an introduction to

STRESS & HEALTH

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SAGE
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THE IDIOT DEFENSE

One strategy that has been used in legal proceedings, often termed the ‘idiot defense’ (but also termed the ‘ostrich defense’), is that of maintaining that the defendant was unaware of certain events that had occurred, even though they ought to have been aware of them. In many scandals that involved corporate fraud (e.g., Enron, WorldCom), chief executives maintained that their job was to run the company as a whole, and leave certain aspects of the corporation to experts in specific sectors. Typically, this defense didn’t do much for them.

When little kids see a clown, some of these kids laugh whereas others might find them scary. Obviously, how the clown is perceived is in the eye of the beholder. Of those kids who find the clown scary, some might cover their eyes or put their head under a blanket, and for that moment the stressor doesn’t exist. In kids this ostrich defense might be viewed as cute, but comparable behaviors in adults (e.g., don’t look or touch that swelling or lump and you can pretend that it’s not there) are referred to as avoidance or denial, and are also seen to be illogical, not at all cute, and even less useful than the ‘idiot defense’ adopted in legal cases.

In Chapter 1 we learned that stressor features as well as our individual characteristics, regardless of whether they’re due to genetic contributions, previous experiences, personality or age, will influence the extent to which negative experiences affect our well-being. To a significant extent, these variables influence how potential stressors are appraised or viewed, and the methods that are used to minimize or eliminate their impact (Lazarus & Folkman, 1984). In this chapter we’ll consider appraisal and coping processes and how they might come to promote negative outcomes. The reader ought to come away with an understanding of:
• what’s meant by stressor appraisal, and how to identify the factors that influence the appraisal process and decision making, as well as how misappraisals of events might occur and how illogical thinking might play into these;
• how appraisals influence emotions, and how emotions might affect appraisals;
• the various ways in which individuals cope with stressors, and some of the moderators of a coping response. They should also be able to identify how coping styles and strategies (styles refer to a dispositional or trait characteristic; strategies are viewed as a state characteristic that may be dependent on situational factors) might influence the emergence or exacerbation of pathological states;
• the extent to which some coping methods can be used to deal with stressors more effectively than others, and the circumstances under which this might be the case;
• how social support resources can be used to deal with stressors, and what happens when instead of obtaining support one ends up with unsupportive interactions.

APPRAISALS AND COPING SKILLS

How we perceive potentially threatening events, and which methods we use to cope with them, have been linked to both psychological and physical pathologies. Indeed there has been a deluge of studies showing that the impacts of stressors were modified by both personal and coping resources, thus influencing whether or not particular disturbances would emerge. Likewise, the occurrence of depression in the context of particular illnesses

The appraisal-coping-stress triad

![Diagram](image)

**Figure 2.1** The triad above indicates that our appraisals influence the coping strategies that we use to deal with stressful experiences. Once a stressful event occurs we make an appraisal of this event, which, in turn, leads to coping strategies being engaged in an effort to attenuate or diminish the impact of the stressor. If the event is seen as aversive, and especially one that is out of our control, then the event will be perceived as stressful and a stress reaction will be engendered, which might provoke or exacerbate a pathological condition.
AN INTRODUCTION TO STRESS AND HEALTH

(e.g., HIV, cancer, renal transplants, and cardiac problems) has been related to the individual’s coping ability (Tennen et al., 2000), and it seems that aspects of coping may be fundamental in dealing with specific stressors, such as caregiving, the loss of a child, stigma and discrimination, as well as in response to severe trauma (Branscombe & Ellemers, 1998). As depicted in Figure 2.1, how we perceive or cognitively appraise (interpret) stressors has a lot to do with the coping strategies we invoke to deal with them (Lazarus & Folkman, 1984), which in turn might contribute to whether or not pathological outcomes will emerge. Conversely, the coping styles or strategies we use to deal with stressors might also come to influence how we appraise stressors.

APPRAISALS OF STRESSORS

Appraisals refer to the evaluations that individuals make in response to a potential stressor. These appraisals comprise the threat or risk associated with the event (i.e., the potential for harm or loss, and the degree of challenge the event represents), as well as an assessment of the severity, controllability, predictability, ambiguity, and the meaning associated with this potential threat. When faced with a potentially stressful event, appraisals ought to be adaptive, as they should enable individuals to distinguish those situations that require action from those that do not, along with the type of action that will most effectively address the stressor. To a considerable extent, appraisals are based on the individual’s specific abilities, beliefs, previous experiences in dealing with similar and dissimilar events, and the resources available to contend with the challenge. Thus, appraisals define the extent of the threat that an event imposes, and influence the coping methods that are selected to deal with the stressor. For example, although threat and challenge are similar in so far as they both might promote action, they also have important distinguishing features. Specifically, an appraisal of threat is often associated with negative emotions (e.g., fear, anxiety, or anger) as it signifies the potential for harm or loss. Challenge, in contrast, might signify the potential for growth or gain and hence might be associated with positive emotions (e.g., exhilaration, eagerness, excitement). However, this might not be the case for all individuals encountering a given event: for one individual the event might reflect a challenge, but for another, the same event might be viewed as a threat.

PRIMARY AND SECONDARY APPRAISALS

Potentially stressful events are thought to give rise to two interpretive processes, termed ‘primary’ and ‘secondary’ appraisal. Primary appraisal comprises perceptions associated with the impact of a potentially stressful event or stimulus: for example, the impact of an event may be perceived as benign (or even positive), and hence no immediate action might be deemed necessary. Alternatively, the event or stimulus might be construed as a threat, and as such, additional interpretations concerning the event might be evoked: these include the potential for the event to induce harm, whether it threatens the individual, and to what extent it is a challenge (Lazarus & Folkman, 1984).
Threat might not always be identified easily in some situations, but individuals will infer that a threat is present based on experience and previously acquired knowledge (Lazarus, 1966). Moreover, the positive or negative outcomes associated with earlier experiences might provide individuals with information relevant to threat appraisals (Gallagher, 1990). Having identified a threat, individuals ought to engage in behaviors to limit the threat or its impact. Needless to say, remaining in a heightened or repeated state of arousal owing to perceptions of impending threats is hardly adaptive, and might confer increased vulnerability to illness. Indeed, individuals who tend to appraise events as threatening may be at increased risk for greater long-term health problems relative to those who make more positive appraisals (Hemenover & Dienstbier, 1996).

**Figure 2.2** This differentiates between possible appraisals that can be made with respect to a given situation. For instance, an individual being sent on a training course to upgrade their skills can see this as being either a challenge (‘This will be super. I’ve always wanted to be able to get the maximum out of the internet and here’s my chance to learn.’) or a chore (‘Oh brother. Now I have to leave the comforts of home for two weeks to take a dippy course that I could do on my own.’). They can also see it as a cost (‘I’ve got a ton to do and when I get back the pile will have become that much higher’) or an investment (‘Once I get this under my belt, I’ll be able to do searches twice as fast and that’ll increase my productivity and give me yet more leisure time’).

As indicated in Chapter 1, the response to stressors is governed by numerous factors (e.g., previous experiences, age), and true to this, appraisals of stressful events may be influenced by several antecedent experiences as well as numerous dispositional factors (e.g., Power & Hill, 2010; Roesch & Rowley, 2005). In this regard, general appraisal styles have been associated with several global personality constructs, including hardiness, optimism, hope, hostility, trait negative/positive affectivity, and extraversion and neuroticism. Given the large number of factors that can influence how individuals might appraise a potential threat, it’s perfectly predictable that unanimity is often lacking as to how certain stressors are appraised. Certainly there are stressors that virtually all people will perceive in a similar fashion (e.g. war, natural disasters). However, there are many less intense stressors that are somewhat ambiguous, which will be associated with diverse appraisals.
 Whereas primary appraisals are mainly concerned with the perceived impact of a stressful event, secondary appraisals encompass those perceptions related to the resources available for successfully eliminating or attenuating a stressor. Essentially, the secondary appraisal poses the question ‘Can I cope with this threat?’. For example, when confronted with potential unemployment (an occurrence likely to be perceived as threatening or distressing), a secondary appraisal would comprise an assessment of the financial resources available to deal with the stressor (e.g., employment insurance) relative to the demands that will be placed on the individual (e.g., mortgage payments, tuition for kids, gasoline, food; along with other stressors that accompany being ‘let go’, including diminished self-esteem, anger, or shame). Thus, the apparent stressfulness of the event will depend, in part, on the degree to which that individual’s resources are perceived to enable them to meet these demands. Of course, the appraisals that individuals make regarding a threat are influenced by a variety of contextual or experiential factors. For instance, in the case of potential job loss the appraisals might be affected by whether the individual is supporting others, whether they’re near retirement and would have left the job soon, as well as the extent to which their identity was tied to the job.

SECONDARY APPRAISALS AND CONTROL DIMENSIONS

One of the most fundamental aspects of secondary appraisals concerns our perceived control over the situation. Control can involve several different components or subtypes. Behavioral control comprises the ability to influence a stressful situation through the initiation of some sort of action, whereas cognitive control can be conceptualized as the ability to influence the situation by using some sort of mental strategy (Cohen et al., 1986). Another aspect of control comprises decisional control, which entails having a choice over the coping strategies available to deal with a stressor, provided that the situation allows for such choices to be made. Another element of control is concerned with informational control, which reflects the degree to which the individual is able to predict and prepare for stressful events. Although each type of control appears to be important in determining strategies to reduce distress, cognitive control likely promotes the most beneficial effects on well-being.

APPRAISALS, DECISION MAKING, AND FAST AND SLOW THINKING

As described in Figure 2.2, the way we appraise stressors goes a long way in determining the way in which we choose to cope with challenges. The model described by Lazarus is, in several respects, very reminiscent of a framework that has been adopted in decision-making theory, and it has much to offer theorizing related to stress processes and the development of stress-related psychopathological conditions. To a significant extent we make decisions or attributions based on what Tversky and Kahneman (1974) termed the ‘representative heuristic’ (Kahneman, by the way, won a Nobel Prize in economics for his work, but sadly Tversky died before he could be a recipient of this award). Generally, heuristics refer to strategies (or shortcuts) that are made on the basis of information that is easily accessed. These shortcuts might be based on an individual’s experiences or rules that had previously
been established. Thus, rather than going through lengthy processes to make decisions, individuals might simply resort to past practices, educated guesses, or rules of thumb. The representative heuristic is employed when individuals consider whether their current hypothesis regarding the occurrence of an event is consistent with everyday experiences instead of strict probabilistic considerations. When individuals are in stressful situations new learning is often difficult, but well-entrenched performance, memory, and decision making are not usually impaired. Evidently, in a problem-solving situation that occurs soon after being exposed to a stressor, problem-solving abilities may be compromised, and individuals are more likely to fall back on using a representative heuristic. Another heuristic comprises attribute substitution, which essentially means that when a situation is fairly complex, individuals will make decisions based on a simpler question, but without necessarily being aware that they are doing so. In this instance, they might choose certain attributes of a complex situation or a person, and apply these attributes more broadly. It also seems, as we’ll see shortly, that certain emotions and personality variables might influence the way we appraise events and the decisions we make. Fearful individuals tend to exhibit pessimistic risk assessments and are risk averse, whereas angry people are more optimistic in their assessments and less risk adverse. Unfortunately, anger may also be associated with a heuristic in which individuals might not select from all the options available to them in a decision-making situation (Lerner & Tiedens, 2006).

In discussing the cognitive processes related to decision making, it was suggested that dual systems are in operation: an automatic operations system (dubbed System 1 or Fast Thinking) and a more cognitively-based system, termed System 2 or Slow Thinking. Kahneman (2011) explained that System 1, the automatic, fast thinking system, is highly influenced by our experiences, so that it is primed to react in a particular way in response to environmental events, whereas the cognitively-oriented slow thinking System 2 might kick in when more complex decisions need to be made.

DECIDING ON THE FLY

Some decisions that we make are based on lots of thought and reasoning, but sometimes we need to make decisions rapidly and there might not be much time to do so. It seems that although the prefrontal cortex is generally involved in decision making, some aspects of this cortical region might be responsible for decision making that occurs on the spur of the moment, whereas others are based on experience and habits that had been formed earlier (Jones et al., 2012). It has been thought that ‘value-based’ decisions, such as those that occur when an individual appraises options and potential consequences, involve the functioning of the orbital frontal cortex. Based on studies among individuals that had sustained damage to this region, it was concluded that the orbital cortex is necessary when decisions must be computed quickly or that must be inferred. However, other cortical regions likely are involved when the decisions are based on ‘cached’ values that were determined by previous experiences. It will be recognized that this is not far

(Continued)
removed from the Fast and Slow Thinking described by Kahneman, but anchors the notion to particular brain regions. Essentially, when the orbital frontal cortex is disturbed, decision making ‘on the fly’ suffers from an impaired ability to base decisions on prior experiences that allow options to be weighed appropriately. This has obvious implications for an individual’s ability to learn from their mistakes, and may be relevant for the propensity to make bad decisions related to repeated drug abuse, especially as drugs such as cocaine markedly influence the orbital frontal cortex.

To a considerable extent our experiences and memories of experiences might prime our responses to particular events (Morewedge & Kahneman, 2010). In this regard, three factors will largely govern our response biases; associative coherence, attribute substitution, and processing fluency. Associative coherence refers to a particular stimulus eliciting a coherent and self-reinforcing pattern of associative processes; what this means is that the stimulus or event is consistent with our preconceived or primed ‘intuitions’. The second component, attribute substitution, means that when we have made a judgment about a particular stimulus, we might form further unconscious attributes about this stimulus, based on what we had learned previously in similar situations. So if we are primed to believe that Sarah is a charitable person, we might make further attributions about that person, such as Sarah is also kind, warm, and even a kindred spirit. Even though we know virtually nothing about Sarah, except for one characteristic (she is charitable), it primes us to readily believe or accept other features of her personality. Finally, processing fluency, or our subjective experience concerning the relative ease/difficulty involved in a given cognitive task, is influential in determining whether particular judgments will be made. There are a variety of factors that influence processing fluency in addition to previous experiences and priming, including the clarity and ease with which the information is obtained.

Turning back to primary appraisals in the context of stress responses, it seems that when we make an initial decision or appraisal about an event, this involves a semi-automatic process that might be enacted on the basis of the very same principles described by Kahneman in regard to decision making. Essentially, associative coherence, stimulus substitution, and processing fluency may be fundamental in defining our initial appraisals of a potentially threatening situation. Consider for a moment a sudden stressful occurrence that you experienced. If it was one that you had previously experienced or one that was similar to other events, then you might engage in responses that are ‘second nature’ to you and the resulting actions seem well rehearsed (hence, when going into some situations, a realistic practice run, even cognitively, is well advised). However, if the stressful situation is entirely out of the range of your expectations or experiences, then it may give rise to a confused response (or even an ‘out of body experience’) and it takes a few seconds or even milliseconds for you to ‘understand’ what is actually happening. It is then that System 2, or secondary appraisals, come into the picture so that appropriate decisions can be made.
There are situations that we get into where decision making is not clear cut. Indeed, we might find ourselves in circumstances where the conditions seem ambiguous because we don’t have the knowledge or background to see it for what it is. By example, most of us won’t have a clue concerning the value of a car or a house when we start out looking to make a purchase. Instead, we look at ‘anchors’ that help us make a decision (Kahneman, 2011). In this case, the anchor is the asking price (or what other houses in the area have sold for, or advice from an agent who is actually not on our side, but simply wants to make a sale), and after some negotiation we might come up with a number that is reasonable both to ourselves and from the perspective of the vendor. However, the seller could have asked for an amount that was 10 or 20% higher (or lower) and we would have gone through the very same process, simply because we have no idea what the actual value of the house or car might be. Of course, in some instances the starting point might be so far off the mark that we wouldn’t even consider the purchase, but if it is ‘in the ball park’ then we might proceed with our negotiations none the wiser.

The very same thing holds true when it comes to making appraisals regarding threats to our well-being. We need an anchor to tell us what the threat means. When a government agency pronounces that the risk of a pandemic is high, we might ask ‘what’s meant by high?’ Does ‘high’ mean that 99% of people will be affected, or is ‘high’ 30%, and what does this mean when it comes to the risk for me or those close to me? Furthermore, given the past track record of the agencies that inform us about all sorts of events (e.g., the media, government, or even some celebrity who holds forth on a subject in which s/he hasn’t any expertise), to what extent should these anchors be discounted? After all, we’ve had numerous warnings from government agencies of things that simply haven’t materialized. Even though we are able to process a fair amount of information, and we’re able to appraise its value, it is often the case that our appraisals aren’t at all sophisticated and might actually be tied to anchors that comprise nothing more than ‘what some guy said’ or list prices on a sign.

APPRAISALS AND MISAPPRAISALS

Before we go any further, an important caveat needs to be introduced. We often assume that our appraisals of situations are, in fact, accurate. In part, this is likely correct. This also means that, in part, this conclusion is wrong. How accurate are our appraisals of situations? You probably know that when you’re in a slump everything looks bad (this is your appraisal), and when you’re riding high, then just about everything looks good, and even the obviously bad things look manageable. Essentially, when a person comes into a situation in a poor state of mind, then in dealing with stressors they might not see the world the way it really is, but instead see it from a narrow, dark, and gloomy place. It’s under these conditions that we might want to look to our friends to get their reaction to events, as it’s often easier for an outside observer to see things ‘in perspective’.

Just as we might make appraisals based on our own previous experiences, we also do so based on what others tell us or on the basis of what we believe that others think. Individuals frequently make social comparisons, and then form their appraisals accordingly. Experiments from decades ago illustrated that we tend to conform to what others do when making certain
types of appraisals, and it seems that social comparisons are also made when it comes to some fairly stressful situations. Obviously, when you need to rely on the judgment of others over a certain issue, make sure that they’re in the right state of mind for properly assessing a situation. At times, a person might find themselves asking for advice from a group of friends. However, as you have heard at some time or another, the appraisals and actions made by groups might be very different from those that any single individual might make. Specifically, when appraisals and decisions are made by a group, it is more likely that they will engage in greater risk taking than might be the case if they do so as individuals. This phenomenon, known as the ‘risky shift’, can come about owing to a diffusion of responsibility (‘we’re all in this together, and we’ll share the blame if things don’t work out well’). Alternatively, it might be that individuals follow the example of others who are seen as more inclined to take on a risky position. Regardless of the source of the risky shift, this tells us that when we, as individuals, make appraisals of situations, the perspectives we come up with might differ from those made by a group.

There are also numerous situations in which individuals don’t make evaluations of events on the basis of their own intuitions, but on the basis of what norms they believe exist. In a recent study we recruited college-aged women who were in psychologically abusive dating relationships and in whom symptoms of depression were elevated. When these women were shown a nine-minute video clip of a young woman describing her steadily increasing abusive relationship (escalating from mild criticism through to verbal and psychological abuse, and finally to clear physical harm), our abused participants, who we had expected would be upset by what they heard, were for the most part not at all upset. Indeed, some were upbeat, and even giddy. Our experimental probing suggested that these women seemed to be making social comparisons to justify the fact that they were staying in their current relationship, and the film clip served to validate their view that their relationship was actually normal. Essentially, some of these women indicated that ‘My relationship isn’t all that great. But if my boyfriend treated me that way [referring to the video clip] I’d leave him’. Remarkably, however, when we measured the stress hormone (cortisol) that is detectable in saliva, their hormone levels were elevated in comparison to those of women who were in non-abusive relationships. So although their stated appraisal of the situation was that it did not distress them, their biological stress system seemed to tell us otherwise, and just witnessing the video and answering questions related to their own lives were sufficient to produce this outcome. Their verbal statements might have reflected a social comparison process, but we don’t discount the possibility that their statements concerning their relationship might well have been a cover to avoid admitting that their situation was actually as abusive as it was (Matheson & Anisman, 2012).

SEEMED LIKE A GOOD IDEA AT THE TIME

Most of us have misappraised situations. Sometimes we make commitments to do things which at the time ‘didn’t seem like bad idea’; however, our sense of dread increases as the time for action approaches. Ask any plane phobic about a holiday planned six months earlier, or the person with
a fear of public speaking who agreed, many months earlier, to talk to a large group, and they’ll say that it didn’t seem like a bad idea at the time. When things are far off, there is an ‘illusion of courage’ that makes us less fearful of an event even though we’ve had lots of experience knowing that we won’t deal with this well when the time comes (Van Boven et al., 2012). We’re just not very good at appraising the distress of distal events. Clearly, what we need to do at the time of the invitation is perceive how we will actually react when the moment of truth comes along, and importantly, act on these feeling, rather than fool ourselves into thinking that things will be different next time.

Related to the fact that experiences influence how we appraise events is the notion that even subtle cues can prime us to perceive events around us in a particular way. We know, for example, that eye witness testimonies are frequently unreliable, and that our memories of events can be altered through subtle suggestions (Loftus, 2003). Priming, as Kahneman (2011) has indicated, can likewise be based on subtle factors as well as comments made by individuals in regard to a person or situation. If my best friend thinks someone is two-faced, and he tells me this, then when I meet this person I might well be very cautious or even negative. Related to this, stereotypes about certain groups or cultures can influence our appraisals, even if we are not consciously aware that this is occurring. Likewise, if an individual is primed to believe that a certain drug will reduce the pain that they’re experiencing, they will report diminished pain after consuming the drug, even if it was only a placebo (see more on this in Chapter 12). A person in a ‘uniform’ or a relatively tall person is viewed as more authoritative than others, even if there’s not a hint that this person is in the least competent. Our appraisals, and our misappraisals, intrude on a huge number of things that we do on a day-to-day basis, and often we might not have a clue concerning the subtle effects of such priming.

As mentioned earlier, our appraisals concerning the controllability of a stressor may have considerable importance in defining the coping strategies that we use and the behavioral and psychological outcomes that ensue. If we believe that we can influence a situation, then appraisals of that situation obviously ought to differ from those evident when we believe a situation is beyond our control. However, individuals frequently overestimate the degree to which they are able to exert control over otherwise chance events, and might be motivated to perceive control over their environment. It goes without saying that these misappraisals might produce difficulties that hadn’t been anticipated, but this illusion of control might also have some positive attributes. When we perceive events as controllable, we are generally better able to deal with stressors through the adoption of problem-focused coping strategies (trying to diminish or eliminate stressors or somehow dealing with them in thoughtful systematic ways), which is usually considered a good way of coping. In a sense, the illusory sense of control may actually reflect an adaptive process for dealing with challenges. For instances, cancer patients who had the perception that
they had some control over their illness exhibited lower levels of distress than did individuals who did not have these control perceptions (Ranchor et al., 2010). Illusory control in this instance might not affect disease progression, but at the very least, it allows for lower daily distress.

Finally, there are many instances in which situations, especially those of a social nature, are relatively unclear, as the messages we receive are subtle or may have multiple meanings. What does a slight frown by my colleague mean, and was it actually directed at me or was it a frown that wasn’t directed at anybody in particular? If a situation is uncertain or ambiguous, it’s fairly difficult to make proper appraisals. Often, this is compounded by the fact that appraisals regarding stressors are made at the very time when we might be least well prepared to make accurate appraisals – that is, while we are in a threatening situation our judgment may be influenced by our emotions or our inability to see things objectively.

APPRAISALS AND IRRATIONAL THINKING

There is yet another aspect of uncertainty/ambiguity that is central to our analysis of appraisal processes. This issue also falls into the category of decision making rather than appraisals, but appraisals of choices and making decisions are (obviously) intricately linked. Kahneman and Tversky have made the point that individuals often behave in apparently odd ways, often making seemingly irrational decisions. In one interesting study, students were placed in a situation where they were told to imagine that they had sat a very important exam that would determine their future. They were then asked to imagine that the grades would be posted in two days’ time. Some students were told they had passed the exam, whereas others were told they had failed. At this point they were also told that they had the opportunity to take a nice holiday trip, and were asked whether they would take this trip. Those students who had passed and those who failed frequently indicated that they would take the trip – presumably those who passed saw it as a reward for their hard efforts, and those who failed saw it as a chance to diminish their despair. Essentially, all the students indicated that they would indeed take the trip, although they would do so for different reasons. Now comes the really interesting part. In a second study, students were told that the exams would be posted in two days’ time, but this time they were given the option of either (a) going on the trip immediately (before the results of exam were released), (b) foregoing the trip, or (c) paying a $5 fee to hold their ticket (delay the trip) until they had received their grades. The students did what you would probably do – they paid the $5 to have the ticket held. Does this decision make any sense at all? In the first experiment students indicated that they would be taking the trip regardless of whether they passed or failed! Yet when offered the option of waiting (and paying $5) they tended to choose this, despite the fact that they would likely opt to take the trip irrespective of their grade. So what might have motivated this behavior? It seems that uncertainty gives rise to some interesting ways of coping that are understandable, even if they are irrational.
TOO MANY CHOICES

Retailers know that giving the consumer too many choices isn’t always the best idea; when faced with too many choices, with varying attributes and prices and confusing information, the potential consumer goes away to ‘think’ about it. My friend, a retailer, tells me that when she hears this she wants to scream ‘Think about it? What’s there to freakin think about? We’re talking about a toaster. A toaster! Not whether you should go for chemo vs. mastectomy!’.

We can go on with numerous examples of the irrational decisions that people make, but the main topic of this book is about stress, and in this context we often witness people make bad decisions that then have negative repercussions. You might recall from our earlier discussion of stress generation that stressed individuals seem to get themselves into increasingly distressing situations. They make poor appraisals and then choose the wrong methods of coping, and they do this repeatedly. Let’s use a very simple example of this. At the end of this chapter there is a questionnaire to measure how individuals cope with stressors. In our research we use this coping inventory a fair bit. In some experiments we ask participants to indicate, on a 5-point rating scale, to what extent they use each of the coping responses to deal with particular stressors. In some of our experiments we also asked participants to indicate how effective they thought these coping strategies would be in dealing with a given stressor. For many people, particularly those who seemed fairly well adjusted, there was a match between the coping method they chose and how effective they thought it might be. However, others, particularly individuals with high levels of depressive symptoms, favored particular coping styles, despite their belief that this coping method wouldn’t be effective. I can almost hear them saying ‘I know my coping responses weren’t good, but I just didn’t know what else to do’. You might want to complete the questionnaire in relation to a recent stressor you experienced, and then go through it a second time to determine whether you think the coping behaviors you selected were effective.

There are, of course, many factors that go into the irrational behaviors that individuals display. For some, their personality characteristics don’t allow them to do what’s necessary. There are individuals who are so afraid of making wrong decisions, or who can’t abide with feelings of regret, that they end up not making any decisions. For others, too many choices are daunting and they too end up making no selection at all. In still other situations procrastination might be a way of dealing with the anxiety associated with making decisions (putting off seeing a doctor regarding certain suspicious symptoms), and they continue with these clearly maladaptive behaviors in the full knowledge that their procrastination might have negative consequences (Steel, 2007). (I’m told this is a ‘guy thing’, but I’m not so certain of that.) Not surprisingly, perhaps, the greater the stakes the more difficult it might be for decisions to be made. For instance, decision making by parents regarding pediatric medical procedures can be an enormous strain (Lipstein et al., 2012), especially when once the decision is made, it can’t be unmade. Sometimes the decisions individuals have to make are
at an entirely different level, such as moral decision making. In an experimental setting, individuals might be presented with a scenario that entails choices that are difficult to resolve (e.g., in experimental paradigms in which the participant is given the choice of actively sacrificing one person in order to save the lives of several others). You’d think that such decisions would be based on logic or empathy, but there are actually a large number of factors that influence outcomes. Not unexpectedly, perhaps, the decisions made in these situations are very much influenced by the recent stressors that individuals had encountered (Youssef et al., 2011).

Human behaviors in response to stressors are, in several respects, not all that far removed from the responses that rodents show under adverse conditions. When animals are in stressful situations, their defensive repertoire may narrow to those responses that are highest in their repertoire, and other response strategies will emerge only as the predominant strategies are rejected; however, there are occasions where animals might persist in emitting these incorrect responses despite the fact that they are never reinforced. In a sense, this is not unlike human behavior under the conditions of strong challenges, wherein individuals fall back on those strategies that are highest in their repertoires (resorting to the tried and true), even if this approach isn’t the most logical or effective. However, humans have a System 2 that kicks in when the reactions of System 1 are clearly not productive, and this serves us well in decision making even when we find ourselves in some very stressful situations.

TRUSTING YOUR BRAIN AND TRUSTING YOUR GUT

As we learn new things and retain this information, millions of neurons within the prefrontal cortex are firing, and the repeated activation of these neurons is necessary to keep short-term memories in place. Should these neurons stop their systematic volleys, the memory will quickly be lost (think of how quickly you forget a phone number when you’re interrupted). Understandably, when stressful events occur, our short-term memory will be disrupted, possibly because some of the neurons that were working to maintain that memory were now engaged with some other task. As memory processes are integral to problem solving and decision making, in the face of stressors it’s efficient and practical to rely on heuristics that are well entrenched. People working in high-pressure situations (surgeons, air-traffic controllers, soldiers), need to be well trained so that when stressors erupt, as they invariably do, they have the short-cuts available to them that allow for rapid and appropriate decision making.

There are situations that are somewhat ambiguous and making decisions is understandably difficult. In these situations we might make decisions based on our intuitions (or trusting our gut). Perhaps not surprisingly, even though the situation was ambiguous, those with expertise fared better with respect to their decisions even though they relied on gut responses compared to those without the same level of expertise. Interestingly, however, when told to ignore their gut instincts and rely on a strict analytical basis, the experts and non-experts performed equally. It may be that there are heuristics here that kick in when making gut decisions that can take us some way if the gut instincts are based on brain processes (Dane et al., 2012).
Most students, at one time or another, have been faced with the dilemma of whether they should accept their first response in a multiple choice exam, or rethink it and perhaps change their initial answer. From the research described here, it seems that if you know your stuff, then go with your first instinct. If you don’t know your stuff, then an analytical process won’t help you much, so you might as well go with your gut. However, if you fail the exam don’t blame me for giving bad advice. Maybe you should have been attending classes more often …

APPRASALS AND PERSONALITY FACTORS

The meaning that a person constructs about any given situation, as well as their own capabilities in dealing with these events, might not only be related to events that involved similar experiences, but can vary with the individual’s global self-constructs that emanate from a lifetime of experiences, including those that occurred during childhood (Carver & Connor-Smith, 2010). In this respect, uncontrollable adverse events during childhood (e.g., abuse, neglect, or parental loss) may lead to the emergence of dysfunctional beliefs that can distort the individual’s evaluation of their own coping capabilities or competency. These evaluations might influence the individual’s self-efficacy and the way the individual appraises the specific characteristics of stressful encounters. Unfortunately, once these negative self-referential attitudes are well entrenched they’re not easily dislodged, and misappraisals of situations might be more common than we’d imagine. It also seems that highly extraverted individuals tend to appraise situations as challenges, whereas individuals high in neuroticism are apt to appraise situations as more threatening (Gallagher, 1990; Hemenover & Dienstbier, 1996). We won’t go through the numerous personality factors that affect stressor appraisals, but we can readily understand that several other global personality constructs, including hardiness, optimism, hope, hostility, trait negative/positive and affectivity, would influence our appraisals of potentially stressful events.

Of the methods used to diminish distress and the illnesses that stem from stressful experiences, several include attempts to change the way individuals appraise events. Rather than engaging in negative thinking, individuals are taught to appraise events in a more positive or more realistic manner, and then to deal with stressors based on these appraisals, even though this might be a personality feature that is difficult to modify. Fundamental to these approaches is the avoidance of entering situations with a negative perspective. Thus, while some aspects of stress management entail proper ways of getting rid of or coping with distress, an important aspect involves changing an individual’s appraisals of events around them. A whole school of thought, now termed ‘positive psychology’, has formed around the concept that positive perspectives and expressions of particular personal characteristics can be essential to foster well-being (Seligman & Csikszentmihalyi, 2000). What this means is that rather than follow the medical model in which attempts are made to diminish the symptoms of illness, the aim of positive psychology is to promote well-being by acting prophylactically to prevent the development of stress-related pathology (Schueller & Seligman, 2008). In this regard, a treatment referred to as positive psychotherapy (or
PPT), which essentially comprises a series of exercises to instill positivity, reduces signs of depression in a subclinical population as well as in clinically depressed individuals, and this procedure was superior to antidepressant medication (Schueller & Seligman, 2008).

THE FORECAST

... how many will pass from the earth and how many will be created; who will live and who will die; who will die at his predestined time and who before his time; who by water and who by fire, who by sword, who by beast, who by famine, who by thirst, who by upheaval, who by plague, who by strangling, and who by stoning.

Who will rest and who will wander, who will live in harmony and who will be harried, who will enjoy tranquility and who will suffer, who will be impoverished and who will be enriched, who will be degraded and who will be exalted.

Fans of Leonard Cohen might recognize that this Rosh Hashana prayer of atonement might be at the root of his poem/song, ‘Who by Fire’. Our take-home message might be that while life isn’t all that predictable, most of us don’t spend our time worrying about all the ‘ifs’ and ‘maybes’. Although we know we’re eventually going to get hammered in some form or other, we manage not to think about it. Illnesses are a long way off, and might even happen to someone else and not me. Perhaps this is an excellent strategy to deal with uncertainty, since focusing on potential catastrophes likely isn’t profitable. What we can do, however, is recognize that there are certain behaviors (or lifestyle factors) that can affect the risk of bad outcomes and we’re probably better off dealing with those.

APPRAISALS IN RELATION TO LEARNING, MEMORY, AUTOMATICITY, AND HABIT

Years ago, Hebb (1955) formulated the view that as we learn new information the connections between neurons are strengthened, and the assembly of cells involved in recognizing objects and responding to them appropriately is both strengthened and widened. Complex learning and memory involve still broader cell assemblies or networks, and once the connections are sufficiently strengthened, stimulating one aspect of the network will result in the entire cell assembly being triggered. So, for example, if I tell you that a word in this sentence (the one you are reading at this moment) is actually spelled incorrectly, you might have to go back again to find the error. Likewise, you won’t have any trouble understanding the statement ‘a frnd in ned is a frnd indd’. This is because your cell assemblies are in place, and once a component of the cell assembly is activated, you can interpret the sentence appropriately.

According to this formulation, learning occurs via a top–down approach; we learn through a trial-and-error process, through associations being made, by being rewarded for certain
responses, and generalization (a grizzly bear is a grizzly bear regardless of whether we see it from the front or from the side) and discrimination (grizzly bears are dangerous, but not when they’re in an enclosed area within a zoo). As topics become more difficult, the networks involved become more complex, but we take advantage of already developed networks so we can build on these. Some perceptions and responses are so deeply ingrained that we will respond reflexively to particularly stimuli, essentially working on auto-pilot or using automatic thoughts (Kahneman’s Fast Thinking or Negative Thinking biases displayed by some individuals). Related to this, some of our behaviors are so exceptionally well entrenched that we can engage in them repeatedly (habits), which essentially reflects a bottom-up approach. When we try to solve problems we often use methods that were successful in the past, with the attitude that if the wheel has already been invented, why should we try to build something new? This axiom has been around for a long time, but it isn’t always a correct perspective (for that matter, I can see somebody, somewhere, having said that if we already have a perfectly useful abacus, why try something new?). Sometimes, we simply need novel approaches to old problems.

These same processes are pertinent to how we appraise and cope with stressors. To a certain extent we are hard-wired to respond to environmental stimuli in a standard manner (fixed action patterns). Young birds, for instance, respond in a stereotypic fashion to a visual image of a hawk moving across their visual field, and animals often respond to warning signals from other animals without having had previous relevant experiences. These automatic responses are essential; an antelope might not get a second chance to discover that a lion running at it is, in fact, a threat. In other cases, factors related to learning (attention, memory) are fundamental in stress processes being established. Essentially, we are equipped with both top-down (experience-dependent) circuits, and those that develop through a bottom-up approach (prewired).

There is considerable evidence that our cognitive functioning, particularly in relation to appraisals of stressors, may be warped by previous experiences. In the preceding sections we saw this repeatedly, but what is particularly noteworthy is that certain appraisals may come to occur in an automatic fashion. For some individuals, depending on their personality attributes and previous experiences, these automatic thoughts involve a negative bias. Thus, for example, when we ask depressed individuals to recall previous experiences, they tend to recall more negative than positive events (Ingram et al., 1995), and also tend to recall a greater number of negative emotional words than those that have a positive valence (Taylor & John, 2004). Essentially, by experiencing and learning about events in a particular way, automatic response sequences (or habits) may be established so that we will appraise these events in a stereotyped negative way when we later encounter them. Unfortunately, habits are hard to break, and getting ourselves out of negative mind sets takes some doing.

**EMOTIONAL RESPONSES**

Just about everyone realizes that positive and negative events will give rise to different emotional responses. The nature of these emotional responses will depend on how an individual appraises an event (conversely, emotional responses can also influence appraisals), and the context in which the event occurs, as well as previous experiences, personality factors, and
motivation. In this brief section we’ll discuss emotions associated with stressful experiences, but I have to admit here that one can hardly do justice to such a complex and fascinating topic in only a few pages, particularly given the vast literature that exists (see for example the work of Damasio, 1999).

A given event might elicit different emotional responses across individuals owing to particular experiences, various developmental factors and other related socialization processes. As well, damage to certain parts of the brain owing to a stroke or lesions may profoundly influence emotionality, ranging from a loss of emotion and affect through to excessive responses to certain types of stimuli. Moreover, just as individuals may differ in their intellectual capacity and social intelligence, there are individual differences concerning emotional intelligence (Salovey & Mayer, 1990). Essentially, emotional intelligence is thought of as an ability that involves multiple skills related to emotional perception and expression, the emotional facilitation of thinking, emotional understanding and emotional regulation, as well as personality characteristics and other traits (e.g., optimism, motivation). Some people are adept in this regard, whereas others seem to express their emotions in odd ways and also seem unable to read the emotions of others. An extreme form of this inability to understand emotions is alexithymia, a trait in which individuals seem to have difficulty in identifying their own feelings, describing their feelings, or understanding the feelings of others, and in fact, they might look to others in emotional situations to see how they ought to react.

**DISTINGUISHING BETWEEN EMOTIONS**

There are subtle differences that exist in emotional responses to stressors and, as seen in Table 2.1, our vocabulary is replete with descriptors that reflect these differences. In addition to these individual emotions, several emotions can also occur concurrently in response to a single event (seeing a certain person can elicit jealousy, hatred, and anger concurrently), and sometimes it’s difficult for us to even understand the emotion that we are feeling. Likewise, a particular event can instigate one emotion in a given context, but a very different one in a second situation. By example, a racial or religious epithet can cause an individual to feel anger when it occurs, but if this occurs in front of others, and the individual thinks that these other people believe the slur, then it might cause feelings of shame. Some emotions differ from one another in ways that might be related to the context in which certain events occur. For instance, fear and angst are very similar, but fear is thought to be directed to a specific stimulus, whereas angst is sometimes thought of as a non-directed emotion. Likewise, shame and embarrassment/humiliation are very similar in that they each occur in response to one’s own socially or professionally unacceptable behavior that comes to the attention or is witnessed by others. Each also involves the loss of honor (dignity). However, whereas embarrassment and humiliation are emotions that occur in front of others, shame can also occur as a result of an unacceptable behavior that only the individual knows about.

The emotions mentioned up until this point have been largely those of a negative nature, but there are also many positive emotions that can alter the way we appraise stressful events: desire, ecstasy, excitement, enthusiasm, euphoria, hope, joy, love, lust, passion, pleasure, pride, trust, and zest are just a few of these. They’re as complicated as the negative emotions,
and obviously appear under different conditions. Sometimes these emotions can combine with those of a negative nature to elicit ‘mixed emotions’ or those that are ‘bittersweet’. Watching adult kids leave home can leave an individual feeling both pride and loss/loneliness, and having a loved one pass after a lengthy illness can similarly result in both relief and sadness. Of particular relevance to the present discussion is that if positive emotions can alter the way we appraise and hence respond to stressful events, then the positive psychology mentioned earlier can potentially be an effective way of precluding the despair and depression that might otherwise be endured in negative situations.

### TABLE 2.1 Negative emotional responses across situations

<table>
<thead>
<tr>
<th>Situation</th>
<th>Emotion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irritating situation</td>
<td>Annoyance</td>
</tr>
<tr>
<td>Traumatic event</td>
<td>Shock, horror, surprise, awe</td>
</tr>
<tr>
<td>Loss</td>
<td>Grief, depression, sorrow, despair, sadness, misery, hopelessness</td>
</tr>
<tr>
<td>Anticipation of adverse events</td>
<td>Fear, anxiety, worry, angst</td>
</tr>
<tr>
<td>Absence of tangible or social stimulation</td>
<td>Boredom, loneliness</td>
</tr>
<tr>
<td>Failure, that occurs in the context of a public forum</td>
<td>Disappointment, embarrassment, humiliation, shame</td>
</tr>
<tr>
<td>Threat directed toward ourselves or at our group</td>
<td>Fear, anger, hostility, rage</td>
</tr>
<tr>
<td>People who have engaged in abhorrent behaviors or wronged us</td>
<td>Contempt, hatred, loathing, disgust</td>
</tr>
<tr>
<td>Our own engagement in untoward behavior</td>
<td>Guilt, regret, remorse, self-shame</td>
</tr>
<tr>
<td>Perceptions of what others have</td>
<td>Jealousy</td>
</tr>
<tr>
<td>Inability to reach a goal</td>
<td>Frustration</td>
</tr>
<tr>
<td>Emotions triggered by the discomfort of others</td>
<td>Empathy, apathy</td>
</tr>
<tr>
<td>Emotions shared by members</td>
<td>Collective guilt, collective shame, collective angst</td>
</tr>
</tbody>
</table>

### STRESS-RELATED EMOTIONS

Clearly, emotions can involve multiple mechanisms, and because more than a single emotion can occur at the same time, they are often difficult to study, certainly in the context of identifying biological correlates of emotions. Further, we often resort to animal studies to analyze the biological responses associated with certain emotions (e.g., fear, anxiety), but there are limitations to what can actually be evaluated in animals (Do mice feel emotions such as shame or guilt, and if they do, how can we tell?). What does seem to be the case is that while there are wide arrays of emotions that emerge under diverse conditions, these all serve several common or interrelated functions. Among other things, they provide us with information about events around us. They also let others know how we’re feeling (unless we can successfully hide our emotions), allowing them to take measures that are corrective (apologize), supportive (sympathy), or defensive (aggressive, indignant). However, there are nuances to these emotions that give us more detailed information than simply ‘things are bad’ or ‘everything seems to be okay’. 

You’re probably aware that there are different types of pain, and they have different meanings and implications (e.g., to a physician). There are sharp pains and dull pains, those that continue or are intermittent, pain that throbs and that which is steady, pain that is localized or that which is widespread or radiates. Likewise, different emotions can tell us about the situation we’re in and whether defensive actions should be taken, and what these actions should comprise. By example, anger is an activating emotion, so that in response to some transgression (e.g., a slur against one’s group), an individual might want to take an angry or aggressive stance toward the perpetrator. Concurrently, that person may feel shame/embarrassment, which is an emotion associated with withdrawal or suppression, and as a result they might be less likely to act on their anger. This decision might potentially save them from the ill-feelings of a group of bystanders who might view aggression as socially unacceptable, although the individual might later experience a period of pervasive rumination about the event and what they should have or could have done differently. Yet it is exactly this experience that provides individuals with critical information, namely that they can’t deal with this issue on their own and that collective action by group members will be needed instead (Matheson & Anisman, 2012).

Just as emotions can influence cognitive processes, cognitions can influence emotions or the way emotions are expressed. For instance, an aggrieved party ordinarily might become aggressive towards the person who angered them. However, the expression of that aggression might be more likely if the potential victim of this aggression was appraised to be smaller and weaker, and less likely when that person looks strong and able. The ‘aggrieved’ person may be angry, but in some instances they seem to have executive control regarding behavioral outputs. We often hear the statement ‘I just lost control’. This might be true in some instances, but it may also be the case that individuals ‘allow’ themselves the luxury of losing control when the opponent is viewed as weaker.

As we’ve already seen, positive or negative moods have a lot to do with how we appraise or interpret events around us. Likewise, being angry or envious will alter appraisals of events related to the person who we are angry with or of whom we are envious. More than that, however, our emotions can alter our general disposition to react in particular ways to unrelated events. There’s nothing very surprising in this, but even though we all seem to know it, it is remarkable how often we ignore this basic bit of knowledge. We’ve all heard of the boss who, when in a bad mood, might pick on an employee, or the parent who, having had a rough day, then takes it out on a partner/child. These individuals can’t seem to compartmentalize their responses, and their mood increases their own stress reactions, giving rise to stress in others, and concurrently they lose potential sources of support that might otherwise have helped them deal with their own distress. Most of us also know that our emotional responses will affect our decision-making ability, particularly if this entails complex and/or stressful aspects. By example, in his (1993) book on negotiating, Getting Past No, Ury offers the sound advice that when stress levels are high and emotions are peaking, it’s best to ‘go to the balcony’ (meaning, remove yourself from the situation and see what’s going on as an observer, rather than being enmeshed in the turmoil). In this way we can see the scene for what it is, unhampered by our emotional responses.

We’ve known for a long time that the limbic portion of the brain plays an integral role in emotional outputs. For instance, fear and anxiety are associated with the central portion of
the amygdala and the extended amygdala (a region referred to as the bed nucleus of the stria terminalis), whereas the ventral tegmentum and nucleus accumbens (midbrain regions that we’ll talk much more about later) seem to be involved in reward/motivational processes. However, these brain regions do not operate in isolation from other regions, but cooperate with one another to produce organized outputs. Connections exist between the prefrontal cortex and the amygdala, so the brain regions involved in decision making (the cingulate cortex, prefrontal cortex) can influence those involved in anxiety (the amygdala). It also seems that some brain regions, such as the nucleus accumbens, may contribute to more than a single type of stimulus, being activated in stressful as well as rewarding situations. Presumably, complex emotions that entail an amalgam of primary emotions involve multiple brain regions interacting with one another.

It might be expected that different emotions may also be tied to diverse peripheral physiological changes. Just as specific events can give rise to different emotional responses, distinct patterns of cardiac and respiratory activity have been associated with fear, anger, sadness and happiness (Rainville et al., 2006). Likewise, the release of the classic stress hormone cortisol occurs preferentially if the stressful event elicits shame (Dickerson & Kemeny, 2004) or anger (Moons et al., 2010), and the immune responses elicited by stressors similarly depend on the specific emotions elicited (Danielson et al., 2011).

COPING WITH STRESSORS

Appraising stressors appropriately is only half the story regarding how stressors can influence well-being. The other half is concerned with how individuals cope with stressors. Some theorists have viewed coping as a style (i.e., a dispositional feature that is relatively stable), whereas others have seen this as a strategy that varies in response to situational factors and varies over time as the stressor and its ramifications unfold (Tennen et al., 2000). There is also a middle ground in which it is supposed that the coping methods used vary as a function of the particular situation encountered, but these methods are guided by the particular coping styles that individuals bring with them to the situation. This hardly seems surprising, but it had at one time been a topic of some debate. In the section that follows we’ll go into a fair bit of detail regarding coping processes, but as we do, keep in mind that coping may stem from the way individuals appraise events, but it also may affect appraisals. We’re dealing with dynamic processes that are subject to feedback and frequent adjustments.

THE STRESS–APPRAISAL–COPING TRIAD

There are numerous coping methods that can be used to deal with stressful experiences. These can be in the order of a couple of hundred actions or behaviors, but they are usually classified into about a dozen different subtypes that fall into two or three general types that comprise problem-focused, emotion-focused, and avoidant strategies (disengagement). There have been other names for these strategies, and other classification systems described, but these categories are probably the most widely used. Emotional coping subsumes multiple strategies (e.g., emotional expression, emotional containment, rumination, self- or other-blame, withdrawal,
AN INTRODUCTION TO STRESS AND HEALTH

It is often thought that when appraisals and coping strategies are ineffective, then the development of pathology might ensue, whereas effective coping will limit such outcomes. If only it were this simple. Trying to analyze the relations between stressful events, coping strategies, and the emergence of pathological states isn’t as straightforward as simply correlating individual coping strategies with particular outcomes. Appraisals and coping strategies not only

COPING THROUGH RELIGION

Religion is potentially a very effective coping strategy, even if it doesn’t (necessarily) have healing powers that some have attributed to it. For religious individuals, it may provide comfort when all else fails. Religion can provide a system of beliefs that allows individuals to find meaning in an experience, and to appraise events as predictable and at the very least ‘under God’s control’. In addition, it often provides a social support network that enables problem-oriented coping, or even emotion-focused strategies that bring about solace and peace of mind.

Marx disparagingly stated that ‘Religion is the sigh of the oppressed creature, the heart of a heartless world, just as it is the spirit of a spiritless situation. It is the opium of the people’. The response to this might be ‘Whatever gets you through the night’ (Lennon, 1974; this should of course be distinguished from the other Lenin), provided, of course, that this is not used as an alternative to potentially more effective coping strategies. Indeed, rather than seeing religion as the opium of the people (masses), it can be argued that among some groups it serves as the SSRI (or the CBT) of the masses.
vary across situations, they also do so with the passage of time (DeLongis & Holtzman, 2005; Tennen et al., 2000) and the subjective construal of the stressor. Added to this, individuals won’t use a single strategy at a time, but may use several strategies concurrently, or flip from one to another as the situation demands, as well as on the basis of the opportunities and resources available.

The specific coping strategies that individuals endorse might serve different functions as a stressor evolves over time. By example, when an individual first learns that they have a potentially fatal illness, one of their first reactions (once the shock has worn off) might be one of seeking support from their relatives (spouse, children) or close friends. The function of this might simply be to use the support as an emotional-coping method. This might be followed soon after by the use of this support group to obtain information (e.g., to find out whether alternative treatment strategies are available). Later still, the support may become one of an instrumental nature (taking the person to treatment sessions, supplying food), and finally, in a worst case scenario, social support may be used to provide social comfort, distraction, and finding peace.

It is often taken as axiomatic that in situations in which the individual has control, problem-focused strategies (e.g., problem solving, cognitive restructuring or positive growth) that are seen to be adaptive will predominate, whereas those strategies that encourage an undue focus on emotions (e.g., rumination, emotional venting, self-blame) are viewed as counterproductive and maladaptive. This simple view is intuitively appealing. Yet it is also a bit simplistic, especially as emotion-focused coping ought to be viewed as comprising either emotion-approach or emotion-avoidant features. In certain situations the latter coping method (e.g., using avoidance/denial) might be an optimum strategy (e.g., when learning that one has a terminal illness). Likewise, although avoidance often works against individuals’ well-being in the long run, it may provide temporary relief from an ongoing stressor, giving someone the opportunity to adopt (or develop) more effective strategies. As well, emotional approach strategies that allow the individual to modify or regulate negative emotional responses can have positive effects in several stressful situations. This coping method can generally be subdivided into emotional processing (e.g., attempts aimed at acknowledging, exploring, and understanding emotional responses to challenges) and emotional expression (reflecting verbal and non-verbal messages concerning the emotions felt). In emotionally-charged situations, emotion-focused coping might be particularly beneficial as it facilitates the individual’s ability to come to terms with their feelings, and in so doing distress may be reduced (Stanton et al., 1994). To be sure, emotional expression without coming to an understanding of these emotions can be disruptive, especially when this coping method involves inappropriate rumination or gives rise to negative affect and appraisals.

Table 2.2 provides a description of several coping strategies that individuals might use in dealing with distressing events. As we’ve seen, any given coping strategy may serve different functions, or operate to facilitate or inhibit other strategies. Despite the frequent discussion of which coping strategies are good and which are bad, keep in mind that individuals do not endorse coping strategies in isolation of one another, and different coping strategies are used concurrently and/or sequentially. Individuals can ruminate and problem solve concurrently,
and they can ruminate and blame at the same time. And in addition to this, they can shift from one strategy to another and then to yet another all within a short time-span.

TABLE 2.2 Coping strategies

**Problem-focused strategies**
- Problem solving: Finding a solution to limit or eliminate the impact or presence of the stressor.
- Cognitive restructuring (positive reframing): Re-assessing the situation or putting a new spin on the situation. This can entail finding a silver lining to a black cloud, e.g., “My kid flunked out of university, but hey, I save on paying his tuition”, through to finding meaning (benefit finding) in adverse experiences.

**Avoidant or disengagement strategies**
- Active distraction: Using active behaviors to distract ourselves from ongoing problems. This can include working out, going to the movies.
- Cognitive distraction: Distracting ourselves through thinking about issues unrelated to the stressor, such as immersing ourselves in our work, or engaging in hobbies.
- Denial/emotional containment: Not thinking about the issue or simply convincing oneself that it’s not particularly serious.
- Humor: Engaging in humor to diminish the stress of a given situation, or simply to put on a brave face.
- Drug use: Aside from the positive feelings that individuals might obtain from using certain drugs, drugs can also serve as a means of dealing with stressors.

**Emotion-focused strategies**
- Emotional expression: Coping with an event through emotions such as crying, anger and even aggressive behaviors.
- Other-blame: Comprises blaming others for adverse events. It can be used in an effort to avoid being the one blamed, or as a way to make sense of some situations.
- Self-blame: This comprises blaming ourselves for the events that occurred. Sometimes, of course, we are guilty and should be blaming ourselves, but there will also be instances where we inappropriately lay the blame at our own feet.
- Rummation: This comprises continued, sometimes unremitting thoughts about an issue or event; these thoughts often entail self-pity, revenge, or replaying the events and the strategies that could have been used to deal with events. Rummation often accompanies depression, and individuals with certain ruminative styles are at increased risk of depressive illness.
- Wishful thinking: This entails thoughts regarding what it would be like if the stressor were gone, or what it was like in happier times when the stressor had not surfaced.
- Passive resignation: This comprises acceptance of a situation as it is. It might be a reflection of helplessness when an individual believes that they have no control over the stressor or their own destiny, or it may simply be one of accepting the future without regret or malice (“it is what it is”).

**Religion**
- Religiosity (internal): Using a belief in God to deal with adverse events. It can represent the simple belief in a better hereafter, a belief that a merciful god will help attenuate the event, and when things don’t work out, falling back onto “God works in mysterious ways.”
- Religiosity (external): Religion may involve a social component where similar-minded people come together (congregate) and serve as supports or buffers for one another to facilitate the individual’s ability to cope with a stressor.

**Social support**
- Social support seeking: Finding people who can help us cope with stressful experiences is one of the most common methods of dealing with stressors. This is especially the case given that social support may serve multiple functions in relation to stressors.
One would think that if a particular strategy proves ineffective in attenuating the impact of a stressor, then it would be advantageous for an alternative strategy to be adopted. Yet, under certain conditions, cognitive functioning may be impaired, limiting the adoption of new responses. In times of distress our repertoire of responses may be narrowed so that only our prepotent (or well-entrenched) responses will be used, whereas other coping methods, as effective as they might potentially be, will fall by the wayside. In still other situations, particularly those that involve a high degree of ambiguity (e.g., ‘Will the biopsy show the tumor to be malignant or benign?’, ‘Can we expect biological terrorism?’), individuals may find themselves uncertain about what to do, and end up taking few coping initiatives on their own. In these instances, a good role model or leader can be especially worthwhile.

So, what differentiates individuals who are good at dealing with stressors from those who are not? As already indicated, how we appraise situations is fundamental in this regard. However, assuming that an appropriate appraisal is made, it seems that those individuals who are adept at using a relatively broad range of coping strategies, and prepared to be flexible in their use (i.e., able to shift from one strategy to another as necessary), may be best suited to deal with stressors. In contrast, stressors will most negatively affect those individuals with a restricted range of coping methods, or rigidity in turning away from ineffective coping strategies. Further to this same point, the functional effectiveness of coping is not simply determined by which strategy is used, but also by how various strategies are used in conjunction with one another (Matheson & Anisman, 2003). As a case in point, although rumination is frequently associated with depressive illness (Nolen-Hoeksema, 1998), it typically occurs together with other coping strategies. In fact, in non-depressed individuals rumination co-occurred with a broad constellation of problem- and emotion-focused strategies, as well as cognitive disengagement (e.g., ‘I’m going through some pretty bad times, but if I talk to the guys at work they might have some ideas about what I can do’). In contrast, among dysthymic patients (those with chronic, low grade depression), rumination was primarily associated with emotion-focused coping, and inversely related to efforts to disengage (e.g., ‘I’m going through some pretty bad times, and it’s because I’m just a failure at everything I do or ever will do; I just want to lie here and never see the world again’) (Kelly et al., 2007). We don’t know what came first; the depression might have preceded the narrowed coping methods, but it is often thought that poor coping favors the emergence of depression. In either event, poor coping seems to involve the use of rumination in conjunction with emotion-focused coping strategies rather than with an array of other strategies.

There is yet another oddity in the way individuals cope or problem solve that varies as function depending on whether they had previously been stressed. When placed in a problem-solving situation, individuals who had not been stressed tended to consciously take the simplest approach to figure out how things worked, and concurrently their hippocampal activity was high (the hippocampus is involved in memory and its activation serves participants well in this problem solving situation). Stressed participants, in contrast, tended to use excessively complex strategies, even if they could not verbally express why they chose the strategy that they did (i.e., it seemed to be a subconscious undertaking). In this instance, brain imaging revealed that the problem-solving effort was accompanied by activation of
the striatum that might be more aligned with unconscious learning. In effect, stressful events may influence the way we deal with situations, moving us away from purposeful, conscious approaches.

THE GOOD FIGHT

For as long as I can remember, there has been this notion that fighting against an illness might increase survival, whereas feelings of helplessness and hopelessness would have the opposite effect. This is epitomized in movies where the doctor says about the star that has just undergone some brutal surgery to remove a bullet or a tumor ‘Well, it’s up to him/her now. But, I think Matt/Marlene is strong and has a will to live’. It’s as if the patient has some control over events (does this also mean that if they were to die, then they’d be to blame?). In fact, feelings of helplessness and hopelessness have been negatively related to five- and ten-year survival following breast cancer treatment (although the strength of the relationship was only moderate). However, there have also been reports that having a ‘fighting spirit’ was unrelated to survival. So, although negative appraisals and mood might lead to poorer outcomes, having a positive spirit and the will to fight simply doesn’t impress or worry cancer cells.

The advice that is commonly given to those who are critically ill is ‘don’t give up’, ‘be strong’, or ‘fight against your illness’, and obituaries make reference to ‘the valiant battle’ or ‘fought bravely to the end’. Most (or maybe only some) of us also know the words from Dylan Thomas’s famous poem: ‘Do not go gentle into that good night, Old age should burn and rage at close of day; Rage, rage against the dying of the light.’ There is certainly much to say for putting up the good fight, and there’s no doubt that social support can help in this regard. Yet in reading Thomas’s poem you might want to note the use of the term ‘good’ in referring to night in the very first line, even though there is the encouragement to ‘rage against the dying of the light’. Perhaps the night can be good, especially when raging against the dying of the light has proven to be useless and the person has suffered a long and painful illness. It is under these conditions that the social support a person receives can serve as a comfort that might help the person let go and die peacefully. In fact, I believe (although there’s obviously no evidence to support this belief) that sometimes a dying person is waiting for their family to allow them to go gentle into that good night.

ASSESSING APPRAISALS AND COPING

Several instruments have been developed to assess the coping styles or strategies that individuals endorse in stressful situations. In general, methods of evaluating appraisals of events are less common than those assessing coping methods. Often, participants are asked to think of an event or are provided with a depiction of an event, and then simply asked how threatening and stressful they perceived that event to be, and how much control they think they had over it. There have also been scales developed to assess stressor appraisals, with one of the most commonly used being the Stress Appraisal Measure (SAM) (Peacock & Wong, 1990). The SAM is thought to measure three aspects of primary appraisals, namely
challenge, threat, and centrality, as well as secondary appraisals comprising resources available to contend with a particular event. This widely-used instrument typically has much to offer, especially when used in conjunction with an analysis of the coping methods used.

Coping methods have been assessed through various scales. One of the earliest measures in this regard was the Ways of Coping Questionnaire (WOC), which assesses the degree to which individuals endorse specific coping strategies in response to a specific stressor that the participant indicates they had recently encountered (Folkman & Lazarus, 1988). This scale comprises eight subscales, six of which assess problem-focused coping, and two which reflect emotion-focused coping. A degree of dissatisfaction with this approach has been expressed (e.g., Endler & Parker, 1994), which has prompted the development of still other scales.

The Coping Response Inventory (CRI) developed by Moos et al. (1990) assesses the individual’s appraisal of a specific stressor and then divides coping into approach and avoidance responses, as well as cognitive and behavioral coping. The Coping Orientation to Problem Experience (COPE) inventory developed by Carver et al. (1989) assesses how individuals generally deal with stressful events. This measure comprises 15 strategies that are typically organized into problem-focused coping (e.g., planning), adaptive emotion-focused coping (e.g., humor), and finally, maladaptive emotion-focused coping (e.g., denial). Similarly, the Coping Inventory for Stressful Situations (CISS) developed by Endler and Parker (1994) assesses the frequency with which individuals endorse particular coping strategies for dealing with stressful events. Finally, Matheson and Anisman (2003) developed the Survey of Coping Profile Endorsement (SCOPE) to assess coping styles and strategies, and subsequently used this scale to measure appraisals of coping effectiveness (see Table 2.3). This questionnaire asks participants how they would cope with stressors in general (coping styles) or in response to specific events (strategies). The SCOPE comprises 14 subscales aligned with those described in Table 2.1.

These coping scales have a fair bit in common with one another: there is overlap in some of the items, dimensions of coping, and when factor analyzed (a statistical method to determine which of several variables link or cluster together to create distinct factors), they all provide either the two- or three-dimensional structure already described (e.g., problem-focused, emotion-focused or avoidant coping). Thus, the choice of instrument an investigator might use depends on the stressor of interest as well as the fit with the researcher’s own theoretical approach to understanding the issues at hand, or with how they wish to use the data. There are also other coping scales available that focus on specific situations or variables (e.g., Quality of Social Support Scale), particular illnesses (e.g., Mental Adjustment to HIV Scale; Mental Adjustment to Cancer Scale), or coping within specific subgroups of individuals.

What follows is a sample version of the most recent rendition of the SCOPE as well as the scoring used for this instrument. If you are curious and decide to assess your own coping methods using this questionnaire, bear in mind that you can’t use this to make diagnoses about yourself (e.g., ‘My profile looks like someone who is very unhappy’). The scores provided in the ensuing section are ‘group’ scores, and comparing yourself to these ‘averaged’ profiles might not mean much. Further, the scale can be used to measure coping ‘styles’ or ‘strategies’ depending on the wording of the question. If the question asks you to respond on the basis of ‘stressful events experienced over the past two weeks’, then
### TABLE 2.3  A coping scale

Survey of Coping Profile Endorsement (SCOPE)

The purpose of this questionnaire is to find out how people deal with more general problems or stresses in their lives. The following are activities that you may have done. After each activity, please indicate the extent to which you would use this as a way of dealing with problems or stresses in recent weeks.

<table>
<thead>
<tr>
<th>Ordinarily, in recent weeks have you:</th>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Often</th>
<th>Almost always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. accepted that there was nothing you could do to change your situation?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2. tried to just take whatever came your way?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. talked with friends or relatives about your problems?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4. tried to do things which you typically enjoy?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5. sought out information that would help you resolve your problems?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6. blamed others for creating your problems or making them worse?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7. sought the advice of others to resolve your problems?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8. blamed yourself for your problems?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9. exercised?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10. fantasized or thought about unreal things [e.g., the perfect revenge, or winning a million dollars] to feel better?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11. been very emotional compared to your usual self?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12. gone over your problem in your mind over and over again?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13. asked others for help?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14. thought about your problem a lot?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15. become involved in recreation or pleasure activities?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>16. worried about your problem a lot?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>17. tried to keep your mind off things that are upsetting you?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>18. tried to distract yourself from your troubles?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>19. avoided thinking about your problems?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>20. made plans to overcome your problems?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>21. told jokes about your situation?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>22. thought a lot about who is responsible for you problem [besides yourself]?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>23. shared humorous stories etc. to cheer yourself and others up?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>24. told yourself that other people have dealt with problems such as yours?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>25. thought a lot about how you have brought your problem on yourself?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>26. decided to wait and see how things turn out?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>27. wished the situation would go away or be over with?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>28. decided that your current problems are a result of your own past actions?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>29. gone shopping?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>30. asserted yourself and taken positive action on problems that are getting you down?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
Ordinarily, in recent weeks have you:

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Often</th>
<th>Almost always</th>
</tr>
</thead>
<tbody>
<tr>
<td>31.</td>
<td>sought reassurance and moral support from others?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>32.</td>
<td>resigned yourself to your problem?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>33.</td>
<td>thought about how your problems have been caused by other people?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>34.</td>
<td>daydreamed about how things may turn out?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>35.</td>
<td>been very emotional in how you react, even to little things?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>36.</td>
<td>decided that you can grow and learn through your problem?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>37.</td>
<td>told yourself that other people have problems like your own?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>38.</td>
<td>wished you were a stronger person or better at dealing with problems?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>39.</td>
<td>looked for how you can learn something out of your bad situation?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>40.</td>
<td>asked for God’s guidance?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>41.</td>
<td>kept your feelings bottled up inside?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>42.</td>
<td>found yourself crying more than usual?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>43.</td>
<td>tried to act as if you were not upset?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>44.</td>
<td>prayed for help?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>45.</td>
<td>gone out?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>46.</td>
<td>held in your feelings?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>47.</td>
<td>tried to act as if you weren’t feeling bad?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>48.</td>
<td>taken steps to overcome your problems?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>49.</td>
<td>made humorous comments or wise cracks?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>50.</td>
<td>told others that you were depressed or emotionally upset?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>51.</td>
<td>distracted yourself with food?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>52.</td>
<td>found comfort in your favorite foods?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>53.</td>
<td>spent time cooking a big meal?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>54.</td>
<td>gone out for food with friends?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

To determine your score, add up the items for each type of coping method and divide by the number of items (questions) in that category. Below you will find the questions that are relevant for each of the coping methods.

Problem solving: 5, 20, 30, 48
Cognitive restructuring: 24, 36, 37, 39
Avoidance: 17, 18, 19
Active distraction: 4, 8, 15, 29, 45
Rumination: 12, 14, 16
Humor: 21, 23, 49
Social support seeking : 3, 7, 13, 31
Emotional expression: 11, 35, 42, 50
Other-blame: 6, 22, 33
Self-blame: 8, 25, 28
Emotional containment: 41, 43, 46, 47
Passive resignation: 1, 2, 26, 32
Religion: 40, 44
Wishful thinking: 10, 27, 34, 38
Eating: 51, 52, 53, 54
you’ll be examining coping style. If, however, the question is framed as asking about coping with a particular event (e.g., a fight with your spouse, an argument with your boss, distress over not getting things completed, etc), then you’ll be looking at coping strategies. If you do each of these assessments, starting with coping styles, and then at later times assess your coping strategies in regard to particular stressors, you might find that your coping methods differ across stressor situations, but there will be some similarity to your coping disposition (style).

**COPING AS A PROFILE OF RESPONSES**

In most studies that involve numerous subtypes of coping, a ‘factor analysis’ is conducted to reduce the number of variables that need to be dealt with as responses to certain questions will often cluster together. Thus, although a given coping inventory might comprise many subscales, the factor analysis might group these into two or three more manageable units. As indicated earlier, emotion-focused coping comprises several coping strategies, such as emotion-based strategies, self- and other-blame, rumination, and so forth, and hence these are essentially pooled to represent a single factor. Likewise, problem-focused coping might comprise problem solving and cognitive restructuring, and these are combined as a single unit for purposes of analysis.

Factor analyzing the data and combining categories may be fine in many situations, but there are occasions where this might not be desirable, and to a certain extent might even be counterproductive. The factor structure evident under one set of conditions (e.g., in a group of individuals who are healthy or non-stressed) might not match up with that evident under certain stressor conditions or among individuals dealing with a particular experience. For instance, in a non-stressed group of individuals, social support may fall into a factor that is aligned with emotion-focused coping. However, in response to a certain illness, it might more comfortably fall into the category of problem solving, as social support would be used in this capacity (e.g., ‘help me find out if there is an alternative treatment strategy available’). Still later, if the illness progresses, social support might fall into an emotion-focused framework. Obviously, across these circumstances social support would appear as part of a different factor (as a source of problem solving or instrumental support vs one that involves emotional support), and hence they would not be statistically comparable to one another.

A second issue concerns the fact that although having a factor structure simplifies analysis, coping processes entail complex interactions that cannot be deduced using simple methods. In fact, creating broad categories that involve multiple coping strategies might not allow for the identification of subtle factors that could distinguish groups from one another. It is ironic, parenthetically, that while social psychologists have focused on reducing the number of variables into broad factors (although some, such as Carver, have made the point that the researcher might feel more comfortable not factor analyzing the data and assessing strategies individually), those involved in the creation of tests and measurements of other characteristics have not done so, and have recognized the value of treating categories distinctly. For instance, an IQ score provides an overall index of intelligence/ability or separate
indices for verbal and performance measures. However, most tests are not limited to these broad categories. Instead, these tests involve multiple categories that allow the identification of more subtle problems that might be present. For instance, Johnny can score comparably across all components of the IQ test, or he might score low in those dealing with language, but high in those that involve creativity. In both instances he might have an average overall IQ score, but these different profiles might have very different implications. Likewise, the profile of coping responses endorsed may provide important clues as to the subtle differences that exist between groups or between individuals, which might otherwise be obfuscated by pooling data across the several strategies that make up a factor.

Figure 2.3 shows the coping strategies adopted in a normative sample of university students. In general, those coping methods that are often considered to be adaptive, including problem solving (PSV), cognitive restructuring (CR), active distraction (ADIS), cognitive distraction (CDIS), and social support seeking (SS), were found to be more highly endorsed than the emotion-focused strategies comprising emotional expression (EE), other-blame (OB), self-blame (SB), emotional containment (EC), passive resignation (PR). An exception to this was that rumination, which is not usually thought of as an effective strategy (but consider the comments made earlier about its conjoint use with other strategies), was also found to be used frequently. For the most part, the coping strategies were comparable

FIGURE 2.3 Coping profiles among university students who exhibited dysphoria (moderate depression), anxiety, both dysphoria and anxiety, or low levels of both.
between men and women, although women tended to exhibit higher levels of cognitive distraction and rumination, as well as social support seeking and emotional expression.

When coping styles were assessed among individuals who differed with respect to depressed mood, the differences in coping profiles were pronounced (Figure 2.3). The Beck Depression Inventory (BDI), a self-report questionnaire that asks individuals about various aspects of their mood, was used to divide participants into groups. Among individuals with some degree of depressive symptoms (a moderate BDI score >9, termed ‘dysphoric’ in the figure), the coping profile could readily be distinguished from those of individuals who were not at all depressed (a low BDI score <4). The dysphoric individuals used less problem-focused coping and social support seeking than individuals with low or mild symptoms of depression. They also used more rumination, emotional expression, other-blame, self-blame, and emotional containment than non-depressed individuals. Evidently, even in the face of mild depressive symptoms (nowhere near clinical levels), some coping methods were very much like those of individuals with higher levels of depression that we had seen in earlier analyses.

As anxiety often appears in conjunction with depression (anxiety is often comorbid with depression), we wondered whether the coping profiles of those with anxiety or dysphoria alone could be distinguished from that evident among individuals with both sets of features. Figure 2.3 shows that the coping profile of individuals in these categories differed from one another in several respects. Specifically, anxious participants displayed problem-focused coping just like that of the controls, whereas those with dysphoria or dysphoria plus anxiety showed much lower problem-solving efforts. A similar pattern was evident with respect to active distraction. However, all three of the symptomatic groups reported greater rumination than that of the controls. Moreover, the degree of emotional expression, other-blame, self-blame, and emotional containment varied as a function of the symptoms presented. Individuals with a combination of anxiety and dysphoria reported higher levels of these coping methods than did those with only one class of symptoms. It seems that the profiles of coping responses effectively distinguished between individuals with different psychological symptoms, which might not have been detected as readily if the coping methods had been grouped into broad categories.

The point of these various examples is that psychological illness, and even mental health characteristics below the clinical threshold, might be accompanied by distinct coping profiles. Using this profile approach may also provide clinicians with information regarding where their focus should lie in helping patients deal with their stressors or illnesses. Specifically, if a clinician believes a patient is not coping well, it might be useful to identify which specific aspects of their coping methods deviate most from the norm, and then focus therapy on these particular aspects of coping as well as on particular appraisals.

**A Twenty-first-century Coping Response**

In response to severe stressors, as in the case of severe depression, food consumption typically declines. However, in response to moderate stressors there are a fair number of people who display increased eating, particularly in the form of junk food rich in carbohydrates (Dallman, 2010). Negative emotions among ‘emotional eaters’ might elicit this outcome owing to particular
hormonal changes (Raspopow et al., 2010). Alternatively, emotional eaters might not accurately recognize bodily sensations when under duress, essentially mistaking arousal for hunger. Yet another view is that distress results in disinhibition which 'allows' for increased eating to occur, and that eating acts as a coping mechanism to alleviate the negative emotions otherwise evoked by stressful events. With respect to the latter view, eating might actually be a way of coping with adverse events (as either a disengagement strategy or in an effort to ‘self medicate’ through increased glucose availability).

Long ago, when human-like critters spent a large portion of their time hunting (a dangerous pastime as the prey could easily become the predator), the increased release of the stress hormone cortisol might have been essential for proper defensive actions, and this cortisol also prompted the consumption of food. This increased consumption was necessary, especially for the strength and endurance to partake in the next hunt, when it would readily be burned off. As my friend and associate Sonia Lupien has indicated, today, when the hunt comprises a visit to the supermarket and stressors consist of sitting on our butts while being stuck in traffic, the cortisol release that leads to eating might turn out to be counterproductive. Therefore eating may be a vestigial response associated with cortisol release, but its value in relation to stressors in Western society (which often comprises eating comfort foods high in calories) is less apparent.

FINDING MEANING AND PERSONAL GROWTH

In some situations, cognitive restructuring may be a particularly effective problem-oriented method of dealing with severe stressors. A common form of this coping method has comprised changes in the meaning and importance of the aversive event. It has been suggested that living through traumatic circumstances may result in two independent processes occurring, namely trying to make sense of the event and finding some benefit from the experience (Davis et al., 1998). For instance, although cancer occurrence can take an enormous physical, psychological, and social toll on individuals, cancer survivors might use their experience as an opportunity to improve their physical and mental health. Indeed, individuals report gaining benefits from living through a cancer experience; they might recognize the positive implications or experience post-traumatic growth following their experience of cancer (Cohen & Numa, 2011; Sherman et al., 2010). Beyond the positive effects of this coping method, it also limits negative post-traumatic stress outcomes and the adverse effects of intrusive thoughts on positive affect, life satisfaction, and spiritual well-being (Park et al., 2010).

Not unexpectedly, the positive effects associated with finding meaning or benefit finding (‘meaning making’ is a related concept that will be treated together with finding meaning and benefit finding) occur in a variety of other venues, such as caregiving for spouses with dementia, family members with cancer, and among parents with severely ill children. The fact is that benefit finding stemming from a severe adverse experience is not at all uncommon. Women treated for breast cancer frequently become engaged in ‘walks’ to support breast cancer research, and other groups have similarly made heroic efforts to raise funds for certain charities (e.g., the Terry Fox Foundation; Rick Hansen’s Man in Motion campaign; the Michael J. Fox Foundation; the Milken Family Foundation).
It is vital to distinguish between two subtle characteristics regarding meaning making, namely those of searching for meaning (‘meaning-making efforts’) and arriving at a meaning (‘meaning made’) (Park, 2010). Perhaps not unexpectedly, simply searching for meaning doesn’t necessarily result in appreciable benefits, whereas finding or arriving at some meaning might. In fact, seeking meaning can in some instances have adverse effects or might be indicative of a persistent preoccupation with an adverse event (Park, 2010). Later, when we deal with methods of stress management, a theme that will be repeated is that there aren’t any treatments that work for everyone. So, too, it seems that finding meaning might be an effective coping method for some individuals but not for others, and it might also vary with the situation that culminated in the severe trauma. It is one thing to find meaning in the death of a loved one that can be ascribed to the negligence of others (e.g., legally taking on an automobile company when death was caused by cars bursting into flames upon a moderate back-end collision), it’s quite another to find meaning from a person tripping over their coffee table, hitting their head, and subsequently dying (although these cases are often chalked up to being ‘God’s will’).

There are several factors that predict which individuals adjust (sometimes referred to as acceptance of the diagnosis and the treatment) to their condition. These comprise the sustained use of proper coping methods, the ability to manage non-illness related stressors, and a belief system that resulted in an altered meaning of the cancer experience. Thus, the well-being of women in this situation would be well served by providing resources to reduce distress, providing effective support systems, which include the opportunity to talk about their experiences, and helping women in reframing their beliefs about the illness. As powerful as finding meaning or post-traumatic growth might be as a coping method, its effectiveness in dealing with some disorders might be better than with others. For instance, post-traumatic growth is a cogent factor in dealing with cancer, cardiac disease, multiple sclerosis, and rheumatoid arthritis, and has been reported to be a prominent coping method among parents dealing with a child with a severe illness. However, the jury is still out regarding the efficacy of this coping method in dealing with HIV/AIDS. As effective as finding meaning might be, it doesn’t cover every situation, nor is it for everyone. Some people simply won’t find any meaning in their illness, which might simply be seen as something that they must endure.

SOCIAL SUPPORT

There has been a vast amount of research concerned with the benefits of social support in dealing with day-to-day stressors and those of a traumatic nature. As indicated earlier, social support has many functions, serving as a shoulder to cry on and a source of information, guidance, instrumental help, reliable alliances, social integration, attachment, reassurance of worth, and an opportunity to provide nurturance. The value of these components of social support varies across situations as the needs of individuals differ under various circumstances, and may also vary over time in relation to a given stressor (e.g., in response to a serious illness).
SOCIAL SUPPORT AS A BUFFER

Social support might not be effective in getting rid of every stressor (e.g., getting the tax department off your back, unless you’re really well connected), but it could serve as a buffer against some of the adverse effects of stressors, thereby preventing the psychological disturbances that might otherwise occur (depression, anxiety; Lakey & Cronin, 2008), improving physical health, and promoting recovery from illness (Carod-Artal & Egido, 2009). For instance, elevated depressive symptoms were highly related to having poor social support, and obtaining social support may limit the development of depression. These studies, which included retrospective and prospective analyses, have involved a wide range of stressful situations and taken in several age groups. Of course, the positive actions of social support may vary with a great number of factors, and so blanket statements concerning the value of social support need to be somewhat tempered.

POSITIVITY AND SOCIAL SUPPORT

There are many physicians and scientists who believe that social support, along with other aspects of ‘positive psychology’, may have great benefits in the healing process, even for some diseases that don’t seem to respond well to drugs (e.g., some types of cancer). There are, however, others who believe that positive psychology and social support are all well and good, but they don’t cure illnesses. The data provide a degree of support for the view that positive outcomes may come about in relation to social support, but are the magnitude of the effects meaningful with respect to illness attenuation? For instance, a 10 or 20% rise in immune functioning may be statistically significant, but does this translate into a greater ability to fight infection or cancer? Regardless of whether it does or doesn’t, social support will lessen the psychological burden of those in distress.

The beneficial effects of social support aren’t new. In the Talmud, which preceded modern psychology by a fair bit, there is the statement that ‘whoever visits the sick takes away 1/60th of their illness’. I don’t know where they got this number, and I suspect that it’s not evidence-based. That aside, this statement doesn’t necessarily mean that you acquire 1/60th of the other person’s illness (although I’ve seen this argument actually made), nor does it mean that a tumor will have shrunk by 1.66% with each visitor. I guess it also doesn’t mean that if 60 people visit you simultaneously, then you’ll be entirely cured. What the statement is intended to mean is that social support lightens the burden (even temporarily) carried by the sick person.

The mechanism through which social support has its positive actions is not fully understood. Support can act as a distraction, or a way of limiting the psychic damage that might otherwise be provoked by stressors, and it also limits many of the stressor-elicited biological changes (hormonal, neurochemical, and immunological) that might have adverse consequences. For instance, social support availability was inversely related to levels of stress
hormones (e.g., cortisol), both in laboratory stress tests and in natural settings (Heinrichs et al., 2003). For instance, women with metastatic breast cancer with a high quality of social support showed lower cortisol levels than those with a lower quality of support. In fact, based on a meta-analyses (see the box below as to what is meant by ‘meta-analysis’) it was concluded that social support diminished the cortisol response elicited by laboratory stressors (Heinrichs et al., 2003). Further, it was reported that in a stress test where psychosocial support resources were available, brain activity changes occurred (comprising right prefrontal cortex activation and diminished amygdala activity) that were associated with appraisal and fear/anxiety processes (Taylor et al., 2008). Further, individuals who had received social support over several days displayed a blunted cortisol response and elevated neuronal activity within the anterior cingulate cortex in response to a social stressor (Eisenberger et al., 2007).

**META-ANALYSIS**

The use of meta-analyses has become increasingly popular to identify the key variables that determine the processes associated with various pathologies and stressor effects. A meta-analysis is a statistical procedure in which the results of many studies already published in peer-reviewed outlets are combined in order to evaluate a particular research question. The aim of this type of analysis is not simply to say that a significant effect was associated with a particular condition or treatment, instead it assesses the effect size in each study (effect size is an index of the strength of associations that exist between two variables) taking into account the number of participants included in that study. Hence it is thought that this sort of analysis provides a more realistic estimate of how variables are related to one another. In some reports, the meta-analysis is also accompanied by a thorough review of the literature, pointing out some of the variables that might not have been included in the primary analysis, and which variables might either mediate or moderate relations that were uncovered by the meta-analysis.

It is likely that actually having support may not count nearly as much as the perception that social support is available. Indeed, when individuals perceived support as being available, their well-being improved irrespective of whether and to what extent the support was actually proffered (Wills & Shinar, 2000). Moreover, it is likely that the quality of the support available, rather than simply having support, may be essential in determining changes in psychological symptoms. In some instances social support groups are particularly effective in buffering stressor effects, especially if members of the group are all encountering similar problems (say a suicide support group, or one that involves the parents of children with particular illnesses). It seems that support coming from someone ‘who understands my pain’ is better than that coming from someone, no matter how well intentioned they might be, who seems less able to ‘put themselves in my shoes’.
SOCIAL SUPPORT IN RELATION TO IDENTITY

The benefits that might be derived from social support depend on the motives and goals of the individuals (or groups) that provide the support, how the recipient of the support perceives and interprets the motives of the supportive individual or group, and the broad context associated with the conditions where the support was offered (Haslam et al., 2012). If the support provider and recipient are both part of the same ingroup (i.e., they share an identity, meaning that they see themselves as being part of the same religion or culture, and in this case it can also mean individuals who share similar problems), then the positive effects of the support in a stressful situation may be more beneficial than those obtained from someone who does not share the same identity (Haslam et al., 2005). Thus, social support that comes from a parent who has a child with a heart problem similar to one experienced by the child of the support recipient might be more valued and effective than support obtained from someone who does not have a sick child. However, there are also cases where support from an outgroup member can be exceptionally well received (e.g., support in relation to a political stance), as this reinforces the idea that ‘my cause is just, and is widely recognized’.

Typically, when the influence of support is assessed, this is considered within the context of the benefits obtained by the support recipient, and not in the context of benefits to the support provider. As we’ll see, for some individuals acting as a support provider (a caregiver) can be meaningful and rewarding, and it seems that charitable giving and working for charitable causes can have a similar impact. Prosocial behaviors, such as the provision of support, have indeed been associated with specific brain activity changes, including increased neuronal activity in the ventral striatum, a brain region involved in reward processes. Evidently, giving support elicits positive outcomes in the support giver, and in some instances diminishes their own distress.

FORGIVENESS AND TRUST

Among the most common stressors experienced are those that entail interpersonal relations. These can take the form of disputes, let-downs, or transgressions between family members, close friends, traditional enemies, authority figures, or between groups of individuals. There are many instances in which a victimized individual or group is asked to forgive (or voluntarily might choose to forgive) the behaviors of the transgressor. Apologies can be offered by one party in the hope that forgiveness can be obtained from the other. In a best-case scenario one individual sees that they were in the wrong and values the relationship, and hence apologizes. The recipient of the apology then views this as sincere, and forgives the other person. It is not uncommon for transgressions within our intimate relationships to be the greatest challenge regarding our ability to forgive. Depending on the severity and chronicity of the conflict (e.g., abuse or partner dissolution or betrayal), such transgressions may engender shame and/or anger, anxiety, depression, and considerable rumination that can be exceedingly damaging, and often these transgressions are hard to forgive. In other instances, the transgression might be perceived as being just too great, the
hurt too strong, and forgiveness is virtually impossible. Of course, there are numerous other factors that might also come into play that could undermine a reconciliation (e.g., ego, trust, self-righteousness, financial concerns).

So who benefits from forgiveness? Both parties, I suppose, but it may be particularly beneficial for the forgiver. The view has often been expressed that forgiveness of interpersonal transgressions might limit the adverse impact of these events on well-being, particularly by limiting the ruminations that go with them (e.g., McCullough, 2000). Essentially, rather than focusing and ruminating on the transgression, by forgiving the transgressor the victim allows themselves the freedom to walk away. Of course, this doesn’t mean that offering forgiveness results in forgetting, but for the moment it allows them to ‘let go’ or ‘move on’. As a result, forgiving someone else for their behaviors might actually be, as is often said, ‘a gift to the forgiver’ (Brown & Phillips, 2005; McCullough et al., 1998).

As difficult as apologies and forgiveness might be to achieve between two individuals, it is often more difficult to achieve a reconciliation between groups. However, there are notable cases in which this has happened. By example, the Australian government, and later the Canadian Government, via their respective prime ministers, apologized to Aboriginal groups for wrongdoings related to the treatment of children who had been forcibly removed from their homes and sent to ‘residential schools’ in order to socialize them. The intent of the apology was to have the Aboriginal people forgive them (and the people of the country) for past wrongs. It seems as if this should have been an easy thing to do, but it took years for this to be enacted (see Chapter 11 for a discussion regarding intergenerational trauma effects).

You might ask what sort of effect this apology could possibly have as it didn’t come from those who committed the atrocities, but from others who were actually far removed from those who were responsible, and sometimes the apology came with considerable reluctance as it might have had implications for reparation for the wrongdoing. Well, if nothing else, it’s a message that says ‘We don’t condone the past egregious behaviors, and we would like better relations with you’. Typically, the response from groups that receive an apology is a positive one, but with caveats attached: ‘We are happy to receive your apology and it means a lot to us. Although, we can’t forget the past, we would like to move forward. Thus, your apology will mean much more if it comes with actions that improve quality of life for our group.’ In effect, the apology serves as vindication for the oppressed group’s experiences, and it might represent a first step for future improvement. There is a down-side to this, of course, as improvements for the aggrieved group may not occur, and they will thus see this as yet another betrayal (and in the meantime, members of the oppressor group may well say ‘Heck, we gave them an apology, now what do they want?’).

Conceptualizations of forgiveness, regardless of the framework from which a researcher comes, share the view that forgiveness influences perceptions of an interpersonal interaction so that negative thoughts, feelings, and behaviors are reduced (McCullough, 2000). It is believed that to a certain extent forgiveness (or the ability to forgive) may be a dispositional characteristic (Ysseldyk et al., 2009), but not unexpectedly, this also varies with specific transgressions. Ultimately, however, forgiveness might act to reduce vengeful and avoidant motivations and increase benevolent feelings or behaviors. In effect, forgiveness should not
be viewed as an end in itself, but might be an act that influences cognitive, behavioral, and affective responses in relation to the transgression.

Although forgiveness is typically associated with positive psychological outcomes, a forgiving response can also have the opposite effect. In the case of an abusive relationship, forgiveness might serve to perpetuate women’s (or men’s) illusion of long-term safety and well-being, and thus reinforce the individual to stay in a clearly unhealthy relationship. For example, forgiveness of a currently abusive partner might act to diminish the perceived severity of the transgression (e.g., ‘Oh, maybe I’m being a bit too sensitive’), which might undermine an individual’s well-being in the long run (e.g., through self-blame, avoidance and social isolation, and continued experiences of abuse). As a result, rather than serving as a buffer against distress, in some situations forgiveness may alter appraisals and coping efforts, culminating in a greater probability of stress-related symptoms evolving.

In order for genuine forgiveness to occur it is essential that the behavior of the protagonist can be trusted. Trust is an essential component not only in interpersonal relationships, but also in intergroup relations, and it is a fundamental component in politics and in commerce. Of course, it is also essential in conflict resolution as forgiveness requires trust that the other person or group will not subsequently repeat their objectionable behavior. When we trust another person we are essentially leaving ourselves uncloaked and unprotected, believing that no harm will come to us.

Not surprisingly, just as trust might make for good relationships, a breach of trust may have exceptionally stressful and damaging effects. We see this frequently in cases of separation/divorce where an individual may feel that ‘I trusted you, and you have gone and severed this trust in the worst possible way’. Obviously, this would be most evident if there was a third party involved. This type of situation, predictably, might be accompanied by rumination, and in particular, thoughts concerning retribution (which is the saintly way of saying revenge). As indicated earlier, however, this might be the worst possible way of coping. Rumination can have some positive attributes when it’s used in combination with problem solving or cognitive restructuring. However, in the case of rumination associated with divorce/separation, the cognitive restructuring that will be evident (if indeed it is) will likely be focused on less productive issues. Revenge can be satisfying, but only transiently, particularly as it may cause the other side to escalate the battle. At the very least, it becomes a vicious circle wherein the individual ruminates more, thinks about all the wrong things, and even becomes obsessed with the idea. Sometimes it’s best to just walk away, have this person out of your life, and to do so quickly and efficiently. Of course, there are occasions when the other side is unreasonable (e.g., on financial issues) and you don’t want to be pushed around and have someone take advantage of you, especially when you believe that the circumstances that led to the split are not your doing. In this instance, you might have good cause to stand your ground, but at the same time you ought to appraise the down-side of the battle that will evolve, and consider how far you want to take it, before making your next move. In a game of chess lots of pawns die, and there may be sacrifices.

Trust comes into our lives in various ways, and trust in the workplace (in this case, trust in the organization and trusting other employees) influences our well-being and our satisfaction with the organization. Investigators often view ‘trustworthiness’ as reflecting the
benevolence, integrity, and ability of a trustee (person or organization), and ‘trust’ as already described as comprising an intention or willingness to accept (or allow oneself) to become vulnerable with the expectation that the trustee will behave appropriately. It seems that trust has much to do with job satisfaction: Helliwell et al. (2009) indicated that one unit of trust (on a 10-point scale) has an effect on well-being that is comparable to a 30% salary increase. In effect, if you offer people the equivalent of an extra 20% of their salary (i.e., some amount less than 30%) or the opportunity to work in a trusting environment, they would likely pick the latter. To be sure, within many settings trust also needs to be accompanied by several related factors, including integrity, loyalty, consistency, and openness. And added to this, whether it’s close interpersonal relationships, workplace situations, or intergroup conflicts, an essential factor concerns the view that individuals often think that talk is cheap: their trust will be dependent not on what is said, but on what is done.

UN SUPPORTIVE INTERACTIONS

Social support can go a long way in helping individuals deal with stressors, and this appears to be especially true in regard to illness. One not only sees the influence of social support in relation to psychological illness, such as depression, but also in relation to adjusting to neurological illnesses, such as Huntington’s disease, motor neuron disease, multiple sclerosis and Parkinson’s disease. Support can come from different sources, and social support from family members may have particularly pronounced positive effects on chronic illness outcomes, especially when family cohesion is high and there is an emphasis on self-reliance and personal achievement. In contrast, negative patient outcomes were tied to critical, overprotective, controlling, and distracting family responses to illness management.

Social support is unquestionably positive for our well-being, yet there may also be a downside to receiving support. Among other things, receiving support could negatively influence self-esteem, as it might result in the individual feeling less competent in contending with the situation without assistance. In addition, individuals might feel indebted to the support provider, which may serve as an additional stressor for an already stressed individual. Finally, attempts to obtain social support may sometimes promote ineffective responses from others, or may cause inaccurate advice to be obtained as the other person might simply not have the ‘right’ answer.

This brings us to yet another potential risk related to social support; specifically, we often approach others for support, usually with a reasonable expectation that that support will be forthcoming. Typically, our friends listen and offer their support. There will be times, however, when that support isn’t offered, or comments are made that are not quite in line with our expectations. Such experiences, referred to as ‘unsupportive relations’ or ‘unsupportive interactions’, might take us by surprise, and in some instances may have marked negative repercussions (Ingram et al., 2001) that far exceed those of simply not having support. Clearly, being unsupported is not the same as having a lack of support, and the ramifications can be pertinent to the evolution of pathological outcomes. Unsupportive responses may come in several forms, including minimizing (e.g., ‘felt that I was overreacting’), blame (e.g., ‘I told you so’), bumbling (e.g., ‘did not seem to know what to say, or seemed afraid of saying..."
or doing the wrong thing’, as well as forced optimism) or distancing or disconnecting (e.g., ‘did not seem to want to hear about it’).

**SITTING ON THE FENCE**

There are times when individuals might expect support, even if they don’t explicitly seek it. When victims of discrimination, threats of genocide, or of harsh treatment by their government do not receive support from others (as we’ve seen often), then the behavior of other countries and people might be viewed as an instance of an unsupportive relationship, and the effects on later relationships can be very disturbing: ‘In the end we will remember not the words of our enemies, but the silence of our friends’ (Martin Luther King; Nobel Laureate, 1964) and ‘... to remain silent and indifferent is the greatest sin of all’ (Elie Wiesel; Nobel Laureate, 1986).

This said, there are times when others might intervene, without sufficient understanding or knowledge, basing their behaviors on instinctive gut responses, media manipulation, well-orchestrated political campaigns, or simply in taking the side of the perceived underdog. With respect to international and national politics, ideologies become confused with realities, and discerning what is true and what reflects bias becomes exceedingly difficult. Decisions that are made in this regard likely follow the heuristics described by Kahneman and Tversky as opposed to well thought-out, reasoned decisions.

There are times when our friends fail to support us properly, but there are also times when we misinterpret what can be done or we have warped expectations concerning what our friends ought to do. For instance, some progressive, chronic illnesses can be devastating emotionally and financially, but social support might not be as forthcoming as it might be when a person has been diagnosed with cancer. Friends might not rally around as readily when a person is diagnosed with MS or lupus, and certainly not if it’s a mental condition. Moreover, even if they do, there’s a time-stamp on this behavior as people are able or willing to provide support for only so long before they tire or need to get on with their own lives. Unfortunately, the ill person might see this withdrawal of support as a betrayal or unsupported (‘you know who your friends are when the chips are down’), which can exacerbate the depression that might be associated with illness.

Connected to unsupport is the premise that support was expected, but wasn’t obtained (or did not reach the level that was expected). Of course, there are some people who are entirely unreasonable and have expectations of others that simply can’t be met. There are also those who demand loyalty to an extent that supporting them fully would be contrary to anything reasonable. In most cases, however, the support expected is not unreasonable, and often the support is sought from those to whom we are closest. Thus, when your best friend forever (BFF), partner, parent, or sib doesn’t come through as expected, it’s particularly distressing, and adds to the distress you were dealing with in the first place. Think of a time when you counted on your two best friends to help you out, but both had more important commitments,
or said things that were just plain thoughtless (‘well, you know, there are two sides to every story’), or worse still, blamed you for the situation you found yourself in (‘well, maybe you brought it on yourself’). How long was it before you spoke to them again?

Unsupportive interactions have been linked to reduced psychological well-being, over and above the perceived unavailability of social support, or the effects of the stressor experience itself (Ingram et al., 2001; Song & Ingram, 2002). We’ve all heard of cases where family members distance themselves from one of their own who has been diagnosed with HIV/AIDS. The stigma of this illness is enormous and having family members turn on an individual is obviously counterproductive for the patient. But the unsupport might even come from those who are close to the affected person simply because they may feel uncertain about how to act and what to say due to a lack of experience. As a result, and despite good intentions, responses can be interpreted as unsupportive, causing further distress in those individuals living with the disease, thus exacerbating depressive symptoms and poor emotional well-being. Remarkably, the stigma associated with HIV/AIDS is so profound that even children who contracted the disease prenatally or through transfusions are victimized by unsupport. Specifically, although the families of children with HIV/AIDS and those with cancer exhibited comparable family functioning and both groups tended to seek support from family members, the parents of children with HIV/AIDS were more reluctant to seek support from outside the family. Once more, HIV/AIDS has a stigma attached to it that affects whole families regardless of how or in whom the disease appeared, and thus the benefits of support might not be sought or ever obtained.

Yet another example of how unsupport affects outcomes derives from work with young women who end up in abusive dating relationships. Dating abuse is not an uncommon circumstance, as more than 20% of college women are subjected to physical abuse and the number is still greater for psychological abuse (however, I would remind you, before you start becoming unsupportive of all males, that the incidents of abuse perpetrated by women against men are just as high). The problems for abused women may be compounded by other unsupportive relations that develop. Specifically, when abused women disclose information regarding their situation, family and friends may become frustrated and react negatively when their advice is not accepted, especially if the victim of abuse refuses to terminate the relationship. Predictably, these women may feel that they can no longer rely on their social network for support or advice, and will stop confiding in them, thus further isolating themselves. With no one to turn to, their partner may become their sole source of support, despite the abuse (reminiscent of the child who turns to the abusive parent for support and protection).

In addition to direct effects on well-being, unsupportive relationships may undermine the use of other coping methods. In this regard, among HIV patients, perceived distancing and the disinterested responses of others predicted greater use of ineffective coping strategies, such as disengagement and denial, which in turn was associated with greater mood disturbance. Likewise, among bereaved respondents, unsupportive interactions with members of their social network were associated with diminished coping efforts and reduced perceived effectiveness of the coping strategies that were used. The net result of these unsupportive experiences is that individuals might become reluctant to seek support, and may limit or re-orient their help-seeking behaviors in an ineffective fashion. Rather than seeking help from friends or family, individuals might turn to anonymous sources.
of support (e.g., internet chat groups) where judgments are not tied to the individual’s sense of self-worth (i.e., rejection from an anonymous stranger may be less distressing than rejection by a close other).

One final comment is in order before closing off this section. Unsupport is particularly notable in the elderly, and especially among those with severe neurological problems, such as Alzheimer’s Disease, Parkinson’s, and stroke. In fact, there have been many reports of the elderly being subjected to abuse as a result of frustrations experienced by caregivers. A new position statement by the American Academy of Neurology has, in fact, called on clinical neurologists to screen patients for abusive experiences. We may as well be upfront about this. Not all caregivers are meant to do this sort of sensitive work and their frustrations might emerge inappropriately. Of course, abuse is manifested in many contexts beyond elder abuse, and when patients show up for neurological testing, it is wise to assess whether these problems are secondary to some sort of abuse, as not doing so might leave the patient open to still greater problems.

**TAKING ADVANTAGE OF A FRIEND**

There is a cute and interesting laboratory manipulation that has been conducted to see how individuals might (or not) deal with decisions that involve unfairness, and represent an unsupportive interaction. The ‘ultimatum game’ (or a slight variant called the ‘dictator game’) is one in which a sum of money is offered to two individuals provided that they can come to an agreement on how to split the booty. If the proposer makes an offer that is accepted then they both win, but if the proposal is not accepted then they both lose. Typically, if the offer is an unfair one (say an 80:20 split), then the second person will reject the offer. It can be imagined that if the total prize were $100 the individual offered $20 would simply say, ‘Screw this. I’d rather lose the $20 than be suckered’. But what if the total prize were $100,000, would they be as likely to walk away from $20,000?

In this paradigm the unfair offer is coupled with a neurophysiological profile in which electrical activity in the medial frontal region becomes very negative (Boksem & De Cremer, 2010). However, if the unfair offer comes from a friend, then it’s less likely that it will be rejected, and the negative activity within the frontal cortex is not apparent, possibly owing to activation evident in other regions, such as in the anterior prefrontal cortex (Campanha et al., 2011). Apparently, we respond more positively to unfair offers from friends than from strangers. Frankly, I’m a bit surprised by the results. I would have thought that when one is taken advantage of by a friend the emotional and negative cognitive responses would be that much greater than when this knife in the back came from a stranger. However, events in a laboratory might not mean the same thing to an individual relative to the betrayals that occur in real life.

**SOCIAL REJECTION**

A particularly potent stressor that social beings, like us, might encounter is one that entails social rejection. Groups of individuals can be rejected, as seen in cases of discrimination
related to gender, sexual orientation, race, or religion. Rejection can occur at a group or personal level. Social rejection is, in fact, fairly common as in the case of stigmatization and discrimination against those with mental disorders, or those with illnesses such as AIDS. Social rejection can also occur in the absence of these factors, occurring either because the individual is somewhat different from the rest of their ingroup or is viewed as being an embarrassment to the group. This is often referred to as the ‘black sheep effect’, where members of the ingroup don’t want their group’s identity tarnished by a particular individual. When group members feel that they are a unified social entity (entitativity), outliers from the group who negatively represent them are denigrated in order to preserve the good standing of the group as a whole (Lewis & Sherman, 2010). Predictably, the stronger the ingroup cohesion (ingroup identification), the more likely a deviant member would be viewed as being atypical and hence rejected. In fact, individuals will derogate an unfavorable group member to a greater extent than they would an unsavory outgroup member. This could be a means of protecting the group, but it is equally possible that this differential derogation is an individual protection strategy as it serves to limit the threat of being associatively miscast (‘He’s not one of us, and I’m not like him at all’) (Eidelman & Biernat, 2003).

Some adolescents will know the feeling of having their two best friends turn on them or simply ignore them, leaving them out of social events and generally feeling diminished by them. In general, unsupportive relationships, especially those that involve targeted rejection, can be especially damaging, and have been linked to an exacerbation of depressive feelings. No matter the age, the impact of social rejection can be intense and undermine individuals’ abilities to contend with ongoing stressors, just as unsupportive responses act in this capacity. You’d think that on-line social exclusion might not be as bad as it is when it occurs in a real social setting, but it is actually hurtful, even if you don’t know the people who are excluding you. However, when excluded from an on-line forum, it might be a bit easier to say to yourself ‘It’s not me, they have a problem’, and hence your self-esteem might not be as drastically affected as it may otherwise be. Then again, think about being excluded as a ‘friend’ on your erstwhile friend’s Facebook page, especially when everybody under the sun is included. It’s already happening that a slap to the face now occurs in the form of being ‘defriended’.

Our fear of social rejection is in itself a very powerful negative emotion that may be linked to elevations of the stress hormone cortisol, and if this fear is sufficiently persistent, the overall biological profile that is observed is not unlike that characteristic of other chronic stressors and those that accompany PTSD. Essentially, fear of social rejection reflects a trait that is accompanied by chronic distress, leading to an adaptation to limit the excessive physiological activation that might culminate in allostatic overload.

Given the powerful actions of social rejection on psychological well-being, there have been several paradigms developed to assess this in a laboratory context. One increasingly popular approach to studying this is a computer game, referred to as cyberball, in which a virtual ball is tossed between three characters (Blackhart et al., 2007). One of the icons is controlled by the participant, and the others are presumed to be controlled by other individuals. Initially, the ball is tossed evenly between the players, but shortly afterward, it is passed between the other two virtual participants and the actual participant is excluded.
This has the effect of eliciting negative ruminative thoughts, an altered mood, hostility, and elevated cortisol levels. In addition to these behavioral and hormonal effects, social rejection in the cyberball paradigm markedly influences the brain processes associated with appraisals and decision making as well as with depressed mood. In particular, following rejection the self-reported distress was accompanied by increased activity (as measured by functional magnetic resonance imaging (fMRI)) in the dorsal anterior cingulate cortex, although this outcome was diminished among individuals who had experienced rich social support in the days prior to testing. Not unexpectedly, the effects of rejection on brain processes were marked in adolescents, especially in those with a higher rejection sensitivity who might be most vigilant regarding peer acceptance.

What makes these findings particularly interesting is that the very same brain activation profile has also been seen in studies assessing the effects of physical pain (Eisenberger et al., 2003). Given this similarity it was suggested that the anterior cingulate cortex is fundamental in the neural circuitry that supports physical and social pain, and may be part of a broader ‘neural alarm system’ (Eisenberger & Lieberman, 2004). Similar effects were observed in adolescents, and in this instance rejection was also accompanied by decreased neuronal activity in the ventral striatum (a region associated with reward processes), suggesting that the rewarding experience that could accompany a game with others had lost its luster. Moreover, these brain changes were most prominent in those individuals who were especially sensitive to rejection (Masten et al., 2009). Furthermore, the way in which an adolescent’s anterior cingulate cortex responded to social rejection was predictive of their disposition toward later depression (Masten et al., 2011). In particular, those who showed the greatest changes of the anterior cingulate cortex activity in response to social rejection in an online social interaction subsequently showed the greatest depressive behaviors (as judged by parents) over the ensuing year. Thus, this index of social exclusion might be a marker for future depression. It is of particular significance in this regard that social support during adolescence, reflected by the time spent with friends, can serve to diminish the brain changes associated with peer rejection even when measured in the ball-tossing game two years later. In effect, reactions in a social rejection test might be a marker for later mood disturbances that accompany social interactions.

In an effort to provide a comprehensive perspective of how social rejection comes to promote depression, Slavich, O’Donovan et al. (2010) incorporated emotional, cognitive and psychobiological factors in an interesting manner. Essentially, it was suggested that social rejection may result in the activation of neurons within brain regions (e.g., the dorsal anterior cingulate cortex) involved in the processing of information related to negative events and reflection-based distress. These experiences give rise to negative self-referential cognitions (‘people just don’t like me’) and emotions that are related to these feelings, especially shame and humiliation. This, in turn, would activate brain regions that are involved in regulating mood, and may affect certain aspects of the immune system (inducing inflammatory effects) that might also contribute to depressive-like states.

Aside from the informative nature of these studies with social rejection, what struck me was that the observed emotional responses and the changes of brain activity occurred even in a relatively contrived laboratory situation, where a virtual ball was being tossed around. How much stronger would the brain react to social rejection in a genuine life context that
involves friends or family? As King Lear said, ‘Turn all her mother’s pains and benefits to laughter and contempt; that she may feel how sharper than a serpent’s tooth it is to have a thankless child!’

CONCLUSION

Adverse events, especially those that occurred during critical periods early in life or possibly during adolescence, result in increased vulnerability to later stressor induced pathology. However, some individuals are able to emerge less scathed than others even in the face of the most traumatic events. It is possible that this occurs owing to an inherent biological resilience, the availability of effective coping resources, a sense of mastery, or other psychosocial factors. In fact, stressful events in some cases may imbed individuals with greater resilience (e.g., by putting them in a situation that favors finding meaning or personal growth). Individuals may have learned from adverse experiences that with appropriate behaviors and coping methods it is possible to transcend current strife (Seery, 2011), indeed there might be something to the tiresome cliche ‘that which doesn’t kill you makes you stronger’. From a practical research perspective, knowing which behavioral or biological factors distinguish those who succumb to illness in the face of severe trauma and those who do not might prove exceptionally valuable in defining strategies to immunize or treat individuals so that traumatic events do not have the severe repercussions that might otherwise occur.

It seems that appraisals of events and how we cope with them can be influenced by prior stressful experiences as well as our current affective state. There are some individuals who tend to put a negative spin on events, so that others often perceive them as being a negative or pessimistic person (they, in contrast, would say that they are not pessimists, they’re realists). Likewise, the coping strategies they typically endorse are stereotypical (fixed), even when the situation might call for a different approach. Breaking well-entrenched behavioral styles (habits) is exceedingly difficult (e.g., emotional rumination in response to stressors), but there are times when these coping methods are entirely inappropriate and hence ineffective. In contrast, an effective way of dealing with stressors is to be flexible in using particular coping strategies, and to recognize that this flexibility needs to be maintained over time and across situations. That sounds like good advice, but it doesn’t tell you how to do it, and might be about as helpful as advising me to become taller if I want to play in the NBA. However, when we come to Chapter 12 (dealing with treatment and intervention strategies) we’ll discuss ways that might help individuals adopt a more flexible pattern of responses to the challenges they encounter.

SUMMARY

- How we appraise stressors may influence the way in which we cope with them.
- Appraisals of events can influence our decision-making process that also feeds into our choice of coping methods, although individuals often behave in irrational ways, appraise events inappropriately, and make poor decisions.
• It isn’t that the coping methods adopted aren’t inherently good or bad, it is instead that the effectiveness of particularly coping strategies is likely situation-dependent.

• Several coping methods can be used concurrently, and the array of coping strategies used can determine their usefulness. In addition, in dealing with stressors it is important to maintain flexibility so that various strategies are available as needed.

• Social support is often one of our most potent coping strategies, but expected support that does not materialize, or is viewed as less than ideal, may be interpreted as unsupportive, and can thus have very negative repercussions.