Cognitive and Affective Competencies for Culture-General Proficiency

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ABSTRACT

The ability to immediately and effectively function in any foreign culture and in mixed-culture environments is of paramount importance to today's expeditionary-style operations. Cultural training specific to a particular local may not offer a viable preparation, when the geographical destination of overseas deployment cannot be predicted or planned. The present paper examines an approach to culture general (CG) competence over those methods to enhance culture-specific skills. "CG competence" is the knowledge, skills, and attitudes to interact effectively with peoples across different, unplanned, or unforeseen cultures. Having completed a review of literature on enculturation, we conceptualize cultural understanding as the neurological processes of transformative schematic activities that are related to symbolic exchange and learning. In CG training, we take into account the importance of transference from one mindset to another; symbolic representations as to how one expresses self and relations in everyday life; and anthropological reflection on socially-constructed emotions and meaning-creation. The present CG approach focuses not so much on **what** to think, but **how** to think about unfamiliar and complex cultural environments. It displaces the teaching emphasis from rule-focused, heuristic skills to shaping the "mindset" of an individual engaged in multi-cultural interactions. *Interactions* refers both to communications with native peoples and to adjusting, mentally and emotionally to a foreign environment. The paper identifies four cognitive culture-general competencies and three affective competencies that mirror the natural learning progression of the cross-cultural learner. Once learners acquire CG competencies, they will be able to quickly learn cultural-specific skills, because the act of gaining cultural competence is literally embodied in the creative, multi-layered activity of how learners interact with native peoples and how they reflect on such interaction and how they modify behaviors on the ground.

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INTRODUCTION

The nature of security in today's world requires an expeditionary approach to military preparation. (FM 1, 2005; MCDP-1.0, 2001; AFDD 1, 1997). Expeditionary Maneuver Warfare implies the ability to deploy across wide geographical regions and mission types (Marine Corps Operating Concepts, 2006). For example, a Marine Expeditionary Unit (MEU) aboard an Amphibious Readiness Group (ARG) forward deployed in the Indian Ocean must be prepared, in a matter of days if not hours, to go ashore and perform a number of missions, frequently in chaotic multi-cultural settings. In the case of the Haiti relief operation of 2010 after a 7.0 magnitude earthquake devastated the country on Jan 12, the location of overseas deployment could not be planned or predicted, and yet required immediate and effective adaptation to unforeseen cultural settings. Under such circumstances, cultural training specific to a particular locale does not offer a viable preparatory training. The present paper examines a new approach to Culture-General (CG) training, in order to fulfill this unmet need.

Culture-General vs. Culture-Specific Training

Cross cultural skill building can be characterized in two ways: culture-specific and culture-general. Culture-specific skills apply to one particular culture only and may include items such as language, and "rules" of interaction with respect to a given locale. While they provide travelers and sojourners with important and introductory knowledge, the very nature of such knowledge is narrow in scope and often provides a collection of heuristics.

On the other hand, "culture-general (CG) competence" is defined as the knowledge, skills, and attitude to interact effectively with people of different cultures and in multi-cultural conditions. Effective training for CG competence should decrease ethnocentric interpretations of other's cultural behavior, develop comparative framework for mindful behavioral and attitudinal modification, and improve task performance in any culturally unfamiliar terrain. The focus of CG training is not necessarily on **what** to think, but rather, **how** to think about the unfamiliar cultural environment. In our work on CG competencies, we have explored the concept of culture and cross-cultural training methods from many different perspectives.

A CG strategy displaces the teaching emphasis from heuristic, rule-focused skills to shaping and evaluating the "mindset" of an individual engaged in multi-cultural interactions; in this sense, *interactions* refers both to communications with native peoples and to adjusting, mentally and emotionally to a foreign environment. As such, we believe it is more important for an individual to interact curiously, observantly, and respectfully, and to develop comparative frames of reference for behavioral modification, rather than it is to simply follow a finite set of guidelines applicable to a single situation or environment. In addition, we posit that CG training will provide a foundation for a variety of culture-specific training in the future.

Building on the ideas above, we identified two pragmatic objectives for a CG approach to teaching cross-cultural competence:

- Objective 1: Trainees will able to interact effectively and immediately with peoples in any foreign culture and in multi- or mixed-culture environments.

- Objective 2: With a CG approach serving as a foundation, trainees will be able to more quickly acquire cultural-specific skills.

The present CG approach is a result of exhaustive review of literature on the concept of culture. We have found two perspectives on the culture concept particularly productive: They are symbolic (or interpretive) anthropology, and a new neurological model on enculturation, both of which have opened up a new field of cultural neuroscience. In addition, interviews with and observations of recently deployed Soldiers provided us with specific insight into testing our hypothesis and developing a CG competence training methodology.

A NEW NEUROLOGICAL MODEL OF CULTURE

Recent advances in neuroscience have shed light on how cultural understanding is shaped by the mind, as well as symbolic anthropology that emphasizes meaning creation and interpretive aspects of human interaction. They have, laid the foundation for an emerging field of cultural neuroscience. We describe how this approach to exploring cultural perceptions and mapping support the current CG approach to training.

Anthropological studies of culture, until rather recently, have been dominated by three influential schools of thought, namely: (1) interactionism, (2) instrumentalism, and (3) interpretivism.

The first paradigm of interactionism sees the human group formation as processes of boundaries maintenance and permeation through social signs of incorporation/ exclusion and infiltration (Barth, 1969; Brubaker, 2004; Eriksen, 1991; Hannerz, 1992, 1996). On the other hand, the second paradigm of instrumentalism acknowledges that people get together to form organized human communities for attaining instrumental and political goals, because groups can do more than separate individuals can do. For instance, tribes, ethnic groups, neighbor associations, and companies are organized by individuals because membership can be utilized as resource for one's survival, reproduction, economic or political gains and other instrumental goal attainment within a historical context of inter-group competition and power inequity (Banton, 1983; Brass, 1991; Cohen, 1969; Eller, 1999; Tambiah, 1996). These two perspectives recognize the individual agency's choice, need, and motivation for formation and maintenance of organized entities. These two paradigms, however, tend to neglect inter-organization exchanges and co-acculturative processes among competing or collaborating communities.

The third perspective is called interpretive anthropology or symbolic anthropology. This rather influential paradigm has provided a framework for examining cross-group interfaces and symbolic exchanges. Founders of this school, such as Clifford Geertz (1973, 1975), David Schneider (1968), Victor Turner (1967, 1974) and Mary Douglas (1966, 1970, 1986, 1992), have all conceptualized culture as a symbolic system that arises primarily from human interpretations and categorizations of the world, natural and artificial, around them. Interpretive anthropologists who followed their lead have shared a common theoretical understanding that meaning is generated through discursive processes of language-and-action and sign-exchanges between and among different human groups who operate within the context of "intermediate space of trans-cultural mixing" (Gilroy, 1993).

In general, contemporary anthropologists agree that human groups transmit diverse systems of meaning though various symbolic venues that include language, art, music, foodways, rituals, artifact, kinship, built environment, social institutions, and non-verbal media. This interpretive mode of thinking has led to important theory-building such as those of cultural hybridities (Bhabha, 1994; Garcia Canclini, 1995, 2001; Pieterse, 1995) and multi-modal discourse analysis (Kress, 2003; Kress & Van Leeuwen, 2001). Studies of power and symbols in the capitalistic world have also shown how those with power and those without interact in the symbolic realm of meaning creation, cooptation, resistance and creative adaptation in organizational settings (Ong, 1999; Ong & Collier, 2005; Hall, 1997).

Despite their strong interest in meaning, interpretive anthropologists have rarely delved into the actual cognitive, emotive, and neurological processes that are activated when sign-stimuli are received and interpreted as being meaningful by humans. While we know that humans do create and share meanings, how do we actually perform the acts of creation and sharing? What are the processes of linking individual agency, collective meaning-dissemination, and institutional outcomes? How do humans, individually and collectively make socially relevant meanings and even enforce moral judgments? In order to answer these questions, the following section will examine in some detail the human brain's neurological processes that take place when a person perceives some pieces of "reality" as being "meaningful".

A lot of learning takes place in our brain as we register more and more information, and the brain's networked firings become more routine and automatic. Imagine a situation where we see a little golden haired girl over and over again, while experiencing corresponding cognitive and emotional reactions and/ or even sub-conscious recognition and underlying emotionality, over and over again. If new information adds more connection weights between units in different regions, that particular schema (i.e. signified association of neural firings and their connectivity) becomes more stable, and less transitory. What is anthropologically significant is how certain patterns of neuron connectivity become more established, re-enforced, and stabilized over time. As more and more webs of connectivity are established by repeated exposures to similar stimuli-responses over time, the brain progressively decouples deeper and more reflective "meaning creation" separate from mere "knee jerking" responses to environmental stimuli. We can then remember the image or evoke it in a new way without actually "seeing" it out there. The reflective meaning-creation schema can be considered a relatively resilient system because of its strong interconnectivity of multiple neuron activities in the brain.

This firmly established schematic system becomes a kind of guideline, or a "cultural" map to interpret new stimuli (such as a new image of a girl with black hair), and to promote certain expressions and behavioral outcomes. Therefore, one can now theorize that a cultural scheme that is operative for symbolic interpretation and action is made of whole interlinked networks of neuron firings, near and far, in the brain which mobilizes present and past experiences of neural connectivity and the existing depository of reflective meaning-creation schema. The schematic connectivity is very important not so much as to what it allows us to "see" but *how* and *in what ways* it lets us "see" the world.

This proposition is further supported by a practical investigation. As part of our review, we interviewed a small group of former service members who returned from overseas operations. These interviews point to a marked difference in emotive and cognitive make-ups between those back from their first tour of duty and those who have completed multiple tours. We learned that those with multiple foreign deployments can recount their experiences more reflectively. We see this as evidence that repeated exposures to previously alien settings over time have led these veterans to progressively decouple deeper and more reflective "meaning creation" that is separate from mere "knee jerk" responses to external stimuli. In other words, the brains of these highly experienced veterans can be conceived as possessing a multiple reference library or a depository of past image-induced neural firing patterns that helps them decipher and decode a specific situation in more interpretively "deep" manners. Because of this, they can "explain" a previously foreign phenomenon to an outsider/interviewer by utilizing their own schematic system and reasoning for cultural categorization, pattern-recognition, and abstraction. Such cognitive and affective scheme serves as a kind of "global positioning system for cultural navigation."

What is important to the present project is the fact that some people learn this reflective meaning-creation better than others, with an ever increasing depository as to how to "interpret" the world out there. Training that further leverages this development of schemes can be expected to result in a higher level of learning as trainees create high-level representations and learn to associate new information within those schemas. This supports the CG approach to learning cross-cultural competence. With a generalized view of culture as a whole (including not only the concept of culture but also the existence of hundreds of cultures in the world), trainees are better prepared to comprehend specific knowledge associated with any one specific culture by utilizing existing schemes for understanding. As such, culture-general training becomes a potentially powerful tool for transformative and cathartic discovery.

CULTURE-GENERAL COMPETENCIES

The identification of CG competencies help to shape cultural training and instruction by highlighting required accomplishments for gaining a classification, such as cross-culturally competent. Building on the preceding review, we highlight the requirements for effective learning and describe our specific focus on the affective domain of learning.

Development

Learning is the acquisition of knowledge, skills, and abilities and the information processing required to do so. As such, learning encompasses multiple domains as detailed in Bloom's Taxonomy (Krathwohl, Bloom, & Masia, 1964):

- Cognitive: knowledge and the development of intellectual skills over time
- Psychomotor: manual or physical skills
- Affective: growth in feeling or emotional areas over time

While cognitive and psychomotor skills are often described and addressed in skill-building applications, affect attracts less attention, though this area is growing. Affect describes the emotional states individuals experience and that can influence thoughts and behaviors (Ames & Ames, 1985). In particular, learning is significantly impacted by motivational and affective factors, such as the alignment of information to be learned with personal goals and an individual's feelings toward the learning process or environment (Alexander & Murphy, 1998). Such factors can be determined or influenced by prior knowledge and experience, perceived information, instructor intent and purpose, and whether the learning environment is positive or negative. Much research has centered on the affective influences on learning. For example, learners are more likely to perform well when instructors acknowledge their goals and interests or when the learning environment is perceived to be supportive and encouraging (Ames, 1992; Newman & Schwager, 1992; Pintrich, Marx, & Boyle, 1993). These influences exist on two levels: one's attitude towards the learning content, e.g. perception of relevance, and one's personal growth emotionally and with regard to their value system, e.g. adopting an open mind.

Recognition of the affective influence on learning extends to multiple fields in the domain of learning. For example, initially, intelligent tutoring systems (ITS) focused exclusively on the cognitive domain of the learner: the learner's knowledge (Burns & Capps, 1988). More recently, it was determined that ITS also had to take into consideration the learner's affective or emotional state. As a result, examination and consideration of the student's

affective state has been part of the International Conference on Intelligent Tutoring Systems since at least 2004 (Lester, Vicari & Paraguacu, 2004) and there are numerous examples of laboratory work done on integrating affect within ITSs (D'Mello, Craig, Gholson, Franklin, Picard, & Graesser, 2009; Alexander, 2009).

With regard to cross-cultural training, the affective domain plays a very significant role. Affective learning leads to the trainee's ability to be sensitive to and aware of cues around them, as well as being able to know when it is appropriate to apply skills they have learned (Crooks, 2007). In culture training, knowing why to apply a skill is as important as knowing what skill to apply.

Neurological studies concerning the influence of affect on human meaning-creation indicate that the amygdala region of the human brain is one structure that is anatomically positioned to participate in this processing of neural linkages for situational learning. Located in the middle of the brain, connected to the hippocampus, this almond shaped complex has been identified as a critical processor area for the human activities related to anger and love. The amygdala does not operate alone. In tandem with other parts of the brain, including the ventral striatum and the orbitofrontal cortex, the amygdale region responds to potential danger or increased chances for survival and reproduction. The amygdala area activates when it receives information from the anterior temporal cortices, and it also stores codes for subsequent processing of such perceptual information in other brain regions. Particularly significant to the current research is the fact that this region plays an important role in emotionally laden "schematic" memories, including anger, fear, distress, anxiety, and sexual feelings. It is important to note that these primary emotions are cross-culturally (i.e. universally) perceived by different peoples.

Lesion studies with people with damaged parts of the brain, as well as recent autism research, have produced research findings that are also consequential to the current discussion. They have elucidated the roles played in *social cognition* by specific neural structures, genes, and neurotransmitter systems (Lombardo, et al., 2010). We know that cortical regions in the temporal lobe participate in perceiving socially relevant stimuli, whereas the amygdala, right somatosensory cortices, orbitofrontal cortices, and cingulate cortices all participate in linking perception of such stimuli to motivation, emotion, and cognition (Baron-Cohen et al. 1999).

As a result of the above mentioned research, we believe that cross-cultural proficiency requires affective as well as cognitive competencies. This includes both culture-general knowledge, skills, and attitudes as well as the required affective states of individuals that lead them to interact successfully cross-culturally, as detailed below. Viewing dynamic cultural competence from this perspective takes into account the importance of schematic transformation (i.e. transference from one mindset to another), symbolic representations (i.e. how one expresses self and relations in everyday life), anthropological locations (from which perspective/power position one looks at a specific cultural phenomenon) (Gupta & Ferguson, 1997), and awareness of and reflection on socially-constructed emotions in collective meaning-creation.

Description

The preceding sections have provided a foundation for the reasoning behind CG training for those individuals who must function successfully in cross-cultural environments. The following section will describe the cognitive as well as affective competencies that have been identified to support this approach. Each competency is accompanied by associated learning goals.

Cognitive Competencies

Cognitive Competency 1 (CC1): Understand that culture is learned

CC1 Enabling Learning Goals

- Understand that culture is not innate; rather, it is learned and historically situated.
- Understand the role and effects of ethnocentrism

Knowledge that culture is learned, not inherited, is the first step necessary to appreciate how the so-called "common-sense" way of thinking, feeling and acting may actually inhibit effective cross-cultural communication. Ethnocentrism is the view that other cultures are inferior to one's own. Ethnocentric individuals lack respect for other cultures because they believe that others are born with their "peculiar" and inferior culture, while one's own way is rational, superior, and objective. The CC1 aims at the learner's new realization that one's culture is not natural but learned through socialization, and that there are no superior nor inferior cultures.

Cognitive Competency 2 (CC2): Understand the existence of cultural propensities

CC2 Enabling Learning Goals

- Demonstrate knowledge of four categories of propensities, or ways of processing information about the world:
  - Categorization of the world and the prioritization of those categories
  - Patterns of reasoning
  - Patterns of decision-making
  - Patterns of inter-relation among people
- Recognition that cultural propensities are influenced by individual socialization and group history

All cultures possess a certain set of propensities to make sense of the world. Important among them are four suggested propensity categories: They are: (1)categorization of the world and prioritization of the categories, (2) patterns of reasoning, (3) patterns of decision-making, and (4) patterns of interrelating.

Cognitive Competency 3 (CC3): Apply knowledge of cultural propensities

CC3 Enabling Learning Goals

- Use categories of propensities to recognize the differences as well as similarities between habits of self and others; and reflect on how these influence behaviors.
- Learn to view self from others' points of view.
- Understand self and others' biases and ethnocentrism

Cognitive Competency 4 (CC4): Understanding of cognitive dissonance and culture shock.

CC4 Enabling Learning Goals

- Understand that without adequate information about a different culture, conclusions about that culture's behaviors are likely to be incorrect.
- Understand the process of cultural adaptation. Demonstrate knowledge that culture-shock is cause by cognitive, physical/sensory, and affective dissonance.

Affective Competencies

Affective Competency 1 (AC1): Be curious and motivated to learn about culture

AC1 Enabling Learning Goals

- Be open and accepting to learning about cultures
- Acknowledge cultural artifacts as sources of cultural knowledge.
- Initiate interaction with cultural artifacts
- Acknowledge the relevance of cultural training to personal and professional goals

Affective Competency 2 (AC2): Appreciate differences and similarities in how individuals from various cultures interpret the world around them

AC2 Enabling Learning Goals

- Recognize cultural propensities in the behavior of the cultural *other*
- Interpret the behavior of the culture *other* in the context of cultural propensities
- Refrain from judging other cultures based on one's own cultural propensities
- Appreciate both the differences and similarities among cultures

Affective Competency 3 (AC3): Recognize the appropriateness of behavior

AC3 Enabling Learning Goals

- Be sensitive and emotionally mature when encountering inappropriate behavior under different circumstances
- Qualify why certain behaviors are appropriate or inappropriate
- Understand the comparative levels of emotional threshold

These competencies promise a highly effective foundation for the training of culture-specific skills, i.e. cultural heuristics. More importantly, they represent the cognitive knowledge of the nature of culture and the cognitive and affective influences on one's perception of the cultural *other*. In this way, students learn the *what* and *how* (cognitive) as well as the *why* (affective) and can then better process information about the *who* when it is encountered. This is intended to bridge the gap between teaching rules and actually modifying a learner's mindset.

Implementation

Accompanying this list of competencies is a set of proposed strategies for implementing this approach in a game-based virtual environment for cross-cultural training, utilizing an experiential approach to learning as well as maintaining a focus on engagement, relevance, and reflection. Specifically, these initiatives will guide the application opportunities trainees encounter by: using contingency logic to shape the learning experience, requiring the learner to accurately assume the role of the cultural *other* in a given interaction, and utilization of cultural propensity continuums to illustrate the variety of cultural influences on individuals.

Using contingency logic to shape experience

In the present context, contingency logic describes the myriad of rules governing human contact in various cultures by highlighting a matrix of interactions. Specifically, individuals interact differently depending on whether the interaction takes place in private (back) or in public (front) and whether the interaction is with an accepted (positive) or unaccepted individual (negative).

Taking this logic into account, CG training should shape the learning experience by requiring trainees to experience interactions within each matrix category: back-positive, back-negative, front-positive, front-negative. Requiring coverage of all four axes of interaction is important not only to provide insight into the concept of culture as a whole, but also because military personnel may potentially interact with cultural *others* both in public and within residential settings, as well as be viewed positively or negatively by that cultural *other*. In this way, experiences are varied, better related to the trainees' own lives, and they provide

learning material in addition to a simple interaction with a foreigner.

Experiencing the cultural-other

We recognize that some aspects of our competencies, e.g. understanding that cultures have certain propensities, may best be learned from the perspective of the cultural *other*. In order to encourage the trainee to begin to understand the motivations and propensities of cultural *others,* CG training should incorporate role-switching exercises in which the trainee experiences the role of a cultural *other* in an interaction with American military personnel, within the natural progression of the mission. In these situations, the learning objects and interactions will be adjusted accordingly to support this approach. The trainee should be assessed on the accurateness of his actions and responses as well as on his justifications (further addressed below) for these behaviors. In this way, the trainee must attempt to think from another's point of view in order to progress.

Justifying behavior

Critical incidents are a common way to assess individuals on their learning and knowledge, wherein an individual's decisions are not as important as the justifications he gives for his decisions. CG training should adapt this approach for culture awareness training. Trainees should encounter multiple opportunities to interact with cultural *others* within the environment. At certain points, the learner should be given action choices. At these points, there may be only one or two possible actions. What the trainee should choose is the correct justification for the selected action. Justifications may differ in actual content, e.g. shaking hands because it is respectful versus because it is a way to gain entry, or they may differ in wording choice. For example, a justification choice may be presented in ethnocentric verbiage, emphasizing the trainee's cultural superiority to the *other*. This approach serves a dual purpose. First, it reinforces the cognitive knowledge of appropriate behavior. Second, it provides a way for the system to assess the individual on his affective state or his understanding of the why behind certain cultural schemas.

Utilizing cultural propensity continuums

As indicated above, cultures can be distinct from one another based on certain categories of cultural propensities. For example, given the same stimuli, different cultures may engage in different responsive actions based on varying patterns of reasoning. These patterns of reasoning can, in CG training, be uncovered through interaction with cultural *others*. Therefore, in the world market example, a trainee can speak on the same topic or ask the same questions with all cultural *others*, learn information about each *other's* propensities, and "chart" with each *other* on a cultural propensity continuum. This approach reinforces the understanding of cultural propensities and redefines *logic* so that the trainee begins to appreciate the *why*.

CONCLUSION

We have identified and assessed the state of the art in the theory addressing general characteristics of culture and its relationship to language and communications and neuroscience. The results of this research, and the considerations presented by both cognitive and affective learning requirements, resulted in the construction of four overarching competencies that encompass the skills required to be cross-culturally successful: understanding that culture is learned, understanding the existence of cultural propensities, learning to characterize self and others based on these propensities, and understanding the concept of culture shock. Once learners acquire CG competencies, they will be able to quickly learn cultural-specific skills, because the act of gaining cultural competence is literally embodied in the creative, multi-layered activity of how learners interact with native peoples and how they reflect on such interaction and how they modify their own behavior on the ground.

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