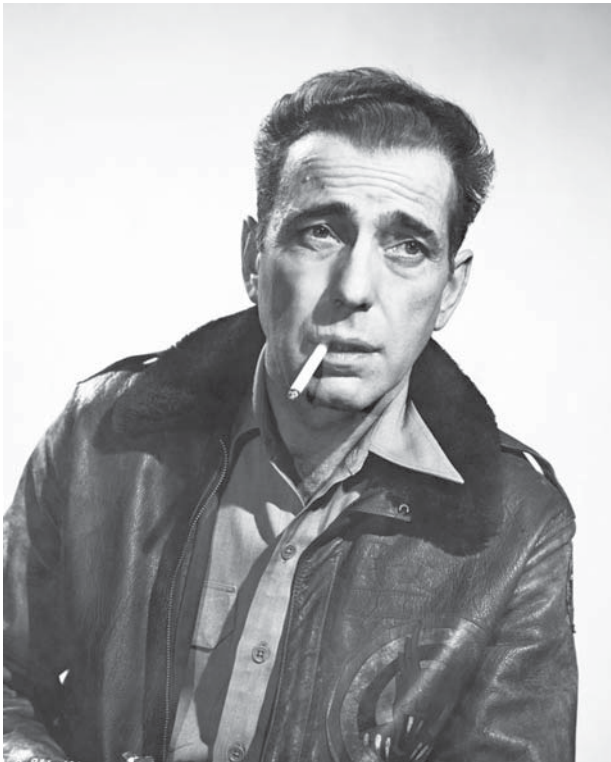
# CHAPTER 2

## SOCIAL PERCEPTION AND COGNITION

*There is nothing either good or bad but thinking makes it so.*  
William Shakespeare

### LEARNING OBJECTIVES

- \* To understand the dual-systems model of thinking (rapid versus slower and deliberative) and how it applies to thinking in the social context
- \* To understand how we form first impressions of people
- \* To learn how we arrive at conclusions about cause and effect in our social world
- \* To explore how we tend to think rapidly with very little conscious deliberation, using categories about people and events (schemas), and applying implicit rules of thumb (heuristics)
- \* To understand how we process information about people and events, involving attention, memory, thinking in more or less concrete or abstract ways (construal) and thinking of what might have been
- \* To examine the biases that influence our thinking about our social world



**Figure 2.1** Film star Humphrey Bogart

Source: © John Springer Collection/Corbis

While learning to drive a car, you are attentive to the many details of this complex task: get in the car, adjust the seat, adjust the mirrors, start the ignition, check the mirrors and rear window, shift into reverse gear, back into traffic when it's safe, shift into drive or first gear, drive in traffic, continually check the sides and rear as well as what's in front of you, brake well before a red light, move your foot from the brake to the gas pedal when the green light appears ... it's all a conscious, focused performance. Contrast this with the experienced driver. All of this becomes automatic, and your mind may well be on the day ahead, what your partner said last night, or the music on your sound system. Fully focused attention is galvanized only when the unexpected happens – the car in front of you stops suddenly, the weather turns nasty, the fuel gauge hovers around 'empty'. Notice how your way of thinking about driving has shifted.

Think of old movies where smoking was portrayed as normal for certain characters, even glamorous, for example, those of Humphrey Bogart. Contrast this with most movies today in most cultures, where smoking is rarely portrayed. Note how smoking several generations ago was seen as normative, nothing to draw our attention, while today it is more unusual, drawing conscious attention.

This reflects the **dual-systems model** of thinking (Evans, 2008; Kahneman, 2011). We think in a manner that is rapid, automatic and unconscious (System 1), and

we also think in a manner that is slow, deliberative and conscious (System 2). Thus, we may gradually and logically form an impression of someone if, for instance, we are interviewing the person for a job, or if this is a first date with a prospective romantic partner (System 2). More often, we form our impression rapidly, automatically and without conscious thought (System 1). Note that System 1 operates largely out of conscious awareness, although it is not the Freudian model of unconscious repressed feelings. Rather, it allows us to handle the routine tasks of daily life on 'automatic pilot'. As Fiske & Taylor (1991) suggest, we are cognitive misers, unwilling to expend any more effort into thinking than is necessary. Indeed, the rapid, non-conscious mode has evolved to serve us well where we have to appraise the situation based on immediate cues and react. On the other hand, conscious awareness and thinking things out have obvious advantages. Indeed, Langer (1989) presents vigorous arguments for a more 'mindful' way of living.

Social psychologists have made some intriguing discoveries in this area. This chapter begins with a discussion of how we form overall impressions of people based on traits such as friendliness, honesty, sneakiness or self-discipline. The discussion then turns to the study of attributions, how people draw conclusions about why other people act as they do. Finally, the chapter outlines more subtle processes of social cognition by which we 'construct' our own view of reality and the many shortcuts we take to get there. Much of the material in this chapter is fundamental to many areas of social psychology and will be elaborated upon in succeeding chapters.

**KEY POINT:** We think in two different ways, a conscious, deliberative manner and an implicit, automatic system using the least possible effort. The latter system characterizes our routine daily manner of living.

## FORMING IMPRESSIONS OF PEOPLE

Research on social perception began with how we form initial impressions of other people, how we decide that a person is friendly, arrogant, honest or interesting. In general, participants in those early studies were provided with a photo or a brief description of a person, in which one or a small number of characteristics or actions were varied, and then the participants were asked to rate the target person in terms of a set of traits. One of the key findings that emerged from those studies concerned the existence of **central traits**, certain characteristics that affect other judgements about that person. For instance, when participants were led to believe that a guest lecturer in a class was ‘warm’ as opposed to ‘cold’, they tended to make more positive judgements about that individual in terms of being popular, wise and imaginative (Asch, 1946; Kelley, 1950). When informed that the target person was a smoker, that person was rated by participants as less ‘considerate’, ‘calm’, ‘honest’, ‘healthy’, ‘well-mannered’, ‘happy’, less self-controlled, less imaginative, and less mature (Dermer & Jacobsen, 1986; Dion, Dion, Coombs & Kozlowski, 1990; Polivy, Hackett & Bycio, 1979).



**Figure 2.2** What is your impression of this person? Why? Does knowing he is Leonard Cohen, poet, songwriter and singer, affect your impression?

Source: © Rune Hellestad/Corbis

Of course, we notice many different traits in the same person. We may first notice that a person is attractive, and then discover that this person also appears arrogant. How do we combine these observations about the person to arrive at an overall evaluation? Imagine that we have some kind of mental rating scale for each characteristic. The evidence indicates that we follow an implicit weighted averaging model in combining such information about the person (Anderson, 1965, 1978). That is, we keep a rough ‘running’ average of our trait ratings in our heads. For example, if we find someone to be highly intelligent (rating the person as 8 on a scale of 1 to 10) but only somewhat attractive (4 on that scale), our overall rating of that person would fall somewhere around 6 on that 10-point scale. However, if attractiveness were more important to us than intelligence as a basis for judging people, then the overall weighted average would be less than 6 because attractiveness is more important to us.

Clearly, we don’t consciously think about others in such a mathematical way, but we implicitly combine impressions about people as if we were doing so. It is important to understand that people arrive at judgements about traits rather quickly and often with minimal information, System 1 in cognitive terms (Carlston & Skowronski, 1994). For instance, participants confidently provide the same trait ratings to photographs of people (Figure 2.2), whether they are exposed to those pictures for one-tenth of a second or a full second (Willis & Todorov, 2006).

Are these first impressions lasting? Intuitively, it would seem that as we get to know someone better over time, our impressions should change and become more accurate. This hypothesis has been tested in a longitudinal study, in which participants met in groups once a week for seven weeks. Before the first meeting, each participant completed self-rating forms, and after weeks 1, 4 and 7, they rated all of the other persons in their group on the same scales. As predicted, over time, their ratings of the other people more closely matched how people rated themselves (Paulhus & Bruce, 1992). Thus, first impressions are important but not immutable.

### Biases in impression formation

Most people, at least in Western cultures, tend to form impressions of others that are positive rather than negative; this is known as a **positivity bias**, also known as the Pollyanna principle (Matlin & Stang, 1978).



**Figure 2.3** A scene from the movie *Rashomon* in which different people remember and interpret the same criminal event in very different ways

Source: © John Springer Collection/Corbis

Consider, for example, student evaluations of their professors. At one university, students rated 97% of their professors as ‘above average’, a mathematical impossibility (Sears, 1983). Along with the positivity bias, our overall impression of a person tends to be influenced more by negative information than by positive information (Fiske, 1980; Skowronski & Carlston, 1989; Anderson, 1965; Hamilton & Zanna, 1972). Of course, we may be influenced by both the positivity bias and **negativity effect** at the same time in forming our overall impression (Klein, 1991).

### Eye of the beholder

Of course, perception of a person, event or object is subjective. We all have our own ways of interpreting people and events, consistent with our own experience and assumptions. The classic 1952 movie *Rashomon* vividly shows how different people report the same crime in startlingly different ways (Figure 2.3).

In forming impressions of others, people bring their own personal way of looking at the world. For instance, we have our own **implicit personality theories** – a set of unstated assumptions about human nature and people in general (Bruner & Tagiuri, 1954; Anderson & Sedikides, 1990; Sedikides & Anderson, 1994). We may believe people are, in general, trustworthy or untrustworthy, rational or irrational, altruistic or selfish. Implicit personality theories also concern our beliefs about what characteristics go together. For instance, many people believe that friendly people are also people to be trusted, which can be a dangerous delusion (Anderson, Lepper & Ross, 1980).

Cognitive neuroscience has contributed to our understanding of social perception. In particular, it has emerged that there are areas of brain activity specific to forming impressions of people, as opposed to impressions of inanimate objects. In one study (Mitchell, Macrae & Banaji, 2006), participants read a series of statements about personality traits such as extraversion, and were asked to pair these trait descriptions with one of a set of facial photos. In one experimental condition, participants were instructed to memorize the order in which the information was given, while in another condition, participants were asked to form an impression of what each person was like based on the picture and the information. While engaged in this task, brain activity was recorded by means of fMRI (functional magnetic resonance imaging) scans. Different brain areas were involved in the non-social task (e.g. superior frontal gyrus, caudate nucleus) and the social, impression-formation task (dorsomedial prefrontal cortex). This study and others suggest that distinct areas of the brain are involved in social cognition.

There are also cultural differences. For instance, when people in Western cultures are asked to describe the artistic type of person, they will use adjectives such as creative, temperamental and unconventional. A Chinese person would be mystified by this request, because the ‘artistic type’ is not a concept in that culture. On the other hand, in Chinese culture, people describe a type of person who is worldly, socially skilled and devoted to family (*shi gu*) (Hoffman, Lau & Johnson, 1986). Western participants tend to focus on objects in their perceptual field while East Asians focus more on the contexts and background of the scene (Ames & Fiske, 2010). When Chinese and American participants were asked to judge various pictures of target objects against a background, their fMRI responses showed that, compared to the Chinese, the Americans activated more neural regions involved in the processing of objects (e.g. middle temporal gyrus) (Gutchess, Welsh, Bodurođlu & Park, 2006). No consistent differences between the two participant groups were found when they were instructed to focus on background images. Thus, cultural differences in how people process visual information (such as other people) are reflected in selective activation of cortical areas.

**KEY POINT:** In forming an impression of someone, we are strongly influenced by our ratings of the person on central traits. We tend to combine our ratings of various characteristics following a weighted averaging model. We tend to be biased toward the positive in our impressions of people, unless we see something negative, which will outweigh in importance the positives. Impressions of people are also in the eye of the beholder, influenced by our personal, implicit 'model' of human nature and by our culture. Impressions of people have been shown by fMRI readings to involve different brain centres than impressions of objects.

## ATTRIBUTIONS OF CAUSALITY

Zinedine Zidane is considered to have been one of the greatest football (soccer) players of his era. Of Algerian descent, his parents emigrated to France when he was a child, where his talents soon became evident. He eventually played as a midfielder for the Real Madrid and Juventus teams, and for the French national team, which won the World Cup in 1998. In the World Cup tournament of 2006, he was named as the outstanding player prior to the final match, which pitted France against Italy. At a crucial point in the second half of that match, he deliberately head-butted Italian player Marco Materazzi, for which he was sent from the field of play. The match ended in a draw, and, without Zidane, France lost in the penalty shootout. It was later determined that Materazzi had insulted Zidane's mother, which precipitated Zidane's angry response. How would you explain his action, which quite plausibly cost his nation's team the World Cup? Was it caused by Zidane's inability to control his temper, to his cultural sensitivities, to Materazzi's provocative actions, to the heightened tensions of the World Cup final? In this section, we explore how people explain the social and personal events in their lives, in short, how they make attributions (Heider, 1958).

Let us begin with several fundamental principles. According to the **discounting principle** (Kelley, 1972), people tend to accept the most likely cause and set aside or 'discount' other possibilities. For example, consider a boss who closely supervises a hard-working employee. Since the supervisor has a plausible explanation for that worker's productivity (close supervision), an alternative attribution for that worker's productivity – that she was motivated to do a good job – will be discounted (Strickland, 1958). In several studies, it has been shown that politicians are rated as having more integrity and strength when they oppose the position of their own party or when they speak before a hostile audience (Eagly, Wood & Chaiken, 1978; Pancer, Brown, Gregor & Claxton-Oldfield, 1992). If they follow the party line, we attribute their position to political pressure and conformity, and discount the possibility that they really mean it. Similarly, when we are told our success in a task indicates that we are competent, we discount other possible explanations, such as being lucky (Braun & Wicklund, 1989).

According to the **covariation principle**, when two events repeatedly occur together, people often see cause and effect between them. For example, suppose a person becomes very angry every time a certain topic of conversation comes up, but is rarely angry otherwise. We would probably attribute the anger to the topic of conversation. Of course, two events may coincide without one causing the other. There may be a correlation between the congestion on commuter trains and traffic on a bridge, but we cannot assume that the train congestion brings the cars or vice versa; (both happen to occur at rush hour). Such an obvious example aside, in general there is a bias, particularly in Western cultures, to assume causality where it may or may not exist.



**Figure 2.4** Italy's Marco Materazzi falls on the pitch after being head-butted by France's Zinedine Zidane (right) during their World Cup 2006 Final match in Berlin, Germany. To what would you attribute Zidane's actions?

Source: © HO/Reuters/Corbis

## ATTRIBUTION THEORIES

Several theories have been developed to explain how people form situational or dispositional causal attributions. The following discussion focuses on three theories: Jones and Davis's model of correspondent inferences, Kelley's covariation model, and Weiner's model of achievement attributions.

### Theory of correspondent inferences

When a person tells you how attractive you are, does he or she really mean it? Can we use someone's behaviour as a guide to how that person is feeling, or what that person intends, particularly when we have only that one event to guide us? At first glance, one might surmise that 'actions speak louder than words'. However, at least two important factors complicate the picture. First, a person may seek to mislead others about her true feelings: the poker player



**Figure 2.5** A problem in perception: Does this poker player have a winning hand? How do his opponents decide?

Source: Beto Chagas/Shutterstock.com

with a straight flush, the salesperson who knows the real bottom-line price, the daughter who assures her mother that 'everything is fine'. Second, actions often stem from situational causes. Politicians are expected to make promises, students are expected to take useful notes in lectures, and the salesperson is instructed to act cheerfully.

The **theory of correspondent inferences** (Jones & Davis, 1965) concerns how we use certain cues to infer that an action corresponds to a personal disposition. What do we look for? First, we focus upon freely chosen behaviours and ignore those that are expected, required or coerced. We may know that the excessively friendly salesperson is probably following the manager's orders, and a correspondent inference (that she or he is friendly) is unlikely. Second, behaviours that produce uncommon effects – those that seem unique or out of role – are noticed. If your best friend expresses concern that you look tired, you may attribute that behaviour to the role, 'That's what friends are for'. However, if a salesperson

says the same thing, a correspondent inference to his or her disposition (that he or she is sympathetic) is much more likely. A third important cue is social desirability, adherence to social norms. We learn more about a people's taste in clothing if they wear pyjamas to class than if they wear jeans and a t-shirt.

These inferences seem to be logical 'best guesses' when we don't have much information. There are also two non-logical biases. People tend to make more confident correspondent inferences of someone's intent when the action has a strong consequence for themselves, rather than for someone else (hedonic relevance), and when they believe that the actor *intended* to benefit or harm them (personalism). When you are the target of an insult, you are less likely to make allowance for the person having a bad day (a situational attribution) than were that person insulting someone else. A series of experiments has supported the model of correspondent inferences (Jones & Harris, 1976; Jones, Davis & Gergen, 1961).

**KEY POINT:** Attributions involve the perception of the causes of people's actions and their consequences, and the attributions may be dispositional or situational. If we can judge a particular cause as plausible, we tend to discount other possible causes, and we tend to assume cause and effect between people and events that happen at the same time. We infer that a person's action corresponds to a disposition to act in that way when the act was freely chosen, the consequences are unexpected or are counter to social norms, when the action seemed directed at the us and when the consequences are significant.

As noted, the theory of correspondent inferences concerns a single act, and how we decide whether that act 'corresponds' to a disposition. However, we often make attributions about the actions of people whom we



have observed over time. In these cases, the attributions that we make about their behaviour follow somewhat different principles. The covariation model was developed to apply to such cases.

## Covariation model

Imagine that you are a reporter for a newspaper who has been assigned to interview a celebrated musician visiting your city. The musician praises you for conducting a great interview. Why did the visiting celebrity pay you that compliment? Kelley (1972) argues that people behave as ‘naive scientists’ in the sense that they sift through various clues, past and present, to arrive at a ‘best guess’ or hypothesis about the ‘real cause’ of someone’s action. He developed an attributional model of covariation which accounts for how people put together information about the actor (the person performing the behaviour), the entity (the person to whom the behaviour is directed), and the situation (the social context in which the action takes place). In the case of the reporter and the celebrity, there are three sources of information that we would consider:

**Distinctiveness of the entity** Is the celebrity generally known for charm and generosity to members of the press? If so, then there is nothing distinctive about the behaviour shown towards you (the entity) as a reporter. On the other hand, if the person’s behaviour towards you is distinctive, different from how he or she treated other members of the press, then it must be something about you that caused him or her to praise you (an entity attribution).

**Consensus across actors** Do most of your interview subjects praise you for your interviewing techniques? If so, it says something about you as a reporter (entity). If not, it indicates something about this particular individual (the actor is a nice person) or perhaps about celebrity interviews in general (perhaps all celebrities praise their interviewers).

**Consistency across situations** Does the celebrity behave in this way towards you in different situations? If consistency is high, we would attribute behaviour to the actor or the entity – either she is generous with her praise, or you are a great reporter. However, low consistency would lead to a situational attribution.

Of course, wherever possible, we would use all three sources of information together. However, research shows that we use consensus information about how others act towards the entity less often (Nisbett & Borgida, 1975), and so we are less likely to consider how other interview subjects have reacted to our interviews.

Note the difference between the theories of correspondent inferences and covariation (Figure 2.6). Kelley has provided us with a useful model of how we use covariation information to make social attributions. However, it presupposes that we have sufficient consensus, consistency and distinctiveness information. The theory of correspondent inferences explains how attributions are made when we do not have such information (Higgins & Bryant, 1982).

## Attributions about success and failure

Many of our actions have consequences, sometimes defined in concrete feedback: a mark on an examination, getting a job or promotion, making a lot of money, winning (or losing) that tennis match or being elected to office.

|   | Distinctiveness | Consensus | Consistency |
|---|-----------------|-----------|-------------|
| <b>Actor Attribution:</b> Internal causes (attitudes, personal traits) made the person act in this way                | Low             | Low       | High        |
| <b>Entity Attribution:</b> External causes (your physical appearance, your behaviour) made the person act in this way | High            | High      | High        |

**Figure 2.6** The theory of covariation – how we attribute social behaviour to internal or external causes

Source: Kelley, 1972

|                  | <i>Stable</i>   |                            | <i>Unstable</i> |                                     |
|------------------|-----------------|----------------------------|-----------------|-------------------------------------|
|                  | Internal        | External                   | Internal        | External                            |
| Controllable     | typical effort  | professor dislikes student | unusual effort  | unusual disruption by other student |
| Not controllable | lack of ability | task difficulty            | mood            | luck                                |

**Figure 2.7** Weiner’s model of achievement attributions

Source: Weiner, 1979

Beyond these milestones, success and failure can be experienced in more subtle ways: being well-liked, having a child who is admired, being respected by co-workers, being ‘unlucky at love’. Many who experience divorce must deal with feelings of having failed in the relationship (Weiss, 1975), and attributions regarding success and failure are crucial in dealing with loneliness, as we shall see in Chapter 8 (Peplau & Perlman, 1982).

Weiner (1974, 1980) suggests that achievement attributions involve three choices. First, we decide whether the success or failure was caused by something about the actor (internal) or something about the situation (external). We also decide whether the internal or external cause was stable or unstable in nature. That is, the outcome may be attributed to a stable internal cause (ability of the actor), an unstable internal cause (effort of the actor, which can vary from time to time), a stable external cause (task difficulty) or an unstable external cause (luck). Finally, we must decide whether the occurrence was controllable by the actor, for instance by making efforts to improve his or her ability (Figure 2.7).

Earlier research found that males and females tended to attribute male success to internal factors and female success (particularly in a ‘male task’) to luck (Deaux, 1984). As this study was reported almost three decades ago, we could question whether the same results would be obtained today. In a later study to explore whether society had really changed in this regard (Beyer, 1998), students were asked to imagine that they had received either an ‘A’ or an ‘F’ in a course that was required for them to graduate. Then they were asked to rank the various possible causes for their grade. Among those who were to imagine the excellent mark, males tended to attribute their success to their own ability while females emphasized effort, such as studying and paying attention in class. On the other hand, males dealing with failure blamed it on a lack of effort, while females attributed their own failure to a lack of ability.

Weiner’s model has also been tested with attributional data from the sports pages (Lau & Russell, 1980). Content analyses were performed on reports of games in which causal explanations for winning and losing were recorded. In general, unexpected outcomes (‘upsets’) generated a greater number of attributions – there seemed to be more to explain. Winning was generally attributed to internal factors (‘We all had a great day; everyone gave 150%’), and losing to unstable/external factors (‘It just wasn’t our day’; ‘The referee made some bad calls’). Other research indicates that winners tend to make attributions to more stable and controllable causes (effort) than do losers (Grove, Hanrahan & McInman, 1991). When we make attributions about a failure, we may be more prone to attribute it to unstable and external causes (Weiner, Figueroa-Munoz & Kakihara, 1991). In either case, the person has avoided self-blame.

**KEY POINT:** The covariation model predicts whether we will attribute the cause of a person’s behaviour to him or her personally (the actor), to the person to whom the act was directed (the entity) or to the situation. This attribution depends on information about whether the actor behaves in the same way to other people, whether others behave consistently in that manner to the entity and whether others behave in this way only in that specific situation but not in others. The theory of achievement attributions concerns how we make judgements about success and failure. It considers whether we make attributions to the actor or to the situation, whether we see that cause as stable (ability, task difficulty) or unstable (effort, luck) and whether we consider the outcome to have been controllable by the actor.

## ATTRIBUTIONAL BIASES

Recall the metaphor of the ‘naive scientist’ who searches systematically for relevant information and uses it logically to explain behaviour. These attribution theories suggest that if people have the information, they will use it in a rational manner. However, research has also identified several attributional biases.

### Correspondence bias: Overestimating dispositional causes

We tend to believe that people do what they intend to do. This **correspondence bias**, assuming that people’s actions correspond to dispositional or personal factors, has been called the **fundamental attribution error** (Ross, 1977) because it is so pervasive in Western societies. In one experiment, people attributed what someone wrote or said to their ‘true beliefs’ even when they were told that the person had been instructed to argue a certain position (Jones & Harris, 1976). In another experiment (Ross, Amabile & Steinmetz, 1977), a simulated quiz game was set up, in which some participants served as the quizmaster, others as contestants and other as simple observers. The questioners were invited to make up questions which would demonstrate their own wealth of knowledge. Examples: Where are the clearest waters for scuba diving? What is the fifth book of the Old Testament? Who won the football World Cup in 1962? Clearly the questioner has the advantage over the contestant because of the situation: they choose the questions. However, both the contestants and the observers rated the questioners as more knowledgeable in general than the contestants, because they underestimated the power of the situation.

The correspondent bias may reflect ‘dispositionalism’ (Krull, 2001), an underlying belief that people act as they do because of their own personal characteristics and intentions, and therefore the situation is just not all that important. For instance, one might easily explain the unrestrained actions of people at a rock concert as being due to the music and the crowded atmosphere. And yet, a dispositional bias may lead us to attribute their behaviour to what they are like as people who often attend such concerts (Sabini, Siepman & Stein, 2001). The effects of the correspondence bias are strongest where both consensus and distinctiveness are low (Van Overwalle, 1997).

Does the correspondence bias vary with age or income or education? With a nationally representative sample of adults in the United States, a consistent correspondence bias was found across a variety of demographic characteristics such as age, education level attained and income. However, it was far from universal; overall, only 53% of participants showed evidence of the bias (Bauman & Skitka, 2010).

## BOX 2.1 TAKE ANOTHER LOOK

### ATTRIBUTIONS ABOUT EVIL AND THE CORRESPONDENCE BIAS

In recent years, social psychologists have studied the vexing problem of evil (Baumeister, 1997; Waller, 2002; Newman & Erber, 2002; *Personality and Social Psychology Review* 1999, 3(3)). Evil is generally considered as the deliberate harming of human beings by other human beings, involving violence that is indiscriminate and often extremely cruel. While the Holocaust is generally recognized as the prototype, the modern history of evil includes atrocities in the Balkan states, Rwanda, Cambodia, Syria and Sudan, terrorism against innocent civilians in many parts of the world and the widespread use of torture as documented annually by Amnesty International. The term also may be invoked to describe horrendous crimes directed at specific individuals, such as those committed against children. In general, we consider actions as evil, rather than simply morally wrong, when they are excessive and incomprehensible even in terms of the goal of the action (Darley, 1999). While people act



**Figure 2.8** To what extent would you attribute this terrorist act in Bali in 2005 to the person or to the situation? Does the correspondence bias apply here?

Source: © xPACIFICA/Corbis

psychological tests, along with in-depth clinical interviews, were administered to Nazi war criminals, both those in leadership roles who were tried and convicted in the war crimes trials in Nuremberg, and those in rank and file roles as killers. These tests have recently been reanalysed in terms of more contemporary methods, and compared to test protocols from the general population (Zillmer, Harrower, Ritzler & Archer, 1995). The analyses indicated that these Nazi mass murderers, on the whole, did not show any consistent pattern of psychopathology (see also Browning, 1992). Indeed, Nazi physicians who had earned international reputations for their legitimate medical research prior to the Nazi era subsequently conducted unspeakable 'experiments' on prisoners in the concentration camps (Lifton, 1986).

Social philosopher Hannah Arendt (1963) was assigned by a US magazine to cover the trial in Jerusalem of Adolf Eichmann, a German bureaucrat who had directed the logistical planning of the Holocaust, which involved organizing the transport of millions of people to the death camps, their murders and the disposal of their corpses. Based on both her own observations and psychological investigations, she described Eichmann as representing the 'banality of evil'; an ordinary, ambitious civil servant who seized an opportunity to advance his career. It is a disturbing insight indeed, that ordinary people are capable of extraordinary evil. Needless to say, ordinary people are also capable of extraordinary kindness, altruism and heroism in certain circumstances, as we shall see in Chapter 9.

If we cannot attribute evil actions solely to the personal characteristics of people who commit them, then we must look to the situation. Baumeister (1997) suggests that in addition to possible sadistic personality characteristics, there are some conditions that may promote evil. These include an idealism in which the end justifies any means in promoting one's own group or nation, and threatened egotism in which members of the out-group are seen as a threat or challenge. In line with Arendt's report, Baumeister argues strongly that sadism is the least important of these three roots of evil.

In succeeding chapters we will explore theories and research concerning aggression and violence, as well as apparently blind obedience to an authority who directs a participant to torture another person with electric shock. (These famous experiments of Stanley Milgram are discussed fully in Chapter 6). The lesson, however, is clear. We must strive to avoid the correspondence bias and recognize that evil can be caused or at least promoted by the social situation. This is not a justification or excuse. We may explain evil actions, in part, by the situation, but we do not excuse the perpetrators.

in despicable ways for understandable goals – patriotism, fear, power, wealth – some actions cannot be explained simply as means to such ends.

How do people try to explain such actions? Reflecting the correspondence bias, we tend to ignore the situation and attribute evil actions to the perpetrators. One simple form of this dispositional explanation is simply that evil is committed by evil people, a process that Darley (1999) refers to as demonization. This, of course, constitutes circular reasoning: Evil acts are caused by evil people, who are evil because of the acts that they commit. It is a pseudo-explanation, which may seem genuine since it contains the word 'because'. It explains nothing.

Perhaps a more useful dispositional explanation posits that there is something unique in the personality of people who commit evil acts, perhaps a form of psychiatric disorder. Again, notice the circular reasoning: when we reason, post hoc, that they 'must be sick' to do what they did, we explain nothing. Indeed,

While we are more likely to attribute the actions of others to stable trait dispositions, we tend to attribute our own behaviour to situational factors. This is known as the **actor/observer bias**. (Note that, as was the case earlier in this chapter, ‘actor’ refers to the person performing the action, not someone playing a role.) A good illustration is found in letters to newspaper and Internet advice columns. Writers of these letters tend to attribute their own difficulties to the situation (e.g., ‘We’re having marital problems because she refuses to have sex with me’). However, the person giving the advice (the observer) often tends to attribute the same marital problems to characteristics of the letter-writer (‘You should bathe more often’) (Schoeneman & Rubanowitz, 1985; Fischer, Schoeneman & Rubanowitz, 1987).

Several studies illustrate the actor/observer bias. In a simple experiment (Hansen, Kimble & Biers 2001), participants were randomly assigned to behave in either a friendly or unfriendly way towards a confederate, who had also been instructed to act friendly or unfriendly. Participants attributed the unfriendly behaviour of the other person to dispositional reasons (‘unfriendliness’), while they attributed their own unfriendly behaviour to the instructions of the experimenter. In other research, when asked to explain why students chose their university majors and their romantic partners, participants tended to attribute their own decisions to external reasons (e.g., ‘it is interesting’), but their friend’s decisions to dispositions (e.g., ‘he’s insecure’) (Nisbett, Caputo, Legant & Maracek, 1973). In a study conducted in a Canadian prison, inmates tended to attribute their criminal actions to situational factors, while their social workers blamed the criminal, even though their professional training stressed the social causes (Saulnier & Perlman, 1981).

Why do the attributions of actors and observers differ? One reason is that they have different perspectives on the same event. The actor’s behaviour captures the attention of observers (Heider, 1958). In contrast, as actors, we generally cannot directly observe ourselves, and so are more aware of the situation. Indeed, if people are shown a videotaped replay of themselves, they are more likely to attribute their actions to their own characteristics (Storms, 1973). Also, as actors and observers, we have access to different information. We remember how different situations influenced our actions. Lacking this information about others, observers resort to a correspondent inference: friendly people do friendly things.

Of course, there are times when we know that our behaviour was caused by our own intentions, and the behaviour of someone else was caused by the situation. When external causes for a behaviour are clearly evident, both actor and observer make external attributions (Monson & Hesley, 1982). For example, most of us vividly recall television images of terrified people in the streets of New York, London, Mumbai and Madrid after terrorist attacks, and we attributed their understandable fear to the situation. Moreover, we are more likely to be able to take on the perspective of a person we know well, because we can empathize with them (Regan & Totten, 1975). This empathy grows over time: While in the earlier stage of a relationship, two people will focus on themselves in defining themselves to their partners, later, the focus shifts outward to the other person (Fiedler, Semin, Finkenauer & Berkel, 1995).

Does the correspondence bias reflect the individualism that characterizes Western cultures? In more collectivistic or communitarian societies in which the group is more highly valued, such as China, Korea, Japan and India, situational attributions are more frequent (Morris & Pang, 1994; Choi & Nisbett, 1998; Krull, Loy, Lin, Wang, Chen & Zhao, 1999), based on a belief that personal dispositions are more malleable or changeable in response to the situation (Choi, Nisbett & Norenzayan, 1999). When research participants from India and the United States were asked to describe the causes of various positive and negative events, situational causes were more frequently cited by Indian participants (Miller, 1984). One item described an accident in which a motorcycle driver is injured by an automobile driver; the car driver took the injured person to the hospital and then left him there in order to attend to his work. While Americans simply condemned the driver as irresponsible, the Indians considered the stress of professional work demands on the driver, the possibility that he was confused by the situation, and the possibility that the person did not seem to be seriously injured.

Westerners often ignore what is going on around the actor and focus only on his or her actions, whereas Asians are more likely to pay attention to what is happening in the background as well. For instance, in a study carried out at an aquarium, when Westerners observe fish in a tank, they tend to focus on the fish while Asians focus on both the fish in the foreground *and* the background setting (Norenzayan & Nisbett, 2000).

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Yet, in our increasingly global world, people are capable of adopting more than one approach, depending on the cues (Oyserman & Lee, 2008). For example, in another study, students born in China and studying in the USA focused on the person after having been first exposed to US symbols (e.g. flag of the USA) and on the situation or background after having been first exposed to Chinese symbols (e.g. the flag of China).

Further information comes from studies of how news is reported. Morris & Peng (1994) carried out content analyses of newspaper articles that had appeared in Chinese- and English-language newspapers; for example, reports about multiple murders committed by a postal worker in Michigan and about murders by a Chinese graduate student living in the United States. Journalists writing in English about these crimes focused on the perpetrator (e.g. disturbed men) while those writing in Chinese emphasized situational factors (e.g. the postal worker not getting along with the supervisor). And in a study of real-life reporting in Japanese and American newspapers, an incident of illegal trading practices was attributed by the American newspapers simply to the trader, but by the Japanese newspapers to a lack of organizational controls (Menon, Morris, Chiu & Hong, 1999).

One caution about the covariation bias: consider the case of someone such as a banker who dresses very conservatively. Would attributing the choice of clothing to the banker be in error? Clearly the job requires such attire and may attract people who enjoy wearing such attire (Gilbert & Malone, 1995). While we are influenced by the situation, we also choose our situations.

## Self-serving bias

People tend to attribute their own success to internal factors and their failure to external factors in order to protect their self-esteem. For example, students receiving good grades in an examination attributed those grades to ability or effort, but those with mediocre grades tended to attribute those results to task difficulty or just bad luck (Bernstein, Stephan & Davis, 1979). Taking credit for success but denying responsibility for failure is most likely to occur when the person has chosen to engage in the activity and is highly involved in the activity, and when the performance and its results are public rather than private (Bradley, 1978). This bias is not limited to Western countries; people in Japan and Latin America are also likely to attribute success to their own ability (Chandler, Shama, Wolf & Planchard, 1981).

There are limits to the **self-serving bias**. While people going through divorce generally have little trouble in finding fault with their former partners, they may attribute the failure of their marriages to themselves, particularly when they are still emotionally attached to their ex-partner (Lussier & Alain, 1986). In a field experiment by Taylor and Riess (1989), the experience of success or failure was manipulated experimentally in a realistic setting of competitive skiing. The participants were competitive skiers in a giant slalom race. Each competitor had two slalom runs, which were timed electronically, and the times were announced after each run. For half the racers, assigned to the 'success group', 0.7 seconds were subtracted from their real times before the announcement, while in the 'failure group', 0.7 seconds were added to their times (in competitive skiing, these are significant differences in time). Subsequent questioning showed that those in each group perceived their performance as a success or failure as expected. Then participants filled out questionnaires that assessed their attributions for their performances. The self-serving bias did not prevail in this case. Participants tended to attribute both success and failure to effort and ability.

When people are depressed, they tend to be relatively accurate in judging the extent to which they are personally responsible for their success or failure (Sweeney, Anderson & Bailey, 1986; Alloy & Abramson, 1979). This may be a mixed blessing, in that some degree of a self-serving bias, even if an illusion, may actually contribute to people's comfort by protecting their self-esteem (Taylor & Brown, 1988).

Are self-serving attributions used to protect our self-image or to polish the image we present to others? Riess, Rosenfeld, Melburg & Tedeschi (1981) tested these competing hypotheses in a rather ingenious way. Participants were told that they had succeeded or failed in a test of word associations. They were asked to attribute their success or failure to ability, effort, task difficulty or luck. To measure attributions, half the participants completed the usual questionnaire. The other half were hooked up to electrodes and told that this was a new, improved, extremely powerful lie detector that would indicate how they really felt; (no such machine exists). Then they were asked to respond to attributional questions in the way that they expected would be shown by

the machine. The results were mixed: participants who believed that they were hooked up to a machine that would reveal their true feelings still showed a self-serving bias, but not as strong a bias as those who completed questionnaires. It appears that both protecting our self-esteem and protecting the image we create for others are important in this attributional bias.

**KEY POINT:** Several attributional biases have been identified, including the correspondence bias, the actor versus observer bias and the self-serving bias. Other cues in the situation can override the bias, and cultural differences have been found.

## Attribution of responsibility and defensiveness

Other attributions are influenced by a need to feel secure. This is shown in a classic experiment by Walster (1966), in which participants were given a report about an accident. The driver, Lennie, left his car parked at the top of the hill. The parking brake cable came loose, and the car rolled down the hill. In one version, extensive damage was caused and someone was injured, while in the other, the damage was minimal. Participants were asked to indicate the extent to which they attributed responsibility to Lennie for the accident. Lennie was held more responsible when there was severe damage and injury than when the damage was minimal, even though there is no logic in making this distinction. This effect also has been found in other studies (Burger, 1981).

Why would severity of consequences affect the attribution of responsibility for the same action? Walster (1966) has suggested that people act in a defensive manner, avoiding thinking about the possibility of a threatening event. They often attribute responsibility for a serious crime or accident to the victim, because to interpret it as an outcome of bad luck would be to admit the possibility that it could happen to them. Of course, this defensiveness would be more likely to occur when the situation is similar to one that they might find themselves in, or when the victim is similar to themselves – they could imagine themselves ‘in that person’s shoes’. Students attributed greater responsibility to the driver for a severe-consequences accident when the protagonist was described as a student than a middle-aged business executive (Burger, 1981).

Now consider how we perceive people afflicted with HIV/AIDS or lung cancer. Of course, engaging in unprotected sexual activity or smoking can put anyone’s health at risk, so to some extent we consider those who engage in such activities as ‘responsible’ for their illness (Mantler, Schellenberg & Page, 2003). However, we do not seem to ‘blame’ them, indicating that we distinguish between responsibility and blame.

Turning to historical events, research shows that we are more likely to attribute responsibility for a negative event to another group or nation than to our own group or nation (Doosje & Branscombe, 2003). Similarly, in reporting hate crimes such as a gang murder of a gay person, attributions in the media are represented in ways consistent with political orientations. That is, more conservative media, who are less sympathetic to gay and lesbian people, often find more situational attributions for such crimes (Quist & Wiegand, 2002).

**KEY POINT:** We are more likely to make a defensive attribution and blame the victim when the situation is one in which we could find ourselves and when the victim is similar to ourselves. We tend to attribute responsibility to others for their behaviour, particularly when consequences are severe and negative.

## The illusion of control

We tend to pay attention to the effects of our actions, and to make the connection between our actions and events that follow them (Thompson, Armstrong & Thomas, 1998). Much of what happens in life is beyond our control. Perhaps in response, people cling to an **illusion of control**, an exaggerated belief in their own capacity to determine what happens to them in life (Langer, 1975). For instance, people often prefer to select



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their own lottery ticket, under the illusion that they can increase their chances of winning. In an experimental demonstration of this effect (Wortman, 1975), participants were presented with two coloured marbles in a can, each representing a different prize. Some were told which marble represented the desirable prize, while others were not. Then participants either chose a marble from the can, blindly, or were given one. In all cases, the participants had absolutely no control over the outcome. However, they attributed more outcome control to themselves when they blindly selected their marble. Lerner (1977) has identified an important implication of the illusion of control: an exaggerated **belief in a just world**, a belief that we get what we deserve in life. This is discussed fully in Chapter 15.

Indeed, when people experience a traumatic event that shatters their view of the world as just and predictable, they may respond to being victimized with self-blame. In examining the research on people who have been victimized, Miller and Porter (1983) present the following, rather unexpected, findings: (1) victims often exaggerate their own responsibility for the event and its consequences; and (2) the degree of self-blame is often positively related to how successfully the person will cope. Self-blame may enable the person to maintain the illusion of control in life, which can be channelled into constructive coping strategies.

Victor Frankl (1963), a psychoanalyst and survivor of the Nazi death camps, maintained that a search for meaning in life is an essential component of human experience. People who have emerged paralysed from an accident often struggle with the question, 'Why me?' Their success in finding a satisfactory answer, even if that answer is in their own ostensible failure, enables them to cope more effectively with their circumstances (Bulman & Wortman, 1977). Finding meaning may, to some extent, include attributing some responsibility to oneself, providing us with a sense of control that such misfortune will not happen again. In some forms of victimization, the search for meaning is more difficult. Silver, Boon and Stones (1983) interviewed 77 adult women who had been victimized in childhood by familial incest. Although an average of 20 years had elapsed since the last episode, more than 80% were still searching for meaning. Indeed, those who attributed some of the responsibility for their victimization to themselves adjusted more effectively in the future.

**KEY POINT:** We tend to hold an exaggerated belief in our own capacity to determine what happens to us in life. This is related to a belief that the world is just, that people get what they deserve and deserve what they get.

## Society and attributional biases

As noted earlier, the correspondence bias is more strongly evident in Western cultures than in Asian cultures. The research reviewed in this chapter points to factors within the person as the causes of attributional choices, such as a need to protect self-esteem or a sense of control, or the attempt by cognitive misers to 'minimize effort'. This strictly 'psychological' orientation to attributions has been challenged by social psychologists, who argue that we have ignored the role of social factors in determining how we make sense of our world (Crittenden, 1983; Hewstone & Jaspars, 1984). For example, in the realm of politics, people are sometimes blamed for social problems which affect them, such as poverty, unemployment or underemployment, delinquency and drug abuse, while the role of the social system is ignored (Guimond & Dubé, 1989; Shapiro & Stelcner, 1987). This may also reflect a self-serving bias, where those afflicted by poverty are reluctant to blame themselves, and those who are doing well are willing to give themselves credit (Guimond, Bégin & Palmer, 1989).

## AN EVALUATION OF ATTRIBUTION THEORIES

In the decades following the publication of Heider's (1958) seminal book, attributions became a major focus of attention in social psychology. Three critiques emerged concerning attribution theory: (1) that attribution theory is peculiar to a particular culture and does not describe human nature per se; (2) that much of what





people do is pretty mindless – they usually do not ask why of themselves or others; and (3) that since people are not usually aware of why they behave in a given way, they are forced to come up with some answer when the researcher asks them. Each of these criticisms has some validity.

The cultural critique begins with the fact that both the theorists and the research participants have come almost entirely from the United States. Sampson (1977) characterizes this culture as being based upon the ideal of the self-contained individual, and so the correspondence error would reflect this ideal. Indeed, attribution studies in other cultures reveal differences. As noted earlier, comparative research shows clearly that Americans are highly subject to the fundamental attribution error, while people from Asian cultures give considerably more weight to situational factors in explaining why people do what they do (Nisbett, 2003).

As for the second critique, can it be assumed that people generally are aware of causes? Nisbett and Wilson (1977) reported a series of classic studies that indicate people are often unaware and unconcerned that something is ‘causing’ them to act in a certain way (System 1 thinking). Some of the experiments are rather ingenious. In one, shoppers were asked to evaluate the quality of four totally identical nightgowns or nylon hose. Participants showed a strong bias towards preferring the article placed on the right-hand side – although in later questioning the majority were unaware of this tendency and denied that they were influenced by it. In another experiment, participants were asked to memorize a list of word pairs. Some pairs were designed to influence later responses by association. For example, those who had memorized the pair ‘ocean–moon’ were twice as likely as controls to name Tide (a popular brand) when asked for a laundry detergent. However, rarely did participants make this connection when asked to explain their choice. Rather, they responded with apparently ‘top of the head’ remarks, attributing their response to the brand their mothers used. Nisbett & Wilson (1977) conclude that people generally do not make attributions in their daily activities unless asked to do so, such as when in an experiment.

Even when people think spontaneously about causal explanations (Weiner, 1985), it appears that much of what people do happens in a state of ‘mindlessness’. Imagine participants being approached by an experimental confederate, as they were about to use a photocopy machine. Some were asked to let the person use the machine before them, but were given no reason. Others were presented with a similar request along with a meaningful reason: ‘I’m in a rush’. And others were given the same request with a meaningless ‘placebo’ reason: ‘May I use the machine first because I have to make some copies?’ When the delay would be minimal to the participants, they complied when presented with what sounded like a reason, even when it was no reason at all. They simply responded automatically (System 1 thinking) according to a script: when someone asks a small favour and offers a reason or excuse for it, you will usually comply (Langer, Blank & Chanowitz, 1978).

Thus, the question now seems to be: when does attributional thinking occur? The evidence suggests three types of situations in which we tend to ask why someone acted as they did, or, indeed why we ourselves did something: (1) when something unexpected happens, such as when the underdog unexpectedly wins the game, the mark we obtained on an examination is much better or worse than expected, or when a person in obvious distress is not helped by bystanders (Bohner, Bless, Schwarz & Strack, 1988); (2) when an event is personally relevant, when the good mark or the unexpected defeat happens to us rather than to someone else (recall the theory of correspondent inferences); and (3) when someone feels a desire to find some meaning in an important event, such as a sudden loss of someone close to you, being the victim of major crime, illness or injury, perhaps falling in love. As an example of this, attributional thinking in marriage has been found to occur most often in the early ‘honeymoon’ stage and during times of conflict (Holtzworth-Munroe & Jacobson, 1985).

**KEY POINT:** Attribution theory is built on the premise that we ask ‘why’ in certain circumstances: when we are asked to do so, when the situation is unusual or when it has a high impact on us.

## SOCIAL COGNITION

In assessing what is known about impression formation and attributional processes, two facts stand out. First, as noted earlier in the dual-process model, people form impressions and make judgements about others quite



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rapidly, often on the basis of limited information. Second, people are active in processing information. Social psychologists have become increasingly interested in these automatic processes, and have linked their work to research in basic cognitive psychology. There are two fundamental concepts. First, our information about our world is organized or ‘coded’ in terms of meaningful categories (schemata). Second, in making decisions and judgements, we often use cognitive shortcuts or heuristics.

## CATEGORICAL THINKING: SCHEMATA

Of course, we know that every person and event are unique. Yet, if we were to approach every person, place or event as totally unique, we would soon be overwhelmed by uncertainties. In fact, there are similarities among certain types of people or events. Thus, we tend to organize our view of the world in terms of categories. People are generally categorized in terms of easily observable characteristics, such as gender, ethnic group, occupation or age. We can also categorize people in terms of inferred characteristics, such as people who are friendly, honest, sarcastic or pessimistic. Similarly, we construct categories of events (parties, classes), activities (camping, reading), objects and even ideas. Then we build a collection of beliefs, assumptions, images and memories around these categories – schemata.

### Social schemata

A cognitive schema (plural schemata, derived from the Greek word for plan or structure) enables us to organize and simplify information, memories and impressions. These are sets of interconnected beliefs, information, images, memories and examples about social objects: all that we ‘know’ about something. For example, our schema of automobiles might include our knowledge of how they work and how to drive them, our impressions of various brands and models of cars, perhaps memories of cars that we have owned or rented, trips we have taken, accidents, repair bills or pleasant events involving cars. Of course, it may also include our images of types and examples of automobiles, such as the one we drive or the one we would wish to have. Schemata help us to organize and simplify information that we have received, help us to interpret new information more rapidly, and determine what we will encode and remember.

There are various types of schemata. A **person schema** refers to specific people such as a famous star, a public figure, your parent, a professor. For example, suppose we have a schema of the current political leader as being honest, somewhat obese, hardworking, decisive (or indecisive?), concerned with people in distress, wanting to resolve conflicts. If he or she were to appear on TV with an eloquent request that all of us work hard and sacrifice for the good of the nation, we would interpret this speech in terms of our schema. However, if our schema were of a conniving, self-serving politician with a winning smile, we would interpret the same speech quite differently.

Another interesting type of schema relates to events. For example, we may have an **event schema** referring to a group of friends going to the game or match. Event schemata include mental images of the stadium or arena where the event occurs, which teams participate and what happens – the ‘script’. It begins with purchasing the ticket, presenting it to a ticket-taker and finding our seats. We may buy a programme and begin to identify players as they warm up. We recognize the uniforms of the two teams, and the physical set-up of the field. We stand for the national anthem, then sit and shout encouragement during the opening, purchasing snacks and liquid refreshments. We have standard reactions to a score by our team, and we know how to express disapproval of the referee or opposition players. Think of other event schemata: a university examination, a date for the movies, supper in a restaurant, a trip to the beach, a day at work, air travel, being online. Of course, an important reason for building these schemata is that they enable us to experience the events as predictable, understandable and comfortable. Thus, for instance, we can go to a restaurant anywhere in the world and, with some variations, apply our schema for eating out.

Finally, we have schemata about social roles – organized mental structures about people who belong to social categories. We may have **role schemata** about physicians, rock singers, professors, students, smokers, non-smokers, friends, lovers, butchers, mothers. Role schemata are generally restricted to role-relevant situations, although not for every role. Priests and rabbis, for example, may often find themselves still being treated



as priests and rabbis in a social situation. A role schema may be idealized, even unrealistic: few people can live up to a culturally shared schema of ‘lover’ as being always devoted, understanding, affectionate, passionate, and never selfish, unreasonable or tired.

Several characteristics are common to these types of schemata. First, schemata tend to be organized hierarchically, from the general to the more specific. For example, we may have a general schema for the concept ‘party’, and more specific schemata for each of an informal, loud-music party in someone’s basement, a child’s birthday party, a religious occasion, a wine-and-cheese party and an art gallery opening. Second, people or groups of people may differ in specific schemata. For example, university students think of ‘intelligent people’ primarily in relation to academic and intellectual matters, while people interviewed in supermarkets tend to see intelligence in terms of practical problem-solving and not ‘acting foolishly’ in social situations (Sternberg, Conway, Ketron & Bernstein, 1981).

Much research has been devoted to the study of the **self-schema**: the set of images, memories, beliefs and evaluations that people have concerning themselves. We will explore this topic further in the next chapter.

## Prototypes

Cantor and Mischel (1979) suggest that we often use **prototypes**, mental images of a typical example of that category, as one component of a schema. For example, you may picture your own cocker spaniel as a prototype of the category dog, with four legs, fur, a tail, characteristic sounds of barking, whining and growling, licking your hand. If you were to see an unfamiliar dog of another breed, you would decide whether it was a dog by comparing the characteristics of that rottweiler or schnauzer to your prototype.

The extent to which a particular person (or animal) resembles the prototype, and the extent to which you allow for variations, will determine how readily you identify the person with the category. For example, Brewer, Dull & Lui (1981) presented participants with photos and verbal labels of people in certain categories, such as grandmother. Then they provided more information about the person. This information was included more frequently in the subject’s impression of the person when it was consistent with the prototype (e.g., ‘kindly’ for a grandmother) than when it was not consistent (e.g., ‘aggressive’ for a grandmother).

A **stereotype** refers to a particular kind of shared prototype for members of a social group shared within a culture and applied to pre-judge an individual member of that category (Taylor, 1981). Since stereotypes are intrinsic to prejudice, we will discuss them fully in that context (see Chapter 13).

## Social representations

Where do these schemata come from? While it is reasonable to suggest that schemata are learned, they do not depend entirely on direct experience. For example, people may have schemata about people that they have never met, or about life in countries that they have not visited. Similarly we may have a schema about being ill with cancer although we have not been afflicted personally; we may have observed someone else in that situation or we may have learned from on-line sources. Certainly much of the learning that shapes our schemata is vicarious in nature, coming from movies, television, books and the experience or imagination of others.

Many of our schemata are both acquired from other people and communicated among people, a process that requires shared meanings and symbols held by members of a culture, community or group. In other words, while cognition is necessarily located in the mind of an individual, the essence of social cognition is that it is shared collectively in a culture. These considerations support the notion of socially constructed schemata, or **social representations** (Moscovici, 1981). Thus, for example, a Canadian’s event schema of an ice hockey game has evolved in Canadian culture. Russians, Swedes or people in the United States might hold a quite different event schema of a hockey game; the players are different, the styles of play may differ, the décor of the arena may differ. A schema about a prominent politician shared by many people in the country may change over time as individuals communicate with each other directly and through the mass media.

Moscovici (1981) identifies two processes by which social representations emerge and evolve: anchoring and objectification. **Anchoring** refers to integrating an unfamiliar event, person or idea into some existing structure of knowledge, so that we can compare a new object, person or experience in terms of what is familiar to us. Often we classify or categorize the new image or event, imagine it and think of it in terms of our own

cultural worldview. **Objectification** refers to a process by which an abstract idea becomes concrete, perceived as part of common-sense experience. For instance, the abstraction of ‘elections’ becomes objectified in our minds through politicians, speeches to cheering throngs, lawn signs, TV advertisements and the reporting of results. Of course, elections in one culture or country may be distinct from those in another. Still, Canadians, Australians, Israelis, Dutch and Swedes share enough about the experience of elections to be able to understand each other. Personification is a common example of objectification (Moscovici & Hewstone, 1983). For example, while most people have only some vague ideas about psychoanalysis, they probably know the name Freud and the image of the analyst’s couch. Similarly, while few understand the theory of relativity, most remember the name Einstein, perhaps news reports of the discovery of the boson, a subatomic particle, and connect it to the mysteries of the atom. Often the policies of a government or a country become personified in terms of the prime minister, premier or president. Much of the research in this area is descriptive; for example, some studies explore the social representation of mental illness in different historical periods and among people of different age groups (De Rosa, 1986).

**KEY POINT:** Social schemata are organized cognitive structures of characteristics, memories, typical examples (prototypes) about certain kinds of people, events and social roles. They are derived from our social representations learned from our culture, which enable us to anchor a specific instance to what we already know and to objectify an abstract idea into concrete examples, memories and events.

## PROCESSING SOCIAL INFORMATION

Why do we have schemata? While we can rarely know everything about everything, schemata help to fill in the gaps by providing us with a ‘best guess’ about what is true. They can help us to be prepared for the future by providing us with expectations (Fiske & Taylor, 1991). In particular, our schemata guide us, telling us what to pay attention to, and influencing what and how we remember.

### Attention

Selective attention is one important effect of schematic thinking. In an environment in which we would be overloaded with sensory information, the schema guides us as to what to notice and process. For instance, at a tennis match, we will attend to the match itself and less so to what the spectators are wearing (unless the game is boring). In a negative schema about members of an out-group, people may attend to instances of negative characteristics and ignore the positives.

### Memory

Many people assume that memory is akin to a bank or a hard disk; material is deposited and can be withdrawn later, as needed (Lamal, 1979). Occasionally one of these deposits is lost, and we say that we’ve ‘forgotten’.

To the contrary, current research suggests that memories are encoded while they are being stored, in forms dictated by people’s assumptions and schemata. For instance, you do not simply store what you read in this textbook, but you interpret what you read in terms of what you have already learned, how it relates to your personal life, what associations you make of the material. Remembering is much more than retrieval of a file on your hard disk: Rather, it is an active or ‘constructive’ process in which these assumptions and schemata influence the memory that is retrieved. Remember this as you study!

Think of someone who you would consider to be a ‘memorable’ person. A memory of a person will include specific things that the person has said or done, and more abstract memories of ‘what the person is like’, such as personality traits, prominent attitudes and dispositions (Srull & Wyer, 1989). Indeed, we often form clear overall impressions of a person, but cannot explain in any detail why we feel that way. This is explained in terms of dual representation (specific details and general impressions). For example, if we see a person do something very thoughtful for someone else, we will store in memory both the specific behaviour and our

evaluation of the person as being thoughtful and kind. Over time, as we get to know the person better and observe many more such actions, we may forget the specific behavioural details. However, these behaviours will have an enduring impact on our overall evaluation.

Schemata may guide our memory of a person, enabling us to remember or ignore specific details about that person. For example, in an experiment (Zuroff, 1989), participants were induced by means of a brief description of a woman to think of her as 'traditional' or 'liberated' (feminist) in her beliefs and goals. Subsequently they were presented with a long list of adjectives that various people had ostensibly used to describe that woman. Although all participants had the same list, they tended to remember information consistent with the 'traditional' or 'liberated' schema they had been given. If they had been induced to think of her as 'traditional', they would be more likely to remember an adjective such as 'kind' than 'independent'. This particular effect of schemata, priming, will be explored later in this chapter.

What are your memories about high school? Do you look to your past through 'rose-coloured glasses'? We may recall our high school years as happier than they were because we now have a 'good old days' schema of that period of our lives (Ross, McFarland, Conway & Zanna, 1983). Of course, couples who separate often remember the conflicts and difficulties that led them to break up, not the good times and attractiveness of their partner that brought them together.

Our memory of past events can also be influenced by our expectation or 'theory' about what should have happened (Ross, 1989). In a study of students enrolled in an extravagantly advertised study-skills programme, participants first completed an initial questionnaire in which they evaluated their own study skills. Then they were assigned randomly to the programme or to a waiting list. After going through the study skills programme, all participants were re-interviewed. A follow-up showed that the programme had no significant effect on their grades. However, participants believed that they had improved despite their dismal marks. When asked to recall how they had rated their skills previously, participants who completed the programme now recalled that, before going through the programme, their skills were worse than it had seemed to them at the time before the programme. They applied the schema of self-improvement to distort their memory of the past in order to feel that they had, indeed, improved (Ross & Conway, 1985).

Thus, our memories of the past can be reconstructed to be consistent with our current thinking. Consider that people tend to assume that memory and activity level will decline as they grow older. Older adults remember themselves as having been more capable in these ways earlier in life than a matched group of younger adults. As a result, we may feel our memory has declined because we recall, perhaps in an exaggerated form, our prowess of earlier years and we assume decline with aging (McFarland, Ross & Giltrow, 1992).

Our memories of the past can also be influenced by our mood at the time of recall. A series of studies by McFarland and Buehler (1998) indicate that when people are induced to reflect on their feelings and what they might do to feel better, they tend to remember happy events. On the other hand, when people are simply instructed to dwell on how they are feeling, they tend to have unpleasant memories of the past. People may also remember having said something to someone if it sounds like something they might have said (Buehler & Ross, 1993).

A final note on memory: dual-process models suggest two distinct processes by which we remember. One system involves learning through experience, the gradual encoding and processing of ideas, experiences and prototypes which lead to the development of cognitive schemas. For instance, we encode a collection of experiences in restaurants which build the event schema of 'going out to eat'. This system builds gradually, with experience in different restaurants. The second system is rapid encoding and storage of a novel experience or object, where the novelty cues memory without much in the way of conscious effort (Smith & DeCoster, 2000). There is also evidence that people vary in their capacity to remember specifically threatening information (Peters, Hock & Krohne, 2012).

Related to this would be memory of implicit social cognitions, thoughts that are not in conscious awareness. Based on cognitive neuroscience research, there appear to be different memory systems involved in learning and unlearning of unconscious material (Amodio & Ratner, 2011). And, we can generally more readily remember material (such as words or paintings) that others in our social group, people similar to us, have also experienced. This shared experience makes the material more prominent in memory, and easier to recall (Shteynberg, 2010). For example, if talking to your friends about a movie they have also seen, you may recall

more detail than if talking with people who have not seen it. This is also true of memory for music, which involves a system independent of verbal memory and which is specific to remembering music of our own culture (Demorest, Morrison, Stambaugh, Beken, Richards & Johnson, 2010).

**KEY POINT:** In sum, schemata enable us to process information efficiently. They guide our attention to, and interpretation, of what we perceive. Social representations of such material enable us to understand and become comfortable with novel ideas (anchoring) and people, and to understand them in a more concrete form (objectification). Memory is constructive, whereby the storage and retrieval of memories are guided and even altered by our schemata and our assumptions about the present.

## CONSTRUAL-LEVEL THEORY AND COUNTERFACTUAL THINKING

When we think about persons, events or other objects, we perceive them spontaneously in terms of their **construal level**, that is, along a continuum from psychologically distant to psychologically close. Obviously the person sitting next to you is psychologically closer to you than if that person were to sit across the room, across the street or across your city. Receiving a personal email is psychologically closer than receiving the same message copied to numerous recipients. The object or event may be perceived as personally relevant or relevant to someone else – someone close to you, a stranger across the room or a hypothetical other person, all of whom are incrementally more distant in psychological terms. Thus, psychological distance, whether spatial, temporal, hypothetical or social, is anchored in the present, here-and-now reality.

According to construal-level theory (Trope & Liberman, 2010), the more remote or distant an object, person or event is from our own present reality, the more we ‘construe’ or think about that object or event in an abstract manner. For instance, if you are at your dentist’s right now, that reality is quite concrete and immediate: the chair, the dentist plunging an implement into your mouth, the sound of the drill, the pain. This contrasts with how we construe a dental appointment scheduled in a few months, or the vague feeling that you really should have your teeth checked out sometime, somewhere. Some research even indicates that thinking about things at a psychological distance may increase creativity (Jia, Hirt & Karpen, 2009). Other research indicates that when you think about a past event while primed to think in concrete terms, you tend to recall more details about the event – although not necessarily with greater accuracy. Experimenters can induce an abstract or concrete mindset by instructing the participants to think about ‘why an event occurred’ (abstract) versus ‘how an event occurred’ (concrete) (Kyung, Menon & Trope, 2010).

### Thinking of what might have been

One way in which we mentally transcend our present reality is by thinking of what might have been, **counterfactual thinking** (Figure 2.9). We can think about how an outcome could have been different (Roese, 1997). For instance, imagine that you have won an Olympic silver medal. This may well stimulate counterfactual thinking about how you might have acted differently and won the gold medal. However, if you were to win a bronze medal, it may well stimulate thinking about having acted in a way that could have caused you to miss winning a medal at all. Researchers used video clips in which participants rated the emotional state of competitors at the moment the medal placements were announced. Indeed, surprisingly, bronze medalists were observed to be happier than silver medalists (Medvec, Madey & Gilovich, 2002): ‘I could have missed winning a medal.’ Counterfactual thinking can lead to many outcomes. If you fail to purchase something on sale at 50% off, you are less likely to take the opportunity to purchase that same item at 25% off, because your counterfactual thinking centres on the much better bargain that you have missed (Tykocinski & Pittman, 1998).

When we reflect on what might have been, we may imagine an outcome that would have been better (upward counterfactual thinking) or worse than what really happened (**downward counterfactual thinking**) (Roese

& Olson, 1997). For instance, if you receive a 'B' in a course, you may imagine that it might have been an 'A+' or a 'C-'. Each kind of counterfactual thinking can serve a different purpose for us. Downward counterfactual thinking, imagining how it could have been worse, can give us some relief and acceptance of reality. If we have an accident that causes extensive damage, imagining that someone could have been injured can put things into perspective. On the other hand, upward counterfactuals can galvanize us into action to improve the results in the future. Imagining the 'A+' that might have been may lead us to making some improvements. However, counterfactual thinking can lead to feelings of regret, even if we were to imagine a worse outcome (Walchli & Landman, 2003). In one study of women with silicone breast implants, counterfactual thinking about how the operation might have yielded better results was related to a poor post-operative adjustment (Parker, Middleton & Kulik, 2002).

While upward counterfactual thinking can motivate positive change, we sometimes have illusions about self-improvement. Why do people persist in attempting to change themselves in some way despite repeated failure and frustration? For instance, we may persist in trying to lose weight despite repeatedly unsuccessful attempts with various diets. This pattern of unrealistic expectations about eventual success after repeated failure is called the **false hope syndrome** (Polivy & Herman, 2000, 2002). Failure leads us to conclude that just a few minor modifications in our strategy will enable us to control our drinking or smoking, lose that weight and keep it off, achieve that 'A' average or win a tournament. The pattern repeats itself.

Clearly some kinds of self-change are realistic or at least possible, as well as desirable. However, we must learn from experience and distinguish between realistic and unrealistic self-change goals. For instance, we tend to underestimate how long it will take us to complete a task (Buehler, Griffin & Ross, 1995). While hope and optimism are necessary for change, false hope will be a barrier to the kinds of change that can succeed over time.

**KEY POINT:** We can think beyond present realities to other possibilities. We think in terms of psychological distance, the more immediate in more concrete terms, and the more distant, more abstractly. We can also think in terms of what might have been. Upward counterfactual thinking evokes how things might be better and can motivate self-improvement. Downward counterfactual thinking provides us with relief by imagining how things could have been worse.

## RAPID REASONING

Let us return now to notions of rapid thinking. We must often make judgements where it would be unrealistic to try to think things through. As we have seen, we are 'cognitive misers' and tend to avoid expending more time and effort. We will never collect all relevant information about courses, cars or jobs before making our decisions. We have seen how we invoke certain biases in making attributions, and how we invoke a schema to perceive and interpret what we see and hear. Now we turn to how we take other cognitive shortcuts.

We often follow certain unstated 'rules' or **heuristics** – assumptions and biases that guide our decisions about uncertain events. One such 'rule of thumb' involves medical diagnoses: physicians are taught to consider the common illness before the rare and exotic disease; when you hear hoof beats, look for horses before you look for zebras. In everyday experience, we learn similar rules, without being taught what they are.



**Figure 2.9** Counterfactual thinking: What if your horse had won the race?

Source: Dennis Donohue/Shutterstock.com



## Understanding your Social World

Research over the past decades has identified a number of these heuristics (Tversky & Kahneman, 1974). Here are a few of them.

### The representativeness heuristic

Imagine that you are visiting a casino, and you record the outcome of 12 spins of the roulette wheel. Which of the following sequences are you more likely to observe (R = red; B = black)?

|   |                 |
|---|-----------------|
| 1 | RBR BRB RBR BRB |
| 2 | RRR RRR BBB BBB |

Mathematically, both sequences are equally likely to occur. However, most people would choose the first sequence, in which the two colours alternate, because it seems ‘representative’ of what 12 random spins of the wheel should look like (Tversky & Kahneman, 1974). The **representativeness heuristic** involves judging the likelihood of an event by how much it seems to resemble the typical case. While this seems reasonable, over-reliance on representativeness as one’s rule of thumb leads you to ignore other important factors, such as luck, base rate information, and the independence of events. This can lead to the fallacious thinking of the compulsive gambler. These unfortunate people believe that they can make money even if others cannot, and that persistence will pay off. So, if you are losing at the roulette table, persist and the law of averages will catch up for you; if you are winning, also persist because you are on a ‘hot streak’. In fact, each roll of the dice is an independent event.

Now, consider the following description: ‘Steve is very shy and withdrawn, invariably helpful, but has little interest in people or in the world of reality. A meek and tidy soul, he has a need for order and structure and a passion for detail.’ Would you guess that Steve is a farmer, a trapeze artist, a librarian or a surgeon?

If you actually had a set of personality test scores of representative samples of people from each profession, you could calculate the probability that Steve is a meek surgeon, a shy trapeze artist, a farmer with a passion for detail, and so forth. However, this would demand the kind of information that would usually not be accessible. The representativeness heuristic provides us with a quick and easy solution; we simply estimate the extent to which Steve is representative of the typical person (prototype) in each occupation. We would probably conclude that Steve most closely resembles a librarian. Now, imagine that you were told that Steve’s name had been drawn from a list of 100 men, only 10 of whom were librarians. Most people would ignore this objective ‘base rate’ information that there is only a 10% chance that he is a librarian. They would still assume that Steve was a librarian (Tversky & Kahneman, 1973).

In a dramatic demonstration of this principle, participants watched a videotape of a psychologist interviewing a prison guard. For half the participants, the guard expressed very hostile attitudes towards prisoners while the other half saw a guard expressing more optimistic, humane attitudes towards prisoners. Some of each group were told that this guard was quite typical of prison guards, others that the guard was quite atypical, and still others were told neither. Participants then answered a questionnaire about prison guards in general. Those who had viewed an interview with a humane guard expressed significantly more positive attitudes towards prison guards in general, even when the guard was presented as atypical (Hamill, Wilson & Nisbett, 1980). They ignored base rate information and relied on the one example that they were provided with.

Finally, consider the case in which two different objects are exemplars of the same value, such as coins or banknotes of the same value. Several studies of participants in the United States show that they attached greater value to a \$1 banknote than to the recently introduced \$1 coins, and they overestimated how much money they had when it was in banknotes (Tessari, Rubaltelli, Tomelleri, Zorzi & Pietroni, 2011). Clearly, at least in this case, the two types of currency of equal objective value represent different entities to the consumers – a dollar bill really represents a genuine dollar to them!

### The availability heuristic

Which is more common in the English language, words that begin with the letter K, or those that have K as the third letter? In fact, in the English language, there are more than twice as many words with K as the third letter





(e.g., awkward, like, bake) as with K as the first letter (e.g., king, know, keep). However, most people incorrectly estimate that more words begin with the letter 'K', simply because it is easier to think of such examples (Tversky & Kahneman, 1982). For various reasons, we are accustomed to think of words in terms of their first letter. This is a demonstration of the **availability heuristic**, one of the most important cognitive 'rules' (Tversky & Kahneman, 1974). It is deceptively simple: if something comes readily to mind, we tend to assume that it's probably true and use it to judge the likelihood of an event.

Consider when people are depressed and tend to see life in negative terms. When asked to anticipate future events in their lives, they would be more likely to imagine negative events happening to them because these events would be more cognitively available to them (Vaughn & Weary, 2002). Another instance of the availability heuristic is our tendency to be excessively influenced by extreme examples, again because they come readily to mind. For instance, fame influences our judgements of people (McKelvie, 2000). Clinicians asked to offer a diagnosis based on a case history are influenced by cases that they have encountered recently (Schwartz, 1994), and teachers use available memories of similar students in predicting the performance of a current student (Jussim, Madon & Chatman, 1994).

The availability heuristic also influences business decisions. For example, Kliger & Kudryavtsev (2010) examined the effects on stock market activity of analysts' recommendations to buy or sell. They found that investors gave too much importance to whether a stock price was currently rising or falling (the most readily available information) while giving less weight to other information in the analysts' reports, such as their actual recommendations to buy or sell and their estimates of financial risk. The wild fluctuations in world markets in recent years no doubt reflect to some degree the effects of the availability heuristic in market investment decisions.

**Priming and availability** Triggering cognitive availability is called **priming**. Suppose that we have just watched a tearful movie involving marriage conflict and rampant infidelity. Then we meet the new couple who moved in next door. Are we more likely, as a result of having watched that movie, to notice signs of tension between them, or to interpret their tension as a marital problem rather than fatigue from moving? Research evidence suggests that this is often the case. A schema about marriage problems has been activated or 'primed' for us, which we may then use to interpret events. On the other hand, if we had just seen a movie showing passionate married love, we might notice, interpret and remember very different information about our new neighbours.

In an elaborate experiment (Srull & Wyer, 1980), male and female participants were instructed to construct sentences from four-word sets. Some of the word sets contained hostile content or suggestion (e.g., leg, break, arm, his), while others contained neutral content only (e.g., her, found, know, I). For one group of participants, 15 of the 50 sets suggested hostility, while for the other, 35 of the sets had hostile connotations. The object was to prime a memory category – 'hostility' – in the subject group using 35 sets of words conveying hostility. Then the effects of this priming were shown as participants read a paragraph that described the behaviour of a stranger in neutral terms with respect to hostility. The participants were asked to rate the stranger on a number of characteristics, one of which was hostility. Some participants were given the information about the person immediately after priming, some 24 hours later, and some a week later. The interval between receiving the information and rating the stranger also varied for different participants: no delay, 24 hours delay or one week. So, for example, some participants received the information immediately after priming and rated the person 24 hours later, and some received the information 24 hours after priming and rated the stranger one week later.

The results confirmed two predictions, and contained a surprise. As expected, the same stranger was perceived as more hostile after participants were primed with 35 items rather than with 15, thus confirming the effect of priming on category availability. Also as expected, the priming effect was greater when the information was received immediately than when there was delay. However, here is the surprise: the effects of priming were greatest when there was a rather long interval between receiving information (the paragraph about the target person) and making judgements about the stranger. Once the category of hostility had been primed and made available, participants formed their initial impression of the person, and then later remembered that person as being even more hostile than he or she had appeared earlier.

**Table 2.1** Heuristic reasoning in society

Research on cognitive heuristics has extended beyond the lab into some real-life situations and applications. Here are a few examples:

**REPRESENTATIVENESS**

- In genetic counselling, parents who have had one abnormal child overestimate the probability of the having another (Shiloh, 1994).
- Psychiatrists and clinical psychologists tend to make clinical diagnoses on the basis of a prototype for a disorder rather than using established diagnostic criteria (Garb, 1994).
- In sentencing, judges tend to match the defendant before them with prototypical criminals (Lurigo, Carroll & Stalan, 1994).

**AVAILABILITY**

- People make judgements about how likely they are to die of various causes based on how often that cause has recently been mentioned in the media – which may or may not correspond to the real risks. For instance, many more people die in automobiles than in airplanes, but most people consider air travel as riskier (Lichtenstein, Slovic et al., 1978).
- People may judge illnesses based on one salient symptom (e.g. a lump), and ignore health problems that do not present recognizable symptoms such as high blood pressure (Chapter 16).
- Physicians are influenced by cases they have encountered recently and arrive at the diagnosis that comes to mind at that time (Schwartz, 1994). More in Chapter 16.
- Teachers use memories of similar students or siblings in predicting the performance of a specific student (Jussim, Madon & Chatman, 1994).

**ILLUSORY CORRELATION**

- It is commonly assumed that there is a relationship between women's emotional states and their menstrual cycles. While this may be true in specific cases, the assumption that all or most women suffer from PMS is illusory. For instance, when women were asked to keep daily diaries, irritability and depression typically did not increase during the premenstrual or menstrual phases, but when asked to recall later, they reported that they suffered menstrually related mood swings (McFarland, Ross & De Courville, 1989; Nisbett, 1980).
- We see this effect in prejudice. For instance, being treated rudely by one waiter can cause a tourist to condemn all waiters in that city, or even the entire nation (Spellman & Holyoak, 1992). See Chapter 13 for more details.

## Simulation heuristic

How readily can we imagine various scenarios in order to guess what to expect (Kahneman & Tversky, 1982)? For example, imagine that Mr Crane and Mr Tees were scheduled to leave the same airport at the same time but on different flights. Both are caught in the same traffic jam on the way to the airport and arrive 30 minutes after the scheduled departure of their flights. Mr Crane is told that his flight left on time, while Mr Tees is told that his flight had been delayed and left five minutes before he arrived. Who is more upset? Most people would respond that Mr Tees is more upset, because we cannot imagine that Mr Crane could have made his flight, while Mr Tees might well have made it. The simulation heuristic enables us to imagine 'if only' conditions, which explains much about our reactions to near misses, second-guessing and other frustrations. Of course, you have correctly associated this principle with our earlier discussion of counterfactual thinking, haven't you?

## The illusory correlation

As noted in our earlier discussion of causal attributions, we tend to notice covarying events, those that happen at the same time in our social world, and to assume that they belong together. However, the **illusory correlation** is evident when we tend to exaggerate the apparent correlations between things that 'go together'. For example, in an experiment, participants were shown pairs of words, and later asked to estimate how often each pair had occurred. Although all word pairs were shown the same number of times, participants tended to overestimate the frequency of word pairs that seemed to belong together, such as bacon–eggs and tiger–lion (Chapman & Chapman, 1969).

The implicit assumption that people from an out-group are 'all alike' is a vivid example of the illusory correlation heuristic, and is fundamental to the idea of a stereotype (Barkowitz & Brigham, 1982; Hamilton

& Gifford, 2000). Think of how the media can contribute to prejudice through an illusory correlation. For instance, if a mentally ill person kills a famous person (e.g. John Lennon) or if a small group who adhere to certain religious beliefs commit a terrorist act, many may leap to the illusory conclusion that mental illness or religious beliefs correlate with violent actions. Of course, such beliefs involve ignoring the low base rates for violence in such groups. We will return to this topic in Chapter 13.

### The false consensus effect

In the **false consensus effect**, we tend to see our own attitudes and behaviour as typical, and thus we tend to assume that other people similar to us would hold the same attitudes, make the same decisions and act as we do. For example, in an experiment (Ross, Greene & House, 1977), students were asked to walk around campus for 30 minutes wearing a large sandwich board carrying a crudely lettered message, 'Eat at Joe's'. Some agreed, and some refused, but both groups later estimated that more than two-thirds of the other students on campus would have made the same decision they did. Other studies have shown that participants overestimate the extent to which others have the same smoking habits and hold the same political attitudes they do (Sherman, Chassin, Presson & Agostinelli, 1984; Fields & Schuman, 1976). Of course, there are limits to this heuristic. We may want to see ourselves as unique on certain very positive attributes, and would thus underestimate the number of people who share those desirable attributes (Campbell, 1986). For instance, some people who value taking good care of themselves, working out, eating healthy foods, etc., underestimate the actual number of people in their society who act in similar manner (Sul, Wan & Sanders, 1988).

## BOX 2.2 INSIGHTS FROM RESEARCH

### PSYCHOLOGY, BUSINESS AND ECONOMICS

Classic economics is based on utility theory, the premise that people, businesses and governments are rational, making choices that will maximize their gains and/or minimize their losses. Of course, this implies System 2 thinking, the system of conscious rational awareness. The assumption that people are rational actors in their own enlightened self-interest has been challenged by other economists and by social psychologists. Indeed, behavioural economics is based on the premise that people often make decisions contrary to their own best interests (Lambert, 2012). For instance, our personal economic decisions may involve paying our workers fairly, limiting how much we work so as to spend more time with our families, and buying the more expensive brand of car.

Daniel Kahneman (2011), a social/cognitive psychologist, was awarded a Nobel Prize in economics for his seminal work on 'rapid thinking' and cognitive heuristics in behavioural economics. He recalled an early experience in Israel where recruits in the Israeli defence forces were assigned to units and duties based on a 15-minute informal interview. This system was shown to have failed miserably, but persisted, because of an 'illusion of validity' held by those invested in it. We all have faith in what we have purportedly learned from our own experience, and confidently make judgements based on it.

Consider, for instance, an heuristic called the endowment effect. Parting with familiar objects, such as discarding a worn pair of jeans, giving away a favoured toy, selling one's home, can be emotionally difficult. Research clearly shows that people place a higher value on things that they own than on things that they do not own, even those lacking any sentimental value. For instance, if they are given a coffee mug and later offered to exchange it for a chocolate bar of relatively equal value, they will tend to refuse; similarly, if they had been given the chocolate bar, they will be reluctant to exchange it for the coffee mug. If we value the coffee mug more because it is ours, then we experience the exchange as a loss of our coffee mug, rather than a gain of a chocolate bar (Kahneman, Knetsch & Thaler, 1990). This aversion to loss which outweighs the pleasure of acquisition has been shown in a wide variety of contexts, including exchanging bottles of

equal value wines (Van Dijk & Van Knippenberg, 1998). However, lest we leap to conclusions about human nature, consider the results of a series of studies (Maddux, Yang, et al., 2010) in which participants with a Western background (Canada, USA) showed the endowment effect to a greater extent than did those from a Chinese background.

Do entrepreneurs, particularly the successful ones, think differently than other persons? In order to seize the moment, the entrepreneur must work rapidly in situations that are often novel, unpredictable and complex. In this chapter, we see that people deal with such situations by resorting to cognitive heuristics, enabling rapid decision-making – but with the potential for unfortunate biases. For instance, entrepreneurs tend to be very confident, perhaps overconfident, in their own judgement. They also tend to make use of the representativeness heuristic – generalizing from small, non-random samples (Busenitz & Barney, 1997). Because they tend to be overconfident and optimistic, they are less likely to engage in counterfactual thinking – imagining what might have been (Baron, 2000). Baron (2000) points out that this is a mixed blessing. On one hand, counterfactual thinking may generate negative feelings, which may interfere with the ability to focus and function. On the other hand, counterfactual thinking enables one to understand why negative outcomes occurred, and to learn from one's mistakes.

Who becomes a successful entrepreneur? Much of the research provides a laundry list of characteristics: vision and drive, ability to raise capital, financial and management skills, ambition, self-efficacy, optimism, self-confidence, willingness to take calculated risks, ability to delay gratification and, of course, the willingness to work hard (VandenBos & Bulatao, 2000). Baron (1998, 2000) summarizes the set of skills as constituting social competence, the ability to get along with others, to interact effectively and persuasively.

**Bounded rationality** It is important to understand that we are neither rational beings in all circumstances, nor non-rational 'cognitive misers' always taking the easy shortcut to a decision. Rather, we seek to find the best alternative, given the limits of our minds to process information and the existing conditions: how much information do we have available, how much time do we have? In other words, rather than seeing the use of heuristic rules as laziness, we can see them as rational, having evolved to meet the demands of our environment and our lives. Rather than cognitive misers, Gigerenzer (2010) argues that we are cognitive optimizers.

Consider, for example, how physicians make decisions about diagnosis and treatment (Gigerenzer & Gray, 2008). Consider a situation where a patient appears in the emergency service with chest pains and is admitted to hospital, possibly having suffered a heart attack. Researchers compiled a list of 50 test results, signs and symptoms that would indicate a heart attack and supplied the emergency physicians with this list along with a calculator to apply a formula that combined this information. Armed with this formula, physicians admitted significantly fewer patients were admitted unnecessarily to the Intensive Care Unit. Later, when the physicians had returned to their clinics, without the calculators, the same improvement was evident. The physicians had not memorized the complex formula involving the 50 indicators. Rather, they learned what their experience showed them to be the most important criteria – in most cases it was just three – and ignored the rest. In other words, the physicians learned to apply their own 'fast-and-frugal' decision-making formula, and it worked.

Consider one more example. Which city in the United States has a greater population: Detroit or Milwaukee? Students in the United States and Germany were asked this question, and neither group of students had a sterling record of success (the correct answer is Detroit). However, a greater percentage of the German students were successful (Gigerenzer & Brighton, 2008). Why? Most students in the United States had some familiarity with both cities, but very few of the German students had heard of Milwaukee; hence they relied on the city that they knew of, at least by reputation. In short, they applied a heuristic rule, the recognition heuristic, which implies that, in a situation of uncertainty involving a choice between two of more objects, rely on the recognized object as being more important in some way. Of course, advertisers recognize the importance of brand-name recognition.

**KEY POINT:** In rapid thinking, we evoke unstated rules or heuristics as cognitive shortcuts. We may judge the likelihood of something by how it seems to represent the typical case, and ignore base rate information. We tend to use what comes readily to mind although that may be something extreme or unusual. This is especially true when the event is primed beforehand. If we can imagine or simulate an event or object, it has greater impact on us. We are influenced by an illusory correlation between objects or events that occur at the same time. We tend to assume a false consensus between our actions and what we would expect of others. We may be best described as cognitive optimizers, rather than cognitive misers, using the best information that we have in the circumstances to make decisions.

## INTEGRATIVE COMPLEXITY IN THINKING

Individuals also differ in their cognitive styles, in how they make sense of their social world. An important difference in cognitive style between people is the **integrative complexity** of the individual's information processing. People high in integrative complexity tend to be open-ended, flexible, able to integrate different perspectives. On the other hand, individuals low in complexity tend to be rather rigid and close-minded, and are incapable of integrating different perspectives. For example, the high-complexity person can see positive and negative in the same person, and so might see that the person is an admirable musician and obnoxious with other people. The low-complexity person would tend to see someone simply as good or bad, a friend or an enemy.

Do people have low integrative complexity because they are unable to think in more complex ways, or because they prefer to think in a less complex manner? In a series of studies, people were encouraged to broaden their thinking about problems, such as reconciling one's religious beliefs with the death of a child. Suggestions included seeking compromise rather than simply choosing one alternative or the other, looking for alternative approaches to solving a problem and looking for an overall philosophy that might underlie different approaches. In general, participants were able to increase the integrative complexity of their thinking when encouraged to do so (Hunsberger, Lea, et al., 1992). Religious fundamentalism seems to be related to a lack of integrative complexity on existential issues (e.g., reconciling a belief in God with a human tragedy), but this did not generalize to other issues, such as jobs versus environment (Hunsberger, Pratt & Pancer, 1994; Pancer, Jackson, et al., 1995). Thus, to a considerable extent, integrative complexity appears to represent a choice or a style in thinking.

Peter Suedfeld has explored this dimension of information processing, using non-experimental evidence in intriguing ways. In one study, the writings of a number of revolutionary leaders were coded for complexity, comparing them before and after the revolution had occurred (Suedfeld & Rank, 1976). It was hypothesized that, during a revolutionary struggle, the leader must be relatively categorical and single-minded towards the one goal of revolutionary change, whereas after a successful revolution, the leader of the new government must be more complex in both understanding and communicating. The results were striking: leaders who remained powerful after the revolution (e.g., Lenin, Stalin, Castro, Jefferson) showed this shift towards greater complexity after the revolution as compared to those who lost their influence (e.g., Trotsky, Che Guevara). In another archival study, researchers coded integrative complexity in the speeches of leaders in the US Civil War, the Second World War and the first Persian Gulf War of 1990. They found that, in all cases, low levels of complexity tended to be related to a decision to go to war (Conway, Suedfeld & Tetlock, 2001).

Other archival studies have examined integrative complexity of people at different stages of life (Suedfeld & Bluck, 1993). In one, the integrative complexity in letters of famous people was studied in relation to significant life events, both positive (e.g., marriage, coronation, major book published, election or appointment) and negative (death of spouse, political defeat). In this study, integrative complexity increased in response to negative life experiences, but not in response to positive events. In another study (Suedfeld & Piedrahita, 1984), researchers coded the published correspondence of a number of eminent men and women over the last 10 years of their lives (e.g., Lewis Carroll, D.H. Lawrence, Freud, Liszt, Proust, Queen Victoria). Those who died at a

ripe old age after a long illness showed a gradual decline in integrative complexity over their last four years. However, those who died unexpectedly showed a steep decline in integrative complexity in their last year, regardless of their actual age. Suedfeld & Piedrahita (1984) suggest that a decline in integrative complexity may occur naturally as an 'intimation of mortality' in the period preceding death. Of course, more evidence would be needed to support this intriguing interpretation.

**KEY POINT:** People vary in integrative complexity, the extent to which their thinking is open-ended and flexible. Archival data shows that situational factors can have a strong effect on integrative complexity.

## A FINAL NOTE

Consider the following paradox. It is important for people to understand and make sense of the people, events and situations in their lives. Of course, the best way to understand anything is to gather as much information as possible and think about it carefully and logically. However, because there is simply too much information to process and too little time to do it, we rarely act in the optimal manner. We must figure out what is happening, decide what to do, and then act. While cognitive shortcuts can lead to error, they can in fact be seen as a source of strength and creativity in human functioning (Bargh & Chartrand, 1999; Wegner & Wheatley, 1999). They allow us to go beyond the available information and to fill in the gaps and make inferences, guesses, hunches. Unlike computers, which are compelled to follow precisely defined rules (algorithms), people make inferential leaps based on incomplete information. Indeed, in the field of artificial intelligence, computers are 'taught' to reason by means of the same cognitive shortcuts that characterize human intelligence (Newell & Simon, 1972).

## SUMMARY

1. The dual-process model of thought processes states that we may think rapidly and automatically or consciously and deliberately. In general, people are cognitive misers, seeking the easier, more rapid way of thinking unless compelled or cued by the situation.
2. We form first impressions of people using a rough average of our impressions of individual characteristics, weighted by those characteristics most important to us.
3. Our impressions are biased by an orientation to think positively about others, but we are more influenced by negative information in forming an overall impression.
4. We bring our own individual and cultural assumptions about human nature to our perceptions of others.
5. We often look for explanations (attributions) about why people act as they do and why certain outcomes occur. When we find one explanation that fits, we tend to discount other possibilities and we tend to see cause and effect in events that occur together.
6. In making attributions, we choose between seeing the person or the situation as causing the action.
7. In a single event, we conclude that the act corresponds to a disposition to act that way when the person acted freely, the effects are uncommon or not according to usual social norms. Where we have more information about how the person acted in other situations and towards other people and how others acted to that person, we take this into account.
8. In our attributions about success and failure, we decide whether the success or failure was caused by something about the actor (internal) or something about the situation (external), whether the cause was stable or variable over time, and whether the occurrence was controllable by the actor.
9. Our attributions are subject to several biases, particularly that of overestimating the person's role in causing the action while ignoring the influence of the situation (correspondence bias). Culture plays an important role in moderating this bias. We may also explain

actions and outcomes in a self-serving manner, giving ourselves credit for success and blaming others for failure.

10. We tend to believe that our own environment is controllable and that life is generally fair or 'just', which leads us to search for meaning where uncontrollable events happen, and to blame victims for their fate.
11. Attribution theory is limited by a cultural bias to think in terms of cause and effect.
12. To reduce cognitive effort, we think in terms of categories, or schemata, about people, events and ourselves. Schemata are often represented in our minds by prototypical examples, and may become rigid stereotypes. Schemata guide what we pay attention to, how we interpret new information, and what and how we remember.
13. Construal-level theory states that how we think of people and events in terms of concrete or abstract formats depends on their psychological distance from us, in time, space and relatedness. One type of abstraction is counterfactual thinking, which enables us to contemplate alternative possibilities.
14. In order to facilitate rapid thinking, we apply an implicit rule, or 'heuristic' – a cognitive shortcut. In making judgements, we often ignore information about base rates and take the 'typical' as the rule, exaggerate the relationship between events (illusory correlation), overestimate how much others agree with us (false consensus effect) and use what readily comes to mind at the time. We also tend to value what we possess more than alternatives of the same or even greater value (endowment effect).
15. People vary in the extent to which they think in relatively simple or complex ways.

## POINTS TO PONDER

- What is the dual-process model of social cognition? How would you apply this model to how we perceive and think about other people?
- Our capacity to process information about our social world is strongly influenced by biases that we bring to this task. How do these biases influence how we think about the causes of people's actions?
- We are described as 'cognitive misers' expending as little time and effort as possible in trying to understand the people and events of our lives. In what ways does our miserly nature show up, and when do we become more 'mindful' about our thinking?

## FURTHER READING

**Fiske, S.T. & Taylor, S.E. (2008). *Social cognition: From brains to culture*. Boston, MA: McGraw-Hill.**

An updated and well-written overview of this burgeoning field, linking social cognition, social neuroscience and the role of culture. This book is indispensable as an introduction to this subject.

**Forgas, J., Williams, K.D. & Wheeler, L. (2001). *The social mind. Cognitive and motivational aspects of interpersonal behavior*. New York: Cambridge University Press.**

An interesting integration of the research on how our strategies in dealing with others are influenced by how we interpret and explain the social world. Dated in some ways, but still useful.

**Gilovich, T., Griffin, D.W. & Kahneman, D. (2002). *Heuristics and biases. The psychology of intuitive judgments*. New York: Cambridge University Press.**

The definitive review of this topic. It is filled with all kinds of practical implications (Note: author Daniel Kahneman won a Nobel Prize for his work in this area).

**Kahneman, D. (2011). *Thinking, fast and slow*. New York: Farrar, Straus and Giroux.**

An important and groundbreaking overview and recollection of various heuristics and biases that constitute our cognitive shortcuts, written in an amiable, accessible style. A scholarly book that made the best-seller list in several countries.

## Understanding your Social World

**Kunda, Z. (1999). *Social cognition: Making sense of people*. Cambridge: MIT Press.**

A comprehensive review of research and theory, accessible to students. Includes basic processes, applications to problems such as knowing yourself and forming prejudice, along with some cross-cultural perspectives.

**Roese, N.J. (2005). *If only. How to turn regret into opportunity*. New York: Broadway Press.**

A lively and entertaining treatment of counterfactual thinking, its advantages and its perils, with suggestions for personal change. The author is a pioneer researcher on this topic.

**Spencer, S.J., Fein, S., Zanna, M.P. & Olson, J.M. (2003). *Motivated social perception. The Ontario Symposium (Vol. 9)*. Mahwah, NJ: Erlbaum.**

Set of advanced papers on how our motives, goals and need to maintain self-esteem impact on how we make sense of our world. Together, these chapters provide insight into the premise that we see what we want to see.

***Personality and Social Psychology Review* (1999) 3(3).**

This issue of this journal is devoted to the psychological study of evil.

## WEBLINKS

<http://www.socialcognition.eu>

A useful compendium of European resources in this area.

<http://www.princeton.edu/~kahneman/multimedia.htm>

A very useful collection of articles and lectures by Daniel Kahneman.