14

Individual Differences
in Attitude Change

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The term *individual differences* refers to how people differ with respect to a wide variety of factors such as personality, motives, and abilities. Conceptualizations of individual differences in human temperament can be traced from the ancient typologies of Hippocrates and Galen to the somatotypes of Kretschmer and Sheldon, the work of Galton on mental testing and Binet on intelligence, to the most contemporary multitrait personality inventories, such as the Big Five (Costa & McCrae, 1985; Digman, 1990). Individual differences can emerge from a large variety of heritable and non-heritable sources, and some of the innumerable ways in which individuals differ may be more adaptive than others (see Buss & Greiling, 1999, for a review).

Individual differences contribute to explaining phenomena ranging from historical revolutions to scientific innovation and progress (Sulloway, 1996). For example, why, when faced with the same biological evidence that caused Darwin to accept evolution, did his closest colleagues refuse to abandon their creationist convictions? In part, this refusal may be because some people are predisposed to resist any radical innovation, whereas others tend to challenge any conviction and come up with revolutionary ideas. In this chapter, we examine how individual differences can influence attitudes and attitude change.

We organize our review of social psychology's leading individual difference constructs around four major motives that govern human thought and action. We focus on motives because of their pivotal role in determining social behavior, and because motivational ideas have profoundly influenced the study of attitudes and persuasion. Nevertheless, we will also cover some prominent nonmotivational individual differences, as well.

The general motives used to organize our review are: (a) knowledge, (b) consistency, (c) self-worth, and (d) social approval. Briefly described, the need to know refers to the desire to possess knowledge about and understanding of the social world. Knowledge gives people predictability and control over their social environments, allows individuals to adapt their behavior toward ways that provide pleasure and avoid pain, and provides a sense of individual freedom and competence (Brehm, 1966; Maslow, 1962; Murray, 1955). Second, the internal coherence or consistency of the explanatory system is a key aspect of understanding the world. Part of making sense of things is that perceptions and beliefs hang together without

575

contradiction. The need for consistency leads people to avoid dissonance within or between the affective, cognitive, and behavioral components of the psychological system. Third, developing and maintaining positive self-perceptions is another fundamental human activity (Allport, 1955; James, 1890; Maslow, 1943; Tesser, 1988). Positive self-regard is a sign of social acceptance and liking (Leary, Tambor, Terdal, & Downs, 1995), and is essential for achieving happiness and mental health (e.g., Taylor & Brown, 1988), and for coping with the stresses of life (Steele, 1988). The fourth human motive highlighted in this chapter is the need for social inclusion and approval. Affiliation with others can provide a sense of self-worth, and inclusion in a group can provide a desired social status or power (Deci, 1995; Guisinger & Blatt, 1994).

These four motives are widely used in the literatures on the self, identity, personality, human motivation, and social cognition (Baumeister, 1998; Dunning, 1999; Epstein, 2003; Kruglanski, 1996; see also Prislin & Wood, chap. 16, this volume). The precise distinctions among the motives are, of course, somewhat arbitrary and overlapping, but they capture much of the current motivational thinking in social psychology (see also Fiske, 2004). They have the advantage of being broad, basic, and more fundamental to the nature of human desire than particular specific motives that are the result of relatively specific situations. For that reason, the four major motives can be linked to a number of more specific individual differences that have been shown to be relevant to attitudes and attitude change.

Of course, the extent to which these motives are chronically or temporarily activated can vary not only from individual to individual, but can also vary within the same individual from situation to situation. However, this chapter examines individual rather than situational differences in motives. It is worth noting that in addition to these four motives, other motives are surely relevant for understanding attitudes that have not been captured as individual differences. For example, terror management theory–dealing with fear of one's own death–has important implications for understanding people's desires to protect and defend their cultural world views (i.e., value laden attitudes), but, death anxiety has not been assessed as an individual difference (Pyszczynski et al., 1997).

Although some authors have studied the relationship of the four key motives to each other in order to establish a hierarchy among them (Sedikides, 1993), in attitude change situations, we suspect that any of the motives can be supreme depending on a number of individual and situational factors. In addition, any one motive can sometimes be subsumed by another. For example, the consistency motive could be seen as stemming from the knowledge motive because people may want to keep their explanatory system without contradictions in order to better understand and predict the world. Alternatively, the consistency motive could be incorporated into the self-worth motive because people may want to be coherent in order to feel good about themselves. Or, they may want to be consistent in order to be accepted by others. As these examples illustrate, the motive of consistency could possibly be subsumed into any of the other three human needs. But, the motives can also operate independently. For example, one could argue that a true need to know requires accepting the fact of ambivalence rather than consistency. Furthermore, the motives sometimes act in opposite ways allowing them to balance each other (Epstein, 2003). For example, although the need for self-worth could motivate people to seek self-enhancing information from others, the need for inclusion exerts pressure against such norm-violating behavior.

In this chapter, the four motives are used mostly as a practical way to organize the ever growing number and variety of specific individual differences relevant to attitudes and attitude change. Thus, the many possible interdependences among the motives are not problematic. The main function of our organizing structure is to facilitate access to the diversity of individual differences that have been examined. By using this motivational framework to organize the chapter, we do not imply that a particular individual difference was originally designed to

assess a specific motive. In fact, due to the overlap among the motives, some of the individual differences described under one motive could plausibly be discussed under a different motive. For example, the Need for Closure (Webster & Kruglanski, 1994) is discussed under the knowledge motive, but it could plausibly fit under the need for consistency.

The focus of our analysis is on examining the impact of individual differences on attitude change (i.e., when an evaluation moves from one position to another, such as going from slightly favorable to very favorable) and attitude strength (i.e., how impactful and durable the attitudes are). We do not focus on how individual differences may determine the particular attitudinal positions that individuals hold. For example, Jost, Glaser, Kruglanski, and Sulloway (2003) have argued that people adopt conservative ideologies in an effort to satisfy their motives. In particular, they postulated that conservatism is partially determined by a variety of individual differences related to the motives of knowledge and consistency. Similar approaches can be found in the literature on sensation seeking predicting particular attitudes toward drugs and protective behaviors (Hoyle, Stephenson, Palmgreen, Lorch, & Donohew, 2002). In this chapter, rather than focusing on the study of specific attitudinal positions (or sets of related attitudes or ideologies), we examine the role of individual differences in affecting the psychological processes relevant to attitude change and strength.

The chapter is divided into four sections. We describe: (a) the core motives and the key psychological processes underlying attitude strength and change, (b) the relationship between motives and attitude change processes and their implications for attitude strength, (c) individual differences regarding preferences between motives, and (d) some remaining issues regarding individual differences and attitudes.

MOTIVES AND FUNDAMENTAL PROCESSES LEADING TO ATTITUDE CHANGE

We have already briefly described the four general human motives that serve as the organizing framework for the individual differences relevant to attitudes and persuasion. Table 14.1 summarizes the particular individual difference variables that we have grouped under the more general motives. Before turning to the specific research on individual differences, however, it is useful to consider the particular psychological processes through which individual differences in human motives are likely to influence attitude change. In Table 14.2, we have summarized the key processes along with the key motives. As implied by the matrix, our conceptual position is that each of the core motives can influence attitudes by one or more of the core processes underlying attitude change.

Au: Pls. check Table 2 or Table 14.2

In specifying the underlying processes of attitude change, we rely on the mechanisms outlined in the elaboration likelihood model of persuasion (ELM) (Petty & Cacioppo, 1986; Petty, Priester, & Briñol, 2002; Petty & Wegener, 1999). The ELM outlines several distinct ways in which variables can have an impact on attitudes at different points along an elaboration continuum ranging from little or no thought about the information presented to complete and extensive thought about the information. Each of the four major motives described above can influence attitudes by affecting one or more of the underlying processes by which variables induce persuasion: (a) affecting the *amount* of issue-relevant thinking that occurs, (b) producing a *bias* to the thoughts that come to mind, (c) affecting structural properties of the thoughts, (d) serving as persuasive evidence or arguments, and (e) serving as simple cues to change in the absence of much thinking. Obviously, there are many persuasion theories that might have been used as an organizing framework (e.g., cognitive dissonance theory, Festinger, 1957; the heuristic-systematic model (HSM), Chaiken, Liberman, & Eagly, 1989), but we rely on the ELM mainly because it has guided numerous studies of individual differences and is

TABLE 14.1
Individual Differences Related to Four General Human Motives and Preferences Among Them

(1) Knowledge	Need for cognition (Cacioppo & Petty, 1982); Need to evaluate (Jarvis & Petty, 1996); Need for closure (Webster & Kruglanski, 1984); Causal uncertainty (Weary & Edwards, 1994) Self-awareness (Carver & Scheier, 1981)
(2) Consistency	Authoritarianism (Altemeyer, 1981); Dogmatism (Rokeach, 1954); Preference for consistency (Cialdini et al., 1995); Resistance to persuasion (Briñol et al., 2004); Bolster and counterargue (Briñol et al., 2004); Defensive Confidence (Albarracín & Mitchell, 2002); Argumentativeness (Infante & Rancer, 1982); Implicit theories of change (Dweck, Chiu, & Hong, 1995)
(3) Self-worth	Self-esteem (Rosenberg, 1979); Optimism (Scheier, Carver, & Bridges, 1994); Self-doubt (Oleson, Poehlmann, Yost, Lynch, & Arkin, 2000)
(4) Social Approval	Need for uniqueness (Snyder & Fromkin, 1977); Individualism-collectivism (Triandis, McCusker, & Hui, 1990); Field dependence (Witkin et al., 1954); Machiavellianism (Christie & Geis, 1970); Individual differences in disposition toward minority groups and identity (e.g., social dominance orientation, Pratto et al., 1994); Individual differences in the motivation to control for prejudice (e.g., internal and external motivation to respond without prejudice, Plant & Devine, 1998)
Preferences Between Motives	Self-Monitoring (Snyder, 1974); Uncertainty Orientation (Sorrentino & Short, 1986)

comprehensive in outlining the multiple processes by which variables–including individual differences–might impact persuasion. We outline these processes next.

Amount of Thinking

First, a certain motive can influence attitudes by influencing the amount of thinking in which people engage when making a social judgment. This effect on extent of information processing is likely to occur when the likelihood of thinking is not constrained to be high or low by other variables (e.g., neither high nor low amounts of external distraction) and thus thinking is free to vary (i.e., become greater or lesser). Importantly, an attitude formed based on effortful issue-relevant information processing will be well articulated and bolstered by supporting information, and as a consequence it should be strong (Petty, Haugtvedt, & Smith, 1995).

TABLE 14.2
Matrix of Motives and Psychological Processes Relevant to Attitude Change

Au: Pls. check incomplete Table.

	Knowledge	Consistency	Self-Worth	Social Approval
Amount of thinking				
Direction of thinking				
Features of thoughts (meta-cognition)				
Assessment of evidence (arguments)				
Use of peripheral cues				

Direction of Thinking

Second, motives can have an impact on persuasion by influencing not the amount, but the direction of the thinking that takes place. Perhaps the most extensively explored direction that thinking can take is whether it is aimed at supporting or derogating the position advocated, though other dimensions of thinking have been explored as well (e.g., whether the thoughts are directed at the source or the message; see Cacioppo, Harkins, & Petty, 1981). Attitude change is postulated to be a function of the number and valence of thoughts that come to mind, at least when elaboration is high (see reviews by Eagly & Chaiken, 1993; Petty & Cacioppo, 1986).

The distinction between amount and direction of thinking suggests that some motives may be more likely to be associated with affecting relatively objective (undirected) thinking whereas others may be more likely to affect biased (directed) thinking. For example, the need to know is likely to be associated with extensive and largely objective elaboration because the motive to understand is relatively independent of the content. In contrast, the need for self-worth could focus information processing activity in a particular direction if one side or the other reflected more favorably on the self. Other motives such as consistency and social approval might also guide information processing in a particular direction.

Structural Features of Thoughts

According to the ELM, variables can affect various structural features of thoughts such as how confident people are in them or how accessible they are. For example, when thoughts are held with high confidence, people will use them in forming their judgments (self-validation processes; Petty, Briñol, & Tormala, 2002; Briñol & Petty, 2004). On the other hand, if people doubt the validity of their thoughts, they will discard them. Furthermore, if people believe that their thoughts are biasing in some way, they can adjust their judgments in a direction opposite to the implication of the thoughts (correction processes; Petty & Wegener, 1993; Wegener & Petty, 1997; Wilson & Brekke, 1994). Both validation and correction processes are generally more likely to occur when the extent of thinking is high, though with considerable practice, they can be automatized (e.g., Maddux, Barden, Brewer, & Petty, 2004). Thus, individual differences in the extent of thinking or in practice can moderate these metacognitive effects.

In addition, individual differences can determine what information is used to validate thoughts or attitudes. For example, under a high need to know, people might assess validity by using information related to the credibility of the source or other indicators of accuracy. However, if other motives such as the need for inclusion were salient, people might instead look to consensual validation of their thoughts and attitudes.

Use of Arguments

When thinking is high, people assess the relevance of all of the information in the context for assessing the merits of the attitude object under consideration. That is, the information in the context–whether originating in the source, message, recipient, or surroundings–is examined as a possible argument or reason for favoring or disfavoring the attitude object (Petty, 1994; Pierro, Mannetti, Kruglanski, & Sleeth-Keppler, 2004). Individual differences can influence what type of information serves as persuasive evidence for the attitude object. For example, positive information related to image would provide more persuasive evidence for high than low self-monitors (Snyder & DeBono, 1985).

Use of Cues

Finally, when conditions do not foster thinking, attitudes are influenced by a variety of low effort processes such as mere association (Cacioppo, Marshall-Goodell, Tassinary, & Petty,

580   BRIÑOL AND PETTY

1992) or reliance on heuristics (Chaiken, 1987). Motivational factors can influence attitude change in these circumstances by affecting the selection of cues or by having an impact on what cues would be more effective. For example, if the need to know is high but people are unable to carefully process information for whatever reason (e.g., distraction, noise), they are likely to look for cues related to knowing and accuracy, such as source credibility. In contrast, social cues would likely have a greater impact when the need for social inclusion is high.

Summary

In sum, individual differences in each of the four motives outlined earlier can be related to the fundamental processes of attitude change. In the present chapter, the literature on attitude change and strength is reviewed using this motivational framework. Before specific individual differences are examined, however, it is important to briefly mention a few additional assumptions of our framework. First, we assume that any one motive can be associated with different outcomes in different situations and for different individuals. Second, in different situations or for different individuals, the same attitude can be the result of the operation of different motives. A final theoretical assumption is that attitudes are not necessarily more accurate or stronger when they are formed or changed through one motive or the other. For example, an attitude shifted as a result of the need to know should not necessarily be more "accurate" than an attitude that results from the need to be coherent or the search for self-worth. That is, the need to know does not assure objectivity and other motives do not always produce biased attitudes. Obviously, as noted earlier, the strength of those attitudes depends on the extent to which the are based on extensive thinking regardless of whether they are actually grounded in reality or not.

   It is noteworthy that these conceptual assumptions differentiate the present approach from other frameworks, such as the HSM (Chen & Chaiken, 1999). For example, the HSM distinguishes an "accuracy" motive which leads to objective processing from "defensive" and "impression" motives which lead to biased processing. As noted above, we do not tie the four key motives to any particular outcome or mechanism. As but one example, people who "defend" their current attitude might do so because they believe their attitude is accurate and therefore want to protect it, or because holding their ground makes them feel knowledgeable or competent, or because they think that defending their attitude will make them attractive to others, or because they value consistency per se.

THE RELATIONSHIP BETWEEN MOTIVES AND ATTITUDE CHANGE PROCESSES AND THEIR IMPLICATIONS FOR ATTITUDE STRENGTH

In this part of the chapter, we explain how particular individual differences falling under the four motives can influence attitude change through the various psychological processes just outlined. We first consider the impact of each motive as a whole. Then, we examine research on each of the particular individual differences related to this motivation.

Individual Differences Relevant to the Need for Knowledge and Their Impact on Attitude Change and Strength

The need for knowledge can influence attitude change processes in a variety of ways. Most notably, the need to know may require that people carefully process whatever information might be relevant in order to form an adaptive attitude, and thus gain predictability and control

over the social environment. Thus, the need to know can influence attitude change and strength by affecting the amount of information processing that occurs (Chaiken & Maheswaran, 1994: Tormala, Briñol, & Petty, 2003). On the one hand, when the need to know is high, people may assess the validity of their own thoughts by using information related to the credibility of the source or other indicators of accuracy (Briñol, Petty, & Tormala, 2004). On the other hand, if the need to know is high but people are unable to process for whatever reason (e.g., distraction, noise), they are likely to look for simple cues related to knowing and accuracy, such as source credibility (Petty & Cacioppo, 1981). Next, we describe the specific individual difference measures related to the need to know and their influence on attitude change and strength through these psychological processes.

Need for Cognition.   Need for cognition (NC) (Cacioppo & Petty, 1982) refers to stable individual differences in the tendency to engage in and enjoy effortful thought. NC is commonly measured with a self-report scale containing statements such as, "I prefer complex to simple problems" (Cacioppo, Petty, & Kao, 1984). People high in NC tend to devote attention to an ongoing task, searching all the information available, especially information based on empirical and rational considerations.

Individuals high in NC consistently have been found to engage in greater elaboration of persuasive messages than those low in NC and to put forth more mental effort on a variety of cognitive tasks (see Cacioppo, Petty, Feinstein, & Jarvis, 1996 for a review). For example, people high in NC tend to form attitudes on the basis of an effortful analysis of the quality of the relevant information in a persuasive message, whereas people low in NC tend to be more reliant on simple peripheral cues in the persuasion context (Cacioppo, Petty, and Morris, 1983). However, even low NC individuals can be motivated to scrutinize the message arguments and eschew reliance on cues if situational circumstances are motivating–such as when the message is of high personal relevance (Axsom, Yates, & Chaiken, 1987), the source is potentially untrustworthy (Priester & Petty, 1995; Tormala et al., 2003), or the message content is surprising (Smith & Petty, 1996). Importantly, NC also has consequences for attitude strength, and people high in NC tend to have stronger attitudes than those low in NC (Petty et al., 1995). Additionally, because individuals high (vs. low) in NC tend to engage in deeper thinking, they also tend to form stronger automatic associations between attitude objects (Briñol, Petty, et al., 2004).

There are two important aspects to note regarding the effortful cognitive activity characteristic of individuals high in NC. First, the extent of the thinking is not the only process that can be affected by NC because the more extensive thinking of individuals high in NC is not necessarily objective. In fact, other variables such as mood can introduce a significant bias to the thought content of people high in NC (Petty, Schumann, Richman, & Strathman, 1993). Second, individuals high in NC not only tend to think more about any given attitude object, but they also devote more attention to their own thinking. As a result, high NC has been related to metacognitive processes such that individuals high in NC are more likely to evaluate their own thoughts for validity (Briñol & Petty, 2003; Briñol et al., 2004; Petty et al., 2002; Tormala et al., 2002, 2003), to engage in controlled (Wegener & Petty, 1997) and automatic (Petty, Briñol, Horcajo, & Jarvis, 2003) bias correction processes, and to draw different metacognitive inferences based on the intensity or efficiency with which they respond to persuasive messages (Tormala & Petty, 2002, 2004).

The need for cognition has been found to relate to a number of other well-established attitudinal phenomena. For example, NC has implications for the mere thought polarization effect, in which thinking about one's attitude leads to more extreme attitudes (Tesser, 1978). Given the greater propensity to engage in spontaneous thought, Smith, Haugtvedt, and Petty (1994) found that high NC individuals showed greater attitude polarization following a period of reflection on their attitudes. However, when explicit instructions to think are provided, low

NC individuals can show greater polarization than high NC individuals (Lassiter, Apple, & Slaw, 1996; Leone & Ensley, 1986). This finding suggests that when thinking is instructed rather than spontaneous, high NC individuals may consider all sides of the issue and thus show moderation rather than polarization.

Need for cognition has also been studied in the context of primacy and recency effects. High NC individuals tend to show greater primacy in judgment when the information is "chunked"— presented as consisting of two distinct sides of an issue (Kassin, Reddy, & Tulloch, 1990). In these situations, when a particular point of view is presented first, highly thoughtful individuals think about this information. As a consequence, the conclusions they draw from it bias processing of subsequent information (Haugtvedt & Petty, 1992; Haugtvedt & Wegener, 1994). In contrast, when the information presented is not clearly divided into two sides but rather comes in a continuous stream, low NC individuals have shown greater primacy in judgments than individuals high in NC (Ahlering & Parker, 1989). This result is consistent with the view that low amounts of thinking can cause individuals to freeze on the early information and ignore subsequent information (Kruglanski & Webster, 1996) (for additional discussion on this topic, see Petty & Jarvis, 1996; and for empirical evidence on the role of "chunking" and NC in moderating primacy/recency effects, see Petty, Tormala, Hawkins, & Wegener, 2001).

The need for cognition can also have important consequences for attitude change in the context of interpersonal influence. For example, Shestowsky, Wegener, and Fabrigar (1998) found that in the context of dyadic decision making, high NC individuals are perceived as more effective persuaders and are more capable of generating valid arguments to support their views than are low NC individuals. Consistent with the notion that high NC individuals tend to hold stronger attitudes than low NC individuals, high NC people were not only better at persuading their partners, but were also found to be more resistant to others' counterattitudinal persuasive attempts.

Finally, research has examined the notion that matching a persuasive message to the characteristic traits of individuals high versus low in NC can affect attitudes in multiple ways along the elaboration continuum (Petty & Cacioppo, 1986). For example, when the elaboration likelihood is free to vary, matching can serve to enhance information processing activity (Wheeler, Petty, & Bizer, in press). Thus, a message that appears to be aimed at people who are not thoughtful could enhance the information processing activity of people low in NC (because it matches their self-schema), but reduce the information processing activity of individuals high in NC (because it mismatches their self-schema; see also Petty, Wheeler, & Bizer, 2000).

Recent research has also found that under low elaboration conditions NC-matching can also serve as a peripheral cue. In one study (Wheeler, Briñol, & Petty, 2002), individuals high and low in NC were exposed to products of different brands that were described as "intelligent, technical, and corporate" or as "glamorous, upper-class, and good looking." As expected, individuals high in NC assessed the brand as more favorable in the former than in the latter frame condition, whereas participants low in NC did the opposite. Importantly, these results were replicated when NC was assessed with an implicit measure (the implicit association test (IAT) (Greenwald, McGhee, & Schwartz, 1998). Future work might profitably address differences between implicit and explicit personality measures.

Need to Evaluate.   The need to evaluate (NE) (Jarvis & Petty, 1996; Petty & Jarvis, 1996) refers to individual differences in people's tendencies to engage in evaluative thought. People who are high in the need to evaluate tend to chronically assess whether things are good or bad (see also the "need to assess," Kruglanski, Thompson, Higgins, Atash, Pierro, Shah, & Spiegel, 2000). Knowing whether things in the world are good or bad helps people to understand the environment. Probably because of this and other functions (Maio & Olson, 2000), people tend to form attitudes about nearly everything (Bargh, Chaiken, Govender, &

Pratto, 1992; Roskos-Ewoldsen & Fazio, 1992). Nevertheless, some people are more chronic and spontaneous than others in their tendency to evaluate, and the NE scale assesses this. The NE scale contains items such as "I form opinions about everything." Worth noting, NE can be distiguished from other constructs, such as the Need for Affect (Maio & Esses, 2001), which assessed individual differences in the preference to approach or avoid situations that induce emotions. Recently, Huskinson and Haddock (2004) have shown that whereas individuals high in Need for Affect tend to base their evaluations mostly on affective information; individuals high in NE tend to use both affective and cognitive information.

Jarvis and Petty (1996) demonstrated that, compared to people low in NE, those high in the NE are more likely to form attitudes toward a variety of social and political issues. In other studies, Jarvis and Petty also found people high in NE to be more likely to generate evaluative thoughts when responding to both relatively novel stimuli (e.g., positive, negative, and neutral paintings from various styles and periods) and personally relevant stimuli (e.g., participants' autobiographical narratives describing a day in their lives). In addition, Petty and Jarvis (1996) reported that people high in NE were quicker to respond to a measure of their attitudes suggesting that their attitudes were more accessible (see also Albarracín, Wallace, & Glasman, in press). Also consistent with this idea are findings with measures of automatic attitude evaluation. Using an evaluative priming procedure (Fazio, Sanbonmatsu, Powell, & Kardes, 1986) in which positive or negative words precede target words, Hermans, DeHouwer, and Eelen (2001) found that high NE individuals responded more quickly to evaluatively congruent than to evaluatively incongruent target words. For those low in NE, however, there was no difference, as if their evaluations were not spontaneously accessible.

Because the attitudes of high NE individuals are spontaneously accessible, their attitudes would tend to be more stable across contexts, whereas individuals low in NE are more likely to base their attitudes on whatever information is salient in the immediate environment rather than their prior evaluations. Interestingly, Albarracín and colleagues (in press) suggested that if individuals high in NE are engaged in an explicit comparison of their old attitudes with new information that is consistent with these attitudes, they are more likely to polarize their positions because the new information validates the initial attitude. Low NE individuals are less likely to polarize because their initial attitudes are not as salient.

One reason attitudes come to mind more quickly for high than low NE individuals is that those high in NE tend to engage in online versus memory-based evaluative processing (Hastie & Park, 1986). In fact, Tormala and Petty (2001) found that high NE individuals formed attitudes toward an unfamiliar person in a spontaneous, online fashion, whereas low NE individuals formed them in a less spontaneous, more memory-based fashion. Thus, attitudes were more highly correlated with information retrieved from memory for low than for high NE persons.

Finally, recent research has shown that NE is useful in predicting a variety of important attitude-relevant cognitive, behavioral, and affective political processes (Bizer et al., 2004). Using data from national election surveys, Bizer and his colleagues found that NE predicted how many evaluative beliefs about political candidates a person held, the likelihood that a person would use evaluations of issue stances to determine candidate preferences, the extent to which a person engaged in political activism, the likelihood that a person voted or intended to vote, the extent to which a person used the news media for gathering information, and the intensity of emotional reactions a person felt toward political candidates.

The Need for Closure. Need for closure (Webster & Kruglanski, 1994) refers to the desire for a definitive answer on some topic, as opposed to confusion and ambiguity. Need for closure represents a dimension of stable individual differences as well as a situationally evocable state. As a chronic dimension, the desire for definitive knowledge has been measured with the *Need for Closure Scale*, which includes items such as "I would rather know bad news

than stay in a state of uncertainty" (for properties of the scale, see Webster & Kruglanski, 1994; see also Neuberg, West, Judice, & Thompson, 1997). In general, the need for closure appears to function similar to other treatments of open-mindedness and closed-mindedness. Being high in need for closure has been shown to reduce the extent of information processing, to magnify primacy effects, to increase reliance on theory-driven versus data-driven processing, and also to enhance reliance on initial anchors and primes (see Kruglanski and Webster, 1996, for a review).

With respect to interpersonal influence, those high in need for closure have sometimes been easier to persuade and sometimes more difficult to persuade. In general, when people do not possess any prior information on a topic, individuals high in need for closure have been found to be more open to attitude change and show a preference for persuasive partners, as this helps them to achieve closure. In contrast, when people have a prior opinion, high need for closure individuals are less open to change and show a preference for persuadable partners (Kruglanski, Webster, & Klem, 1993). In addition, those high in need for closure tend to be rejecting of opinion deviates, but accepting of conformists (Kruglanski & Webster, 1991). In sum, the most direct effects of need for closure are accepting an alternative opinion that can bring quick closure, but maintaining one's old attitude when it provides easy closure.

Need for closure can also influence attitude change by affecting the extent of thinking about information. For example, Klein and Webster (2000) exposed participants to a persuasive message about a new XT-100 answering machine composed of three or nine arguments that were either strong or weak. The results indicated that attitudes toward the product were more affected by the number of arguments (i.e., a peripheral cue; Petty & Cacioppo, 1984) than by the argument quality manipulation for individuals high in need for closure. In contrast, individuals low in need for closure scrutinized the message content more as revealed by the greater argument quality effect on their attitudes. In a second study, Klein and Webster (2000) found that individuals high in need for closure processed a message extensively if a peripheral cue was unavailable to provide an easy means for closure.

Causal Uncertainty.   Causal Uncertainty (Weary & Edwards, 1994) is defined as uncertainty about one's ability to identify and understand the causal conditions for social events. Individual differences in causal uncertainty can be assessed with the causal uncertainty scale (CUS) (Weary & Edwards, 1994). The CUS is a self-report inventory that measures chronic individual differences in the strength of causal uncertainty beliefs, including items such as "When I receive poor grades, I usually do not understand why I did so poorly." Individuals high in CU are motivated to resolve feelings of uncertainty by gaining a more accurate understanding of causal relations in the social world. For that reason, high scores on CU have been found to enhance social information search and processing (Weary & Jacobson, 1997; Weary, Jacobson, Edwards, & Tobin, 2001).

In the domain of attitude change, individuals high in CU are more persuaded by arguments providing causal explanations for events than arguments that do not contain causal information (Tobin, 2003). Additionally, CU has been examined together with individual differences in preference for type of information processing. Specifically, CU has been studied in relation to the Myers-Briggs Type Indicator (MBTI) (Myers & McCaulley, 1985), which measures the extent to which people prefer to make judgments based on conscious, rational processes, or on the output of more automatic processes (see Edwards, Lanning, & Hooker, 2002, for a review; see Epstein, Pacini, Denes-Raj, & Heier, 1996, for a similar conceptualization). Edwards (2003) has recently argued that the effect of causal uncertainty on effortful information processing depends on the extent to which a person typically prefers to process with conscious effort. In one study in which participants received a persuasive message, thoughts and attitudes of those high (vs. low) in causal uncertainty and "judgment" (i.e., preference for conscious effort) were more affected by the quality of the arguments contained in the message than individuals who

were low in either causal uncertainty or judgment. This study suggests that causal uncertainty and a preference for rational conscious thought lead people to engage in controlled processing.

It is also noteworthy that causal uncertainty has been related to the propensity to engage in bias correction processes (see Vaughn & Weary, 2003). Just as those high in causal uncertainty sometimes engage in greater information processing, they also appear more likely to engage in attempts to debias their judgments when a bias is salient. As suggested by Vaughn and Weary (2003), future research should explore whether casual uncertainty can affect attitudes by influencing the extent to which individuals assess the validity of their own thoughts in response to persuasive messages.

Self-Awareness (Carver & Scheier, 1981).   One way in which people can try to understand their worlds is by knowing who they are and learning about themselves. Some individuals are more self-aware than others. That is, people differ in the extent to which they attend to their own attitudes, feelings, needs, and concerns. Fenigstein, Scheier, and Buss (1975) referred to these individual differences as private self-consciousness. Private self-consciousness is a trait that can be assessed with a self-reported questionnaire including items, such as "I'm always trying to figure myself out." Self-awareness is also a temporary state that can be manipulated.

Individuals high (vs. low) in private self-consciousness are more aware of their cognitive processes and are more cognizant of what factors influence their decisions. Private self-consciousness has been found to be associated with more attitude-behavior correspondence, presumably because it promotes introspection (Pryor, Gibbons, Wicklund, Fazio, & Hood, 1977). Also, because private self-consciousness makes people more aware of their existing attitudes it can be associated with more resistance to persuasion. Consistent with this view, individuals high in private self-awareness have been found to maintain their beliefs in the face of opposition more than individuals low in self-awareness (Froming, Walker, & Lopyan, 1982; Gibbons & Wright, 1983; Hutton & Baumeister, 1992). Scheier and Carver (1980) also found that high private self-consciousness increased resistance to attitude change in a cognitive dissonance paradigm.

The psychological processes by which private self-consciousness leads to resistance to attitude change are likely to vary as a function of the likelihood of thinking. For example, increasing private self-consciousness might bias one's thoughts in favor of previous attitudes under high elaboration conditions, and increase the impact of one's attitude as a simple cue when elaboration is relatively low. When elaboration is moderate, self-consciousness can influence persuasion by affecting the amount of thinking. In fact, Hutton and Baumeister (1992) found that increasing self-consciousness (temporarily induced with a mirror rather than measured with a self-report) increased the impact of argument quality on participants' attitudes. In contrast, participants who were not made self-aware showed equal degrees of persuasion regardless of the strength of the arguments.

Finally, self-consciousness might influence attitude change by other mechanisms under other circumstances. For example, self-consciousness might lead people to pay more attention to their own thoughts in response to a message, thus affecting persuasion by influencing thought-confidence. As described for other individual differences, this metacognitive role would be more likely to occur under relatively high elaboration conditions.

Individual Differences Relevant to the Need for Consistency and their Impact on Attitudes and Persuasion

A wide variety of attitudinal frameworks are relevant to understanding the need for consistency. This variety includes work on cognitive dissonance (Festinger, 1957), self-perception

(Bem, 1972), attitudinal ambivalence (Kaplan, 1972; Priester & Petty, 1996; Thompson, Zanna, & Griffin, 1995), tolerance for ambiguity (Bem & Allen, 1974), impression management (Baumeister, 1982), commitment (Cialdini, 1993), self-persuasion (Janis & King, 1954), and attitude strength (Petty & Krosnick, 1995).

Once people make commitments or engage in behavior, they tend to act in consistent ways over time (Greenwald, Carnot, Beach, & Young, 1987). There are many strategies related to persuasion that may be used to generate an initial commitment, such as the foot-in-the-door technique (Freedman & Fraser, 1966), the lowball (Cialdini, Caciopppo, Bassett, & Miller, 1978), and making salient previous commitments (see also Pratkanis, 2000). Of course, people do not always behave in a manner consistent with prior commitments or actions, but when discrepancies occur, they are often experienced as unpleasant. In such situations, individuals are motivated to change their attitudes so as to undermine or eliminate the inconsistency, or at least the discomfort that results from the discrepancy (Abelson, Aronson, McGuire, Newcomb, Rosenberg, & Tannenbaum, 1968; Aronson, 1969; Festinger, 1957; Heider, 1958; Higgins, 1987).

The need to be consistent with prior commitments can help to explain why people are sometimes highly resistant to attitude change. When people are committed to an attitude, they are more certain the attitude is correct, they are more confident they will not change it, their position on the issue is more extreme, and their attitude is more stable, enduring, accessible and capable of predicting future behavior (Gross, Holtz, & Miller, 1995; Pomerantz, Chaiken, & Tordesillas, 1995). Although resistance to persuasion can be understood in multiple ways (for a review, see Petty, Tormala, & Rucker, 2004)—as an *outcome* (e.g., showing little or no change to a persuasive message), as a psychological *process* (e.g., one can resist by counterarguing), or as a *motivation* (i.e., having the goal of not being persuaded)—in this section we deal primarily with resistance as a *quality* of a person (i.e., being resistant to persuasion). We begin by providing a brief review of past classic work on individual differences in resistance to undermining internal consistency, and then we describe a number of more recent perspectives.

Authoritarianism and dogmatism.   Research attempting to identify individual differences in persuasion and resistance originated in the early 1950s, when several scholars were focused on the study of different forms of cognitive rigidity—the stability of individuals' beliefs. One of the most ambitious attempts is represented by work on the "Authoritarian personality" (Altemeyer, 1981). The authoritarian personality arose out of the idea that some people were predisposed to agree with statements related to the fascist ideology (Stanger, 1936). Altemeyer's scale included items such as "What our country really needs, instead of more civil rights, is a good stiff dose of law and order." The initial measures of authoritarianism had a great deal of historic interest and inspired similar measures, such as the anti-semitism scale (Levinson & Sanford, 1944), the ethnocentrism scale (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950), and the california F scale (Adorno et al., 1950)—forerunners of more contemporary prejudice measures. As an alternative to the authoritarian personality, Rokeach (1954) developed the dogmatism scale designed to measure individual differences in open versus closed belief systems. Items of the dogmatism scale include assertions such as "A man who does not believe in some great cause has not really lived." Attitudes about resistance to social and political change can also be assessed with Wilson and Patterson's (1968) conservatism scale (see Jost et al., 2003, for a review).

Because people high in authoritarianism support established authority and traditional values, they have sometimes been associated with prejudice, discrimination, and hostility against members of outgroups (Altemeyer, 1998; Duncan, Peterson, & Winter, 1997). According to Altemeyer (1981, 1998), authoritarianism is rooted in the acceptance of the attitudes and values advocated by authority figures. Importantly, attitudes formed or changed by those high

(vs. low) in authoritarianism and dogmatism are more likely to be held with greater degrees of subjective confidence (Davies, 1998), and as a consequence are more difficult to change. However, because the sources of such confidence are not always necessarily accurate and accessible, those attitudes could be modified by other authority figures (Briñol & Petty, 2004).

There are some indications that authoritarianism measures, including dogmatism, can predict change in response to external pressures. For example, Crutchfield (1955) reported a correlation of .39 between authoritarianism and yielding to group pressure in a variation of the Asch (1956) conformity paradigm. Altemeyer (1981) also reported a correlation of .44 between authoritarianism and obedience in a replication of Milgram's (1974) obedience to authority paradigm. In both examples, individuals low in authoritarianism were more likely to resist group conformity and obedience pressures. These findings suggest that measures of authoritarianism can be at least partially useful in predicting susceptibility or resistance to overt social influence. Although there is little work examining the link between authoritarianism and verbal persuasion, individuals high (vs. low) in authoritarianism might be expected to be especially susceptible to authority cues when the likelihood of thinking is low, and to be influenced in their extent of thinking by authority figures when elaboration is free to vary. When elaboration is likely to be high, individuals high (vs. low) in authoritarianism might bias their thoughts in the direction of the authority when source information precedes message exposure, and gain confidence in their thoughts when authorities agree with them after message exposure.

Preference for Consistency.   The preference for consistency (PFC) (Cialdini, Trost, & Newsom, 1995) is measured with a scale that includes items such as "I typically prefer to do things the same way." The scale has been found to be useful in predicting individuals who would and would not be susceptible to cognitive consistency effects such as the foot-in-the-door technique (Freedman & Fraser, 1966) and cognitive dissonance (Festinger, 1957). For example, in one study, Cialdini et al. (1995) found that an initial public commitment (accomplished with acceptance of a small request) only led participants to agree to a second larger favor when they had high scores on the PFC scale. Subsequent research has shown that this effect can be shown even after long delays between that initial and the subsequent request (Guadagno, Asher, Demaine, & Cialdini, 2001). In contrast, after the delay, individuals low in PFC showed a reverse foot-in-the-door effect when their prior helpfulness was made salient. In another experiment, Cialdini et al. (1995) showed that free choice in writing a counterattitudinal essay (advocating increased tuition) resulted in more positive attitudes toward the proposal only among participants with a relatively strong preference for consistency. In a different paradigm, Nail et al. (2001) asked participants to vividly imagine being stood-up for dinner by a friend for no good reason. Being stood-up without a good justification should cause dissonance, and participants derogated the friend more when they were high (vs. low) in PFC.

The PFC has been found to moderate other important phenomena related to attitudes, such as attitude ambivalence. For example, Newby-Clark, McGregor, and Zanna (2002) found that when conflicting evaluations of attitude objects come to mind equally quickly (i.e., simultaneous accessibility), individuals high (but not low) in PFC felt more unpleasant feelings of uncertainty. That is, the relation between objective ambivalence and subjective ambivalence was strongest for individuals high in both PFC and in simultaneous accessibility of the conflicting beliefs.

Resistance to Persuasion.   The resistance to persuasion scale (RPS) (Briñol, Rucker, et al., 2004) was developed to assess peoples' metabeliefs and perceptions of their own vulnerability to persuasion, willingness to change, and motivation and ability to resist persuasion. The scale contains statements such as "It is hard for me to change my ideas." As described previously for other constructs, individual differences in beliefs about resistance to persuasion

may have different effects on persuasion depending on the amount of elaboration. When elaboration is low, participants can use their beliefs about their own persuasibility as a cue, adjusting their attitudes in the direction of their metabeliefs. That is, if people believe they are generally resistant to change, they can rely on this belief and change little in response to a persuasive message. When elaboration is high, individuals' beliefs might influence attitudes by inducing a bias in information processing (e.g., causing people to engage in intense counterarguing of a message if they believe that they are resistant to change). However, under high elaboration conditions, if situational cues suggest that being overly easy or difficult to persuade is inappropriate (e.g., when on a jury or in scientific research), they may attempt to correct for their self-conception (e.g., "I am too difficult to persuade, so I should be more open to new information").

In accord with this multiple roles perspective, in two studies Briñol and colleagues (2004) predicted and found that individuals exhibited attitude change consistent with their metabeliefs about their persuasibility when the likelihood of thinking was low, but they appeared to correct for their beliefs under high elaboration conditions. Specifically, among participants low in NC, individuals who believed that they were generally resistant to persuasion showed less attitude change when exposed to various messages than did individuals who believed that they were generally susceptible to persuasion. However, participants high in NC showed a tendency for a reverse effect, demonstrating more persuasion when they thought they were difficult to persuade. This line of research suggests that some individual difference variables such as NC can moderate the effect of other individual differences (e.g., resistance to persuasion) on attitude change.

Bolstering Versus Counterarguing.   The bolster-counterargue scale (BCS) (Briñol et al., 2004) assesses individuals' beliefs about *how* they resist influence. For example, even if two individuals see themselves as fairly resistant to change, they may believe that they resist influence through very different means. An example item geared toward those who prefer to counterargue is: "I take pleasure in arguing with those who have opinions that differ from my own." An item geared toward those who prefer to bolster is: "When someone gives me a point of view that conflicts with my attitudes, I like to think about why my views are right for me."

In a study designed to examine the impact of people's perceptions of the effortful strategies they use to resist persuasion, Briñol, Rucker, et al. (2004) found that higher scores on the bolstering and counterarguing scales were each significantly associated with less attitude change in response to various messages. Notably, in a second experiment this finding was replicated and the bolstering subscale was positively correlated with the number of bolstering thoughts, whereas the counterarguing subscale was positively correlated with the number of counterarguments generated (but not vice versa). Thus, the spontaneous generation of each type of cognitive response when trying to resist a message may vary from one individual to another, and the BCS may prove useful in assessing these individual differences.

There might be a number of important consequences resulting from differences in how people tend to resist persuasion. For example, classic research on inoculation showed that counterarguing an initially weak message led attitudes to be more resistant to a subsequent stronger message, but simply bolstering one's attitude prior to receiving an attacking message did not result in the same degree of resistance when participants were forced to confront new message arguments (McGuire, 1964).

In general, the bolstering and counterarguing strategies might be differentially effective as a function of message strength. If a message contains only weak or mildly persuasive arguments, counterarguing may be more effective than bolstering because counterarguing is likely to be successful and lead to inoculation type effects. Trying to bolster in the face of weak arguments, however, may not lead to the same success or knowledge that an individual was

capable of resisting the message, rending the attitude more susceptible to future persuasive attempts (McGuire, 1964). In the case of very strong arguments, attempting to counterargue may prove relatively ineffective leading to attitude change and high certainty in one's new attitude (Rucker & Petty, 2004). However, bolstering may prove relatively more effective in preventing attitude change if individuals simply focus on why their initial attitude is correct and do not try to confront the strong message arguments. In sum, understanding individuals' predispositions to various resistance strategies may enhance our understanding of when they are most likely to be able to resist persuasion and the consequences thereof.

Defensive Confidence. The defensive confidence scale (DCS) (Albarracín & Mitchell, 2002) assesses individuals' beliefs that they can defend their positions and con- **Au: Is this yr.** tains items such as "I have many resources to defend my point of view when I feel my ideas **correct or** are under attack." According to research by Albarracín and Mitchell, the beliefs people have **2004? (see** about their ability to defend their attitudes moderate their approach to attitude-consistent in- **reference list)** formation. Specifically, individuals who feel confident in their ability to defend their beliefs ignore information that threatens their beliefs less than individuals who do not feel confident about their abilities. This recent line of research suggests that the beliefs people have about their own abilities to defend their attitudes can influence information exposure.

Argumentativeness. Infante and Rancer (1982, p. 72) defined argumentativeness as "a generally stable trait that predisposes individuals in communication situations to advocate positions on controversial issues and to attack verbally the positions which other people hold on these issues." Infante and Rancer (1996) developed a scale to tap argumentativeness that includes items such as "I enjoy defending my point of view on an issue" (for a similar measure of argumentative competence, see Trapp, Yingling, & Wanner, 1987). There is some empirical evidence suggesting that individuals high in argumentativeness are more inclined to use a greater range of influence strategies and to be less apt to use their power to goad others into accepting their positions than those low in this trait (Infante & Rancer, 1996). As a consequence, people high in this construct also tend to be seen as more credible and capable communicators.

Although all of the research on argumentativeness conducted so far has focused on individual differences in the persuader's skill of developing cogent arguments, individual differences in argumentativeness might be also relevant for the receiver of a persuasion attempt. In particular, individuals high in argumentativeness would likely be more resistant to persuasion, similar to the effect observed for individuals high in resistance to persuasion (Briñol, Rucker, et al., 2004).

Individual Differences in Implicit Theories of Change. Just as people can have beliefs about their *own* resistance to change, Dweck, Chiu, and Hong (1995) have shown that there are individual differences in the extent to which people see *others*' traits as fixed and stable (entity theorists) or as malleable and changeable (incremental theorists). These implicit theories about change can be measured by the implicit theory questionnaire, which assesses people's agreement with statements such as "All people can change even their most basic qualities." Research has shown that the implicit theory questionnaire possesses good psychometric qualities, and unique predictive power above other personality measures (Dweck, Chiu, & Hong, 1995; Hong, Chiu, Dweck, & Sacks, 1997; Levy, Stroessner, & Dweck, 1998). For example, individuals who score as entity theorists (compared to incremental theorists) have been found to draw stronger inferences from behavior, blame themselves more following failure, and form and endorse more extreme group stereotypes (see Dweck, 2000, for a review). In the context of evaluation, Hong et al. (1997) found that entity theorists, relative to incremental theorists, engage in more evaluative processing of information about target individuals when forming an impression. More recently, McConnell (2001) extended that research by showing

that entity theorists tend to form online judgments, whereas incremental theorists tend to form memory-based judgments of target individuals. This effect is notable because research has demonstrated that online judgments tend to lead to more accessible evaluations, and thus are more likely to relate to behavior than are memory-based judgments (see Tormala & Petty, 2001).

Individual Differences Relevant to the Need for Self-Worth and Their Impact on Attitudes and Persuasion

People have a need to view themselves positively. Nevertheless, there are individual and cultural differences in the extent to which people possess positive self-views (Baumeister, Tice, & Hutton, 1989), actively seek information that maintains a positive self-view (Steele, 1988; Tesser, 1988), and wish to enhance the positivity of their self-views (Taylor & Brown, 1988; for a detailed review on cultural differences see Heine, Lehman, Markus, & Kitayama, 1999). For example, in a review of Western self-esteem studies, Baumeister et al. (1989) observed that the mean or median self-esteem scores were clearly and consistently higher than the conceptual midpoints of the scales, regardless of the measures used. Research on self-enhancement reveals that individuals' self-evaluations are distorted by self-protective tactics that foster these positive illusions (Taylor & Brown, 1988). For example, people seem to remember their past performance as better than it actually was (Crary, 1966) judge positive personality attributes to be more appropriate in describing themselves than in describing others (Alicke, 1985); tend to take credit for success, yet attribute failure to the situation (see Zuckerman, 1979, for a review); and tend to think that their good traits are unusual, whereas their faults and flaws are common (Campbell, 1986). Research on favorable self-evaluation maintenance also documents the variety of compensatory self-protective responses that are elicited when people encounter threats to their self-esteem (Tesser, 1988).

Many self-esteem tactics have been identified in the literature that might have implications for attitude change. For example, people minimize the amount of time they spend processing critical feedback (Baumeister & Cairns, 1992), and when such unflattering feedback is processed, people often discover flaws and derogate whoever the source might be (Kunda, 1990). As described earlier under the motive for consistency, this research is consonant with the idea that people tend to be resistant to attitude change, especially when it comes to favorable attitudes toward themselves.

Perhaps one of the most interesting illustrations of how the motive of self-worth is related to attitude change comes from recent research on self-affirmation processes (Steele, 1988). Cohen, Aronson and Steele (2000) argued that because affirming oneself may reduce the perception of threat, it would decrease the need to defend one's attitudes thereby making one more vulnerable to persuasion. Consistent with this view, several experiments have found that resistance to persuasion is undermined when people are affirmed (e.g., by expressing personal values) before receiving a persuasive message (Cohen et al., 2000; Sherman, Nelson, & Steele, 2000). Correll, Spencer, and Zanna (2004) found that the openness to persuasion among affirmed individuals stemmed from more objective processing of the arguments presented, at least when the issue is personally important. Furthermore, in line with the ELM's notion of multiple roles, Briñol, Petty, Gallardo, and Horcajo (2004) found that when an affirmation followed rather than preceded a ventral message, affirmed individuals were more confident in their thoughts to the arguments presented, which in turn determined the extent of influence.

There are a number of constructs and scales relevant to the need for self-worth such as the self-doubt scale (Oleson, Poehlmann, Yost, Lynch, & Arkin, 2000), the judgmental self-doubt scale (Mirels, Greblo, & Dean, 2002), the consumer self-confidence scale (Bearden, Hardesty, & Rose, 2001), and the subjective knowledge scale (Flynn & Goldsmith, 1999), but we focus on

two that have achieved the most research attention with respect to attitude change: self-esteem and optimism.

Self-Esteem.   The primary measure of self-esteem (SE), def. as the regard people have for themselves, used in attitudes research, like much of the other social psychological literature, is Rosenberg's (1965) *self-esteem scale*. The literature on attitudes and SE usually has been interpreted in terms of McGuire's (1968) reception/yielding model. McGuire (1968) proposed that the relationship between SE and persuasion should be positive when reception processes dominate (Berkowitz & Lundy, 1957), but negative when yielding processes dominate (Janis, 1954). That is, recipients low in SE might have difficulty receiving the message, whereas those high in SE would tend not to yield. If both processes operate simultaneously, then one would expect a curvilinear relationship between SE and persuasion. A meta-analysis of the literature revealed evidence for this curvilinear relationship, with people of moderate SE tending to be more influenceable than those low or high in SE (Rhodes & Wood, 1992). Although the curvilinear finding is consistent with the predictions derived from the reception-yielding model, it is also possible that differences in type or direction of thinking could help to explain the effect.

As described earlier, the ELM holds that any *one* variable can have an impact on persuasion by serving in different roles in different situations depending on the elaboration likelihood. When motivation and/or ability to process the information is low, people can be guided by their SE when deciding whether to accept or reject the persuasive message. In such situations, high SE individuals might be more resistant to persuasion than low SE individuals because they may be more likely to reason that their own opinion was as good or better than that of the source. The sense that one's opinion is better than another's opinion is a specific instance of the ownness bias or endowment effect (i.e, what is associated with me is good; Perloff & Brock, 1980; Kahneman, Knetsch, & Thaler, 1991).

When elaboration is high, SE can play a different role such as biasing one's thoughts. Thus, high SE individuals would be likely to engage in thinking that supported their initial attitudes but that derogated alternative positions. Alternatively, under high elaboration conditions, SE can influence persuasion by affecting the confidence people have in the validity of the thoughts they have in response to the message. For example, in one study (Briñol & Petty, 2002), thought-direction was manipulated by exposing participants to strong or weak persuasive messages. As expected, the message composed of compelling arguments produced mostly favorable thoughts toward the proposal, whereas the weak arguments produced mostly negative thoughts. After the message was processed and thoughts generated, but prior to assessing attitudes toward the proposal, participants reported their SE. An interaction between SE and argument quality was obtained, such that for the strong message, high SE individuals showed more persuasion than low SE, whereas for the weak message the reversed pattern was observed. Consistent with the self-validation notion (Petty et al., 2002), SE influenced the extent to which participants relied on their own cognitive responses to the message.

Under high elaboration conditions, the role that SE plays depends on a number of factors. SE can either bias the direction of the thoughts or can affect a person's confidence in the thoughts that are generated. The biasing role is more likely when SE is made salient or measured before the message where it can influence thought generation, but if SE is made salient after the message, the latter role is more likely (Briñol & Petty, 2002). In addition, if people were made aware of the potentially biasing impact of SE (either on information processing or on judgment), they might attempt to correct for this influence (Petty, Wegener, & White, 1998). Finally, we speculate that SE might even serve as a message argument if it contains information central to the merits of the object as might be the case in some personal selling scenarios, such as a job interview (e.g., I should get the job because I'm the best!).

When elaboration is moderate, SE can influence attitudes by affecting the extent of information processing, with low SE being associated with less elaboration than high SE. For example, low SE individuals might have little need to scrutinize the merits of a communication because they would believe that most people are more competent than they are and thus, the message can be accepted on faith. A high SE person, however, would have the confidence to scrutinize the message. This view is consistent with the results of Skolnick and Heslin (1971) who found that argument quality was more important in determining the attitudes of high than low SE individuals. To the extent that people who are high in self-esteem are reminded of this prior to a message and feel a sense of confidence that is misattributed to their attitudes, this confidence could reduce the extent of message processing in cases where elaboration is not constrained to be high or low.

Optimism.   The optimism-pessimism questionnaire (Dember, Martin, Hummer, Howe, & Melton, 1989) and the revised life orientation test (Scheier, Carver, & Bridges, 1994) assess the extent to which people take an optimistic or pessimistic view of life with items such as "I'm always optimistic about my future." Geers, Handley, and McLarney (2003) argued that because of their ability to cope better with unwanted and stressful information, optimists (vs. pessimists) are especially likely to elaborate on valenced information that is of high personal relevance. Consistent with this view, Geers et al., (2003) found that optimists (as measured with the two questionnaires mentioned above) were more persuaded than pessimists by personally relevant messages framed positively (i.e., a new tuition plan was described as a beneficial opportunity to reduce costs) and less persuaded by personally relevant messages framed negatively (i.e., the tuition plan would require all students to work part time for the university). Importantly, when the message was not personally relevant, optimism did not influence attitude change. The finding that optimists were more influenced by positively framed messages and pessimists by negatively framed messages under high thinking conditions (high relevance) may have been due to the fact that "matching" biased processing of the arguments. If the elaboration likelihood was low however, such matching might have served as a simple cue, or if elaboration was moderate, matching might have enhanced information processing activity.

Individual Differences Relevant to the Need for Social Inclusion and their Impact on Attitudes and Persuasion

The need for social inclusion refers to the need for human approval, connection, relatedness, belonging, caring, and attachment. Although the degree to which a person is interdependent and bound up with others, as compared with the degree to which the individual is independent and separate, can vary as a function of culture (Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997; Markus & Kitayama, 1991), all individuals value to some extent being included by and approved of by others (Baumeister & Leary, 1995).

Groups exert influence on individual attitudes because other people provide an informational standard of comparison for evaluating people's own attitudes (social comparison function) and because they provide social norms through which people can gain or maintain group acceptance (normative function). Applied to our analysis in this chapter, this distinction suggests that what particular pieces of information (e.g., source credibility versus consensus opinions) serve as peripheral cues or in other roles may depend on whether people are governed by informational or normative factors.

The distinction between informational and normative motives has been useful to provide an organizing framework to explain social influence phenomena ranging from an individual's agreement with groups, as in minority group influence (Moscovici, Mucchi-Faina, & Maass, 1994), to group-level shifts in attitude, as in group polarization (Isenberg, 1986). For a detailed

review of the motive for social inclusion and approval with respect to attitude change see Prislin and Wood (chap. 16, this volume), Wood (1999), and Cialdini and Trost (1998). In this section of the chapter, we focus more specifically on the impact of individual differences in this motive on attitudes and persuasion. First, we cover individual differences in general motives toward collective versus individual orientation, and then we describe some individual differences toward specific minority groups.

Need for Uniqueness.   The need for uniqueness (Snyder & Fromkin, 1977) refers to the need to feel autonomous, independent, and different from other people. Thus, people who score low on the scale are those who do not want to be different from others. The scale includes items such as "As a rule, I strongly defend my own opinions." Individual differences in the need for uniqueness have been found to predict attitude change in conformity paradigms. For example, when induced to comply with the majority, those who score high (vs. low) in need for uniqueness tend to change their attitudes in the opposite direction as a way to reestablish their sense of uniqueness (Snyder & Fromkin, 1980). Subsequent research has identified at least 15 additional measures that can be used to assess individual differences in the sense of uniqueness and autonomy (see Hmel & Pincus, 2002, for a review). For example, Lynn and Harris (1997) developed a scale to assess the desire for unique consumer products.

As is the case for most individual differences, the need for uniqueness can be easily used to match the frame of persuasive messages with personal characteristics. For example, Tian, Bearden, and Hunter (2001) found that individuals who scored high (vs. low) in their version of the consumer need for uniqueness scale showed a greater preference for ads with unique product designs as compared with common designs. Similar person-message matching findings have been found for individual differences in the separateness-connectedness scale (Wang & Mowen, 1997). As described earlier in this chapter, the specific processes by which matching individual differences and messages results in more persuasion can vary as a function of the elaboration likelihood.

Individualism-Collectivism.   One of the most important ways in which individuals differ from one any other has to do with their culture (Triandis, McCusker, & Hui, 1990). Cultural differences have been found to play a major role in a wide variety of phenomena relevant to social cognition and behavior (Markus & Kitayama, 1991; Oyserman, Coon, & Kemmelmeier, 2002). Individualism-collectivism is perhaps the most basic dimension of cultural variability identified in cross-cultural research (Triandis, 1995). Individualism refers to the idea that individuals are independent of one another, whereas collectivism refers to the assumption that groups bind and mutually obligate individuals. Although the distinction between individualism and collectivism has been used to distinguish between Western and East Asian societies, there are also individual differences within each of those two broad cultural axes. Such individual differences can be assessed with a variety of methods, including self-report questionnaires (Triandis & Gelfand, 1998; Triandis et al., 1990).

In the domain of attitude change, individualism and collectivism differences have been found to produce persuasive matching effects similar to those described for other variables. For example, Han and Shavitt (1994) found that, compared to Koreans, Americans were more persuaded by advertisements emphasizing individualistic benefits. In contrast, ads emphasizing family or ingroup benefits were more persuasive for Koreans than for Americans.

Another cultural finding is that Americans report finding individuating information more useful when they are in uncertain situations than relational information, with the reverse being true for Chinese (Gelfand, Spurlock, Sniezek, & Shao, 2000). This pattern of results has been replicated when instead of comparing individuals from different cultures, differences based on individualism/collectivism scales were used. For example, Cialdini, Wosinska, Barrett, Butner,

and Gornik-Durose (1999) found that individuals (both American and Polish) high in individualism were more persuaded by an individualistic appeal based on their own prior behavior, whereas those who scored high in collectivism were more persuaded by a collectivistic appeal based on their peer group's prior behavior. Again, whether this matching effect reflects a simple cue, an argument, enhanced thinking, biased thinking, or validation of one's thoughts is an open research question.

Field Dependence.   The term field dependence (Witkin et al., 1954) refers to the extent to which individuals use self-produced as opposed to situational cues, such as the social group, in defining their attributes. This variable is often defined operationally as the extent to which people can use postural and inner ear (self-produced) cues to adjust a luminous rod to the vertical and ignore distracting cues from the perceptual "field," as opposed to the field dependent tendency to locate the vertical in terms of the field rather than one's body orientation. In brief, according to Witkin and his colleagues, field-dependent individuals' perceptions are influenced by the surrounding field or given context.

Field dependence/independence is also measured using the Embedded Figures Test (Witkin, Oltman, Raskin, & Karp, 1971), the Test of Field Dependence (Ekstrom, French, Harman, & Derman 1976), and the linear logistical Rasch model (Fischer & Molenaar, 1995). In these tests, people are provided with a number of items and are asked to select which one of various simple figures is embedded within a complex figure. Because field-dependent individuals are more aware of and responsive to aspects of their social situation than field independent persons, they were found to be more vulnerable to conformity situations (Witkin, 1964). In recent research, Hergovich (2003) found that field dependence was related to suggestibility and belief in paranormal phenomena. Conversely, in the forced-compliance situations in which change arises from an individuals' own behavior rather than external pressures, Laird and Berglas (1975) found that field-independent individuals changed their attitudes more after engaging in counter-attitudinal behavior.

Heesacker, Petty, and Cacioppo (1983) demonstrated that the field dependence can influence attitude change by affecting the extent of thinking. In a study in which both argument quality and source credibility were manipulated, Heesacker et al. (1983) found that the attitudes of field-independent individuals were significantly affected by the quality of the arguments regardless of whether the credibility of the source was high or low. This presumably stemmed from their general propensity to differentiate stimuli. However, field-dependent individuals only showed argument quality effects when source credibility was high (i.e., when it was worthwhile to think). Conceptually similar to the findings described for need for cognition, these results are consistent with the idea that situational variables such as source credibility can enhance information processing for people who typically are not motivated to scrutinize message content.

It is also possible that field dependence can influence attitude change by other psychological processes under different circumstances. For example, field dependence may affect the nature of the cues that people use to form an attitude under low elaboration conditions, to bias their thoughts, or to validate their thoughts in high elaboration settings. As suggested by the study by Heesacker et al. (1983), field dependents can be more affected by source credibility, whereas field independents might be more sensitive to their own behavioral reactions (Laird & Berglas, 1975).

Machiavellianism.   The manipulation of others for personal gain is referred to as Machiavellianism (Mach). Individual differences in Mach can be assessed with a Mach test that measures people's agreement with statements such as "Never tell anyone the real reason you did something unless it is useful to do so." In general terms, high-Machs are extremely

pragmatic, have limited commitment to anything other than themselves, tend to adopt leadership roles, and are unconcerned with morality. A complete review of the literature on the issue by Wilson, Near, and Miller (1996) revealed that high-Mach individuals frequently outperform low-Machs in short-term social interactions, especially to the extent that three conditions are met: The experiments (a) involve face-to-face interactions, (b) allow room for innovation, and (c) involve situations that are emotionally charged (high in "irrelevant affect"), which tend to distract low-Machs more than high-Machs.

In the domain of persuasion, these characteristics imply that high-Machs may be more persuasive than low-Machs. For example, even though high-Machs are not more intelligent than low-Machs, they are perceived by their peers as more intelligent and attractive (Cherulnik, Way, Ames, & Hutto, 1981), easily beat low-Machs in bargaining and alliance-forming situations (Gunnthorsdottir, McCabe, & Smith, 2002), and have a superior talent for improvisation and advocating a position contrary to their own beliefs (Burgoon, Miller, & Tubbs, 1972). In research conducted out of the laboratory, Shultz (1993) studied the sales performance of stockbrokers and found that high-Machs had more clients and earned twice as much in commissions as low-Machs. Although this effect occurred only in loosely structured organizations, Shultz's study demonstrated that the Mach scale has implications for both short and long term forms of influence.

Evidence that high-Machs are better at persuading and influencing others is quite extensive (Christie & Geis, 1970; Wilson et al., 1996), but less is known regarding the role of this trait with respect to receiving persuasion. Based on their experiments, Christie and Geis (1970) argued that low-Machs appear to be more susceptible to emotional involvement in interactions on an interpersonal level and then to be somewhat easily manipulated. To test this notion, Briñol and Petty (2002) gave participants either a set of strong or weak arguments in favor of consuming more vegetables in their diet. Consistent with the above notion, low Machs were more influenced by both messages than high Machs. Also consistent with this view, Bogart, Geis, Levy, and Zimbardo (1970) found that low-Machs changed their attitudes in a dissonance paradigm, whereas high-Machs resisted such an induction.

Individual Differences in Identity and Evaluation of Minority Groups. Social psychologists have developed numerous measures to assess individual differences in attitudes toward many groups considered to be stigmatized in some way. For example, the modern racism scale (McConahay, Hardee, & Batts, 1981), the pro-Black and anti-Black scale (Katz & Hass, 1988), and the attitude toward blacks scale (Brigham, 1993) measure attitudes toward African Americans. The heterosexual attitudes toward homosexuality scale (Larsen, Reed, & Hoffman, 1980) assesses dispositions toward homosexuals, and the ambivalent sexism inventory (Glick & Fiske, 1996) measures negative attitudes toward women. Finally, individual differences in general dispositions toward minorities and other groups can be assessed with the social dominance orientation scale (Pratto et al., 1994), which assesses the extent to which an individual wants his or her group to dominate and be superior to outgroups.

As we have argued for other variables, individual differences in attitudes toward minority groups can influence attitude change through multiple processes depending on the elaboration likelihood. For example, under low thinking conditions, high (vs. low) prejudiced individuals are more likely to reject persuasive messages originating from stigmatized sources (Mackie, Worth, & Asuncion, 1990), especially for individuals high in identification with the ingroup (Fleming & Petty, 2000). This assumption is due to the fact that the group toward which one is prejudiced can serve as a simple negative cue.

Individual differences in prejudice and group identity can also affect attitudes in similar ways under high elaboration conditions, but through a different process–biasing thinking (Fleming & Petty, 2000). Finally, in situations where elaboration is moderate, individual differences in

prejudice can affect attitude change by influencing how much thinking a minority source elicits. For example, Petty, Fleming, and White (1999) found that source stigmatization increased message scrutiny only among those who were low in prejudice toward the stigmatized group. In two studies, thoughts and attitudes of low-prejudiced individuals were more influenced by the quality of the arguments presented by a stigmatized (Black, Experiment 1; homosexual, Experiment 2) than a non-stigmatized (White, Experiment 1; heterosexual, Experiment 2) source. In subsequent research, this same effect was obtained when a persuasive message was about, rather than from, a stigmatized individual (Fleming & Petty, 2003).

Individual Differences in the Motivation to Control for Prejudice.   There are not only individual differences in evaluations of minority groups, but also chronic motivations to control for prejudice toward these groups. Among these measures are the motivation to control prejudiced reactions scale (Dunton & Fazio, 1997), the internal and external motivation to respond without prejudice scale (Plant & Devine, 1998), and the humanitarianism-egalitarianism and Protestant ethic scales (Katz & Hass, 1988). These instruments are effective in predicting differences in public and private endorsement of stereotypes as well as motivation to correct one's social judgments.

As described above, individuals low in prejudice scrutinize messages from stigmatized sources to guard against possibly unfair reactions by themselves or others (Petty et al., 1999). This enhanced elaboration activity is also likely to occur for individuals with high scores in motivation to control prejudice, as measured with the scales listed above (Sherman, Stroessner, & Azam, 1997).

Receiving and carefully elaborating relevant information is not the only mechanism through which people can try to correct for potential biases, however. For example, when the elaboration likelihood is relatively low, instead of gathering additional information, individuals motivated to correct for prejudice might rely on heuristics and peripheral cues. Under such circumstances, these individuals might correct simply by activating their heuristic belief, "I am an egalitarian person" (Blair & Banaji, 1996; Moskowitz, Gollwitzer, Wasel, & Schaal, 1999).

At the other extreme of the continuum, when elaboration likelihood is high, motivation to correct for prejudice might influence attitudes by biasing the direction of the thoughts. Consistent with this idea, when low-prejudice individuals were highly motivated to correct for the generation of prejudice-related responses, their thoughts and attitudes have been found to be nonstereotypic (Monteith, 1993). Also, when the likelihood of thinking is high, individual differences in the motive to control for prejudice might influence attitudes by inducing explicit correction processes. There is ample evidence in the domain of prejudice of correction for the unwanted effects of activated stereotypes on attitudes under high elaboration likelihood conditions (Devine, 1989; Dovidio, Kawakami, Johnson, Johnson, & Howard, 1997; Plant & Devine, 1998; Monteith, 1993). When such corrections become highly practiced, as they might be for individuals high in their chronic motive to control prejudice, these corrections may be executed automatically (Maddux et al., 2004).

Individual Differences in Preferences between Motives

In this section, we describe two measures that can be used to distinguish between individuals who are more or less dominated by some of the preceding four motives. In particular, we review work on (a) Self-Monitoring (Snyder, 1974), and (b) Uncertainty Orientation (Sorrentino & Short, 1986).

Self-Monitoring.   Snyder's (1974) self-monitoring scale differentiates between high self-monitors who are oriented toward social approval and inclusion and low self-monitors

who are more motivated to be consistent with their internal beliefs and values. Self-monitoring can be assessed with a reliable and valid individual difference measure (Snyder, 1974) that includes items such as "I have considered being an entertainer."

In the domain of attitudes, high and low self-monitors differ in a number of ways. For example, because internal beliefs are more important to low self-monitors, these individuals are more susceptible to dissonance effects (Snyder & Tanke, 1976) and less susceptible to false feedback about their attitudes (Kendzierski, 1987; Valins, 1966; see also Fiske & Von Hendy, 1992). Also, because high self-monitors pay less attention to internal states and focus more on what the situation requires, they show lower attitude-behavior consistency than low self-monitors (Zanna, Olson, & Fazio, 1980).

Most research on self-monitoring has examined the notion that attitudes serve different functions for people who are high versus low in self-monitoring (Lavine & Snyder, 1996). According to the multiple-roles framework of the ELM, matching of a message to the function served by one's attitude can influence attitudes in multiple ways at different points along the elaboration continuum. Functional matching refers to presenting a message that is in some way relevant to the underlying function served by the attitudes of high and low self-monitors (e.g., presenting a message with value-oriented arguments to a low self-monitor and image-oriented arguments to a high self monitor).

The most common initial finding in this literature was that high and low self-monitors were more persuaded by messages that were matched (versus mismatched) to the function served by their attitudes. For example, Snyder and DeBono (1985) exposed high and low self-monitors to advertisements for a variety of products that contained arguments appealing either to the social adjustment function (i.e., describing the social image that consumers could gain from the use of the product) or to the value-expressive function (i.e., presenting content regarding the intrinsic quality or merit of the product). They found that high self-monitors were more influenced by ads with image content than ads with quality content. In contrast, the attitudes of low self-monitors were more vulnerable to messages that made appeals to values or quality (see also DeBono, 1987; Lavine & Snyder, 1996; Snyder & DeBono, 1989).

Later research showed that the persuasive effect observed for matching can be determined by different psychological processes depending on the situation. When the likelihood of elaboration is high, matching the content of the message to the functional basis of the attitude is more likely to influence attitudes by biasing the direction of processing. For example, a high self-monitor would be more motivated to generate favorable thoughts to a message that made an appeal to image rather than an appeal to values (Lavine & Snyder, 1996). On the other hand, when the circumstances constrain the likelihood of elaboration to be very low, a functional match is more likely to influence attitudes by serving as a simple cue (DeBono, 1987). For example, even when the content of the message is not processed, if a source simply asserted that the arguments are consistent with a person's values, a low self-monitor may more inclined to directly agree than a high self-monitor by reasoning, "if it links to my values, it must be good."

Functional argument matching not only can influence attitude change by making matched arguments more persuasive than non-matched arguments, but also by influencing the amount of information processing. For example, functional argument matching can result in increased message scrutiny when the elaboration likelihood is free to vary. Some evidence for this was provided by DeBono and Harnish (1988). Their research showed that high self-monitors engaged in greater scrutiny of the arguments when they were presented by an attractive source (who might be expected to make an image appeal) than an expert source (who presumably would make a quality appeal), whereas low self-monitors demonstrated the reverse pattern. In other research, Petty and Wegener (1998) had high and low self-monitors read image (e.g., how good a product makes you look) or quality (e.g., how efficient a product is) appeals that contained strong (e.g., beauty or efficacy that last) or weak arguments (e.g., momentary beauty

or efficacy). As expected, the cogency of the arguments had a larger effect on attitudes when the message contained arguments that matched rather than mismatched the functional basis of the attitude. In summary, the accumulated research suggests that matching of a message to the function served by one's attitude can influence attitudes by serving as a peripheral cue (when elaboration is low), by biasing thoughts (when elaboration is high), or by enhancing the amount of information processing (when elaboration is moderate).

Matching also has implications for the generation or production of persuasive messages. For example, Shavitt and her colleagues (Nelson, Shavitt, Schennum, & Barkmeier, 1997; Shavitt, 1990; Shavitt, Lowrey, & Han, 1992) studied the role of self-monitoring by asking participants to write their own advertisements for different types of products. Consistent with the matching notion, it was found that when writing for products that can serve multiple functions (e.g., watch, sunglasses), high self-monitors tended to use more image-based arguments and headlines, whereas low self-monitors tended to use more quality-based arguments and headlines. Thus, when there is opportunity to focus on multiple dimensions of an attitude object, differences in the types of functions that individuals focus on may emerge depending on differences in self-monitoring. Importantly, the above studies also revealed that when only utilitarian or social identity products (i.e., single-function attitude objects) were used, no differences between high and low self-monitors emerged, unless they were provided with several balanced claims (i.e., messages that included both utilitarian and social identity claims). These findings emphasized the importance of testing other unexplored ways in which matching message contents and/or frames with personality types might play a role in persuasion.

Uncertainty Orientation.   Sorrentino and Short (1986) have differentiated between uncertainty-oriented individuals who are motivated toward knowledge seeking and understanding, and certainty-oriented individuals who are more interested in avoiding inconsistency. That is, the uncertainty-orientation reflects interest in resolving uncertainty and gaining new knowledge, whereas the certainty-orientation reflects a primary concern with avoiding ambiguity or confusion. Similar to other variables described under the need to know, to the extent that a situation can be seen as an opportunity to learn something about oneself or the world, uncertainty-oriented individuals will be motivated to think effortfully. In contrast, certainty-oriented individuals will only think carefully to the extent that a situation provides familiarity and certainty about their abilities and opinions. Similar to other individual differences related to the need for consistency, and as a result of the lack of interest in exploring or understanding, certainty-oriented individuals are seen as relatively closed to new beliefs and ideas, and they are likely to be intolerant of others who are different (Sorrentino & Roney, 2000). The measure of uncertainty orientation includes the assessment of two independent dimensions, Uncertainty and Authoritarianism, that assess one's desire to resolve uncertainty (with a projective test) and one's desire to maintain clarity (with a self-report scale), respectively.

Recall that research on self-monitoring has demonstrated that matching a message with a motive can influence attitude change by enhancing the extent of thinking, at least when elaboration is moderate (Petty & Wegener, 1998). A similar argument can be made for the case in which messages match uncertainty orientation. For example, Sorrentino and his colleagues (Sorrentino & Roney, 2000) postulate that situations that activate concerns relevant to one's uncertainty orientation lead to increases in effortful processing relative to situations irrelevant to one's uncertainty orientation. To test this prediction, Sorrentino, Bobocel, Gitta, Olson, & Hewitt (1988) conducted a study in which students were induced to think about a proposal that was high or low in personal relevance. The message contained either strong or weak arguments that came from a source that was high or low in expertise. Sorrentino et al. (1988) found that uncertainty-oriented persons were more influenced by the quality of the arguments contained in the message and less influenced by source expertise as personal relevance increased, replicating past research (Petty, Cacioppo, & Goldman, 1981). However, certainty-oriented participants

showed the opposite pattern–being more influenced by source expertise and less influenced by argument quality as personal relevance increased. Whereas uncertainty-oriented individuals obtained certainty by processing the message arguments carefully when relevance was high, certainty-oriented individuals relied on experts to obtain certainty when the issue was of high relevance. Thus, this work suggests that uncertainty orientation can affect attitudes by affecting the extent of information processing, and the conditions that foster thinking are different for high and low certainty individuals.

REMAINING ISSUES IN INDIVIDUAL DIFFERENCES AND ATTITUDES

The bulk of the chapter has dealt with explicit motives–motives of which people are aware and that are assessed with explicit self-reports. In fact, all the individual differences relevant to attitudes and persuasion described so far in this chapter are measured by directly asking people about their self-views. However, just as people can hold conscious, easily reportable motives, personality theorists have suggested that there can be less consciously held motives as well (McClelland, Koestner, & Weinberger, 1989). Early on, these types of motives were assessed with projective tests (Thematic Apperception Test, Proshansky, 1943) and other indirect measures. More recently, investigators have begun to assess these motives with more contemporary implicit measures, such as the Implicit Association Test (IAT) (Greenwald et al., 1998). Implicit motives are important because they can influence information processing and behavior in certain contexts. For example, McClelland (1985) showed that measures of implicit motives are very effective in predicting behavior in relatively unconstrained and spontaneous situations. Furthermore, implicit motives have sometimes predicted action trends over time better than explicit measures of the same motives (McClelland, 1965). Similar arguments have been made for implicit versus explicit attitudes (Greenwald & Banaji, 1995; Wilson et al., 2000).

The importance of the distinction between explicit and implicit motives and its implications for the study of individual differences and attitude change has been noted by Epstein in his cognitive-experiential self-theory (CEST) (see Epstein, 2003, for a review). Epstein identified the same four basic motives used in this chapter as the major human needs, and noted that each of those explicit motives is associated with implicit beliefs able to influence thoughts and behavior. The CEST argues that there are two independent information-processing systems that operate in parallel (see also Smith & DeCostner, 1999). The experiential system is driven by emotion, is associative, rapid, and primarily nonverbal. In contrast, the rational system is analytic, logical, and slower in information processing. Importantly, Epstein and his colleagues have developed an instrument to assess individual differences in rational and experiential thinking styles, the rational-experiential inventory (REI) (Epstein et al., 1996; for a refined version, see Pacini & Epstein, 1999). The rational subscale of the REI is based largely on the need for cognition scale (Cacioppo & Petty, 1982), and has been able to predict intellectual performance and adjustment, including measures of ego strength and self-esteem, and is correlated with measures of openness, conscientiousness, and physical well-being. The experiential subscale is positively associated with measures of extroversion, agreeableness, empathy, creativity, emotionality, and sense of humor. Given different ways of processing information, Rosenthal and Epstein (2000; see Epstein, 2003) found matching effects for REI and persuasion. That is, in a study in which a rational message (emphasizing objective information) and an experiential message (including vivid individual cases) in favor of breast self-examination were presented, Rosenthal and Epstein (2000) found more persuasion when the message matched participants' thinking style.

This example demonstrates the relevance of considering implicit aspects of the self for the purpose of potential matching effects (see also Wheeler et al., 2002). However, individual

differences in implicit constructs might influence attitudes and attitude change through a multitude of processes. For example, because independence between the implicit and explicit motives is a well-established finding (McClelland et al., 1989), there might be individuals with discrepancies between their explicit and implicit motives (Kehr, 2004). Briñol, Petty, and Wheeler (2004) have suggested that such discrepancies can have important consequences for information processing and attitude change. For example, because internal inconsistencies that are explicit are often associated with aversive feelings (Abelson et al., 1968) and enhanced information processing (Maio, Bell, & Esses, 1996), individuals with discrepancies between their implicit and explicit self-conceptions might similarly be (implicitly) motivated to reduce this ambivalence by seeking and processing discrepancy-relevant information. In order to test this assumption, Briñol, Petty, et al. (2004) conducted a study in which both explicit and implicit self-dimensions (e.g., self-esteem) were measured. Results showed that as implicit-explicit self-discrepancies increased, participants engaged in more thinking about a persuasive message framed as relevant to the discrepancy. In this research, message processing was assessed by the impact of strong versus weak arguments on attitudes and valenced thoughts. These findings suggest that discrepancies between explicit and implicit self-conceptions are important to understand because such discrepancies can influence attitudes by affecting the extent of information processing.

In the last part of the chapter, we examine a number of other individual differences that are related to persuasion, but for which the link with explicit or implicit motives is not as clear as the ones already described. For example, individual differences can be examined among relatively enduring demographic aspects of a person (e.g., gender and age), individual skills and abilities (e.g., intelligence), and general traits of personality (e.g., the Big Five). In this section, we cover the impact on attitude strength and change of the most studied measures of individual differences regarding ability, demographic, and other personality characteristics, noting the links to the four motivational constructs when relevant.

Gender.   Women are sometimes viewed as more easily persuaded than men. Although this difference may reflect a cultural stereotype, research has tended to show that women are more susceptible to influence than men (Cooper, 1979; Janis & Field, 1959). The basis for this difference can be early socialization experiences because women are expected to conform and maintain harmony (Hovland & Janis, 1959; Eagly, 1978; Eagly & Wood, 1991). These expectations might suggest that gender could be particularly related to the motive of social approval. Another possibility is the greater message reception skills of women (McGuire, 1969), which would relate gender to the need to know. McGuire (1968) also speculated that the effect might be due to the gender of the influence agent, the experimenter, or the person who made the experimental materials. Additionally, Eagly and Carli (1981; see also Petty & Wegener, 1998) noted that some of the gender effect may be attributed to the nature of the influence topic and to the content of the message arguments often used in persuasion studies.

Probably each of these factors can account for part of the variance in gender effects. For example, the gender difference can be undermined or eliminated when the gender of the influence agent (Weitzenhoffer & Weitzenhoffer, 1958) or the gender of the investigator (Cooper, 1979) is controlled. The gender difference can also be reduced when the appeal is based on reciprocity rather than sympathy (Fink et al., 1975). Gender effects can even be reversed, with men being more influenceable than women, for those topics for which women have stronger attitudes or more knowledge (Cacioppo & Petty, 1980; Sistrunk & McDavid, 1971; see Eagly & Carli, 1981 for a review).

Much of this research suggests that there may not be much of a gender difference in persuasibility once other factors are controlled (e.g., gender of source, knowledge differences in the audience). If there were an effect of gender itself on persuasibility, little if any research has examined the mechanisms that might underlie its impact. Thus, it is not clear if gender

affects persuasion because one's gender is used as a simple cue (e.g., "as a man, I must resist"), affects the extent of information processing, biases its direction, counts as an argument itself, or affects thought confidence. As described for other variables, each of these roles is more likely to occur under some circumstances and with different consequences for attitude strength.

Age.   Popular wisdom suggests that young people are more susceptible to persuasion than are older adults. Laboratory research has generally confirmed this assumption. Different studies have shown that young children (vs. older individuals) are more open to different forms of suggestion and hypnosis (Ceci & Bruck, 1993) and that their attitudes are less stable (Alwin, Cohen, & Newcomb, 1991). Some authors have argued that this effect is due to a gradual decrease in susceptibility with age (Glenn, 1980). Others have proposed that this effect is the result of an abrupt change in resistance to persuasion after young adulthood (Mannheim, 1952), and still others have suggested a curvilinear relationship with younger and older individuals being most susceptible to change (Sears, 1981). Recent evidence has provided empirical support for the curvilinear hypothesis, with susceptibility to attitude change shown to be greater during early and late adulthood than during middle adulthood (Visser & Krosnick, 1998). However, it seems unlikely that age per se relates to influenceability. Perhaps age is related to the motive for consistency. Age is often confounded with other variables that would foster this effect, such as attitude strength, likelihood of challenging experiences, and people's naive theories about aging (Petty & Wegener, 1998). Consonant with this view, Visser and Krosnick (1998) found that attitude importance, certainty, and perceived quantity of attitude-relevant knowledge are in fact greater in middle adulthood than during early or late adulthood.

Intelligence.   Individual differences in intelligence are often measured with standardized, multitest reliable instruments (for a review, see Sternberg & Grigorenko, 2003). Traditional analyses of intelligence have focused on how intelligence affects a recipient's ability to receive and yield to messages (McGuire, 1969; for a review, see Wyer & Albarracín, chap. 7, this volume). Because intelligent individuals have greater ability to understand and to scrutinize the merits of a message than relatively less intelligent people, intelligence can presumably increase persuasion when reception factors are important (Cooper & Dinerman, 1951). In contrast, because intelligent individuals likely have a greater ability to defend their attitudes, intelligence can also lead to resistance to persuasion (Crutchfield, 1955). A meta-analytic examination of the accumulated literature on intelligence and attitude change revealed that increased intelligence was generally associated with decreased persuasion (Rhodes & Wood, 1992). There are a number of reasons why this might be the case.

Perhaps highly intelligent people have a greater ability to counterargue messages. However, if the message were especially strong (and not easily counterargued), highly intelligent people might show more persuasion. If we assume that intelligence increases the ability to discern the merits of strong arguments and the flaws in weak ones, then the ability to process associated with intelligence works similarly to the need to know. As described earlier in this chapter, the need to know often influences attitude change by enhancing the extent of information processing. Like other variables, intelligence might also be capable of serving in multiple roles. For example, although it has not been studied explicitly, the perceived intelligence of an individual could function as a peripheral cue (e.g., "I am likely smarter than the source, so why should I change my view?"), especially when the elaboration likelihood is low. Intelligence might not only influence attitudes by serving as a simple cue or by affecting the extent of elaboration, but also by biasing the information processing or by influencing thought confidence. For example, if one's intelligence is made salient after carefully processing the message, it might affect persuasion by influencing the confidence with which people hold their cognitive responses to the message (e.g., "Because I am usually right, I should trust and follow what I am thinking about the proposal").

Of course, we do not imply that only intelligence as measured with traditional questionnaires can play a role in persuasion. As noted previously, an individual's perceived intelligence could also have an impact on attitudes through different roles. Not only how intelligent a person thinks he or she is, but also other related metabeliefs can have an impact on attitudes, such as people's theories about the malleability of their own intelligence (Dweck et al., 1995). Future research might also benefit from exploring the role of individual differences in emotional intelligence or the ability to perceive, interpret and regulate peoples' own (and others) emotional states in influencing attitudes. The study of individual differences in birth order might provide another alternative for future research. For example, Sulloway (1996) linked higher intelligence to first-born children and to less rebellion against the status quo, which might lead in turn to more resistance to change and to accept new ideas.

The Big Five.   Using cluster and factor analytic techniques, personality theorists have reduced the universe of possible personality traits to a limited set of dimensions. The most well-established example is the Big Five of personality (Costa & McCrae, 1985; Digman, 1990). The five orthogonal factors it proposes are usually referred to as (a) Extraversion or Dominance and Submissiveness, (b) Agreeableness, (c) Conscientiousness (Dependability), (d) Emotional Stability (Neuroticism), and (e) Openness to Experience. Most of the research studying the influence of these five factors on attitudes change has shown matching effects.

For example, dominant and submissive individuals have been found to be more responsive to individual persuaders (Blankenship, Hnat, Hess, & Brown, 1984) and to messages (Moon, 2002) that match their personality styles. In one study, Moon (2002) found that dominant individuals changed their attitudes more in the direction of a dominant message (defined as one that expressed greater confidence in its claims and was more commanding of others, relative to submissive messages; Dillard, Kinney, & Cruz, 1996), whereas submissive individuals were more influenced by messages with a submissive style. In conceptually similar research, Chang (2002) found that extravert individuals (as measured by the Eysenck, Eysenck, & Barrett, 1985 introvert/extravert scale) were more vulnerable to messages containing arguments presenting extravert characteristics of an object (e.g., for people who enjoy meeting others), whereas those scoring high in introversion showed more attitude change in response to a message containing introvert characteristics (e.g., for those who are mostly quiet with others). Wheeler et al. (in press) showed that matching the message frame to one's introversion/extraversion can enhance thinking about the arguments presented leading to persuasion only when the arguments are strong. Of course, the psychological processes through which matching messages and traits result in more persuasive effects can vary depending on the elaboration likelihood. Finally, recent research (Schaefer, Williams, Goodie, & Campbell, 2004) has shown that Extraversion tends to be associated with overconfidence (defined as the difference between confidence and accuracy) in a task in which participants had to rate how confident they were in their responses to general knowledge questions. Due to the important role of confidence in the domain of attitudes, this finding suggest that Extraversion and other basic personality dimensions may be capable of influencing attitude change by affecting the confidence with which people hold their cognitive responses.

Other Specific Traits.   We noted earlier that individuals can differ in a variety of ways other than the five major factors, though many of the more specific traits may share some variance with the Big five (e.g., need for cognition is related to openness; Cacioppo et al., 1996). In concluding this section we note some other specific individual differences that have been related to persuasion. For example, consider individual differences in anxiety proneness as measured by the trait anxiety component of the State–Trait Anxiety Inventory (Spielberger, Gorsuch, & Lushene, 1970). Consistent with the notion that individuals classified by this scale

as high (vs. low) in trait anxiety tend to exhibit more difficulties in processing and encoding information, DeBono and McDermott (1994) found that anxious people used the attractiveness of the source to decide their position in response to a persuasive message, whereas less anxious individuals relied on the cogency of the arguments contained in the message. Other research has demonstrated that the individual difference variable of repression-sensitization also identifies some people, sensitizers, who may be more attentive to argument quality and others, repressors, who may be more prone to using heuristics (DeBono & Snyder, 1992).

Obviously, individuals can differ in countless other ways. For many of these more specific individual differences, similar matching effects between the type of persuasive message and individual characteristics have been found. For example, different lines of research have found persuasive matching effects for ideal versus ought self-guides (Evans & Petty, 2003; Herbst, Gaertner, & Insko, 2003; Tykocinski, Higgins, &Chaiken, 1994), for individuals with a dominant independent vs. interdependent self-construals (Lee, Aaker, & Gardner, 2000; see also individualism-collectivism individual differences), for individuals who are high versus low in their consideration of future consequences (Strathman, Gleicher, Boninger, & Edwards, 1994), and for other more narrow variables, such as the centrality of visual product aesthetics (Bloch, Brunel, & Arnold, 2003). Sometimes these matching effects seem to be produced by the match serving as a simple cue, biasing processing, or affecting the extent of processing. As should be obvious by now, we suspect that each type of specific matching would be operative in different situations along the elaboration continuum.

Finally, in order to facilitate the understanding of possible personality differences among people, some scholars have taken single indicators of personality and aggregated them in multiple traits or cognitive styles. An example of this strategy can be found in the distinction between adaptors and innovators (e.g., Goldsmith, 1984). Adaptors like security and prudence, and are characterized by traits such as dogmatism, conservatism, intolerance of ambiguity, practicality, and group dependence. Innovators like challenge and are described by traits such as extroversion, flexibility, adventurousness, impulsiveness, impatience, risk taking, and independence. It seems plausible to expect that these two cognitive styles differ in the motives outlined in this chapter as well as in the type of information people consider when forming or changing their attitudes. For example, Bathe (1999) found that adaptors (vs. innovators) tended to be more vulnerable to different ads and also more sensitive to the source of messages.

CONCLUSIONS

In the present chapter, social psychology's major research findings regarding the role of individual differences on attitude change have been described. A large number of individual differences have been examined in persuasion research. We organized most of them into several meaningful categories of motivational factors: (a) knowledge seeking, (b) consistency, (c) self-worth, and (d) social approval. The main psychological processes by which variables within those four motives can influence attitude change are by: (a) affecting the amount of information processing; (b) biasing the thoughts that are generated, or (c) influencing one's confidence in those thoughts and thus whether they are used; (d) making certain information more likely to serve as arguments, or (e) affecting the selection and use of simple cues and heuristics. By grouping the many specific individual differences and persuasion processes into meaningful categories, we aimed to provide a useful guide to organize and facilitate access to key findings in this literature.

Individual differences in nonmotivational variables, such as demographic, ability, and cultural factors were also considered. Perhaps the most common finding in the literature on individual differences has been that matching persuasive messages to people's characteristics

increases persuasion. The present review has provided a detailed examination of the different psychological mechanisms through which such persuasive matching effects and exceptions might occur. Consistent with the multiple roles notion of the ELM, matching messages with personality has been found to influence persuasion by different processes depending on the likelihood of thinking. Additionally, recent research has shown that matching can produce processing fluency or a feeling of fit (Lee & Aaker, in press). Future research should explore whether such a sense of processing fluency or "feeling right" can also influence attitudes through the multiple processes described in the present chapter.

An additional feature of the current review is the proposition that individual differences can affect persuasion both when an individual is a target and an agent of persuasion. Although most of the research conducted in the domain of social psychology has focused on individuals as targets of influence, individual differences are also relevant for the study of the persuasive agent, as shown for variables such as need for cognition, Machiavellianism, and argumentativeness.

This review also makes it clear that the same basic human motives might be assessed with multiple individual difference measures. Although each of the particular measures focuses on different aspects of the motive, each presumably has in common the reliance on what people consciously report about their self-concept. However, we have noted that there might be other less consciously accessible individual differences relevant to attitude change. As described in this chapter, matching persuasive messages to implicit aspects of the self-concept, and studying the combinatory effects associated with both explicit and implicit individual differences constitutes an important avenue for future research.

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