Introduction: cultural intelligence in perspective

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This volume’s collection of papers reflects the advances that research on cultural intelligence (CQ) has made in the past two decades. In this introduction, we discuss the general concept of CQ and two foundational frameworks including Earley and Ang (2003) and Thomas and Inkson (2004). We also contrast the constructs of CQ, global mindset, and global identity, and conclude by reflecting on future research opportunities.

ORIGINS OF CQ – SOME PERSONAL REFLECTIONS

Several key individuals have created, nurtured, and shaped the concept of CQ. We would like to begin with just one of these journeys: namely, a personal reflection by the authors of this introduction. Doing so now seems appropriate given the first author’s recent retirement from academia.

Our work on CQ began over breakfast by spouses Earley and Mosakowski considering how the work on emotional intelligence (Goleman, 1995) might apply to cross-cultural encounters. The Goleman work had stimulated a great deal of discussion and debate in the psychology and organization literatures. At this time, Goleman’s work (complemented by the underpinning scholarship of Robert Sternberg’s (1985a, 1985b) triarchic theory of intelligence) had taken root in popular business and management literature. Our discussion touched on research Earley conducted with Miriam Erez (his mentor, co-author, and dear friend) and Erez’s extensive cross-cultural research program on identity, culture, and management (Erez & Earley, 1993).

Emotional intelligence (EQ) also gave a big push to the idea of a faceted model of intelligence in contrast to the alternative framework on “g” or general intelligence. Although there is no doubt that individuals have a general form of intelligence and problem solving, there has been good reason to add specificity to this notion by positing various “types” of intelligence, or facets. We were intrigued by the notion that some facet of intelligence might influence a person’s effectiveness across diverse cultural contexts. Some of the most popular and impactful work on faceted intelligence was put forward by Howard Gardner (2006), who posited that in addition to a general intelligence people varied by faceted intelligences. For example, some people have a proclivity for playing music while others have strong capabilities at athletics, chess mastery, etc. By a facet of intelligence, Gardner focused on intelligence as a computational capacity for processing particular types of information. He argued that intelligence can be thought of as a type of problem-solving capability as well as a capacity to make products impactful in a given circumstance. Thus, one might think of this capacity in terms of working within and across social settings/cultural boundaries.

Roughly six months later after these preliminary conversations, Earley accepted a visiting appointment at Nanyang Technological University (NTU) in Singapore sponsored by a former
MIS graduate student, Professor Soon Ang, with whom he had worked when he was on the faculty at University of Minnesota. This was a great opportunity for collaboration with Soon and a number of her junior colleagues at NTU. There are many individuals who deserve recognition but two jump out immediately – Joo Seng Tan (my co-author with Soon on a trade book we wrote on CQ) and Kok-Yee Ng (my co-editor for a special issue of *Group and Organization Management* on CQ). Our group of CQ “entrepreneurs” at NTU gave rise to one strand of research on this topic, and was later joined by another former graduate student (and friend of Soon’s) with whom I worked at the University of Minnesota, Professor Linn Van Dyne. A second major strand of research on CQ emerged from Dave Thomas and his colleagues.

What led to this stream of work? During a tram ride above the Singapore landscape, Soon Ang and I (Earley) broached the topics of culture, work, and psychology. I described my experiences working with expatriate managers. What surprised us was how some managers seemingly low on EQ still worked very effectively in intercultural encounters. Conversely, some high EQ managers who worked well in their own culture fell short during expatriate experiences. This anomaly suggested that EQ did not explain managerial effectiveness across cultures.

We also talked about a great deal about Robert Sternberg’s seminal work on faceted models of intelligence, with my relaying to Soon my earlier conversations with Mosakowski about Gardner, Goleman, etc., and Soon discussing many fine points of Sternberg’s triarchic theory of intelligence. We agreed that reframing a model of intelligence to explain outcomes in cross-cultural interactions would be a useful and productive direction for future collaborative work. This became the cornerstone of the work at NTU on cultural intelligence.

After several annual treks to Singapore as a Nanyang Visiting Professor, I approached Soon with a proposal to publish a book with Stanford University Press. Bill Hicks, their acquisitions editor, had a very positive response to the idea. This catalyzed our development of a more refined and complete framework around CQ.

My first published article on CQ presented a reduced version of our broader framework and it appeared in the Staw and Kramer Research in Organizational Behavior series (Earley, 2002). This was followed by the publication of our research monograph with Stanford University Press (Earley & Ang, 2003) and a Harvard Business Review article with Mosakowski (Earley & Mosakowski, 2004). Soon and I continued to work with a team of young scholars at Nanyang, including our co-author, Joo Seng Tan. Together we published a subsequent management practice focused book, *Developing Cultural Intelligence at Work* (Earley et al. 2006). Since that time Soon has worked with other colleagues in developing a psychometric scale to assess the facets of CQ (with Linn Van Dyne at Michigan State University).

What we have described depicts only one pathway in the evolution of CQ research. Unknown to us at the time was a parallel intellectual venture forged by David Thomas, the editor of this volume, and his colleague Kerr Inkson. They published the book *Cultural Intelligence: Living and Working Globally* in 2009 based on Thomas’s earlier work (e.g. Thomas, 2006). Thomas’s work has been influential in applying a CQ framework to various situations, including team interactions, HR practices, and organizational functioning. As they say, great minds think alike!
ORIGINS OF CQ – AN ACADEMIC PERSPECTIVE

Importance has been ascribed to cross-cultural adaptation long before the development of CQ. For example, an engaging and fun (heaven forbid!) tool developed by Gary Shirts was called *BaFa’ BaFa’* (1977) based on his earlier work with the US government. This simulation was designed to help individuals understand the role culture plays in social interactions and experience adapting to new “cultures” (albeit simulated cultures).

Any discussion of CQ must begin with the notion of culture. After all, culture represents the core of society in relation to its institutions and practices (Berry, 1990; Bond & Smith, 1996; Hofstede, 1991; Triandis, 1972, 1994). Whether culture emerged as a by-product of evolution to combat the risk of isolation (and to help convey adaptive features of social interaction to safeguard the community) or in reaction to psychological needs of discovering meaning in the world around us (Triandis 1994), it remains a central feature of how people interact across geographic and sociological boundaries. The human need to form collectivities and identify oneself based on definable subgroups makes the formation of culture inevitable (Stryker, 1980). Kluckhohn (1954) refers to culture as patterned ways of thinking, feeling, and reacting to various situations and actions. It is acquired and transmitted mainly by symbols, including their embodiments in artifacts. The essential core of culture consists of historically derived and selected ideas and especially their attached values. Culture can be seen as shaping the nature of social structures as they grow and adapt (Hofstede, 1991). Hofstede (1991) provides a commonly cited definition of culture. His view holds that culture is best represented as a set of programming for people within a nation; the “software” of the mind. Societies shape their collectivities and social aggregates according to the rules implied by culture. The cross-generational transmission of cultural meanings within a society is imperfect; over time individuals acquire variations on cultural meanings held by their predecessors imperfectly shared so any pair of people from a single culture may hold slightly different meanings for the same event or construct, and these two individuals may have shared meanings with other parties in the society but not with one another. An additional complication arises when discussing concepts that are unique and idiosyncratic to particular cultures in contrast to those common across cultures.

Against this backdrop of the complex nature of culture, CQ refers to an individual’s capability to adapt and explore alternative cultural environments drawing from three general facets – metacognition/cognition, motivation, and behavior (Earley & Ang, 2003; Thomas & Inkson, 2009 focusing on knowledge, mindfulness and behavior). The metacognitive/cognitive facet refers to information processing aspects of intelligence and it is conceptualized using self-concept theory. In self-concept theory, the “self” is a dynamic interpretive structure that mediates most significant intrapersonal and interpersonal processes. The metacognitive/cognitive facet of CQ can be viewed as the total knowledge and experience of an individual stored in memory concerning cultural adaptation. Knowing yourself is not sufficient for high CQ – awareness does not guarantee flexibility; adaptability of self-concept and ease of integrating new facets into it are, however, associated with high CQ, since understanding new cultures may require abandoning pre-existing conceptualizations of how and why people function as they do.

CQ meta-cognition refers to higher-level cognitive processes as part of a person’s processing of information, or “thinking about thinking” (Flavell, 1979). Thus, meta-cognition can be broken down into two complementary elements including meta-cognitive knowledge (what
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and how to deal with knowledge gained under a variety of circumstances) and meta-cognitive experience (what and how to incorporate relevant experiences as a general guide for future interactions). For example, the demands placed on learning about a new culture that shares little in common with that of an expatriate manager are great, and the individual is likely to realize that a great deal of attention and persistence is required. The final aspect of metacognitive knowledge refers to strategy variables, or the procedures used to achieve some desired goal.

Meta-cognition experience is a critical aspect of CQ since much of what is required in a new culture is putting together patterns into a coherent picture, even if one does not know what this coherent picture might look like. To do so requires a higher level of strategy about people, places, and events. It is for this reason that many cultural training programs fail since they overemphasize the specific example at the expense of a more general meta-learning process. Many companies train their global managers by providing country-specific information. This approach is not only limited by a person’s involvement in the training method, but it does not prepare a manager adequately for understanding and mastering novel situations the training did not specifically cover. A high CQ person must inductively create a proper mapping of the social situation to function effectively. This requires a general but broad foundation of knowledge about cultures and societies similar to the training recommended by an anthropological view covering topics such as economic systems, religious and political institutions, social relationships, etc.

CQ’s second facet is motivation. It is not sufficient to merely have information about how a group of people may deal with the world. You must be able (and motivated) to use this knowledge and produce a culturally appropriate response. CQ directs and motivates adaptation to new cultural surroundings. A central aspect of motivation is an individual’s self-efficacy, or engagement and perseverance (Bandura, 1997). Self-efficacy plays an important role in CQ because successful intercultural interaction is based on a person’s sense of efficacy for social discourse in a novel cultural setting. A person who does not believe in personal capability to understand people from novel cultures is likely to disengage after experiencing early failures. If the motivational facet of CQ is weak, adaptation does not occur.

Efficacy alone is not a full description of the motivational facet of CQ and an important, and related, addition is purposeful and goal-directed behavior (Locke & Latham, 1990). In an intercultural encounter, determining the goals of others coming from different cultural and personal backgrounds can be challenging. The interactive importance of goal setting and efficacy expectations is illustrated in work by many scholars (see Bandura, 1997 for a review). The process of evaluating the significance of knowledge about what is happening with our personal well-being generates emotions. Only through the recognition that we have something to gain or to lose, that is, that the outcome of a transaction is relevant to goals and well-being, do we generate an emotional reaction. Thus, goal appraisal is necessary not only for activating a response toward goal attainment but also for generating emotions that are necessary for energizing action. That is, our goals may act as cognitive anchors, thereby guiding subsequent actions (Locke & Latham, 1990).

A person’s norms and values are related to CQ and they are an important aspect of the self as they guide what features of the social environment a person attends to and what she values (Hofstede, 1991; Schwartz, 1994). Values and norms guide our choice of activities as well help define our evaluation of them (Triandis, 1972). Values are standards that lead individuals to take positions over issues, predispose individuals to favor particular ideologies, guide
self-presentation, evaluate and judge oneself and others, act as a basis for morality and competence comparisons with others, direct individuals concerning what ideas of others should be challenged, and tell individuals how to rationalize beliefs and actions that would otherwise be unacceptable so as to preserve self-image. Values serve to motivate instrumentally by providing enticement through desired end-states and by representing superordinate goals to reinforce a sense of self. For example, a person having strong group-based values is likely to avoid situations requiring personal actions. Further, such a person is likely to evaluate individual, idiosyncratic behavior negatively. Thus, cultural adjustment may be impaired by one’s cultural values and norms if they are strongly held and inflexible.

The third facet of CQ refers to a person’s behavior. Behavioral CQ reflects a person’s capability to acquire or adapt behaviors appropriate for a new culture. The behavioral element of CQ suggests that adaptation is not only knowing what and how to do (cognitive) and having the confidence to persevere and exert effort (motivational), it requires an individual to engage in appropriate actions. Lacking these specific behaviors, a person must have the capability to acquire such behaviors. A common example we might refer to is social distance during interactions (especially important in these COVID-19 times). In many Latin cultures the social distance of two men speaking with one another is closer than for Anglo cultures. As Harry Triandis told us during a class at the University of Illinois so very many years ago, he experienced behavioral challenges with a government official from Mexico at a social event. His colleague would move closer as he spoke with Harry and Harry would back up to maintain a more comfortable distance. It seems that after a lengthy conversation the two had “danced” around a large room while adjusting social distances. Many of these behavioral norms are deeply ingrained and largely unconscious.

A person may know and wish to enact a culturally appropriate behavior but cannot do so because of some deep-set reservation. For example, imagine a manager who is thrust into an uncomfortable social situation and is not able to control his non-verbal communication cues. This type of response (or lack of it) can be thought of in behavioral terms. Even if a person is able to provide a desired response in a cultural encounter, it remains problematic because the host may detect hesitation and react negatively. Persistence is necessary for the acquisition of new skills, and so is a person’s aptitude to acquire these new skills. It is not enough to be willing to try and learn new behaviors – a high CQ person has an aptitude to determine where new behaviors are needed and how to execute them effectively.

Self-presentation is particularly important in social behaviors because behaviors enacted in the process of social interaction are motivated primarily by the need for impression management and self-presentation. For example, a person may eat at a local restaurant in a host country. His primary goal is to satisfy hunger while his concerns about self-presentation may be of secondary concern. Even so, he is likely to follow eating etiquette to avoid offending others in that culture. By adapting his eating behavior and etiquette, he satisfies both his hunger and a desire to maintain a positive self-image.

Elsewhere in this edited volume the reader will see variations on this CQ framework along with important distinctions provided by Thomas and his colleagues. But the key point worth reiterating is that CQ is a capacity to engage and act within a variety of cultural contexts having multiple facets as its base. This suggests that there is no single way to “improve” a person’s CQ, but that an intervention needs to be provided dependent on an individual’s specific profile.
CONTRASTING CQ WITH RELATED CONSTRUCTS

While CQ provides a broad base for work on understanding cross- and intercultural interactions, there are related concepts that provide additional insights. Here we consider how global mindset and global identity compare to CQ.

Maznevski and Lane (2004) describe global mindset as “… the ability to develop and interpret criteria for personal and business performance that are independent from the assumptions of a single country, culture, or context; and to implement those criteria appropriately in different countries, cultures, and contexts” (p. 172). Beechler and Javidan (2007) define a global mindset as an individual’s stock of knowledge and cognitive and psychological attributes that enable an individual to influence individuals, groups, and organizations from diverse sociocultural systems. The cognitive abilities or mindsets of key decision makers play a key role in the strategic capabilities of organizations because the ways managers make sense of their environments can enhance or inhibit competitive advantage. An individual with a global mindset has an openness to, and awareness of, diversity across businesses, countries, cultures, and markets; the ability to develop and interpret criteria and business performance that are independent of the assumptions of a single country, culture, or context; and the ability to synthesize across this diversity and to implement those criteria appropriately in different countries, cultures, and contexts (Maznevski & Lane, 2004).

Distinctions between CQ and global mindset are twofold. First, CQ captures behavioral and motivational bases in addition to meta-cognitive/cognitive elements while global mindset is focused more directly on the cognitive triggers of behavior. Second, global mindset is more strongly focused outwardly with influence and impact as key elements of the model while CQ is more inwardly focused on an individual’s capacities.

Global identity is a concept developed by Miriam Erez and her colleagues and applied to various contexts such as multicultural teams. They define global identity as “an individual’s sense of belonging to groups nested within the global work environment of multinational organizations (i.e., MCTs), and the expectations associated with the roles of working in such groups” (Shokef & Erez, 2006). The development of a global identity is associated with global work activities, such as working with others from different cultures, and non-work global activities, such as social relationships with people from different cultural backgrounds (Chohavi et al., 2008). Chohavi et al. (2008) also found that global identity is influenced by an individual’s openness to experience as a personal disposition, language mastery, and living experiences abroad. Thus, global identity can develop not only in relation to work-related experiences, but also based on personal dispositions and life experience.

CQ and global identity differ in their conceptualizations of how individuals adapt across cultural boundaries. Global identity derives from an identification with belongingness of nested groups (ranging up to a global community), providing a reference point for an individual to adapt more readily by discovering commonalities of self with the other nested groups. With CQ, emphasis is placed on identifying and adapting to differences among individuals from disparate cultures. In this regard, global identity provides a useful complement to CQ in that, over time and interaction, the adaptation central to CQ will be strengthened by employing global identity’s emphasis on commonalities.
CQ – THE NEXT STEPS

What are the next steps in the evolution of research on CQ and cultural adaptation? The chapters in this volume illuminate the diversity of scholarly directions and identify clues as to emerging research questions. Social disruptions will continue to foment change and upset the current states of cultures. Arguably, the significance of cultural adaptation has never been greater. This volume provides an important intellectual backdrop for predicting where the CQ field is headed for the next several decades.

If the reader is willing to indulge us for a moment, let us consider a potential new direction for thinking about culture and CQ. We look to epigenetics to ask how biological processes may affect, in part, how cultures evolve. Without negating the obvious significance of sociological, anthropological, and psychological mechanisms, we believe that biology should also not be ignored. In turn, this raises the question of whether an individual’s CQ is partially dependent on these biological processes.

The first author had the good fortune to serve as the Dean of Business at the University of Tasmania (UTAS, Australia). (For anyone who has not had the experience, a visit to Tasmania is highly recommended for its beauty, hospitality, and lifestyle offerings.) After a series of conversations that the first author had with his former Provost, Michael Calford (now the Director of the Hunter Medical Research Institute in New South Wales, Australia) concerning new trends in genetics and epigenetics research, a new potential pathway emerged for thinking about the origins and evolution of culture. Put briefly (and grossly simplified for the sake of space), epigenetics is the study of how behaviors and environment can cause biochemical changes that affect the way genes are expressed. Unlike genetic changes, epigenetic changes are potentially reversible and do not change an individual’s DNA sequence. Instead, epigenetics can change how the body interprets a DNA sequence.

Epigenetics can affect gene expression through various biochemical processes. One is through the methylation of DNA, in which a chemical group is added to specific places on DNA. Typically, methylation turns genes “off” and demethylation turns genes “on”. A second way epigenetics affects changes is through histone modification, in which certain genes are wrapped tightly around histones and turned “off”, while others are not wrapped around histones and are turned “on”. Another biochemical process is through the interaction of non-coding and coding forms of RNA, which influence critical protein production.

While epigenetic changes begin before birth, they continue as one ages and in response to behaviors and environment. While an individual’s cells share the same genes, they may look and act differently. The most obvious example of this is that, as a fetus grows and develops, epigenetics help determine a cell’s function. Will a cell, for example, become part of a muscle or a nerve? Epigenetics allows the muscle cell to turn “on” genes to make proteins important for its job and turn “off” genes important for a nerve cell’s job.

Epigenetics change throughout the life course. One’s epigenetics at birth are not the same as epigenetics during childhood or adulthood. For example, in a study of a newborn versus a 26-year-old versus a 103-year-old, Heyn et al. (2012) examined DNA methylation at millions of sites across these ages. They found that the level of DNA methylation decreased with age. A newborn had the highest DNA methylation, the 103-year-old had the lowest DNA methylation, and the 26-year-old had a DNA methylation level between the newborn and 103-year-old. That is, the on-or-off states of particular genes changed as a function of age.
Not all epigenetic changes are permanent. Some epigenetic changes can be added or removed in response to changes in behavior or environment. Smoking can result in epigenetic changes. For example, at certain parts of the AHRR gene, smokers tend to have less DNA methylation than non-smokers (McCartney et al., 2018). The difference is greater for heavy smokers and long-term smokers. After quitting smoking, former smokers can begin to have increased DNA methylation at this gene. Eventually, they can reach levels similar to those of non-smokers. In some cases, this can happen in under a year, but the length of time depends on how long and how much someone smoked before quitting.

Yet the effects of epigenetics can have lasting effects, as illustrated by research on environmental scarcity during pregnancy. Heijmans et al. (2008) compared individuals whose mothers were pregnant with them during the Dutch famine in the winter of 1944–45 to their siblings who did not suffer this fetal exposure. Compared with their siblings who were not exposed to famine before their birth, people who underwent fetal development during this famine were more likely to develop diseases such as heart disease, schizophrenia, and type 2 diabetes (Heijmans et al. 2008) and had increased methylation at some genes and decreased methylation at others.

Most significant for cultural evolution, the effect of epigenetic processes might appear transgenerationally. Genetics and epigenetics scholars continue to research this, but evidence to date affirms such an effect. Crews et al. (2007) investigated the ability of an environmental factor to promote the epigenetic transgenerational inheritance of alterations in the mate preferences of rats. When a generation (F0) female rat was exposed to a fungicide, the mate preferences of the F3 generation were altered (Crews et al., 2007). In addition to transgenerational effects on behavior, they found epigenetic alterations (termed epimutations) in the germline (sperm) and transgenerational transcriptome changes in brain regions. Thus, the introduction of an environmental factor influenced both behavior and biology across multiple generations.

What might this work imply for research on culture and CQ? If we accept that environmental factors can impact behavior and biology transgenerationally on a collective scale, environmental shocks would not only be felt through the current economic or political system, but may tear at the fabric of culture for generations to come. The impetus for these potentially enduring effects would not be limited to major devastations such as the genocide in Rwanda, the Russian invasion of Ukraine, or the toll of global pandemics. Even environmental events that are perceived by a collective as less horrifying or less impactful could contribute to cultural evolution. To the extent their effects are manifest through biochemical changes, these cultural shifts may be difficult to predict or understand.

Similar arguments can be advanced about potential epigenetic influences on CQ. Could one or more of the CQ facets be influenced epigenetically? Could these effects on CQ be transmitted to future generations? One implication is that some cultures could, in themselves, enhance (or impede) the CQ characteristics of its members through epigenetic influence. While CQ was developed as an individual construct, should we also be looking to identify a cultural-level companion construct?

Extrapolating the basic findings of epigenetics to culture-related variables like CQ might well help us understand the very nature of culture itself (and not merely cultural intelligence, per se). Mind you, these are very preliminary musings crossing some very complex fields.

Let us return to our comment of the beginning of this section as a way of summarizing our discussion – there is so very much more that future research based on CQ might help us understand the very essence of what it means to be human and what it means to engage with others.
PARTING GLANCE

The first author’s final indulgence is to reiterate his thanks for a fulfilling career in this field, with credit going to (but not limited to) Miriam Erez, Harry Triandis, Ed Locke, Geert Hofstede, Albert Bandura, Lyman Porter, Michael Bond and Alan Lind. My appreciation for the insights, support, and guidance that these individuals most generously volunteered over the years cannot be overstated.

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