

## CHAPTER 24

# Thinking Intelligently About Cultural Intelligence The Road Ahead

---

---

MICHELE J. GELFAND, LYNN IMAI, AND RYAN FEHR

To scholars and practitioners alike, cultural competencies have long been a topic of interest across a wide range of disciplines, from the familiar fields of cross-cultural management and organizational psychology to the more far-reaching areas of education, health, and counseling. Under the rubric of cultural competencies, many constructs have been discussed in the literature including *flexibility* (Arthur & Bennett, 1995; Gullahorn & Gullahorn, 1963; Hanvey, 1976; Ruben & Kealey, 1979; Smith, 1966; Torbiörn, 1982), *cultural sensitivity* (Hawes & Kealey, 1981), *cultural empathy* (Hannigan, 1990), *intercultural sensitivity* (Bhawuk & Brislin, 1992; Hammer, Bennett, & Wiseman, 2003), *bicultural competence* (LaFromboise, Coleman, & Gerton, 1993), *extracultural openness* (Arthur & Bennett, 1995), *global mindset* (Gupta & Govindarajan, 2002), and *multicultural personality* (van der Zee & van Oudenhoven, 2000). The importance of cultural competence cannot be underestimated. In a world of global opportunities and global threats, there is a great theoretical and practical need to develop cultural competencies within many spheres of life—political, educational, organizational, military, and the like—and across many levels of analysis, including individual, group, organizational, and national.

Yet, despite years of scholarship across multiple disciplines, progress in understanding cultural competencies has been limited theoretically, methodologically, and practically. The literature can perhaps be characterized as suffering from the *jingle and jangle fallacy* (Kelley, 1927), where constructs with the same meaning are labeled differently while constructs with different meanings are labeled similarly. For example, terms such as *cultural sensitivity* and *cultural empathy* (Hawes & Kealey, 1981) both refer to an ability to empathize with the feelings, thoughts, and behaviors of people from different cultures (van Oudenhoven & van der Zee, 2002). Furthermore, under the label of *flexibility*, some authors emphasize the ability to adjust behavior in new cultural settings (e.g., Shaffer, Har-

to change, and the ability to deal with stress (e.g., Arthur & Bennett, 1995). Accordingly, there is much confusion and misunderstanding about what exactly cultural competence entails, with no overarching theoretical framework to tie the numerous constructs together and little consensus regarding the operationalization of cultural competence (Chapter 18; Ridley, Baker, & Hill, 2001). Mired in such confusion, the practical utility of cultural competencies is undoubtedly compromised.

It is within this scientific context that the current volume on cultural intelligence (CQ) takes off on its scientific road. Through its many novel and innovative theoretical and empirical chapters, this volume clearly illustrates the promise of CQ to revolutionize and transform the cultural competency literature. A relatively “young” construct on the scientific block, CQ has begun to demonstrate its theoretical elegance, empirical potential, and practical importance in a remarkably short period of time. In short, this volume represents the state of the science and, more generally, the field’s collective intelligence about the construct of CQ. As a young field, however, there are a number of growing pains that can also be identified in this volume that provide some critical challenges as well as opportunities for the future study of CQ. In this commentary, we highlight the key contributions that the chapters collectively make to the study of CQ as well as emerging quandaries, questions, and controversies that should be considered on the road ahead.

### KEY CONTRIBUTIONS OF THE CQ CONSTRUCT

The CQ construct facilitates theoretical progress in the literature in a number of important ways. First, the CQ construct offers *parsimony* (otherwise known as Ockham’s razor principle), or the scientific goal of choosing the simplest theory among a set of otherwise equivalent theories in explaining a given phenomenon. CQ, in attempting to explain effective cultural adaptation, is parsimonious because it focuses on a small number of facets (i.e., metacognitive, cognitive, motivational, behavioral) at a higher, abstract level of generality rather than focusing on a larger number of dimensions at a more specific level. Furthermore, the CQ construct offers *theoretical synthesis and coherence* because it captures the multifaceted nature of cultural competence in a cohesive manner. In this regard, by providing a unified theoretical framework, CQ integrates previously disconnected phenomena. For example, while many cultural competency constructs have focused on one or two of the metacognitive, cognitive, motivational, and behavioral dimensions, they have rarely considered all four dimensions simultaneously, and never as a unified construct.

While the CQ construct is comprehensive, at the same time it also offers *theoretical precision*. With its explicit focus on cognition, motivation, and behavior, CQ is explicit on what it *is* and what it is *not* within its construct space (e.g., CQ is not values nor is it personality). At the same time, the CQ construct serves as a useful benchmark in delineating what other cultural competency constructs are and are not, allowing for some cleanup of the construct confusion that plagues the cultural competency literature, akin

*competencies* that have thus far received little attention in the literature. For example, the metacognitive facet with its focus on higher-level cognition (planning, monitoring, and adjusting) involved in strategic cultural learning is particularly important given its hierarchical role relative to cognition, motivation, and behavior.

CQ serves a useful function by connecting research *across disciplinary borders* through a common intellectual frame, helping to unite previously disconnected literatures. Even within this handbook, scholars are applying CQ to an array of disciplines beyond management, including counseling psychology (Chapter 16), communication sciences (Chapter 15), and religious studies (Chapter 17). Even within the field of management, the CQ construct helps to integrate across a broad number of research topics including the literatures on individual differences/personality, intelligence, expatriation, teams, training, the self, and identity, among other topics.

CQ also breaks new ground by linking cultural competencies to the extant literature on intelligence. First, CQ broadens the extant intelligence literature by addressing how individuals adapt to a new kind of environment that has not been addressed in the literature before—the increasingly common environment of diversity that comes with globalization. The CQ construct also expands on the intelligence literature by shifting focus from culture-specific interpersonal types of intelligence (e.g., social intelligence, emotional intelligence) to a culture-free construct. Second, drawing on the framework of *intelligence per se* for cultural competencies opens up a wide range of possible phenomena to be studied that may be relevant to cultural adaptation. For instance, through its connection to the intelligence literature, heretofore neglected cognitive processes, such as declarative knowledge, procedural knowledge, analogical reasoning, pattern recognition, external scanning, as well as self-awareness (see Earley & Ang, 2003), become highly relevant to issues of cultural adaptation.

### INNOVATIVE MODELS OF CQ

As numerous chapters in this volume attest, there are many exciting conceptual and empirical developments that are collectively mapping the antecedents and consequences of CQ (Chapters 1 and 2). Highlighting the notion that CQ is a dynamic construct (Chapter 11, Bell & Harrison, 1996; Shaffer et al., 2006), authors in this volume tackle the important question of how people develop their CQ in the first place. At the individual level of analysis, a number of individual difference variables have been shown or theorized to relate to CQ, including need for control (Chapter 8), openness to experience (Chapter 9), global identity (Chapter 11), language ability (Chapter 3), contextualized knowledge (Chapter 20), and multicultural personality (Chapter 10), although the causality of these relationships is unclear.

Numerous situational factors have been identified as precursors of CQ, most notably general international experiences (Chapter 3), nonwork experiences (Chapter 4), and multicultural experiences within a culturally diverse group (Chapter 20). Notably, numerous

notion that international experiences need not always help to develop CQ uniformly; rather they do so particularly among individuals who are high in openness (Chapter 20) and/or have a low need for control (Chapter 8). Others discuss situational moderators of international experiences. Tarique and Takeuchi make the interesting and counterintuitive point that international experiences are stronger predictors of CQ when they are *shorter* rather than longer in duration. Finally, throughout this volume, exciting predictions are also offered regarding the influence of higher-level factors on the development of CQ. Shokef and Erez examined how a global work environment enhances CQ, while Leung and Li (Chapter 21) proposed that culture level variables such as social complexity and social cynicism are critical in enhancing and attenuating CQ, respectively. Clearly, there are multilevel antecedents of CQ.

This volume also illustrates that CQ is related to a number of important outcomes. CQ has been shown and/or hypothesized to relate to a number of affective outcomes, including adjustment (Chapters 2, 5, and 10), well-being (Chapter 2), burnout (Chapter 8), and retention (Chapter 7). CQ has also been linked to performance outcomes, including individual decision-making effectiveness (Chapter 2), adaptive performance (Chapter 9), expatriate performance (Chapter 5), and multinational team integration (Chapter 12). CQ likely has important effects at the organizational level, as illustrated in Mannor's theoretical analysis of top managers' CQ. Particularly intriguing is the link between CQ and executive information processing, including scanning breadth and quality and quantity of information search, quality of investment decisions, and, ultimately, better ability to expand internationally and develop international joint ventures with host national companies.

We would also note that it is very encouraging that, as with antecedents of CQ, scholars in this volume have begun to focus on more complex interactions between CQ and other situational and personality variables in predicting outcomes. For example, Shaffer and Miller highlight the importance of the job context as a moderator of CQ effects, noting that CQ will weaken the negative link between role novelty and role conflict and performance while strengthening the positive link between role clarity and role discretion and performance. Rockstuhl and Ng (Chapter 13) suggest that CQ interacts with team level factors (e.g., diversity), such that CQ moderates the negative link between diversity and interpersonal trust. At a more macro level, Kim et al. make the interesting prediction that CQ is more important for outcomes when cultural distance between the host and home country is larger rather than smaller. In all, this volume clearly shows that we need to examine CQ in conjunction with other factors in order to have a comprehensive understanding of its effects.

Finally, this volume has sought to connect the antecedents and consequences dots through CQ. For example, highlighting the role of CQ as a malleable adaptation, several authors in this volume illustrate that CQ mediates the relationship between individual difference variables and both affective and performance outcomes. Oolders and colleagues demonstrated the mediating effects of CQ in the relationship between openness to experience and performance. Similarly, Ward and Fischer found CQ to mediate the multicultural

this research is extremely helpful in that it helps to elucidate the causal pathway through which personality and other individual differences influence individual outcomes.

Taken as a whole, this volume makes significant progress in illustrating the promise of the CQ construct, its antecedents, and its consequences. CQ, a relatively new construct, has taken off quickly and in a decidedly short period of time. Now that the CQ construct is gaining momentum, it is time to examine the implicit and potential controversies and hurdles that warrant attention in future theorizing and research. As Weinberg (1989) noted, "Probably no psychological concept has engendered more controversy than intelligence" (p. 98), as evidenced in numerous debates about general intelligence (Sternberg & Kaufman, 1998) and more recently emotional intelligence (Zeidner, Matthews, & Roberts, 2004). CQ, as another form of intelligence, will likewise benefit from further critical discussions at the level of the construct, methods, and models.

### TO FACET OR NOT TO FACET: CLARIFYING THE UTILITY OF CQ FACETS

We have noted that the multidimensional nature of CQ—the facets of metacognitive, cognitive, motivational, and behavioral CQ—serves a number of valuable scientific functions, most notably, providing a theoretical and coherent synthesis heretofore not available in the multicultural competency literature. Yet this volume also illustrates that we are still in a very embryonic state regarding theorizing and research on the facets. First, although factor analyses have confirmed the four separate factors of CQ, it is not clear whether all factors are necessarily part of the intelligence construct. For example, should self-efficacy regarding intercultural interactions (i.e., motivational CQ) necessarily be conceptualized as part of the intelligence construct? Intuitively it seems plausible for a culturally competent person to lack motivation just as a person with high IQ could lack motivation.

At present, theorizing on the facets can be imprecise, inconsistent, and/or contradictory. For example, some research programs focus on overall CQ and others focus on the facet level, raising the question of what the facets add, and when it is critical to theorize on their effects. Inconsistency can also be found regarding the predictors and outcomes of CQ facets (e.g., an identical antecedent being theorized to lead to different facets across different studies, or different facets being proposed to lead to an identical outcome across different studies). For example, international experience was hypothesized to lead to the development of behavioral CQ and not cognitive CQ in Chapter 3 yet to the development of cognitive CQ but not behavioral CQ in Chapter 8. Some authors proposed that motivational and behavioral CQ lead to interaction adjustment among expatriates (Chapter 2), whereas others propose that cognitive CQ is relevant to interaction adjustment (Chapter 7). Inconsistency is not problematic per se, when it identifies competing theories; yet we would suggest that inconsistency, if not attended to, can cause a literature to emerge in a potentially chaotic and confusing fashion, and that the different CQ facets present

ing behavior (Chapter 1; Earley & Ang, 2003), very little research has examined how the dimensions *interact* in predicting outcomes. For example, what is the psychological and social impact of having low cognitive and metacognitive CQ but high motivational CQ? Likewise, what is the impact of having high cognitive and metacognitive CQ but low motivational CQ? Uncovering distinct CQ facet profiles might provide a more nuanced look at facets that is not captured when looking at them in isolation. Focusing on the facets in combination also naturally raises the question of whether some facets are more “basic” than others, and at least whether *some* level must be present in order for others to exert their effects. In all, more precise and comprehensive theorizing is needed on the facets comprising CQ in the road ahead.

### PEERING INTO THE CQ BOX: ON THE NEED TO SPECIFY THE MECHANISMS OF CQ EFFECTS

Future research must examine the black box of both the antecedents and consequences of CQ. To date, little is known about the processes through which CQ is developed or the processes through which CQ exerts its effects, although there are some notable exceptions. Tarique and Takeuchi (Chapter 4), for example, provided a particularly compelling temporal framework, describing how individuals develop their CQ by attending to, retaining, and reproducing the knowledge, skills, and abilities (KSAs) they discover in new cultural settings. Additional process models such as these will prove useful in articulating the emergence of CQ. Moreover, specifying the causal relationship between CQ antecedents is also an important research priority. As this volume attests, there are many potential individual difference and situational factors that can be related to the development of CQ (e.g., need for control, openness to experience, language ability, international experiences), yet the causal relationship between these constructs remains largely unexplored, raising the proverbial CQ chicken-and-egg question. Indeed, as Shokef and Erez (Chapter 11) showed in their insightful longitudinal analysis of global identity and CQ, many of the relationships between the proposed antecedents and CQ are very likely reciprocal in nature. Many of the relationships between CQ and outcomes discussed throughout this volume (adjustment, performance, retention) might also be reciprocal, necessitating the development of more dynamic models of CQ.

Likewise, little is known regarding the precise mechanisms through which CQ exerts its effects on outcomes. It is tempting to theorize that CQ affects outcomes because people are more knowledgeable about other cultures, yet this risks the promulgation of quasi-tautological reasoning. A critical question, then, is what precisely are high CQ individuals doing on their international assignments that is in turn affecting a wide range of positive outcomes? Future research must examine the multiple mediators—psychological, interpersonal, and even organizational—that are helping to translate high CQ into higher affective and job outcomes. For example, do individuals with high CQ develop more realistic expectations, which in turn translate into less psychological distress

to perform their jobs better? Are high-CQ individuals better able to negotiate with their home organizations in terms of their expectations, provisions of resources, time frames, and so on? Opening the CQ black box and addressing these questions will benefit from longitudinal and social-network analyses, and process-oriented methods, including the use of experiential sampling methods. Supplementing quantitative analyses of CQ with qualitative methods, as several authors in this volume have cogently advocated (e.g., Chapters 15 and 23), is also a must for future CQ research.

### PLAYING DEVIL'S ADVOCATE: CQ AND THE POSITIVE HALO EFFECT

This volume clearly attests to the value of CQ in explaining outcomes above and beyond other cultural competencies, and in showing the importance of CQ for a host of positive outcomes, such as higher adjustment, performance, and lower turnover. Yet in seeking to show the universal positive value of CQ as a construct, we need to be mindful of not throwing the baby out with the bathwater, or, in other words, of continuing to examine other cultural competencies and other forms of intelligence in substantive ways. Put simply, by focusing exclusively on differentiating itself from general and emotional intelligence and existing cultural competencies, CQ research might not be fully exploiting the interactive potential of these constructs. Côté and Miners (2006), for instance, found that emotional intelligence (EQ) can compensate for low IQ, exhibiting its strongest effects on job performance when IQ is low, and it is possible that a similar relationship exists between CQ and other intelligences. Alternatively, it is possible that CQ's effects are partially contingent on other intelligences, such that a certain minimum IQ or EQ is needed for a high CQ to be fully realized. To truly understand CQ, a simultaneous consideration of all intelligences is critical, rather than simply using other intelligences as variables to statistically control in the CQ equation.

It is equally important to integrate CQ with theory on constructs in the cultural competency literature such as intercultural sensitivity, ethnocentrism, cultural flexibility, global mindset, and multicultural personality. It would be useful, for instance, to integrate the temporal development of intercultural sensitivity proposed by Bhawuk, Sakuda, and Munusamy (Chapter 22) with theory on the temporal development of CQ. Likewise, it would seem an oversimplification to suggest that CQ is simply superior to all other cultural competencies. Rather, it would seem best to develop an understanding of the theoretical relationships among the various cultural competencies, and understand *when* some predict while others do not. In all, we must therefore be careful not to focus on CQ at the expense of other previously established constructs in the intelligence and cultural competency literatures.

We would also argue that we should be mindful of the positive halo that currently exists around CQ. Implicit throughout this volume is the notion that CQ is invariably associated with positive values such as tolerance, broad-mindedness, and cooperation, and

of CQ, we see no a priori reason why high CQ (e.g., high cultural knowledge and the ability to adapt to others) will necessarily result in prosocial behavior, raising the question as to whether there is a “dark side” to CQ. For example, are there conditions under which high CQ individuals might take advantage of their extensive cultural knowledge and behavioral flexibility to try to take advantage of low CQ individuals in competitive business contexts? Warriors and generals, for example, have long noted the benefits of having an in-depth understanding of an enemy before engaging in battle. As Sun Tzu said in *The Art of War*, “If you know the enemy and know yourself, your victory will not stand in doubt.” Just as Sun Tzu had less than kind intentions for his enemies, it is possible that individuals could use their cultural knowledge for similarly one-sided gains. Put simply, CQ might make it easier to keep your cross-cultural friends close, and your cross-cultural enemies even closer.

Likewise, throughout this volume, the question of whether high CQ has any psychological downside has received little attention. Inasmuch as culture serves as a “system of meaning” that brings certainty and predictability in navigating everyday interactions, an individual with an overly broad and in-depth conceptualization of culture may suffer from not having any “absolutes.” Whether it is about personal values or what is considered morally right and wrong, it may be possible that an individual with an extremely high level of CQ might suffer from confusion as a result of an extremely relativistic worldview. Having extremely high levels of CQ across multiple cultures may decrease an individual’s basic sense of belongingness, to the extent that he or she cannot help but to feel like a perpetual “participant observer” who sees even their own societal culture from an outsider’s perspective. In other words, consciously knowing too much about cultural realities relative to other people who experience culture as an unconscious, invisible part of life, may lead to a certain sense of alienation. In all, future research should examine both positive and potentially negative effects of CQ.

### THE MULTILEVEL NATURE OF CQ

Although CQ itself is a construct at the individual level, it is inherently a multilevel phenomenon, requiring research attention at the individual, team, organizational, and national levels of analysis. Much research on CQ, as this volume shows, however, has been largely limited to the individual level of analysis, and thus, the next wave of research on the construct should begin to start tackling the multilevel terrain in which CQ processes exist. For example, individuals high or low in CQ do not exist in a vacuum CQ context; they often have to interact with others who also vary in CQ, raising the question of the impact of the dyadic or team composition of CQ on individual as well as group-level outcomes. For example, is high CQ sufficient for an expatriate to develop an informal tie with a host national, or does the host national (alter) also need to have high CQ? Within dyadic contexts, do both individuals need to have high CQ in order to achieve high dyadic outcomes? For example, within the realm of dyadic negotiation, what are the implications

dyad-level negotiation outcomes? Similarly, as Gibson and Dibble (Chapter 14) aptly note, CQ is likely critical in helping teams externally adjust, raising the question of what the necessary and sufficient composition of CQ is for team effectiveness. Likely, the nature of the task will be a critical driver of CQ composition effects. Gaining high, joint outcomes in negotiation by sequencing cooperative behaviors, for example, is a highly conjunctive task (Steiner, 1972) in which contributions from both negotiators are required for high performance. It is possible in this case that the dyad’s ability to attain high performance is a function of the lowest level of CQ within the dyad, or in other words, the “weakest link.” Put simply, even if one negotiator possesses high CQ, as long as the other negotiator has low CQ and does not contribute to the joint activity of reciprocating cooperative behaviors, the dyad may still suffer as a result (see Imai & Gelfand, 2007 for a discussion). Thus, compositional models of CQ across multiple types of tasks and contexts will be important to develop in future research on CQ.

As with any construct involving individuals nested in teams, organizations, and cultures, multilevel models of the antecedents and consequences of CQ are in need of development. This includes an examination of both (1) the predictors of CQ across levels of analysis, and (2) cross-level moderators of the effects of CQ on individual level outcomes. For example, the development of CQ might fruitfully be examined through mixed determinant models (Kozlowski & Klein, 2000), wherein CQ has antecedents that exist simultaneously at multiple levels of analysis (e.g., societal culture, industry, organizational culture, work culture, and individual differences). Likewise, much of the extant research on CQ has examined single-level models of CQ as it relates to outcomes, but cross-level direct models and cross-level moderating models will provide a more comprehensive approach to CQ–outcome relationships. For example, it is possible to suggest that culture-level values (e.g., intellectual autonomy, Schwartz, 1994) and culture-level diversity will both predict an individual’s CQ (e.g., an intercept-as-outcomes model) and strengthen the impact of CQ on the individual’s sense of belongingness and the quality of the individual’s social interactions (e.g., a slopes-as-outcomes model).

Finally, as some authors in this volume have suggested, conceptual and empirical work must be done to assess the meaningfulness and dimensionality of CQ at higher levels of analysis. Can teams have high or low CQ (Chapter 11)? Are there “culturally intelligent organizations” that, through their values, assumptions, policies, and procedures, create cultural adaptation at the organizational level? Likewise, do attraction-selection-attrition processes apply to CQ and the emergence of CQ at higher levels? For example, does CQ influence applicants’ attraction to multicultural organizations and employees’ willingness to apply for cross-cultural or overseas assignments (self-selection processes)? On the other hand, organizations interested in being culturally intelligent might also hire and place employees on the basis of their CQ as inferred through interviews and other selection techniques. Moving up a level, are nations more or less culturally intelligent, as suggested by Leung and Li (Chapter 21)? In this era of globalization, are there societal advantages, such as higher economic outcomes and lower international conflict in countries with high

universally important, for example, in contexts that are highly homogenous or wherein the ecology requires the development of other types of intelligences, e.g., practical or social intelligence (see Sternberg, Chapter 19). More generally, when moving across levels, it will be important to not assume the construct is isomorphic, and to specify the emergence and meaning of the construct at the team, organization, and national levels.

### ON THE NEED FOR METHODOLOGICAL DIVERSITY

The CQ scale (Chapter 2; Ang, Van Dyne, Koh, Ng, Templer, Tay, & Chandrasekar, 2007)—by far the most utilized scale as seen throughout this volume—has shown great promise for the study of CQ. Yet future research would benefit from having methodological diversity in assessing such a complex construct, as has been done for other intelligence constructs. Most notably, the use of self-reported CQ surveys brings the usual disadvantages and assumptions associated with self-report methods. For example, the use of the scale assumes that individuals can accurately assess their own CQ levels, yet, there is abundant evidence that people are overconfident in assessment of their own skills and abilities (Dunning, Heath, & Suls, 2004), particularly those who have low competence (Kruger & Dunning, 1999). Put simply, people who know more realize to a greater extent how much they do not know; thus, it is entirely possible for highly culturally intelligent individuals to rate themselves lower than less culturally intelligent individuals.

Indeed, Bhawuk et al.'s (Chapter 22) discussion of individuals progressing from unconscious incompetence to conscious incompetence further suggests that more competence can bring forth the conscious realization of one's relative lack of knowledge and skills. Furthermore, while individuals are rating themselves on the CQS, it is unclear which reference group they have in mind. An undergraduate student with the experience of studying abroad may think of him- or herself as having high CQ relative to other undergraduate students, whereas a global manager who has higher CQ in reality than the undergraduate student may still rate him- or herself as having lower CQ, if the reference group in mind involves other global managers with extensive international experience. As with other culture scales, social comparison effects are also likely to apply to CQ ratings (see Peng Nisbett, & Wong, 1997).

Thus, increasing the diversity with which we measure CQ will help obviate a number of biases associated with self-reports. Numerous possibilities exist. Van Dyne, Ang, and Koh (Chapter 2) illustrate the value of observer ratings of CQ, which were consistent with self-ratings and predicted self-rated adjustment (see Appendix C). Future measurement of CQ should focus on objective tests of knowledge and ability (Chapter 10). In addition to asking individuals to rate their cultural knowledge, objective tests of facts pertaining to legal and economic systems, art, religion, language, and so on across cultures can be assessed. Implicit measures of cultural knowledge, such as the spontaneous cultural inferences task, which uses priming techniques to assess level of cultural expertise (Fu, Chiu, Morris, & Young, 2007), will be useful for future CQ research (Chapter 18). With

cultural values (e.g., filial piety). Individuals are then asked to respond if that culture probe word was present in the previous sentence as quickly as possible. For those with extensive cultural expertise, because the culture-related sentence activates their network of cultural representation in the mind, it takes longer to reject the probe word compared to cultural novices.

Cognitive mapping techniques and network scaling could also be developed to assess the complexity of ways in which cultural knowledge is represented in the mind. That is, those with more complex representations of culture should be able to describe certain cultures in more integrated, differentiated, and abstract manners; they should also be able to articulate a greater number of nontrivial ideas pertaining to the culture. In developing new measures of CQ, it will also be useful to turn to related disciplines within psychology. For example, physiological and neurological research would be useful to integrate with CQ in that previous research has shown that perceptions of culture influence physiological reactions to cultural situations (Chao, Chen, Roisman, & Hong, 2007) and that culture itself can even affect neural activation patterns (Goh et al., 2007). Beyond the cognitive sciences, it also might prove useful to link CQ to developmental psychology. Just as specific predictors of CQ such as language ability have been found to be most malleable early in life, it is possible that CQ would be influenced most strongly by cultural experiences that occur during a critical period before a single pattern of cultural expectations becomes deeply entrenched.

### CONCLUSION

In conclusion, this volume attests to the promise that CQ has for numerous disciplines. The CQ construct offers parsimony, theoretical coherence, and precision that is unprecedented in the cultural competency literature. Research has already identified important antecedents, consequences, and moderators of CQ effects. The future of CQ is bright, and is undoubtedly filled with numerous exciting theoretical, empirical, and methodological possibilities that have great practical importance in the global village in which we live.

### REFERENCES

- Ang, S., Van Dyne, L., Koh, C., Ng, K.Y., Templer, K.J., Tay, C., & Chandrasekar, N.A. (2007). Cultural intelligence: Its measurement and effects on cultural judgment and decision making, cultural adaptation, and task performance. *Management and Organization Review*, 3, 335–371.
- Arthur, W., & Bennett, W. (1995). The international assignee: The relative importance of factors perceived to contribute to success. *Personnel Psychology*, 48, 99–114.
- Bell, M.P., & Harrison, D.A. (1996). Using intra-national diversity for international assignments: A model of bicultural competence and expatriate adjustment. *Human Resource Management Review*, 6, 47–74.
- Bhawuk, D., & Brislin, R.W. (1992). The measurement of intercultural sensitivity using the concepts of individualism and collectivism. *International Journal of Intercultural Relations*, 16, 413–36.
- Chao, M.M., Chen, J., Roisman, G.I., & Hong, Y. (2007). Essentializing race: Implications for bicultural

- Dunning, D., Heath, C., & Suls, J.M. (2004). Flawed self-assessment: Implications for health, education, and the workplace. *Psychological Science in the Public Interest*, 5, 69–106.
- Earley, P.C., & Ang, S. (2003). *Cultural intelligence: Individual interactions across cultures*. Palo Alto, CA: Stanford University Press.
- Fu, J.H., Chiu, C.Y., Morris, M.W., & Young, M.J. (2007). Spontaneous inferences from cultural cues: Varying responses of cultural insiders and outsiders. *Journal of Cross-Cultural Psychology*, 38, 58–75.
- Goh, J.O., Chee, M.W., Tan, J.C., Venkatraman, V., Hebrank, A., Leshikar, E.D. et al. (2007). Age and culture modulate object processing and object-science binding in the ventral visual area. *Cognitive, Affective, & Behavioral Neuroscience*, 7(1), 44–52.
- Gullahorn, J., & Gullahorn, J. (1963). An extension of the U-curve hypothesis. *Journal of Social Issues*, 19, 33–47.
- Gupta, A.K., & Govindarajan, V. (2002). Cultivating a global mindset. *Academy of Management Executive*, 16, 116–126.
- Hammer, M.R., Bennett, M.J., & Wiseman, R. (2003). Measuring intercultural sensitivity: The intercultural development inventory. *International Journal of Intercultural Relations*, 27, 421–443.
- Hannigan, T.P. (1990). Traits, attitudes, and skills that are related to intercultural effectiveness and their implications for cross-cultural training: A review of the literature. *International Journal of Intercultural Relations*, 14, 89–111.
- Hanvey, R.G. (1976). Cross-cultural awareness. In E.C. Smith, & L.F. Luce (Eds.), *Towards internationalism: Readings in cross-cultural communication* (pp. 44–56). Rowley, MA: Newbury House Publishers.
- Hawes, F., & Kealey, D. (1981). An empirical study of Canadian technical assistance: Adaptation and effectiveness on overseas assignment. *International Journal of Intercultural Relations*, 4, 239–258.
- Imai, L., & Gelfand, M.J. (2007). Culturally intelligent negotiators: The impact of CQ on intercultural negotiation effectiveness. In *Academy of Management Best Paper Proceedings* CD-ROM. Washington D.C.: Academy of Management.
- Kelley, T.L. (1927). *Interpretation of educational measurements*. New York: World Book.
- Kozlowski, S.W.J., & Klein, K.J. (2000). A multilevel approach to theory and research in organizations: Contextual, temporal, and emergent processes. In K.J. Klein & S.W.J. Kozlowski (Eds), *Multilevel theory, research, and methods in organizations: Foundations, extensions, and new directions* (pp. 3–90). San Francisco, CA: Jossey-Bass.
- Kruger, J., & Dunning, D. (1999). Unskilled and unaware of it: How difficulties in recognizing one's own incompetence lead to inflated self-assessments. *Journal of Personality and Social Psychology*, 77, 1121–1134.
- LaFromboise, T., Coleman, H.L., & Gerton, J. (1993). Psychological impact of biculturalism: Evidence and theory. *Psychological Bulletin*, 114, 395–412.
- Peng, K., Nisbett, R.E., & Wong, N.Y.C. (1997). Validity problems comparing values across cultures and possible solutions. *Psychological Methods*, 2(4), 329–344.
- Ridley, C.R., Baker, D.M., & Hill, C.L. (2001). Critical issues concerning cultural competence. *The Counseling Psychologist*, 29, 822–832.
- Ruben, I., & Kealey, D.J. (1979). Behavioral assessment of communication competency and the prediction of cross-cultural adaptation. *International Journal of Intercultural Relations*, 3, 15–17.
- Schwartz, S.H. (1994). Beyond individualism/collectivism: New cultural dimensions of values. In U. Kim, H.C. Triandis, C. Kagitçibasi, S. Choi, & G. Yoon (Eds.) *Individualism and collectivism: Theory, method, and applications* (pp. 85–119), Thousand Oaks, CA: Sage.
- Shaffer, M.A., Harrison, D.A., Gregersen, H., Black, J.S., & Ferzandi, L.A. (2006). You can take it with you: Individual differences and expatriate effectiveness. *Journal of Applied Psychology*, 91, 103–114.
- Steiner, I.D. (1972). *Group processes and productivity*. New York: Academic Press.
- Sternberg, R.J., & Kaufman, J.C. (1998). Human abilities. *Annual Review of Psychology*, 49, 479–502.
- Torbiorn, I. (1982). *Living abroad: Personal adjustment and personnel policy in the overseas setting*. New York: John Wiley & Sons.
- Tzu, Sun. *The art of war*, trans. L. Giles. Available at <http://classics.mit.edu/Tzu/artwar.html> (accessed on 18 February 2008).
- van der Zee, K.I., & van Oudenhoven, J.P. (2000). The Multicultural Personality Questionnaire: A multidimensional instrument of multicultural effectiveness. *European Journal of Personality*, 14, 291–309.
- van Oudenhoven, J.P., & van der Zee, K.I. (2002). Predicting multicultural effectiveness of international students: The Multicultural Personality Questionnaire. *International Journal of Intercultural Relations*, 26, 679–694.
- Weinberg, R. A. (1989). Intelligence and IQ: Landmark issues and great debates. *American Psychologist*, 44, 98–104.
- Zeidner, M., Matthews, G., & Roberts, R.D. (2004). Emotional intelligence in the workplace: A critical review. *Applied Psychology: An International Review*, 53, 371–399.

**Handbook of Cultural Intelligence**  
**Theory, Measurement, and Applications**

**Editors Soon Ang and Linn Van Dyne**

**Foreword by Harry C. Triandis**