Chapter 3: Cognitive Structures and Processes in Cross-Cultural Management

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Controversies about the psychological implications of culture pervade the cross-cultural management literature. When management scholars presume that psychological topics are universal, they are berated for their ethnocentrism (Boyacigiller & Adler, 1991; Wilpert, 1995). However, attempts to link psychology with culture face the dual perils of attributing psychological qualities to societies or cultural qualities to individuals (Hofstede, 2001; Smith, 2004). Despite these perils, social and organizational psychologists have drawn from cognitive theory to connect culture and psychology in ways that are useful for cross-cultural management research (Smith, Bond & Kagitzcibasi, 2006).

The present chapter begins by considering theories of motivation and personality, the psychological theories that build most directly on the perspective on values provided in Chapter 1. We then consider ways in which cognitive theory helps understanding of the link from person to culture by analyzing the proactive development of cultural mastery or expertise. In particular, we consider those research purposes for which a person’s society of origin may be a better indicator of cognitive characteristics than are the values that a person endorses on a questionnaire. Finally, we describe some core findings from cognitive psychology and suggest research agendas that link dimensional theories, recent cognitive theory, and the social structures of organizations. Throughout the chapter, we take the position that the treatment of motivation and personality dimensions in the field of cross cultural management is frequently dated and overly rationalistic. We propose that the field needs to draw from the major advances in psychology of the past three decades by placing
less weight on psychological dimensions relative to other ways of understanding cultural context, reinterpreting those established psychological dimensions that are retained, and considering other dimensions linked to patterns of cognitive processing.

**Motives and Motivation Processes**

Motivation is a core construct in organizational behavior, one that has implications for the topics covered in many chapters in the present volume. Differences in national values have been shown to relate to individual-level motivational differences between members of those nations across a range of organizational behavior topics (Gelfand, Erez & Aycan, 2007), including goals and preferences for reward allocations (see Fischer, Chapter 8), job satisfaction, reactions to feedback and job characteristics (see Huang, Chapter 5). Public and private organizations, armies, tribes, and schools all contain systems, processes and practices that seek to motivate and control their members in ways consistent with national values (see also Lervik, Chapter 24).

Organizational behavior scholars have typically distinguished between content and process theories of motivation and have linked both to cultural differences. Content theories are most closely related to research about national differences in the typical values of individuals (see Huang, Chapter 5 and Smith, Peterson & Thomas, Chapter 1), while cultural differences in judgments about justice (see Fischer, Chapter 8) and negotiation (see Brett & Crotty, Chapter 18) have been linked to process theories.

*Content Theories of Motivation*

Content theories provide taxonomies of values, needs or outcomes that people seek (e.g., Maslow, 1954). Most content theories propose that individuals differ in their motives in either a stable way depending on their personality and early socialization or in a more dynamic way depending on changes in their work situation and life experiences. This basic
theoretical logic is readily adapted to comparative research by recognizing that socialization differs among nations and that the economic and social conditions of nations show a mix of stability and change (Huang, Chapter 5). Reviews of the extensive literature about how childhood socialization explains the link between societal values and individual values are available, but are rarely cited in the cross-cultural management literature (Inkeles & Levinson, 1969; Smith, et al., 2006).

Why would individual-based need theories predict national differences in typical needs? Huang (Chapter 5) contrasts a Marxian view which identifies economics and technology as determining factors with a Weberian view which suggests that historical and religious factors produce a certain heritage of cultural values (Inglehart & Baker, 2000). The cultural view is also reflected in the discussion of societal values in Chapter 1, while the economic and technology view is frequently reflected in discussions of modernization or globalization.

Although typically applied to national culture characteristics, both views also apply to subcultures within nations. Potential cultural variability among regions of nations is sometimes postulated based on traditional religious differences, as in the case of Belgium. Recognizing the bifurcation in many nations between the well to do and the poor, the needs that motivate people in different strata of society that may or may not correspond to geographic regions can also differ quite radically. That the elite of late 18th century France bemoaned their boredom (ennui) and sought fulfillment in cultural activities, while the impoverished worked to live is a common theme in classic French literature. Similar stratification appears in most nations today, particularly in those that are economically dependent on extractive industries and those with a strong colonial heritage.

National culture has links not just to the patterns of needs typical of people in a society, but also to the theories that scholars in a society create (Erez, 1990). As Huang
argues in Chapter 5, individual values are more likely to be seen as primary by researchers in a strongly individualist and materialist nation such as the US where the theory was developed, while scholars from collectivistic nations may see more relational needs as both the source of survival and the peak of attainment. In practice, knowing what rewards people are likely to find motivating is directly applicable to personnel practices such as whether to emphasize pay, benefits, good work conditions, or job security when managing human resources in a given nation (see Brewster & Mayrhofer, Chapter 21). National averages for such work values both overall and for particular occupational categories are now available on-line for national random samples of households from several administrations of the World Values Survey (http://www.worldvaluessurvey.org/).

Process theories of motivation

Classic motivational process theories complement content theories by explaining the mediating processes through which values or needs affect behavior, learning, justice perceptions, well being or performance (Ambrose & Kulik, 1999). The three most commonly considered process theories in organizational research have been goal theory (Locke & Latham, 1990), expectancy theory (Vroom, 1964) and equity theory (Adams, 1965). In the case of goal theory, research has found consistent support across a range of nations with widely different cultural values (Locke & Latham, 1990).

These theories differ in the specific kinds of computations which they propose that people carry out. However, all three theories have also been criticized as showing a particular cultural bias by paying too little attention to emotions, and being too rational in their assumptions about the conscious calculations that lead to motivational choices (Boyacigiller & Adler, 1991). Culture is relevant to these motivational processes, for example, by affecting the propensity to use probabilistic thinking rather than dichotomous true-false thinking when calculating the likelihood that certain outcomes will follow from a given course of action.
(Yates, Lee & Shinotsuka, 1996). As we will develop in the review of cognition theory, the deliberate cognitive processing that process motivation theories propose has a place, but a more limited one than is typically assumed in cross cultural management research. It is more likely to occur in instances where one’s prior experience with a situation is limited and the situation has significant consequences for the person facing it (Kahneman, 2003; Smith & Peterson, 1988). The circumstances when different forms of rationality affect organizational decision making are becoming increasingly well specified (Nutt, 1993; Nutt & Backoff, 1993). Some scholars have proposed that there may be more cultural variability in the content of what motivates people than in the process by which people are motivated (Boyacigiller & Adler, 1991). However, theories of cultural influences on equity judgments and justice perceptions (Bolino & Turnley, 2007; Fischer, Chapter 8) suggest that motivation processes may be quite culturally variable as well. As detailed below, recent cognitive theories improve on process motivation theories by avoiding their assumption of rationality and in so doing they can explain a broader range of behavior and how it is affected by culture.

**Personality Constructs**

Like models of values and content theories of motivation, the theories of personality most often encountered in cross-cultural management are based on dimensions measured using surveys (Triandis & Suh, 2002). Comparative studies of the personality traits that were most typical in different nations were central to the analysis of “national character” in the first half of the 20th century (Inkeles & Levinson, 1969). Values and beliefs subsequently supplanted personality traits as the primary focus for describing and differentiating between individuals and nations. Nevertheless, organizational psychologists have continued to study personality traits, particularly the Big Five, namely agreeableness, conscientiousness,
neuroticism, extroversion, and openness to experience (McCrae & Costa, 1996, 1997; Barrick & Mount, 2005).

Over the past twenty years, the study of personality in North American organizational psychology has been dominated by studies of the relationship between Big Five traits and various performance criteria (Barrick, Mount & Judge, 2001; Barrick & Mount, 2005; Murphy & Dzieweczynski, 2005). Meta-analyses have shown that conscientiousness is a valid predictor of a range of performance criteria across a wide range of occupations and that emotional stability is also a generalizable, but less consistent, predictor of performance. The other three traits, openness, agreeableness and extraversion, predict success in some occupations and for some performance criteria (Barrick et al, 2001; Borkenau, Egloff, Eid, Henning, et al., 2005). Meta-analyses have shown similar links between Big Five dimensions and performance across different national samples (Salgado, 1999). The extent of research on the relationships between Big Five factors and performance has resulted in Barrick et al. (2001) calling for a moratorium on similar studies and for more research focused on the dynamic cognitive processes that link Big Five traits to performance.

The cross-national generality of the Big Five factors has been confirmed across 56 nations (Schmitt & 126 co-authors, 2007). After reviewing research evaluating evidence for the universality of the Big Five dimensions, Triandis and Suh (2002) also concluded that all except openness have been found with reasonable consistency in a broad variety of national cultures. However they provided three caveats. First, the lay trait language used typically in Chinese societies has shown a configuration of traits that does not match the Big Five in any clear way. Second, additional traits are found in some locations, such as the relatedness dimension identified in China, which also has been subsequently identified within US data (Cheung, Cheung, Leung, et al., 2003). Third, traits in general may predict behavior less adequately in collectivist than in individualist societies. Members of collectivistic nations
have been shown to believe less strongly that behaviors of oneself and of others are
determined by personality traits (Church, Katigbak, Prado, et al., 2006).

Personality measures are based on individual-level theory and data structures, but the
Big Five researchers have also investigated whether nations can be characterized in terms of
traits, just as they can be characterized in terms of systems of values and beliefs (Smith,
Peterson & Thomas, Chapter 1). Using the procedure of aggregating items followed by
nation-level factor analysis pioneered by Hofstede (1980), the Big Five factors have also been
obtained at the nation-level. Using scores obtained in this way, Hofstede and McCrae (2004)
found that each of the Big Five dimensions significantly correlated with at least one of the
Hofstede dimensions. Among the stronger findings are that extraversion correlates positively
with individualism and negatively with power distance. The improved methodology that
permits this type of analysis sheds light on the early 20th century formulation that personality
is a function of both genetics and socialization, and that the socialization component may
well be linked to aspects of national culture (Peterson & Ruiz-Quintanilla, 2003).

The focus on Big Five personality traits in organizational research parallels the focus
on the categorizations of cultural values proposed by Schwartz (1994) and Hofstede (2001) in
cross-cultural studies. It also reflects concerns among personality scholars that are analogous
to the ones to which Rokeach (1968) was responding in values research when he proposed
that a smaller set of values reflected a large set of narrowly focused attitudes. Cultural value
taxonomies have provided many of the same benefits for cross-cultural researchers as have
the Big Five for organizational researchers interested in personality. These advantages
include focus, validated measures and a common language. Cultural value taxonomies and
personality trait models are both based on respondents’ introspection and a psychological
measurement tradition which assumes that people can readily identify their values, motives,
or personality traits and can express them in paper and pencil tests. This is a psychology of
conscious processes. The focus on the conscious is most problematic when value, motive, or personality dimensions are used theoretically to represent people’s most basic, least accessible individual characteristics. This sort of emphasis is central to views of culture that define it in terms of basic, tacit assumptions. When pressed, most scholars recognize that the ability to consciously access one’s own psychological characteristics and states is at best incomplete (Nisbett & Wilson, 1977; Oyserman, Coon & Kemmelmeier, 2002). Organization scholars have also argued that such research shows a Western propensity for rationalism (Miller, Hickson & Wilson, 1996). We now consider alternatives that do not depend so strongly upon assumptions about conscious rationality.

**Cognitive Perspectives for Cross-Cultural Management Research**

Since the late 1970s, psychology has de-emphasized theories of conscious thought and sought instead to explain the effects of memory and of unconscious cognitive processes. Markus and Zajonc (1985) explained how cognitive theories emerged from Gestalt psychologists’ observations about the way that unconscious assessments of one’s social and physical context affect one’s conscious attributions and reactions. Whereas early studies documented how context unconsciously affects conscious thought, recent theory is more dynamic. It recognizes that people seek out certain contexts and proactively take more notice of some aspects of context than others. In so doing, current cognitive theory provides integrated explanations of processing dynamics that combine social contexts, cognitive structures, affective responses and ongoing experience (Wood & Beckmann, 2006). Cognitive psychologists now seek to model the tremendous proportion of action that is driven by non-conscious thought, to understand the nature and limits of conscious thought, and to explain the control mechanisms that determine when people rely on one kind of thought rather than the other (Kahneman, 2003).
Despite its strong grounding in dimensional theories, some cross-cultural management research has drawn from cognitive theory (Smith & Peterson, 1988). For instance, Rokeach’s (1968) explanation of values was based on the view that unconscious needs for cognitive consistency (Festinger, 1957) underlie value formation and change. Locus of control has been studied as a personality-like propensity to use information to draw inferences that center on personal agency versus contextual forces. Citizen means (that is, individual-level averages) for locus of control (Smith, Trompenaars & Dugan, 1995; Spector, 1988) and for work locus of control (Spector, Super, Sanchez, et al., 2002) have been compared across many nations. More recently, cognition researchers have examined the role of culture in non-conscious processes such as attribution (e.g., Morris & Peng, 1994), implicit theories (Erdley & Dweck, 1993), and many other cognitive processes (Nisbett, 2003). Thus, although cross-cultural researchers mainly study values, motives and personality and mainstream social psychology pays only limited attention to culture, there is precedent for connecting the two fields. Recent social cognitive theories that explain the development and effects of dispositional beliefs can help respond to the call by cross-cultural management scholars (e.g., Erez & Earley, 1993; Gelfand, Erez & Aycan, 2007) for more analysis of the processes by which cultural values are developed and how they influence behavior.

In the following sections, we review research that we see as having the greatest potential for drawing the fields of cross-cultural management and cognition together with an emphasis on comparative research. Thomas and Fitzsimmons (Chapter 12) provide complementary applications of cognitive theory to intercultural relations. We begin by discussing aspects of cognitive theory which explain how societal culture comes to be reflected in the thinking or cultural expertise of a society’s members. Next, we summarize some basic conclusions from cognitive theory. Relying on these, we propose some a research agenda for linking cross-cultural management and cognition.
Social Cognitive Theory and the Development of Socialized Cognition

The most fundamental problem in cross-cultural psychology is to understand how cultural characteristics of societies are reflected in the psychology of individuals (Triandis, 1995; Smith et al., 2006). Sherif (1936) suggested that people acquire personal values and learn social norms through repeated exposure to the processes, values and norms of a culture. Rokeach (1968) integrated the cognitive theory then current into this simple early formulation by contending that stable values developed and changed through cognitive consistency mechanisms. People behave inconsistently because different situations make differing subsets of the cognitive structures that drive their behavior salient at different times. People formulate explicit values to reconcile inconsistencies between various aspects of the behavior of themselves or of referent others when circumstances make these inconsistencies salient. Social cognitive theory (Bandura, 1986, 2001) elaborates such explanations to explain how mental representations influence the processing that leads to evaluations of and reactions to people and events (Fleeson, 2001; Mischel & Peake, 2003; Mischel & Shoda, 1998). These explanations are relevant to many cross-cultural topics including, for example, cultural differences in evaluations and reactions to people and events, and the effects of mental representations about members of a cultural group.

The usual counterpart to traits in social cognitive theory is a set of dispositional beliefs that describe characteristics of the way in which persons typically process information. Individuals differ in the cues to which they selectively attend and how they encode the features of a situation. These differences reflect cultural learning (Kelly, 1955). Beliefs such as locus of control, implicit theories of ability (Dweck, 1999; Tabernero & Wood, 1999) and personal identity (Brunstein, 2000) are viewed as dispositions because of their chronic accessibility (Higgins, 1990) and their influence on the way that people frame and respond to situations. In relation to culture, Leung and Bond (2004) have proposed that
social axioms are dimensions that describe the bases on which people in different societies attribute causes to their experiences. Thomas and Fitzsimmons (Chapter 12) describe a number of information, interpersonal, action, and analytic skills many of which draw from cognitive dispositional theory that are being considered in research about cultural intelligence for handling intercultural encounters. Compared to Big Five personality traits (McCrae et al., 2001), these dispositional beliefs are generally viewed as more domain specific and more likely to change over time through developmental experiences than are personality traits (Rotter, 1975; Dweck, 1999). However, some scholars have argued that Big Five traits can be reinterpreted in terms of dispositional beliefs (Wood & Beckman, 2006).

Social cognitive theories are dynamic in that they explain how the cognitions, affects and behaviors that make up personality vary across situations. Nominal properties of situations such as locations, physical settings and numbers of people evoke different cognitions, as do their psychological properties such as valence, structure and ambiguity (Mischel, 1973; Mischel & Shoda, 1995, 1998). Social cognitive theory also incorporates memories of emotions and models the processing of affect. Emotions can be linked to memories and a link of a strong emotion to a memory affects its accessibility. Cultures differ in their socialized links between memorable images and emotions.

A key application of the social cognitive view is to the social learning process. A cognitive theory of social learning can be used to extend traditional socialization theories. Descriptions of child development previously used to explain the links between societal values and individual values (Inkeles & Levinson, 1969) can explain how culture becomes reflected in individual thought and behavior. For example, the finding that children both spontaneously learn about societal values by repeated observation and are taught societal values through mechanisms such as stories in children’s books (McClelland, 1961) can provide an even stronger cultural explanation for patterns in the way cognition is structured.
Social cognitive theory also adds to this formulation by explaining other ways in which culture is learned, the processes involved and how cultural knowledge is represented in individual memories. From the side of those seeking to instill culture, these ways include both deliberate modeling of socially acceptable behaviors and avoidance (in the presence of those who they seek to socialize) of less acceptable behaviors. It includes proactive selection by teachers of aspects of societal context to which children will be exposed, and similar proactive choices of context by parents (Bandura, 2001). Those experiencing socialization do not remain passive, however. Not only is modeling spontaneously offered, but it is proactively sought by newcomers as an alternative to the more costly process of learning from the consequences of direct personal experience. Within organizations, Wood and Bandura (1989) describe this process as a triadic interaction between behavior, cognition, and environmental events. Children as newcomers to a culture, like newcomers to an organization, engage in attentional processes such as proactive observation and abstract cognitive representation and cognitive rehearsal of what was observed. More overtly, they engage in behavioral production processes or imitation attempts which generate feedback both from direct observation of the success of one’s imitation and from feedback by others. They are also active agents in motivational processes that rely on direct rewards (others’ reactions to one’s own behaviors), indirect rewards (observation of others’ reactions to a model’s behavior) and self-produced rewards (Wood & Bandura, 1989).

*Culture Expertise: An Outcome of Cultural Socialization.*

The learning process represented in social cognitive theory is linked to the idea of mastery or the deliberate development of special skills, including management-related skills such as leadership (Wood & Bandura, 1989). This dynamic processing view of individual differences is not restricted to analogues to personality traits, but includes cognitive abilities. Studies that treat intelligence as a multifaceted product of expertise highlight cultural
differences in the meaning of intelligence (Sternberg, 1999). Cognitive theories of expertise imply that individuals inevitably develop a special expertise about the culture in which they grow up, expertise that shapes their behavior even more profoundly than does their expressed values. The way that long term memory comes to be structured is a product of long experience, whereas the content of memory of which people are most aware is based on particular experiences. Stated more formally, “Automatic processes are a mapping of the long-term regularities of the environment and do not change or adapt to short-term fluctuations in those regularities” (Wegner & Bargh, 1998, p. 462). Due to the way in which their long term memory is structured, experts respond to those situations in which they have expertise both more quickly and more accurately than do non-experts. Deliberately developing expertise requires a large amount of persistent effort, approximately four hours per day, over an extended period, typically about ten years (Ericsson & Charness, 1994). All of these aspects of expertise are consistent with characteristics of people as they learn their culture of origin.

Ericsson and his colleagues (e.g., Ericsson & Kintsch, 1995) suggest that these characteristics of expertise are due to the presence and ease of access of an extended working memory consisting of particular portions of long term memory. These are portions that are more complete and better organized than most others, and as a consequence can be readily and efficiently accessed. The characteristics of expert compared to non-expert cognition have been typically studied for discrete, complex kinds of skills like chess playing or violin performance rather than for more open-ended social skills. Although scholars studying expertise typically do not explicitly analyze more generalized forms of behavior beyond specific skills, they do draw analogies with “the basic skills required for living in a culture” (Ericsson, et al., 1993, p. 367) that children acquire and the recognition of meaningful words as distinct from nonsense sequences of letters (Ericsson, 2005). People have a tremendous
range of options for choosing activities and values (Bandura, 2001). However, the available options, the way people understand these options, and the social structures that affect the salience of and rewards for selecting societally preferable options inevitably come to be structured into a person’s cultural expertise.

Conclusions from Cognitive Theory

Our position that cross-cultural management scholars should take greater account of cognition is based on the view that cognitive theories offer additional explanations beyond those provided by motivation and personality dimension theories for what it means to be socialized into a given culture. We next present five main conclusions from cognitive psychology that are directly relevant to the reciprocal relationship between cognition and culture.

Working memory and long-term memory: Content and recall. The amount of working memory that humans have available for conscious processing activity is very limited, while the amount of knowledge that can be stored in long term memory is apparently limitless. Everything that humans see, hear, think about and do is influenced by the knowledge stored in long term memory and most of this processing is automatic or non-conscious (Sweller, 2003). Cultural effects on the memories of individuals are evident in the conscious recall of every day events. Chua, Liu and Nisbett (2005) had US and Taiwanese participants recall and record written narratives about personal events, events involving other people and videos of social events. US respondents were more likely to recall and mention events and actions about the main character than were the Taiwanese participants. When asked to recall incidents in which they were in control or had to adjust to a situation, US students had better recall of the incidents of control while Japanese students had better recall of the incidents of adjustment (Morling, Kitayama & Miyamoto, 2004). These studies indicate that much of what is stored in long term memory is the product of culturally bound experiences, which are
then reflected in the knowledge structures that underpin cultural differences in cognition, motivation and emotion. Cultural experiences affect what people store in their long term memory, how and how well it is organized, and what they can readily access.

Values and beliefs. Values and beliefs influence the way in which people encode situations as well as the outcomes they seek and their reactions to events (Dweck, 1991; Pervin, 1989; Mischel & Shoda, 1998). Thus personal values and beliefs can lead to differences in meanings, goals and plans, emotions, and behavior in different situations. Suh, Diener, Oishi and Triandis (1998) provide an example of the impact of individual differences in beliefs from a survey of life satisfaction of citizens in 61 national cultures. Daily positive emotional experiences were a strong predictor of life satisfaction in national cultures where citizens tended to hold individualistic beliefs, but were weaker predictors in cultures where citizens tend to hold collectivistic beliefs. In the latter cultures, life satisfaction was more strongly related to social norms regarding appropriate levels of satisfaction. Other research suggests cultural differences in appraisals of situations and of reactions to them. For example, East Asians are more likely to believe that personal attributes are malleable whereas European Americans are more likely to believe that personal attributes are fixed entities and not easily changed (Norenzayan, Choi & Nisbett, 2002, Study 3).

Direct influence of non-conscious procedural knowledge on behavior. Many cognitive processes, such as appraisals of situations, are well-practiced routines that occur extremely quickly and without the individual being consciously aware of the process (Greenwald & Banaji, 1995). Knowledge stored in long term memory often influences behavior in this manner without being the type of declarative knowledge that is accessible to conscious recall and oral expression. As with automatic processing (Bargh & Gollwitzer, 1994), procedural knowledge takes the form of “if this situation, then that response.” It guides behavior without requiring conscious processing or allocation of cognitive resources in working memory.
(Anderson, 1983). A growing body of evidence indicates that Westerners and Asians engage in different perceptual information seeking behaviors when confronting similar stimuli (Nisbett, Peng, Choi, & Norenzayan, 2001; Nisbett, 2003; Nisbett & Miyamoto, 2005). Compared to US born participants, Asian born individuals are more sensitive to contexts across a range of perceptual categorization tasks (Abel & Hsu, 1949; Ji, et al, 2001; Kitayama, et al, 2003; Masuda & Nisbett, 2006). Evidence that these effects occur below consciousness was provided by Chua, Boland and Nisbett (2005), who mapped the eye movements of European Americans and Chinese participants as they studied pictures in which a focal object was placed on a background. Chinese participants made more rapid eye movements across different locations in the picture, while Americans were more likely to look at the focal object in the picture sooner and do so for longer periods.

*Processing levels and switching levels.* While a considerable amount of cognitive processing occurs at a non-conscious level, people process information at multiple levels of awareness and automaticity (Bargh & Gollwitzer, 1994). For example, attribution theory deals with the effects of non-conscious processes on conscious justifications for choices. Conscious statements of such causal inferences show predictable cultural differences (Morris & Peng, 1994; Kitayama & Masuda, 1997). US respondents are prone to make the fundamental attribution error (Ross, 1977) of over attributing the causes of action to personal factors relative to situational factors when analyzing events as different as a murder and the movement of a fish in a tank. Indian, Japanese and Chinese study participants are less prone to this error (Morris & Peng, 1994). Some features of a situation produce a switch from one processing level to another (see also the discussion of metacognition and mindfulness by Thomas & Fitzsimmons, Chapter 12). Features such as high levels of novelty or conflict increase the influence of conscious processes, while other situations that lack novelty or conflict increase the influence of subconscious processes. These multiple levels of processing
have implications for understanding differences in inferences and reasoning processes across cultures (Smith & Peterson, 1988).

*Affect and cognition.* Affect and cognition are closely and reciprocally related. Affect and emotions influence information processing (Smith & Lazarus, 1990; Forgas, 1995). Affective reactions are influenced by the cognitive structures stored in long term memory that people use to encode and label emotions (Schachter & Singer, 1962; Mischel & Shoda, 1998). Cognitive structures are often emotionally laden, particularly when they relate to beliefs about aspects of the self such as one’s cultural identity (Erez & Earley, 1993; Mischel, 1973). For example, the links from particular appraisals of situations to emotions have been found to be consistent across different national cultures, but appraisals of the situations that determine emotional reactions are found to vary (Lazarus, 1991; Scherer & Wallbott, 1994). In particular, Scherer and Wallbott (1994) found that African participants were more likely to appraise situations as immoral or unfair than were participants from Europe, Asia and North America. However, emotions, such as joy or anger, were found to be linked to similar appraisals of situations across a wide range of locations.

These five conclusions from cognitive theory have implications for many topics in cross-cultural psychology and management. Psychology in the Western tradition during the period when theories of values and personality dimensions dominated tended to view the individual as “a dynamic center of awareness, emotion and judgment and action organized into a distinctive whole” (Geertz, 1975, p.48). Cognitive psychology challenges this emphasis on awareness and its universal applicability. Culturally distinctive behavior is the product of both conscious and subconscious processes. Perhaps paradoxically for cross-cultural management scholars, concern for a broad range of individual cognitive characteristics does not mean that researchers should abandon studies of national culture in favor of studies of personal values. Cognitive theories recognize major limitations in the use of value surveys to
understand cognitive structures. Most cross cultural studies of cognition deal with cultural characteristics to which a broad range of people in a society are exposed and that have, through this exposure, structured their way of thinking. We next consider research agendas that could make especially good use of these conclusions for advancing cross-cultural management research.

**Research Agenda**

Cognitive theories have implications for several areas of cross-cultural management. We focus here on three: (1) culture’s implications for cognitive representations of work-related situations; (2) the role of conscious versus automatic processing, especially when reacting to culturally familiar compared to culturally unfamiliar situations; and (3) the use of value, motive and personality dimensions typically studied in cross-cultural management research.

*Cognitive Representations*

Cognitive theory supports the need for research about cultural nuances in generic concepts and even more culturally distinctive, indigenous concepts (see Smith, Chapter 21). Functional theories of culture provide explanations for the independent development of similar ways cognitive representations in various societies and neo-institutional theory explains their spread across cultures (see Chapter 3). While these explanations provide a basis for research premised on the equivalence of psychological dimensions across nations, cross-cultural psychologists became more aware during the 1970s that the way people represent things in memory can be culturally dependent. This awareness has been reflected in concern that questionnaire measures of phenomena such as values may have different meanings in different societies. This insight derived from linguistics (Berry, 1967; Peterson & Pike, 2002; Pike, 1967; Whorf, 1956), and cross-cultural scholars still tend to refer to linguistics to make this point (e.g., Den Hartog, House, Hanges, et al., 1999; Peterson & Ruiz Quintanilla, 2003).
A cognitive perspective offers more precise alternatives to this basic insight by describing how events and things are represented in memory as associative networks, schemas, exemplars, and parallel distributed processing mechanisms (E. Smith, 1998). Each of these suggests when cross cultural management scholars should expect to find some cultural variability in the concepts they study, and where they should look to find the most distinctly indigenous concepts.

The basic assumption about the way objects and events are represented as associative networks is that “Representations are constructed from discrete ‘nodes’ connected by ‘links’ of different types” (Smith, p. 393). Examples of nodes include concepts represented by nouns, whereas links are reflected in the way a subject and an object are connected in a sentence. For example, the Meaning of Working project (MOW, 1987) considered cultural variability in the basic idea of work: is work something that is done for pay, something that is done under the authority of another person, something that requires commitments and regular hours, or something that is unpleasant? Whether a society’s historical and economic situation includes images of class conflict centering on work, plentiful or scarce employment opportunities, or a plantation or slavery heritage is likely to affect which of these ideas is most strongly linked to the concept of work. When the meaning of working is associated with multiple images like these, particular events like the announcement of a pay raise or a harsh action by a superior can influence which image becomes salient.

The basic assumption about the way memories are represented as schemas is that “A schema is a structured unit of general knowledge about some object or concept” (Smith, p. 403), or an implicit theory about something. Unlike an associative network, a schema is either activated in its entirety or not activated at all. While schemas are evident in patterns observed in conscious thought and behavior, they are not themselves consciously accessible. Cross-cultural leadership researchers have used the labels of schema and prototype to
consider cultural similarity and variability in questionnaire descriptions of effective leaders (House, Javidan, Hanges, & Dorfman., 2002). Smith (1998) noted that there is no agreement about whether schemas can be represented by conscious reports in this way. While conscious thought directs responses to individual questions, the cultural differences in the psychometric structure of survey data that Leung (Chapter 4) describes can be viewed as reflecting cultural differences in schemas.

The basic assumption about the way memory is structured as **exemplars** is that “Representations record information about specific stimuli or experiences, rather than abstracted summaries or generalizations. . . . Such a representation may be constructed on the basis of actually perceiving the stimulus object, imagining it, being told about it secondhand, etc.” (Smith, p. 411). McClelland’s (1961) research about cultural imagery in children’s books treats each story as a discrete object in memory, as an exemplar. Heroes are cultural exemplars of charismatic or transformational leaders (Den Hartog, et al., 1999).

The basic assumption of **parallel distributed processing** is that “A concept or object is represented by a distributed representation, a pattern of activation across a set of processing units in a module. Distinct representations are different patterns across a common set of units” (Smith, 1998, p. 419) that operate together in something like the way an array of pixels in a television screen represents a picture. Individual differences are then seen as the product of chronic accessibility or activation levels of processing units (Higgins & Bargh, 1987; Mischel & Shoda, 1998). For instance, Hanges, Lord and Dickson (2000) describe the role that culture may play in a parallel distributed processing view of leaders.

Cultural differences in associative networks, schemas, exemplars, and parallel distributed processing mechanisms give content to concepts employed by cross-cultural writers such as ‘assumptions’ (Adler, 2002) and ‘collective programming’ (Hofstede, 2001). They explain how culture affects behavior that is outside of conscious awareness. In so doing,
they provide a theoretical basis extending beyond the early insights of linguists for considering why measurement structures of surveys applied in different societies may indicate more than translation error. They do so by explaining why concepts and dimensions that are broadly meaningful and generally similar may still have locally unique nuances.

Conscious and Automatic Levels of Processing

A second research agenda item is to complement and correct research which assumes that the effects of culture are mediated by consciously expressed values, motives, or personality dimensions with research that also recognizes the mediating effects of automatic, non-conscious processing. Cultural socialization not only affects the values that individuals choose, but also influences the way in which long term memory is structured in a way that is less open to conscious choice. Expertise about one’s own culture includes the content of knowledge that is stored in long term memory, the recall of information, attention and perception processes, causal inference and reasoning processes. Wegner and Bargh (1998) describe the relationship between conscious, controlled cognition and non-conscious, automatic cognition in a way that has implications for how the two should be theorized and studied in cross-cultural management research.

Conscious control. Conscious monitoring appears to be most frequent when the risk of significant failure is high (deliberate monitoring) or when a failure in automatic control actually occurs (event-driven monitoring). Deliberate monitoring is likely to occur, for instance, when people recognize that they are in an unfamiliar intercultural situation, whereas event-driven monitoring is likely to occur when cultural norms are violated in a cross-cultural exchange. Thomas and Fitzsimmons (Chapter 12) explain both circumstances and personal characteristics that may promote conscious control in intercultural interactions. Wegner and Bargh (1998) distinguish three types of conscious control based on when the control occurs relative to when the behaviors being controlled occur. These are conscious planning,
conscious intention, and conscious monitoring. The preponderance of psychological research indicates that conscious planning is only very inconsistently linked to subsequent behavior. Conscious intentions appear to trigger conscious self-monitoring and, when announced, indicate to others who may also be monitoring an actor’s behavior what to expect from the actor. Conscious control of all three sorts provides what Wegner and Bargh (1998) describe as a sense of control.

Societal culture has the potential to affect how prone people in a society are to engage in each of these three control processes regardless of within-nation variability in the values, motives or personality traits that individuals report on surveys. Hofstede (2001) notes that national cultures high in uncertainty avoidance place faith in devices consistent with the idea of conscious planning, and that people in these societies tend to persist in planning and regulating even when this sort of planning has little real consequence for action. The open announcement of conscious intentions is central to the idea of explicit choice in decision-making. Explicit choice changes the involvement of others from mere observers to joint monitors of the extent to which the chooser’s behavior corresponds to their announced criterion (Peterson, Miranda, Smith & Harper, 2003). Announcing an intention increases the risk of failure to achieve one’s intent, and hence the potential to lose face. Consequently, announcing intentions, and perhaps even formulating them, is likely to be done only with great care in those collectivist national cultures where maintaining face is particularly important. Sense of control, the experience that one is actively directing one’s own actions, is likely to increase the importance of conscious monitoring in national cultures that value mastery (Schwartz, 1994). In each case, socialization from imitation as well as long experience with societal rewards and sanctions is likely to produce these effects on non-conscious cognitive processes even when the personally expressed values of individuals indicate dislike for them.
Automatic control. Conscious control has a dynamic relationship with automatic control. In the preceding example of intercultural relations, recognizing that another party comes from a different cultural background than one’s own may elicit conscious control to try to adapt one’s behavior (see Thomas & Fitzsimmons’ model of this process, Chapter 12). However, conscious control can lapse, for reasons such as information overload, in which case the inhibitionless quality of automatic control based on cultural socialization would take over. Examples include a propensity to use of one’s first language and one’s culturally most familiar ways of viewing the world under situations of very high stress (Altarriba, 1993). Automatic control also includes one’s preconscious characterization of people in general or of individual personalities and experiences that filter perceptions and produce selective attention (Wilson, 2002). More broadly than just selective attention, culture has the potential to unconsciously shape the way in which perceptions are structured (Nisbett, 2003; Wilson, 2002).

A well known example of the cultural implications of automatic control is the tendency to speak with an accent reflecting the speech patterns of one’s culture of origin. By analogy, theories of non-conscious processing and automatic control suggest that people also think and behave with a cultural accent despite their consciously expressed personal values.

Reconsidering Psychological Dimensions

A third agenda item is to update cross cultural research about psychological dimensions by considering advances in cognitive theory. Some of that updating has already occurred, particularly for dimensions related to self (e.g., Erez & Earley, 1993) and ways of relating to culturally different others (Thomas & Fitzsimmons, Chapter 12). Debate has also commenced as to the extent to which self-regulation theory can be used to provide causal interpretations of how the Big Five personality dimensions affect behavior (Cervone, Shadel, Smith & Fiori, 2006; Wood & Beckmann, 2006). Traits are now viewed in one of two ways.
They are sometimes treated as characteristic of the explicit, verbal explanations that people give of their behavior and that of others. As such, they are useful descriptions of those behaviors and of the differences between people, but they are not causal explanations of the behavior. Alternatively, traits are treated as summary indicators of the way an individual tends to construct a variety of cognitive structures. Similar reinterpretations would be useful for value dimensions and other descriptions of personal cultural content. Cross cultural management research can draw from methods developed in personality research that uses experience sampling (Fleeson, 2001) and that studies life tasks (Sanderson & Cantor, 1999), personal projects (Little, 1999) and personal narratives (McAdams, 1996).

_A cognitive view of societal culture and individual values._ Cross-cultural scholars have been appropriately cautious about how cultural values relate to individual values (Smith, Peterson & Thomas, Chapter 1). The cognitive theorists’ answer to this basic problem is that culture determines a significant part of the well-learned beliefs and knowledge, including values, that are stored in the long term memories of the people in a cultural group and thus provides culturally shared forms of perceiving and understanding about the world. For example, people can conform to the norms and values of their nation without consciously being aware why they are doing so. As experts in their nation’s cultures, they rapidly and unconsciously process culturally meaningful situations, but slowly and consciously process culturally surprising or unfamiliar situations. Cultural socialization and learning processes are assumed to be sufficiently effective that individuals in a nation will tend to express support for many of the values advocated in that nation. However, culture does not determine all of an individual’s values and other beliefs or knowledge. Individual values are developed through a wide range of socialization and learning experiences, only some of which are culturally shared. Additionally, the manifestations of culture and its effects on individual behavior are not limited to personal values and other representations of culture in individuals’
long term memories. Culture includes rituals, constraints, symbols and other social phenomena that also influence individual behavior.

*Cognition, self-construal, and individualism-collectivism.* Psychologists have been particularly fascinated by cultural differences in the cognitive structures that link the individual to various collectives, especially as these differences affect the experience of the self. Triandis and Suh (2002) summarized studies which indicate that one’s in-group and its members are more salient to people in collectivist than to those in individualist nations. From a cognitive perspective, this implies that in-group members as a source of an opinion are more closely linked to the content of associative networks of memories, are more typically a part of schemas, or are commonly exemplars of people in collectivist than in individualist societies.

The proposal by Markus and Kitayama (1991) that cultural variations in cognition are associated with the degree to which persons perceive themselves as independent from others or as interdependent with them has proved particularly influential. They have extended their original approach to individualism and collectivism to consider not just shared personal predispositions, but also frequently shared experiences of people in a given society. Social cognitive theory conceptualizes the person as holding alternate sets of self-construals that may be elicited by particular circumstances (Mischel & Shoda, 1995). National cultures may differ in the types of contexts that individuals are exposed to, leading to more frequent elicitation of some types of self-construal than others. For instance, Kitayama, Markus, Matsumoto and Norasakkunkit (1997) showed that the US provides more happiness-inducing contexts than does Japan. Thus the value emphases that differentiate nations may reflect the prevalence of circumstances that elicit particular perspectives as much as consciously thought out sets of values. In this dynamic view of cultural values, cognitive processes and the outcomes of those processes are also seen by some as culturally grounded and not as the
product of universal basic processes carried out by people with different values (Shweder, 1991; Triandis, 1989; Nisbett, et al., 2001; Nisbett, 2003). For example, the fact that Asians focus more on the context within which an action occurs than do Westerners reflects a difference in processes (Nisbett, et al., 2001) and not simply a difference in values. National cultures include both distinctive nominal contexts, such as social rituals, and distinctive psychological appraisals of similar contexts, such as perceived control. Cross cultural management researchers need to pay increased attention to the possibility that learning one’s culture includes learning what to attend to, what it means and what to do across a range of culturally meaningful situations rather than only to the values that a person expresses.

*Systems of knowledge.* Another characteristic of the dimensions approach is that it tends to treat traits, values and beliefs as though they are stored in memory as discrete units. However, we have noted earlier several models of memory in which these units are interconnected in coherent systems of knowledge, including episodic or autobiographical memory and associative networks. These different representations of how culture is stored in long term memory suggest alternative ways for the study of the meaning and effects of culture for the citizens of different nations. For example, there is considerable evidence that individuals have coherent networks of values and goals for personal projects (Little, 1999) and for life tasks that dominate different stages of a citizen’s life, such as childhood, university, work and advanced adulthood (Sanderson & Cantor, 1999; see also Inkson & Khapova’s analysis of expatriate careers, Chapter 9). Cross-cultural studies of differences in the personal projects and life tasks of citizens will be more sensitive to differences in contexts and more likely to capture changes over time than the broader, context free analyses that result from cross-sectional surveys. Autobiographical memory contains sequences of events viewed from a first person perspective and thus provides narratives about significant events in one’s life which can be used to identify features of citizens’ life stories (McAdams, 1996).
Studies of such systems of knowledge have particular potential for cross-cultural studies of personal career planning and social identity. These examples are merely illustrative of the potential for opening up of questions that might be addressed in cross-cultural research by using insights from cognitive psychology.

**Conclusion**

Throughout this chapter, we have identified a number of ways in which cross cultural management scholars can improve the analysis of culture’s implications for individuals by reconceptualizing and considering alternatives to dimension research. Cross-cultural psychology and personality scholars have engaged in parallel debates about the core constructs of their sub-disciplines. Among cultural psychologists, the treatment of culture as a reified entity label used to differentiate nations has been challenged for its tendency to “[turn] dynamic, interconnected phenomena into static, separate things” (Hermans & Kempen, 1998, p.1113). A more dynamic view treats culture as residing in the implicit and explicit patterns of behavior, values, artifacts, ideas and systems of a group, organization or society (Shweder, 2001). Cognition scholars have also recognized limitations in the alternative that is frequently advocated in management research of studying culture in terms of the explicitly stated values, motives and personality traits of individuals. A debate about the relevance of trait structures versus dynamic processes for explaining consistency in individual behavior has been conducted amongst personality researchers (Mischel, 1973; Mischel & Shoda, 1998; Cervone, 1991; Goldberg, 1993) under labels such as ‘individual differences versus motivational or self-regulatory processes’ and the ‘person-situation debate’ (Fleeson, 2004).

The new understandings emerging from research into topics such as memory, expertise, social judgment, social learning and personality dynamics can similarly broaden the agendas of cross-cultural researchers. In this sort of research, some sort of cultural boundary like a nation (Markus & Kitayama, 1991), multinational cultural group (Nisbett, 2003) or region
within a nation (Nisbett & Cohen, 1996) is treated as a quasi-experimental manipulation. Similar to experimental manipulations, the people within a cultural boundary are treated as having faced similar experiences, not as sharing a similar set of values, motives, or personality characteristics. Cultural research within the cognitive tradition has selected cultural boundaries and cultural characteristics based on the psychological characteristics of interest – the relationship of self to others, systems of thought, and the concept of honor, respectively in the three studies noted above. Chapter 3 will consider the virtues of alternative choices of cultural boundaries and associated research topics more fully.

Chapter 3 will also consider another aspect of social context in addition to the boundaries around cultural groups that has been neglected in traditional psychological studies of culture. Social cognitive theory models the behavior of an individual as occurring in a social context. An organization is one type of context having particular kinds of structural components. Wood (2005) describes these components as accountability structures and mechanisms and explicit reward systems, while Smith, Peterson and Schwartz (2002) extend role theory to describe them as sources of meaning or guidance (see Peterson & Smith, Chapter 3). Psychological research focuses by design on individuals, and has typically done so in a way that reflects an implicit individualism. The bias in psychology, strongly influenced as it has been by the US (see Huang, Chapter 5), is that an individual stands alone as an isolated subject having a personal set of cognitive structures and looks out toward an external world while trying to make sense of it. Markus and Kitayama’s (1991) view of the connection between individuals and in-groups is that in collectivist societies and at least to a limited extent in individualist societies people draw from the insights of others when looking out on the world. Markus and Kitayama (1991) do not differentiate among the parties from whom individuals draw to make sense of themselves and their world. Several categories of organizational roles, rules and norms will be used in Chapter 3 to explain how individual
cognitions link with social context to shape how people in a cultural group understand and respond to work events.
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