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CHAPTER 1

Conceptualization of Cultural Intelligence

Definition, Distinctiveness, and Nomological Network

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As organizations globalize and the workforce becomes more diverse, it is increasingly important to understand why some individuals function more effectively than others in culturally diverse situations (Erez & Earley, 1993; Gelfand, Erez, & Aycan, 2007; Triandis, 1994). Responding to this need, Earley and Ang (2003) drew on Sternberg and Detterman's (1986) multidimensional perspective of intelligence to develop a conceptual model of cultural intelligence (CQ)—defined as the capability of an individual to function effectively in situations characterized by cultural diversity. CQ research aims to provide insight into the age-old sojourner problem of why some people thrive in culturally diverse settings, but others do not.

This chapter introduces a four-factor measure of CQ, positions it in a nomological network and in the broader domain of individual differences, and concludes with a discussion of theoretical and practical implications.

THE FOUR-FACTOR MODEL OF CULTURAL INTELLIGENCE

Conceptualization of CQ

Cultural intelligence, defined as an individual's capability to function and manage effectively in culturally diverse settings, is consistent with Schmidt and Hunter's (2000, p. 3) definition of general intelligence as, "the ability to grasp and reason correctly with abstractions (concepts) and solve problems." Although early research tended to view intelligence narrowly as the ability to grasp concepts and solve problems in academic settings, there is now increasing consensus that "intelligence may be displayed in places other than the classroom" (Sternberg & Detterman, 1986). The growing interest in "real-world" intelligence has identified new types of intelligence that focus on specific

content domains, such as social intelligence (Thorndike & Stein, 1937), emotional intelligence (Mayer & Salovey, 1993), and practical intelligence (Sternberg et al., 2000). CQ similarly focuses on a specific domain–intercultural settings, and is motivated by the practical reality of globalization in the workplace (Earley & Ang, 2003). Thus, following the definition of general intelligence by Schmidt and Hunter (2000), CQ is conceptualized as a specific form of intelligence focused on an individual's ability to grasp and reason correctly in situations characterized by cultural diversity. Just as emotional intelligence (EQ) complements cognitive intelligence (IQ), in that both are important for an individual to find success at work and in personal relationships in an increasingly interdependent world (Earley & Gibson, 2002), we suggest that CQ is another complementary form of intelligence that can explain variability in coping with diversity and functioning in new cultural settings. Since the norms for social interaction vary from culture to culture, it is unlikely that cognitive intelligence, EQ, or social intelligence will translate automatically into effective cross-cultural adjustment and interaction.

Cultural Intelligence as a Multidimensional Construct

Earley and Ang (2003) built on the increasing consensus that investigation of intelligence should go beyond mere cognitive abilities (Ackerman, 1996; Gardner, 1993), and theorized that CQ is a multidimensional concept that includes metacognitive, cognitive, motivational, and behavioral dimensions. CQ as a multifactor construct is based on Sternberg and Detterman's (1986) framework of the multiple foci of intelligence. Sternberg integrated the myriad views on intelligence to propose four complementary ways to conceptualize individual-level intelligence: (a) metacognitive intelligence is knowledge and control of cognition (the processes individuals use to acquire and understand knowledge); (b) cognitive intelligence is individual knowledge and knowledge structures; (c) motivational intelligence acknowledges that most cognition is motivated and thus it focuses on magnitude and direction of energy as a locus of intelligence; and (d) behavioral intelligence focuses on individual capabilities at the action level (behavior). Sternberg's framework is noteworthy because it proposes that intelligence has different "loci" within the person, i.e., metacognition, cognition, and motivation are *mental* capabilities that reside within the "head" of the person, while overt actions are *behavioral* capabilities. Metacognitive intelligence refers to the control of cognition, the processes individuals use to acquire and understand knowledge. Cognitive intelligence refers to a person's knowledge structures and is consistent with Ackerman's (1996) intelligence-as-knowledge concept, which similarly argues for the importance of knowledge as part of a person's intellect. Motivational intelligence refers to the mental capacity to direct and sustain energy on a particular task or situation, and is based on contemporary views that motivational capabilities are critical to "real-world" problem solving (Ceci, 1996). Behavioral intelligence refers to outward manifestations or overt actions—what the person does rather than what he or she thinks (Sternberg & Detterman, 1986, p. 6). Hence, unlike metacognitive, cognitive, and motivational intelligence, which involve mental functioning, behavioral intelligence refers to the capability to display actual behaviors.

The four factors of CQ mirror contemporary views of intelligence as a complex, mul-

tifactor, individual attribute that is composed of metacognitive, cognitive, motivational, and behavioral factors (see Sternberg & Detterman, 1986; Sternberg et al., 2000). Metacognitive CQ reflects the mental capability to acquire and understand cultural knowledge. Cognitive CQ reflects general knowledge and knowledge structures about culture. Motivational CQ reflects individual capability to direct energy toward learning about and functioning in intercultural situations. Behavioral CQ reflects individual capability to exhibit appropriate verbal and nonverbal actions in culturally diverse interactions.

Metacognitive CQ. The term metacognitive CQ refers to an individual's level of conscious cultural awareness during cross-cultural interactions. People with strength in metacognitive CQ consciously question their own cultural assumptions, reflect during interactions, and adjust their cultural knowledge when interacting with those from other cultures. Metacognitive CQ involves higher-level cognitive strategies that allow individuals to develop new heuristics and rules for social interaction in novel cultural environments, by promoting information processing at a deeper level (Flavell, 1979; Nelson, 1996).

For example, a Western business executive with high metacognitive CQ would be aware, vigilant, and mindful about the appropriate time to speak up during meetings with Asians. Those with high metacognitive CQ would typically observe interactions and the communication style of their Asian counterparts (such as turn-taking), and would think about what constituted appropriate behavior before speaking up.

The metacognitive factor of CQ is a critical component of CQ for a number of reasons. First, it promotes active thinking about people and situations in different cultural settings; second, it triggers active challenges to rigid reliance on culturally bounded thinking and assumptions; and third, it drives individuals to adapt and revise their strategies so that they are more culturally appropriate and more likely to achieve desired outcomes in cross-cultural encounters.

Metacognitive CQ therefore reflects mental processes that individuals use to acquire and understand cultural knowledge, including knowledge of and control over individual thought processes (Flavell, 1979) relating to culture. Relevant capabilities include planning, monitoring, and revising mental models of cultural norms for countries or groups of people. Those with high metacognitive CQ are consciously aware of the cultural preferences and norms of different societies prior to and during interactions. These individuals also question cultural assumptions and adjust their mental models during and after relevant experiences (Brislin, Worthley, & MacNab, 2006; Nelson, 1996; Triandis, 2006).

Cognitive CQ. While metacognitive CQ focuses on higher-order cognitive processes, cognitive CQ reflects knowledge of norms, practices, and conventions in different cultures that has been acquired from educational and personal experiences. The cognitive factor of CQ therefore refers to an individual's level of cultural knowledge or knowledge of the cultural environment. Cultural knowledge includes knowledge of oneself as embedded in the cultural context of the environment. Given the wide variety of cultures in the contemporary world, cognitive CQ indicates knowledge of cultural universals as well as knowledge of cultural differences.

Cultural anthropology has documented large variations in culture. Triandis (1994) and

Murdock (1987), however, suggest that at a higher level of abstraction, cultures share some common features. These are cultural universals based on fundamental needs (because all human beings have similar basic needs). Cultural universals include technological innovations (e.g., tools), methods of getting food (e.g., hunting, agriculture), economic activity (e.g., trading), patterns of social interaction (e.g., does one talk to one's mother-in-law?), child-rearing practices, beliefs and behaviors that relate humans to the universe (e.g., religion), aesthetic preferences, patterns of communication (language, gestures), and so on.

In sum, all societies possess fundamental systems to meet basic physiological needs. As a result, societies have *economic systems* to systematically produce vital commodities and distribute products and services. Societies also codify mating and child-rearing practices that create marriage, family, and other *social systems. Educational systems* enable learning and cultural transmission, while *political, legal,* and *social control systems* reduce anarchy and destruction (obedience to social norms). To facilitate interaction, societies develop language systems and *systems of communication* (verbal and nonverbal). Finally, societies have systems for explaining the unexplainable (often relying on supernatural beliefs such as religion and witchcraft), and thus have *systems of supernatural beliefs* that help to explain otherwise inexplicable phenomena.

The cognitive factor of CQ is a critical component of CQ, because knowledge of culture influences people's thoughts and behaviors. Understanding a society's culture and the components of culture allows individuals to better appreciate the systems that shape and cause specific patterns of social interaction within a culture. Consequently, those with high cognitive CQ are better able to interact with people from a culturally different society.

Motivational CQ. Motivational CQ reflects the capability to direct attention and energy toward learning about and functioning in situations characterized by cultural differences. Kanfer and Heggestad (1997, p. 39) argue that such motivational capacities "provide agentic control of affect, cognition and behavior that facilitate goal accomplishment." According to the expectancy-value theory of motivation (Eccles & Wigfield, 2002), the direction and magnitude of energy channeled toward a particular task involves two elements: the expectation of successfully accomplishing the task and the value associated with accomplishing the task. Those with high motivational CQ direct attention and energy toward cross-cultural situations based on intrinsic interest (Deci & Ryan, 1985) and confidence in cross-cultural effectiveness (Bandura, 2002).

Motivational CQ is a critical component of CQ because it is a source of drive. It triggers effort and energy directed toward functioning in novel cultural settings. For example, a Chinese executive who has a good command of Japanese and likes interacting with those from other cultures would not hesitate to initiate a conversation with a fellow colleague from Japan. In contrast, another Chinese executive who is just learning Japanese or dislikes cross-cultural encounters would be less likely to engage in such a cross-cultural interaction.

Behavioral CQ. Finally, behavioral CQ reflects the capability to exhibit appropriate verbal and nonverbal actions when interacting with people from different cultures. Behavioral CQ refers to the extent to which an individual acts appropriately (both verbally and nonverbally)

in cross-cultural situations. Behavioral CQ is a critical component of CQ, because verbal and nonverbal behaviors are the most salient features of social interactions.

As Hall (1959) emphasized, mental capabilities for cultural understanding and motivation must be complemented by the ability to exhibit appropriate verbal and nonverbal actions, based on cultural values of a specific setting. When individuals initiate and maintain face-to-face interactions, they do not have access to each other's latent thoughts, feelings, or motivation. Yet they can rely on what they see and hear in the other person's vocal, facial, and other outward expressions.

The behavioral repertoires of cultures vary in three ways: (a) in the specific range of behaviors that are enacted; (b) in the display rules that govern when and under what circumstances specific nonverbal expressions are required, preferred, permitted, or prohibited; and (c) in the interpretations or meanings that are attributed to particular nonverbal behaviors (Lustig & Koester, 1999). Consequently, individuals with high behavioral CQ are flexible and can adjust their behaviors to the specifics of each cultural interaction.

In cross-cultural situations, nonverbal behaviors are especially critical, because they function as a "silent language" and impart meaning in subtle and covert ways (Hall, 1959). Because behavioral expressions are especially salient in cross-cultural encounters, the behavioral component of CQ may be the most critical factor that observers use to assess other's CQ.

CQ as an Aggregate Multidimensional Construct

Earley and Ang's (2003) theories posit that the four dimensions of CQ are qualitatively different facets of the overall capability to function and manage effectively in culturally diverse settings. Like facets of job satisfaction, the dimensions of CQ may or may not correlate with one another. This implies that the overall CQ construct may be best conceptualized as an aggregate multidimensional construct, which according to Law, Wong, and Mobley (1998) has two distinguishing features: (a) dimensions exist at the same level of conceptualization as the overall construct and (b) dimensions make up the overall construct. Accordingly, we view metacognitive, cognitive, motivational, and behavioral CQ as different types of capabilities that together form the overall CQ construct.

CONCEPTUAL DISTINCTIVENESS OF CULTURAL INTELLIGENCE

To further clarify the nature of CQ, it is important to describe what CQ is *not,* in relation to other individual differences. Specifically, we discuss the differences and similarities between CQ and personality, other intelligences (namely cognitive ability and EQ), and existing intercultural competency models.

CQ as an Individual Difference

CQ is grounded in the larger domain of individual differences. In general, the literature suggests three broad categories of individual differences: abilities or capabilities, person-

ality, and interests (Ackerman & Humphreys, 1990; Boyle & Saklofske, 2004; Dunnette, 1976; Ilgen & Klein, 1988; Lubinski, 2000; Murphy, 1996). Conceptually anchoring CQ in the intelligence literature clearly positions it as a set of abilities or capabilities, as opposed to personality or interests. Abilities are "those personal characteristics that relate to the capability to perform the behavior of interest" (Ilgen & Klein, 1988, p. 146). Thus, we differentiate CQ conceptually from personality characteristics, interests, and outcomes (e.g., decision making, performance, and adjustment).

Individual differences vary in their specificity and stability (Ackerman & Humphreys, 1990; Chen, Gully, Whiteman & Kilcullen, 2000; Hough & Schneider, 1996). We conceptualize CQ as a *specific* individual difference construct because it focuses on culturally relevant capabilities. Thus, it is more specific than broad individual differences, such as general cognitive ability and personality (Chen et al., 2000). It is important, however, to note that CQ is not specific to a particular culture (e.g., CQ does not focus on the capability to function specifically in France or Japan as in the Culture-Specific Assimilator as described by Triandis [1995]). Thus, CQ is specific to particular types of situations (culturally diverse) and it is not culture specific.

With regard to stability over time, Chen et al. (2000) described personality as relatively stable, traitlike, individual differences, while capabilities and interests are more statelike, evolving over time. Since CQ is malleable and can be enhanced through experience, education, and training, it is a statelike individual difference. Like other forms of intelligence (Mayer, Caruso, & Salovey, 2000), CQ should increase based on multicultural and international experiences (Takeuchi, Tesluk, Yun, & Lepak, 2005). In sum, CQ is a specific, statelike, individual capability within the larger domain of individual differences.

CQ in Relation to Personality

As an ability, CQ refers to what a person can do to be effective in culturally diverse settings. Thus, it is distinct from stable personality traits, which describe what a person typically does across situations and times (Costa & McCrae, 1992). Since temperament influences choice of behaviors and experiences, some personality traits should be related to CQ. Consistent with this, Ang, Van Dyne, and Koh (2006) showed discriminant validity of the four dimensions of CQ compared to the Big Five personality traits and demonstrated meaningful relationships between specific personality characteristics and specific aspects of CQ. Notably, and as expected, openness to experience, which is the tendency to be imaginative, creative, and adventurous (Costa & McCrae, 1992), was related to all four dimensions of CQ. This makes sense since CQ is a set of capabilities targeted at novel and unfamiliar cultural situations.

CQ in Relation to Other Intelligence Constructs

CQ is similar to, yet distinct from two other forms of intelligence: general cognitive ability and EQ (Mayer & Salovey, 1993; Schutte, Malouff, Hall, Haggerty, Cooper, Golden, & Dornheim, 1998). CQ is similar to both types of intelligence because it deals with a set

of abilities, rather than preferred ways of behaving (Mayer, Caruso & Salovey, 2000). CQ differs, however, from the two other intelligences in the nature of the ability examined. General cognitive ability, the ability to learn, is an important individual difference that predicts performance across many jobs and settings (Schmidt & Hunter, 1998). General cognitive ability, however, is not specific to certain contexts (Ackerman & Humphreys, 1990; Hough & Schneider, 1996), such as culturally diverse situations. In addition, general intelligence does not include behavioral or motivational aspects of intelligence.

EQ focuses on the ability to deal with personal emotions and is similar to CQ because it goes beyond academic and mental intelligence. However, EQ differs from CQ because it focuses on the general ability to perceive and manage emotions without consideration of cultural context. Given that emotional cues are symbolically constructed and historically transmitted within a culture (Fitch, 1998), the ability to encode or decode emotions in the home culture does not automatically transfer to unfamiliar cultures (Earley & Ang, 2003). Thus, EQ is culture bound, and a person who has high EQ in one cultural context may not be emotionally intelligent in another culture. In contrast, CQ is culture free and refers to a general set of capabilities with relevance to situations characterized by cultural diversity; it does not focus on capabilities in a particular culture.

CQ Scale in Relation to Other Scales of Intercultural Competencies

Paige's (2004) comprehensive review of intercultural instruments identifies ten scales that can be compared to the CQ Scale (CQS): Cross-Cultural Adaptability Inventory (CCAI) (Kelley & Meyers, 1995); Cross-Cultural World Mindedness (CCWM) (Der-Karabetian, 1992); Cultural Shock Inventory (CSI) (Reddin, 1994); Culture–General Assimilator (CGA) (Cushner & Brislin, 1996); Global Awareness Profile Test (GAPT) (Corbitt, 1998); Intercultural Development Inventory (IDI) (Hammer & Bennett, 1998); Intercultural Sensitivity Inventory (ISI) (Bhawuk & Brislin, 1992); Multicultural Awareness–Knowledge-Skills Survey (MAKSS) (D'Andrea, Daniels, & Heck, 1991); Overseas Assignment Inventory (OSI) (Tucker, 1999); and Sociocultural Adaptation Scale (SAS) (Ward & Kennedy, 1999). We also identified the Intercultural Adjustment Potential Scale (ICAPS) (Matsumoto & Associates, 2001) for comparison with the CQS.

Of these eleven cultural competency scales, two scales CCWM and ICAPS have virtually no overlap with the CQS because they focus primarily on nonability and individual differences (e.g., personality, attitudes, and values). The remaining nine scales contain ability elements that can be mapped onto our CQ framework. Three include aspects of metacognition (CCAI, IDI, MAKSS), five include cognition (CSI, CGA, GAPT, MAKSS, SAS), two include motivation (CCAI, MAKSS), and five include behavioral capabilities (CSI, IDI, ISI, OAI, SAS). None of these scales, however, is based on a multidimensional theory of intelligence. Also, seven scales (CCAI, CCWM, CSI, ICAPS, IDI, MAKSS, and OAI) include stable personality characteristics, attitudes, and values, in addition to cross-cultural capabilities (e.g., CCAI includes openness to experience and CSI includes attitudes toward other cultures and personality characteristics).

In sum, existing intercultural competency scales lack coherent theoretical foundations

and often mix ability and nonability characteristics. Since this approach mixes different types of individual differences, it raises questions of construct validity. In contrast, we position CQ clearly as a set of capabilities, anchored in the multiple intelligence literature. Accordingly, CQ is a "cleaner" construct that assesses multiple aspects of intercultural competence in a single instrument, based on a theoretically grounded, comprehensive, and coherent framework.

ANTECEDENTS AND CONSEQUENCES OF CQ

Since we have conceptualized CQ as more statelike than traitlike, we expect that some personality traits will be antecedents to CQ. Research by Kanfer (1990) and Chen et al. (2000) demonstrates that traitlike individual differences predict more proximal statelike individual differences because temperament influences choice of behavior and experiences. Thus, we position more stable distal traits (e.g., Big Five) and demographic characteristics (e.g., age, experience) as antecedents to the nomological network.

To avoid tautological reasoning, we also differentiate CQ (a specific capability type of individual difference) from the consequences of CQ (such as successful functioning in international or other culturally diverse settings). This parallels similar distinctions made in other literatures that differentiate behavior and outcomes of behavior (see Miltenberger, Fuqua, & Woods, 1998). We expect that those with high CQ will have more effective performance and adjustment in multicultural work groups, study-abroad programs, and expatriate assignments (Black, Mendenhall, & Oddou, 1991; Caligiuri, Hyland, Joshi, & Bross, 1998; Kraimer, Wayne, & Jaworski, 2001; Ones & Viswesvaran, 1997; Takeuchi, Yun, & Tesluk, 2002). Thus, CQ is a capability that causes, allows, and/or facilitates outcomes such as adjustment and effective performance in culturally diverse settings.

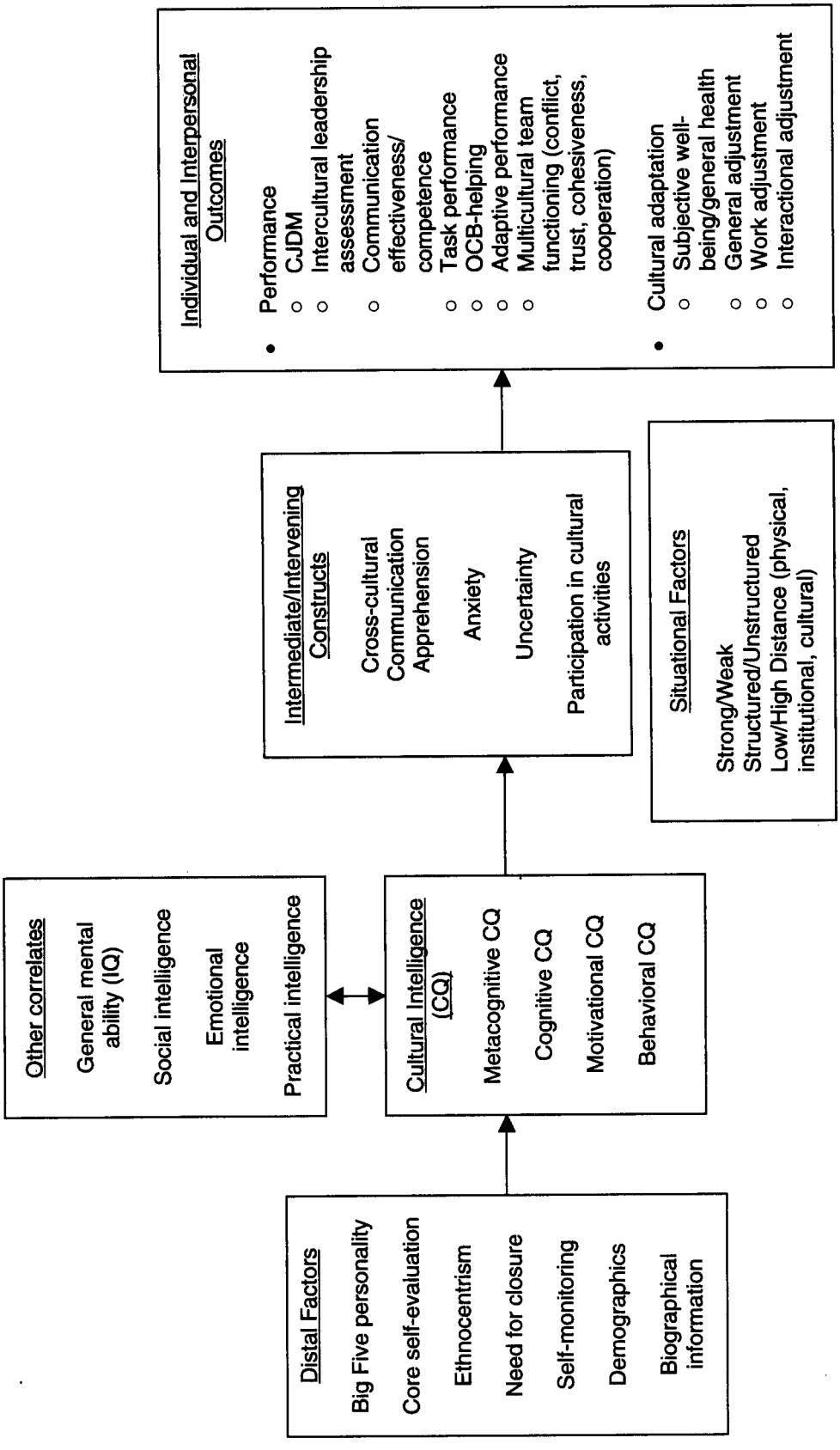
To summarize, CQ is a specific, statelike, individual capability that should be related to other forms of intelligence and other indicators of intercultural competence, while remaining conceptually and empirically distinct. CQ should predict performance and adjustment outcomes in multicultural situations.

NOMOLOGICAL NETWORK

We propose a broader nomological network (see Figure 1.1) for understanding the role of CQ in the study of individual effectiveness.

The nomological network can be described in four major relationships. First, we propose that distal individual differences relate indirectly to individual effectiveness through statelike individual differences on the four factors of CQ. The distal individual differences include more traitlike individual differences, such as the Big Five personality (Costa & McCrae, 1992); core self-evaluation (Judge & Bono, 2001); ethnocentrism (Neuliep, 2002); need for closure (Webster & Kruglanski, 1994); and self-monitoring (Snyder, 1974). Distal antecedents also include demographic and biographical individual differences (Stokes, Mumford, & Owens 1994), such as years of intercultural education and intercultural experiences (both in work and "nonwork" contexts).

Figure 1.1 **The Nomological Network of Cultural Intelligence**



Second, the four factors of CQ affect a host of intermediate or intervening variables, such as the individual's subjective perception of cultural encounters and participation and involvement in cross-cultural roles and activities. These intermediate constructs include subjective perceptions of the uncertainty–anxiety model, which includes constructs of cross-cultural communication apprehension, uncertainty, and anxiety (Gudykunst, 2004).The four factors of CQ also relate to intermediate constructs of participation in cultural activities. Through active participation in intercultural activities, individuals acquire the requisite skills and knowledge to perform and adapt effectively in intercultural situations.

Third, the nomological network recognizes other possible contributions of an individual's cognitive ability, such as general mental ability, commonly referred to as "g," social intelligence (Thorndike, 1936; Thorndike & Stein, 1937), EQ (Mayer & Salovey, 1993); and practical intelligence (Sternberg et al., 2000), to the prediction of individual outcomes in intercultural situations.

Finally, we recognize the importance of context, which could affect the relationship between CQ and intermediate outcomes. Depending on whether the situational variables are weak or strong (Mischel, 2004), we would expect the four factors of CQ would have a stronger or weaker effect on subjective perception of the intercultural environment and participation in intercultural activities. In other words, we propose that the situational strength serves as an important moderator between the relationship of CQ and intermediate outcomes. In strong situations, where the task environment is well structured and there are clear cues for task performance, we expect CQ to play a more reduced role, since difficulties resulting from intercultural situations are attenuated as compared to weak situations. Weak situations are vague, generating mixed expectations of the desired behavior. In such situations people would have to rely much more on their CQ as guides for action (Earley & Ang, 2003; Mischel, 2004). Situational strength could also be affected by perceived cultural distance (Shenkar, 2001) of the task environment. If cultural distance is perceived to be small, we would expect that individuals share more common values and normative behaviors, and hence, CQ plays a more reduced role than in situations where cultural distance is perceived to be great.

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