

## 8 Cross-cultural training and education for detection<sup>1</sup>

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### 1. Introduction and Overview

*Sociocultural signatures* are unique, identifiable (often because they are repeated) features of the social and cultural landscape. That landscape includes observable individual biometrics (i.e., characteristics or traits, such as personality profiles, fingerprints, and voice profile), as well as individual and group sentiments and behaviors (Maybury, 2010) exhibited in political, economic, and social structures.

Detection of sociocultural signatures involves more than maintaining situation awareness and identifying facts in the physical environment. It requires a deeper understanding of what those signatures mean. Sociocultural analysis helps to unravel the meanings of these signatures by decoding how and why people sense the world as they do.

As an example, one might observe that, although Brazilian officials were confident that they would be prepared for the Confederations Cup in June 2013 (a precursor to the World Cup 2014), at the time of writing this chapter, Brazil had built only two-thirds of the soccer stadiums needed by FIFA's (*Fédération Internationale de Football Association*) mandated deadline (Boadle & Downie, 2013). Sociocultural analysis might help to explain this by revealing a pattern in how processes are paced in Brazilian society. Researchers might conclude that it took Brazilian officials two years to determine which 12 cities would host the games because of the government's strong desire to generate the greatest economic benefit for the country. The cities selected could then have taken another long time to build the stadiums due to the same relationship structures being used to find the building contractors that would generate the greatest benefit for the organizers. Further, during the selection process, time was on the side of the contractors who could negotiate better prices as deadlines approached. At a macro level, Brazilians are generally more comfortable with uncertainty than FIFA officials. In fact, legendary Brazilian soccer player Ronaldo was quoted as saying, "We leave everything to the last minute" (Boadle & Downie, 2013).

This example illustrates how sociocultural analysis involves making sense of observed behaviors by accounting for relationship structures (i.e., negotiating costs and benefits) that might explain how

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sentiments and behaviors developed (i.e., “things will get done”), as well as values (i.e., tolerance for uncertainty) and beliefs (i.e., “do not do today what you can do tomorrow”) that have guided individuals’ behaviors in a social context.<sup>3</sup>

In this chapter, we discuss the importance of *cross-cultural training and education* (CCTE) as a prerequisite for robust sociocultural analysis, and recommend methodologies for trainers. We also offer suggestions to Department of Defense (DoD) policy makers who must support CCTE for civilian and military U.S. Government (USG) personnel. We first introduce a conceptual definition of culture, as well as concepts and dimensions of culture that trainers must address in CCTE. Second, we identify some gaps in current analytic practice that research should seek to fill. In the third section, we present state-of-the-art findings from cultural and cross-cultural research that could inform CCTE methods and designs, including best practices in CCTE. Finally, we put forward some recommendations for implementing CCTE more richly and effectively in operational environments.

## 2. What Is Culture?

Culture gives meaning and distinction to the existence of a group. The term “culture” encompasses values, norms, behaviors, and beliefs implicitly shared among members of a social system – defined as a group characterized by meaningful interactions among individuals (Schwartz, 2009). These characteristics of a culture develop and modify over time, and are reinforced by the interactions of people within it. Thus, an inherent component of understanding culture is understanding how the people within it interact and why. For this reason, intelligence professionals (IPs—a broad term that includes analysts) must focus on patterns of social interactions that provide evidence of group behaviors and *how* behaviors and sentiments develop. Starting with dyadic relationships, including person-to-person, person-to-group, and group-to-group, IPs can come to understand the more complex relationship structures that define cultures, and explain *why* dyadic relationships take a particular form.

The term “culture” is multi-layered and can be applied to describe different kinds of social systems, including regions, countries, nations, ethnic groups, and families. While many associate the concept with nationality, not all social systems correspond to national borders (McGinn, Weaver, McDonald, van Driel, & Hancock, 2008). Thus, we can refer to peer group cultures, corporate cultures, and national cultures.

Culture influences and is influenced by social, educational, business, political, economic, linguistic, legal, and religious systems (Tayeb, 1994). It is both around and within us, and individuals have cultural signatures, but people are not embodiments of culture. By analogy, simply because the United States is considered a wealthy nation does not mean that all people in the United States are wealthy. Similarly, even within a relatively collectivistic culture different individuals focus on different degrees on their duty to their families and subgroups.

Cultural syndromes—composed of norms, beliefs, and values—are often mistakenly used to assert qualities of a person. Although IPs should use these syndromes to guide understanding of a

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<sup>3</sup> See Green Sands & Haines (2013) for another example drawn from a simulated war game.

person's behaviors, they must also seek alternative explanations on the basis of an evaluation of multiple cultural factors.

Culture manifests itself not only in the perceived physical world, but also in *how* and *why* people interact in that world as observed. Cultural differences become evident when people perceive the same stimuli—be they social or physical—in different ways (e.g., interrupting a person who is speaking might mean someone is respectfully engaged in a conversation or disrespectfully uninterested in what another person wants to say). Moreover, the consequences of the perceived stimuli differ across cultures. For example, people with similar professions in different national cultures experience different strains despite similar work stressors (Glazer & Beehr, 2005). In Glazer and Beehr's (2005) study, fewer nurses in Hungary intended to leave their jobs because of anxiety than U.S. nurses, even though the Hungarian nurses had greater work overload (leading to anxiety) than their U.S. counterparts. As this example illustrates, finding observable factors or artifacts that manifest themselves in the focal environment—such as rate of turnover—is not the end goal, but the first step in detecting sociocultural signatures. In understanding the effect of culture on this behavior, one must recognize how the behavior relates to a stimulus. In this case, Glazer and Beehr suggested that in Hungary the relationship structure between nurses is communal. Therefore, although the Hungarian nurses had greater role overload and higher anxiety than U.S. nurses, these might not provide sufficient motive for the nurses to leave their employers and put their colleagues in the precarious position of enduring even more overload. In fact, as these data came from nurses working at four hospitals in Budapest, and there were no differences on the main study variables across hospitals, it is entirely possible that moving to another hospital would yield the same outcomes.

Through sociocultural analysis, Glazer and Beehr (2005) explained the processes and underlying assumptions that led to the observed artifacts, such as identifying the communal sharing relationship structure and cultural values (harmony and conservatism; see Table 1 for definitions) associated with the detected outcome. Thus, the foundation for any CTE activity must rest on a thorough understanding of concepts that apply throughout a given culture, which in turn will serve as the cornerstone for understanding how and why observed behaviors are manifested.

## 2.1. Culture-General Concepts

Culture-general concepts central to CTE include artifacts and practices, norms, beliefs, and values.

**Artifacts and Practices.** Artifacts are aspects of culture that are immediately visible; they include tangible objects or observable practices. Practices are behaviors or patterns of social interactions, which in turn reflect an underlying set of rules and understandings. A group's practices are informed by the group's values and norms. Because of this, a practice may carry different implications across groups. For example, when a subordinate speaks to a supervisor, it is common practice in U.S. culture that the two maintain eye contact, as this implies attentiveness and sincerity (Hattori, 1987). In Japanese culture, however, a subordinate making significant eye contact with a supervisor is considered disrespectful or immodest (Hattori, 1987)—likely due to how highly Japanese society values hierarchy (Schwartz, 1999).

Considered together, artifacts and practices form “surface culture.” After detecting artifacts and practices, IPs must consider *how* they came to be, which addresses “process culture,” and *why*, which addresses “deep culture.” Norms, beliefs, and values represent both process and deep cultures.

**Norms.** Norms include not only prescribed but also implicit and informal procedural rules to guide and regulate how people may behave (Smith & Berg, 1987), and indicate what individuals “ought to do” in a given situation (Fischer et al., 2009; Hitlin & Piliavin, 2004). Norms depend on context. In a group context, social networks both punish members for deviating from norms and reward members for upholding them (Cialdini & Trost, 1998; Fisher & Ackerman, 1998). Different cultures place varying degrees of emphasis upon adherence to social norms in general and the punishment of those who violate them (see Triandis’s, 1994, “tightness-looseness” cultural dimension, defined in Table 1): some groups may allow considerable deviation from set norms, while others enforce them much more rigidly.

**Beliefs.** A belief is a generalized understanding of how two concepts relate to one another (Bar-Tal, 1990; Bem, 1970; Katz, 1960). Beliefs represent the fundamental organization of a worldview: “generalized expectancies” or “premises that people endorse and use to guide their behavior in daily living” (Bond et al., 2004, p. 552). The firmness of a belief can vary depending on the level of confidence in the belief’s truthfulness. Beliefs are also highly variable in terms of specificity (Leung et al., 2002), ranging from very particular—referring only to specific people, events, situations, or other targets—to expansive and abstract, pertaining to a wide variety of contexts and targets.

General beliefs guide behaviors across various situations; they are what Leung et al. (2002) refer to as *social axioms*. These beliefs enable people to organize their responses to the social and physical world around them. For example, people with a high internal locus of control may be more likely to underestimate hazards in risky situations (Liverant & Scodel, 1960) because they believe that they can control the situation. Beliefs such as this also serve as explanations for the kinds of values people hold and why they observe artifacts as they do. For example, a common U.S. belief, influenced by a long-term orientation (see Table 1), is that perseverance is important. This helps to explain why U.S. citizens often continue to pursue goals even in the face of difficult odds. In the context of collection and analysis, identifying and understanding others’ beliefs provides an understanding of the deeper meanings of artifacts.

**Values.** Values are abstract principles that people view as desirable, right, and good across situations (Hitlin & Piliavin, 2004; Schwartz, 1999). These principles motivate and guide individuals, helping them to make sense of social systems. Values are embedded in a group’s norms and practices (Knafo, Roccas, & Sagiv, 2011). They facilitate the choices people make in evaluating behaviors and events, and serve as motivating factors toward goal fulfillment (Schwartz, 1992, 1999, 2009). The goals served by values relate fundamentally to biological and social survival (in terms of interactions and group welfare). Although cultures may share the same goals, the behaviors exhibited as people seek to fulfill those goals might differ across cultures; because the emphasis placed on certain values differs, behaviors motivated by the values differ. Thus, at the level of culture, values can be seen as solutions to problems faced by people in a given ecological environment.

Together, norms, beliefs, and values form a culture's dominant profile, also referred to as a *cultural syndrome*. Table 1 lists example cultural factors that contribute to cultural syndromes. Similar to an iceberg, the visible portion of a culture is small compared to what lies hidden beneath. Developing capabilities to detect hidden factors that influence the visible factors is paramount to sociocultural analysis.

Table 1. *Cultural elements and their conceptual definitions*

## **CULTURAL VALUES**

### ***Hofstede (2001): Cultural Values***

#### Individualism vs. Collectivism

- Society views individuals' identities as distinct and unique to the social group (personal time, freedom, choice, and competition valued) vs. society views individuals' identities as integral and interdependent (group needs above personal needs).

#### Power Distance

- Society reinforces hierarchy as established by supervisor power over subordinates. It describes how societies cope with human inequality.

#### Masculinity vs. Femininity (aka. achievement vs. nurturing; instrumental vs. expressive)

- Society values achievement and wealth, resolution of conflict through aggression, careers for men not women, and "live to work" vs. society values placed on nurturance, environmental welfare, negotiation, women's involvement in workforce and politics, "work to live." The former deals with the development of group norms, roles, and leadership, whereas the latter deals with social networks and group decisions.

#### Uncertainty Avoidance

- Society lacks tolerance for uncertainty and reinforces individuals' adherence to rules and following prescribed norms.

#### Long-Term vs. Short-Term Orientation

- Society focuses on future through planning and saving vs. society focuses on immediate action with little consideration for implications on future.

Table 1. *continued***Schwartz (1999): Cultural Values****Autonomy**

- Society reinforces individual choices and opportunities to be unique. These societies encourage individual flexibility in thoughts, ideas, emotions, and feelings and view the person as an autonomous, bounded entity, who can legitimately change status quo and engage in stimulating activities.
  - Intellectual Autonomy
    - Society places importance on individuals' independent pursuits of desired goals and creative ideas. These societies view the person is an autonomous decision maker who engages in social exchanges based on contractual relationships. The person is encouraged to value free thoughts and ideas.
  - Affective Autonomy
    - Society places importance on independent pursuit of positive affective experiences. These societies view the person is an agent of change in the status quo and as desiring arousing/stimulating experiences, feelings, and emotions, such as excitement and desire for a varied and stimulating life.

**Egalitarianism**

- Society places importance on equality, opportunities for all, and providing help for the benefit of the welfare of others. These societies encourage people to be autonomous decision makers, who engage in social exchanges based on contractual and cooperative relationships and pursue prosocial activities for the welfare of others, such as social justice, peaceful world, freedom, honesty, and equality, but also accepting one's portion in life.

**Harmony**

- Society places importance on fitting in with the environment, avoiding change, and engaging in cooperative relations. These societies encourage individuals' unity with nature, protecting the environment, and maintaining a beautiful world.

**Conservatism**

- Society places importance on the status quo, modesty, fulfilling role expectations, and maintaining homeostasis of the group or the traditional order. In these societies the person is embedded in a group of interdependent, mutually obligated others. These societies emphasize that personal welfare depends on the welfare of the group. Maintaining homeostasis is paramount in these cultures. Homeostasis between and among people is achieved through modesty, utilitarian exchanges, forgiveness, and order.

Table 1. *continued***Hierarchy**

- Society emphasizes status differences and ascribed roles (Schwartz, 1994). It places importance on allocation, coordination, and differentiation of power, roles, and resources in pursuit of wealth. In these societies, the person is embedded in a group of interdependent, mutually obligated others, whereby individuals attempt to get ahead, even at the expense of others, while also maintaining respect for and distance from authority.

**Mastery**

- Society places importance on controlling the social environment and getting ahead through self-assertion. In these societies, the person is an agent of change and stimulating activity, often at the expense of others. The society encourages pursuit of goals, ambition to succeed, and capability of controlling one's environment, including the social environment.

***Triandis (1995; 2009): Cultural Dimensions*****Tightness vs. Looseness**

- Society adheres to clear, strict social norms that are reliably imposed in socially accepted "important situations;" deviations are punished vs. society accepts unclear norms and has greater tolerance toward deviations from norms; sanctions are not severe and are possibly informal.

**Simple vs. Complex**

- Society is characterized as being scarce in resources vs. information societies, that have many human and material resources.

**NORMS*****Fischer et al. (2009)*****Individualism vs. Collectivism**

- Society reinforces personal vs. group needs or obligations as evident in socially-oriented expressions of (vs. values of) self-perceptions, relationships with others, goal orientation (for self or group), and behaviors.

**SOCIAL AXIOMS*****Bond et al. (2005)*****Societal Cynicism**

- Society reinforces a social system of generalized hostility toward its members.

**Dynamic Externality**

- Society reinforces a combination of religiosity, belief in fate, and a focus on effort and control.

### 3. Science and Technology Gaps in Cross-Cultural Training and Education

CCTE can strengthen intelligence professionals' (IPs') abilities to detect anomalies in foreign others' interactions and behaviors, and to explain the assumptions underlying them in order to forecast their implications for security and to mitigate threat. However, we have observed that IPs perceive themselves to have limited autonomy in preparing statements that consider alternative perspectives that might explain observed artifacts.

Indeed, the most prominent gap in the IP's toolkit concerns the ability to answer "how" and "why" observed cultural factors emerged. In many cases, IPs who must answer an intelligence question cannot explain how and why the answers are manifested as they are. In some cases, they may not have the opportunity because the answer to *why* is not part of the intelligence question posed. Too often, however, IPs explain artifacts on the basis of their own cultural understanding of an adversary's behaviors, rather than being able to present *why the behavior occurs as it does* from the perspective of the adversary. For example, in a recent NBC News report, Windrem (2013) reported a cyber analyst's observation that different Chinese groups engaging in cyber-hacking activities do not cooperate with each other because they do not share information. A close examination of the explanation suggests a lack of cultural understanding: the lack of sharing is *indicative* of not cooperating, but does not explain it. CCTE would help an IP recognize that this lack of intergroup cooperation is a manifestation of the cultural values for mastery and hierarchy.

Cultural sensemaking is a collection of skills [that] enhance [sic.] and/or modify existing cultural schemas (models) of the intelligence professional. These schemas can restrict and influence an individual's decision (understanding, assessment and priority) on what data to collect, and the consequent meaning of the behavior being observed. (Green Sands & Haines, 2013, para. 2)

This kind of sensemaking does not involve applying sophisticated stereotypes (Osland, Bird, Delano, & Jacob, 2000), but instead detecting real cultural signatures in order to make sense of the situation in which an interaction occurs in a particular environment. It is also an enabler; it helps IPs make sense of the situation in which an interaction takes place, which is vital to forecasting and mitigating real-world concerns. As Flynn, Sisco, and Ellis (2013, p. 13) wrote, "the lesson of the last decade is that failing to understand the human dimension of conflict is too costly in lives, resources, and political will...to bear." Understanding sociocultural factors in context is imperative if violence is to be mitigated. According to Flynn et al. (2013), today's IPs miss the mark in detecting factors that have a major bearing on national security. They argue that IPs must develop "social radars" that provide fine-tuned explanations for observed behaviors. The term "social radar" refers to the detection of sentiments (attitudes, beliefs, and behaviors) in a focal context (Maybury, 2010). Social radar would enable IPs to detect when changes occur in the social environment (Costa & Boiney, 2012). Costa and Boiney claim that the goal of social radar is to "take a data-to-decision support perspective, allowing [IPs] to tailor and weight the fusion of indicators, draw on online sources to update model parameters, and use course of action models to provide quantitative evidence for indicator integration strategies" (p. 5).

Through this process IPs must be able to interpret detected artifacts and apply their culture knowledge to explain how and why the artifacts manifest. Thus, a major learning objective of CCTE



would be to enable IPs to develop a wide-angled cultural perspective when analyzing the actions of people who come from cultures that differ from that of the IP. They should learn to consider multiple alternative explanations for the observations. Enabling CTE objectives include:

- Become aware of one's own cultural biases and cultural lens, that is, self-awareness
- Develop skills for self-reflection in perspective taking
- Develop skills for detecting and interpreting cultural nuances by understanding deep, process, and surface culture
- Increase awareness of communication patterns among members of a culture (e.g., task vs. relationship orientation, status, and roles).

### **3.1. Self-Awareness**

One of the shortcomings that IPs must overcome is minimal awareness of their own cultural biases when interpreting others' behavior. Attribution bias—in which people explain their own experiences as a function of the environment, but others' behaviors as a function of their personality or personal attributes—might lead IPs to misattribute explanations to personality instead of situation and culture. Thus, the first step in enhancing intercultural interactions within the intelligence community consists of learning about or reflecting upon our own character and past experiences.

Self-awareness inventories enable people to explore their own thinking patterns and behavioral styles. These tools can serve as a springboard for thinking about how those patterns bias the interpretations of artifacts. They also provide guidance for trainers who need to understand the stage that trainees have reached in their development. Objectives associated with self-assessment are: (a) provide instrumented feedback to individuals regarding their self-construals, values, and level of intercultural competence, (b) introduce training concepts, (c) supply non-threatening vocabulary, (d) serve as a frame of reference, (e) teach trainees to appreciate the strengths and understand the limitations of people different from themselves, and (f) help individuals explore ways to improve their effectiveness as senders or receivers of intercultural communication. At the end of a self-awareness training module, participants should better understand themselves and have a general sense of the areas in which they must improve to enhance the quality of their intercultural interactions. They will also begin to understand the constraints placed on them when engaging in intercultural interactions.

### **3.2. Perspective-Taking**

The next step in the CTE process is learning to take the other's perspective. Perspective-taking "encompass[es] the ability to perceive events the way others do and understand how other people's cultural values and assumptions affect their behavior. Perspective taking helps minimize the various kinds of cognitive and cultural bias[es] an intelligence [professional] may encounter during analysis" (Green Sands & Haines, 2013, para. 2). To take another person's perspective, people must relinquish control over their own cultural lens and suspend their own belief and value systems "in order to experience an alternate affective or cognitive state" (Abbe, Gulick, & Herman, 2007, p. 20). In the intelligence community, various techniques can help IPs assume alternative perspectives and challenge analytic assumptions, including "analysis of competing hypotheses"

(Heuer & Pherson, 2011) and “red teaming” (Green Sands & Haines, 2013; Mateski, n.d.). The goal is not to provide sophisticated stereotypical explanations that label cultures as falling within one category of a single cultural dimension (e.g., either individualistic or collectivistic), but to untangle the complex web of cultural syndromes that together create a unique cultural explanation within a particular situation and context (Osland, Bird, DeLano, & Jacob, 2000).

### **3.3. Surface, Process, and Deep Culture**

Once IPs understand the complexities of cultural syndromes and individual profiles, they should learn how to identify artifacts or indicators that together could illuminate a cultural signature. For example, an IP might observe a paved highway that ends before it connects to another roadway. The IP must then explore what the highway symbolizes to the community and what its completion would mean to the people in the cultural setting. The IP might discover that the community views the incomplete road as a government ploy to show citizens that it is working toward fulfilling its promises, but at the same time needs the community to contribute to the completion of the road by supporting the re-election of the ruling party. Then the IP can begin to probe the layers of assumptions and underlying belief structures. Perhaps there is a generalized pattern of societal cynicism, exemplified by beliefs that people “will stop working hard after they secure a comfortable life” and “powerful people tend to exploit others” (Leung et al., p. 293). The underlying cultural values that lead to this generalized belief include hierarchy and mastery—principles that guide status and rules for dominating others. The IP must therefore peel back the surface layer of artifacts, the middle or process layer of meaning, and the deep core of assumptions to understand a culture.

### **3.4. Increasing Awareness of Communication Patterns**

When observing dyadic interpersonal communication, IPs must first have a good model of the observable elements that identifies if and how the elements are connected: who communicates with whom; what, when, and how often they communicate; and what types of information are exchanged. IPs can apply social network analysis to gain this insight. A second fundamental aspect of communication concerns the role that each individual plays in the communication network (e.g., primarily a sender or a receiver). Role theory can help to illuminate this aspect. Finally, IPs must consider the detailed characteristics of the communication that occurs, including the semantics, grammar, syntax, and other nonverbal factors that together can yield a cultural signature. Together, these components form the basis for understanding relationship structures.

## **4. State-of-the-Art**

This section describes state-of-the-art findings on perspective taking and communication patterns that inform CCTE designs.

Researchers have made numerous advances in the past decade that assist people to take on different cultural perspectives and improve understanding of relationship structures (Dien, Blok, & Glazer, 2011). These findings have yet to be incorporated in CCTE, as the protocols for perspective-taking and network analysis for identifying sociocultural signatures in relationships have not yet been tested outside of the laboratory. Below, we describe the latest findings on cultural priming as

a technique to support perspective taking, as well as network analysis, role theory, and relationship structures as tools for detecting and explaining identified artifacts. CCTE programs should incorporate findings from these research streams to the extent they are relevant to each agency's CCTE goals.

#### 4.1. Perspective-Taking

One of the enabling objectives of CCTE is to prepare IPs to consider alternative perspectives. Current research from laboratory studies offers promising options for CCTE. Researchers have demonstrated methods that cue people to view artifacts through a cultural lens (e.g., individualism or collectivism) different from their own (e.g., Gardner, Gabriel, & Lee, 1999; Han, 2010; Oyserman & Lee, 2008a; Oyserman & Sorensen, 2009). Cultural priming studies (e.g., Gardner et al., 1999; Han, 2010; Oyserman & Lee, 2008b; Oyserman, Sorensen, Reber, & Chen, 2009) have provided behavioral evidence through application of psychological and neuroscientific methodology that people from North America and East Asia can be cued to think from different cultural perspectives, as evidenced by participants' change in endorsed values (Briley & Wyer, 2001, 2002; Gardner et al., 1999; Yang & Bond, 1980). Several studies have also examined the effects of priming on judgments about specific scenarios, such as acceptance of euthanasia or affirmative action (Kimmelmeier, 2003; Kimmelmeier, Wieczorkowska, Erb, & Burnstein, 2002).

#### 4.2. Communication Patterns

**Network Analysis.** CCTE programs can employ a number of tools and techniques for *network analysis*: the process of modeling the relationships among a set of individuals, groups, or other entities based on data about them (Heuer & Pherson, 2011). Each entity is a *node* in the network; analysis identifies and quantifies the relationships, or *linkages*, between the nodes. These techniques are very useful for analysis of dyadic communications in that each data point represents a connection between two entities (e.g., observing the number of times Bill initiated a communication with George). By this measure, the strength of the link between Bill and George is a function of the total number of communications exchanged between them. It is critical, then, for IPs to be aware of the measurement unit used to determine associations (e.g., number of communications) when interpreting a network model.

One advantage of network analysis is that computational algorithms can directly quantify properties of the network as a whole (e.g., *degree of centralization*) or properties of individual entities within the network (e.g., *the centrality of Bill*). Quantities that refer to regular patterns of relationships among the entities are known as *structural variables* (Wasserman & Faust, 1994), because together they determine the shape of the network at a given time. As such, although these quantities provide IPs with the big picture, it is also imperative to distinguish between them and the quantities characterizing dyadic relationships between two entities.

Network analysis also has the advantage of allowing IPs to study the structure of the network at successive time points to understand the development of an organization (Kossinets & Watts, 2006). IPs can examine structure at a number of levels to understand interactions among different types of entities. Carley and Reminga (2004) observed that "organizations can be modeled and characterized as a set of interlocked networks connecting entities such as people, knowledge, resources, tasks, and groups" (p. 2).

With respect to understanding the culture of a given group of people, a *social network* is perhaps the primary model to use for inferring the nature of the relationship between any two individuals or groups and the function that relationship serves in the organization at large (Borgatti, Mehra, Brass, & Libianca, 2009; Heuer & Pherson, 2011). However, structured social relationships alone do not suffice to model culture (Carley & Reminga, 2004). The processes by which resources and information are managed (i.e., distributed and exchanged) among people living in a region, as well as the ways in which people interact with objects (e.g., tools, artifacts, icons) are distinguishing characteristics of culture as well. By layering network diagrams of these and other such factors upon social networks, richer pictures of the culture emerge, enabling IPs to study the effects of interactions among these different modalities on culture.

For example, IPs can augment their understanding of the relationship between Bill and George if their closeness in the network reflects not just the number of communications they exchange, but also the amount of time they are physically co-present with each other and the number of times they exchange money or goods. If Bill and George are known to communicate and be co-present frequently, but have few exchanges of money or goods, then it is not likely that the two men are business associates. One challenge for CCTE, then, is to improve IPs' abilities to quickly interpret the abstract network models in terms of the real-world sociocultural signatures associated with the modeled data.

**Role Theory.** One way for IPs to interpret sociocultural signatures associated with modeled data is to understand the role played by each entity in the social structure. Role theory states that within any given context, each person has a role that is influenced by expectations (from others) or the person's own interpretation of expectations about socially acceptable behaviors (Beehr & Glazer, 2005). In a role set analysis, members of an individual's role set include the focal person, who is typically the role receiver, and multiple role senders. *Role senders* (i.e., people who have a stake in the focal person's role) communicate expectations for appropriate behaviors to the *role receiver*. Examples of role senders include supervisors, peers, subordinates, family, and others who interact with the role receiver. The role receiver interprets role senders' communications (or lack of communications) and reacts to the perceived expectation.

As an example, members of a supervisor's role set include his/her own supervisor, subordinates, peers, family members, and fellow members of professional associations. Some subordinates might transmit the expectation of explicit instruction; in response, the supervisor provides them with detailed instructions. Other subordinates expect full autonomy, and the same supervisor responds by giving them only high-level directives without detailed instructions. If the relationship between sender and receiver is known, it is easier to correctly interpret messages between them on the basis of that relationship.

**Relationship Structures.** Once IPs have identified role senders and receivers, they must examine the structure of the relationship. According to Fiske (1992), dyadic relationships can be characterized as communal sharing, market pricing, equality matching, and/or authority ranking. Communal sharing refers to treating individuals within one's in-group as equivalent to oneself due to some shared similarity or set of similarities. Individuals in a community are all afforded the same rights, regardless of their contributions to the group. Authority ranking is defined by viewing

relationships on the basis of position or status in a hierarchy. Equality matching refers to maintaining the balance of favors and payments in a relationship and either eliminating or keeping track of any imbalances that arise. Market pricing refers to a utility and equity-based relationship that is determined through a subjective cost-benefit analysis of proportional contributions to the relationship.

These core relational models (RMs) are considered universal, but the ways in which they are expressed in different situations differ across cultures (Fiske, 1992). Moreover, an RM cues a variety of detailed prescriptions, propositions, precepts, and principles that might help explain individuals' thinking (Fiske, 2004). A thorough comprehension of how a given culture views relationships can help an IP better understand the motivations of role players and the rationale behind the dyadic interactions.

**Summary.** CCTE designs can incorporate each of the above approaches to understanding social systems. Indeed, the USG already uses some of the techniques reviewed, such as perspective taking and network analysis, to improve analytic tradecraft. However, increasing use of these techniques does not, by itself, lead to increasing cultural awareness; it simply enables identification of sociocultural signatures. CCTE should help motivate IPs to apply these techniques toward reaching cultural, rather than merely situational, interpretations of events or sociocultural signatures. We therefore propose that the USG further improve IP performance by using CCTE to help IPs apply the techniques to understanding particular cultures.

### **4.3. Cross-Cultural Training and Education**

People in the United States tend to view training and education as the 'culturally appropriate' processes for developing work-related competencies, including competencies for international assignments (Fowler, 1994). Although cultural immersion programs, where a person embeds in a society for an extended period of time, can also be helpful, such programs tend to send people to one country only and can be quite costly. In this section, we address the state-of-the-art in CCTE, including several different types and modes of training that have proven useful, such as critical incidents, role-plays, and scenario-based training.

Since the 1990s, much research has been devoted to demonstrating the benefits of CCTE, including cost reduction, improved performance, and more effective decision making (Brugman, Reinhart, Feinberg, Glazer, Falk, & Castle, 2010; Brugman, Reinhart, Feinberg, Falk, & Castle, 2012). CCTE teaches people to engage in deeper analysis of surface observations. Knowledge and skills acquired from CCTE are important for creating cultural fluency and better understanding of others. These competencies give people tools to attend to the big picture, encourage cognitive flexibility, and reinforce a proclivity for asking searching questions.

**Culture-Specific vs. Culture-General.** Sometimes CCTE focuses on a specific culture to prepare people to work in or on a culture of interest. Although in the short term such training has benefits, it does not produce a great deal of transferrable knowledge and or skills that would apply to any culture of interest. Therefore, the USG should provide culture-general training and education that would give students the declarative and procedural knowledge, skills, abilities, and attitudes they need to understand and work in or on different cultures of interest. For example, someone who works in Russia and has received culture-specific training on Russia might work successful missions

there, but might fail if asked to work on Uganda without culture-specific preparation. With culture-general training and education, the learner builds cross-cultural competence and can more easily fulfill missions that call for shifts in cultural perspectives. Still, both are needed if we are to build confidence in our deep cultural understanding.

**Training vs. Education.** Another important consideration is that training has different goals than education. Culture-specific or general training might prepare people to identify artifacts and determine what is in the environment, whereas education provides tools for deeper explanation of how and why the observed artifacts were created. In this section we consider different modes and media that the USG could use in designing training or education.

**Learning Modes.** *Didactic learning* modes reinforce cognitive development through passive receipt of information, such as listening to lectures, or active seeking of information that can be found in library resources. Other methods for imparting information include briefings, reading materials, and cultural assimilators (in which learners are presented with decision-making scenarios for which they are then asked to choose a behavioral response option before receiving feedback on their choice). By contrast, *experiential learning* is an active mode of learning, where the student participates in the learning process by practicing behaviors and engaging in course-relevant content. It enables students to develop the capability of learning on their own. Example activities include field trips, role-plays, and simulations. See Figure 1 for additional modes of CCTE.

		Culture-Specific	Culture-General
Mode of Learning	Didactic	Lectures, briefings, films, books, cultural assimilators, critical incidents, case studies, language courses	Lectures, films, books, critical incidents, case studies, self-awareness exercises, videos
	Experiential	Role plays, case studies, assessment centers, simulations, field trips/studies, visual imagery, scenario-based training	International potluck, interviews of international sojourners, simulations, analyzing international films, multinational virtual or joint learning programs

Figure 1. Culture training and education.

Both didactic and experiential learning modes can reinforce students' knowledge and detection skills with regard to each of the four enabling objectives (self-awareness; perspective taking; surface, process, and deep culture; and communication patterns). Experiential activities often

impart methods for *knowing how*, whereas students learn the methods for *understanding why* through cognitive learning activities (e.g., lectures and readings).

Furthermore, learning content for each of these modes can range from highly specific to culture general. An example of a culture-specific didactic learning mode might be reading about the culture of the Druze, whereas a culture-general didactic learning mode might be reading about the role of religion in organizing societies.

Either didactic or experiential cross-cultural learning programs are better than no training at all, and are better than in-country training without guided learning (Goldstein & Smith, 1999; Korhonen, 2002; Sizoo, Serrie, & Shapero, 2007; Soeters & Recht, 2001), but neither is necessarily better than the other (Hammer & Martin, 1992; Harrison, 1992). Augmenting experiential CCTE with didactic CCTE aids learning (Harrison, 1992; McDaniel, McDaniel, & McDaniel, 1988).

**Media for Training and Education.** Program designers must also consider the media for delivering CCTE. The three basic media for delivering training and education are *face-to-face (F2F) instruction*, *web-based distance learning (DL)*, and *blended or hybrid learning*. The results of a controlled experiment by Gannon and Poon (1997) showed little difference in knowledge gain between hybrid (simulation game), F2F (lecture, discussion, group exercise), and DL (video-based training). However, MBA students who took part in the hybrid approach felt more satisfied and considered the experience more useful and relevant than students who took part in the other learning experiences. Note that each of these media supports both didactic and experiential learning modes. Below, we describe three commonly used CCTE techniques that support students' achievement of the enabling objectives. Instructors can employ these techniques with any teaching media.

**Critical Incidents.** *Critical incidents* is a cognitive training tool in which learners must react to situations that mimic real-life critical behaviors and decision points (Fowler & Mumford, 1995). Through this tool, learners respond to descriptive situations in which an incident requiring cross-cultural adaptation occurred. When reviewing a critical incident, learners use their newfound understanding of culture and self-awareness to put themselves in the place of the incident's focal character. Through self-reflection and discourse, trainees discover their own implicit biases as they are guided to consider alternative cultural perspectives as a way of better understanding or appreciating the focal person's experience. A facilitator knowledgeable in the culture of interest encourages the trainees to discuss what they learned about themselves and their explanations of others' behaviors and attitudes, how one personally deals with a situation in comparison to others in the training session, and what cross-cultural skills became more visibly needed for the trainee (Dant, 1995). This activity provides an immediate, instructor-facilitated opportunity to utilize new knowledge and enables instructors to determine areas to emphasize further in training/education programs.

**Role-Plays.** In *role-plays*, participants either take on a predetermined characteristic or observe people who are playing roles. Typically, the goal for engaging in role-play is to develop or improve interpersonal interactions in an intercultural setting; the role-plays assist in skill building (McCaffery, 1995). Although analysts rarely engage in interpersonal interactions in foreign cultures, role-play can nonetheless help IPs develop better self-awareness and perspective-taking skills,

improve their abilities to discovering deep and process cultural factors in observed behaviors, and help them to distinguish features of a particular dyadic communication interaction.

**Scenario-Based Training.** *Scenario-Based Training* (SBT) helps learners develop the skills needed for complex decision-making, problem solving, and adaptability. Although reading about the results from others' active engagement in an SBT can be useful for passive learning, active participation is much more educational. A well-crafted SBT has a curriculum developed around a particular scenario and provides trainees with information, demonstrations, and practice in real-world situations. Facilitators insert events into the scenario that form the basis for the learning objectives. The events, therefore, help students develop the skills to think of alternative ways of reaching decisions.

This technique differs from classroom lectures in that it uses real-world scenarios, provides opportunities for practice, and offers immediate feedback on process and results. Whereas listening to lectures is passive (see Moats, Chermack, & Dooley, 2008), participating in SBT is active and therefore has greater likelihood for transfer of learning to on-the-job performance.

Furthermore, Joung, Hesketh, and Neal (2006) found that training firefighters with scenarios depicting management errors and severe consequences (i.e., error-story training) yields better performance outcomes on simulated scenarios than training that walks trainees through incidents managed without errors. This suggests that people can learn from others' mistakes better than they can learn from others' successes. As such, SBT can prove more cost effective, safe, and successful at developing appropriate competencies, because it provides efficient methods to help personnel acquire and transfer complex knowledge, behaviors, and attitudes.

#### **4.4. Summary**

In this section, we outlined some findings from state-of-the-art research on culture, as well as modes and media for CCTE. An important point to make here is that we do not advocate any one particular mode or teaching medium for CCTE, because training must be tailored to the audience and need. We do, however, endorse cross-cultural (culture-general) training as a foundation for all DoD and USG personnel in order to strengthen cognitive flexibility, openness, and ability to engage in sociocultural analysis.

### **5. Transitioning Cross-Cultural Training and Education into Operations**

CCTE can contribute to developing *capabilities to discover, distinguish, and locate operationally relevant sociocultural signatures* derived from sociocultural behavior data. Although not everyone has the opportunity to gain experience through international contacts, CCTE can help IPs acquire knowledge and skills in detecting cultural nuances. Most CCTE programs focus on preparing sojourners to interact with people in different cultures. However, in this type of CCTE, the goal is not necessarily to prepare students for physical interactions, but to enable them to detect cultural underpinnings in extracted excerpts of communications. The activities in which trainees engage during CCTE programs can also be applied to this type of task.

We suggest that designers of CCTE programs roll out the curriculum in stages, corresponding to the aspects discussed earlier. First, IPs would receive cultural awareness *training* in which they learn



about their own culture and how others view people from their culture. Once people become aware of their own cultural orientations, they should become better able to detect differences in others. Second, IPs would receive training in perspective taking that emphasizes understanding behaviors from the viewpoint of culturally different others. Instead of asserting only a person-focused explanation, IPs would evaluate the situation in which the behavior occurred and consider the degree to which that situation might account for the behavior. Moreover, IPs would learn not to focus too much on the most prominent small elements, or on only one area for discovery, because doing so might lead them to ignore opportunities for detecting cultural nuances. Third, IPs should practice their skills in evaluating surface, process, and deep culture, possibly via critical incidents and SBT techniques. Finally, IPs need to develop their skills at detecting relevant dyadic relationships and explaining how these relationships influence the observed artifacts and why those relationships evolved as they have. To that end, IPs would benefit from cognitive skills training that would improve general detection skills (e.g., attention, working memory, critical and divergent thinking).

### **5.1. Recommendations for Transitioning CTE Activities to Operations**

**Scenario-Based Training.** SBT appears to be one of the most cost-effective ways of implementing CTE, but multiple factors influence the success of a particular SBT. These factors include the expertise of the trainer, the organization's reward systems, the climate for error management, the learning environment, task requirements, the student's ability to transfer learning to real life, individual motivation, formative and summative evaluation strategies, content of the training program (including method, strategy, and tools), student's real-work life experience (i.e., accumulated time on the job), and the student's intellect (Salas, Priest, Wilson, & Burke, 2006).

Developing an SBT is time consuming and costly upfront, but in the long run the benefits outweigh the costs, as the program can be used with all trainees. The upfront costs cover selecting and populating the relevant scenarios (e.g., pulling archival intelligence that might be relevant to the Boston Marathon bombers) from which designers can identify the competencies necessary for students to perform effectively on the job, as well as any deficiencies in performance that require correction. If the scenario targets the right deficiencies, designing and implementing SBTs that focus on the upgraded competencies becomes easier, as does evaluating the training's success. Furthermore, once core competencies have been established, trainers can generate corpora of scenarios and assessment instruments for each, and then store, modify, update, and reuse them. This would promote comparability of performance over time across agencies and training sessions.

**Social Relational Mapping.** We also suggest a new approach to training that draws from the theory of communication patterns (social network analysis, role theory, and relational models theory). The social relational mapping method borrows from the methodology of social network analysis, in which nodes and linkages between nodes are represented, as well as Relational Models Theory, which states that any two individuals or entities interact in ways that support patterned social behaviors. Learners in this type of training would become skilled at asking and answering deeper questions about the relationship dynamics (structural and functional) underlying the situations under consideration. For example, is the relationship hierarchical, egalitarian, self-serving, or other-serving? Do people see others as they see themselves (communal sharing)? Are there clear

demarcations between superiors and subordinates (authority ranking)? Are people in the social network studied of equal status to the focal person (equality matching) or are they viewed as tools for getting what the focal person needs (market pricing)?

As an example, IPs might detect that women in Pakistan have the legal right to vote, but in practice cannot go out to vote. This might appear to be a clear instance of equality matching vs. authority ranking, but the explanation for this violation of equality matching and adherence to authority ranking might lie in the value of honor. Therefore, we recommend documenting the described relationships between nodes (or role players) in order to strengthen the construction of the sociocultural context in which any given focal person is embedded. In so doing, IPs will become better able to (1) take on the perspective of the focal person, (2) explain why links with other nodes are not as salient or strong, and (3) consider ways to protect and defend within the constructed sociocultural context.

## **5.2. CCTE Learning Sequence**

Drawing upon practices that trainers use with sojourners, such as training pre-departure and post-arrival, we also recommend that operational organizations use training as an introduction, and also provide continuous learning and reinforcement to sustain IPs' abilities to adopt different cultural perspectives. Ideally, this would occur by default in immersion experiences, but our recommendations apply in the cases where those opportunities are not available or cost effective.

As with pre-departure training, a goal is to establish learners' expectations about working with cultural materials. Such training would reduce students' anxieties, increase their confidence that they can detect relevant cultural information, and reassure them that all information observed is culture laden. Similar to post-arrival training, on-the-job reinforcement of culture studies would address real-time issues as experienced in the actual work setting. This is all the more important as IPs can become so immersed in their subject matter that they are sometimes unable to distinguish between their own cultural biases and those of the culture they are analyzing.

For this reason, we recommend a four-pronged approach to learning: listening, practicing, reviewing, and engaging. Listening refers to all the upfront learning, as well as ongoing learning that results from interacting with fellow IPs. Practicing also occurs during training, but in addition can occur through red teaming with others who share similar cultural cases. Reviewing includes reading layperson's materials (e.g., tour books, books about a society that can be found in the library or bookstore, and news journal articles), asking questions of cultural experts, and reminding oneself of one's own cultural biases. Finally, engaging refers to the habitual practice of preparing commentary and collateral evidence on all analytic tasks. It addresses the need to obtain critical feedback from other experts on a focal cultural group, as well as from people who are critical evaluators of detecting cultural nuances. As in software engineering, a checks and balances (or Quality Assurance) process must confirm that analytic products are appropriately framed in a sociocultural context.

Finally, it must be noted that one of the challenges in transitioning CCTE into operations is ensuring that those who conduct it are themselves experts. Trainers must have deep intercultural experience, a strong foundation in social psychological processes, and the ability to see big picture

influences. Moreover, IPs should work with people who are experienced with a cultural target to obtain guided critical feedback in their sociocultural analysis.

### **5.3. Evaluating Operational Utility**

Empirical inquiry has just begun to explore the extent to which cross-cultural training has proven useful for IPs or military personnel deployed abroad. Criteria for performance measurement are still in development, and may not be available for a few more years. Even so, organizations have ways to determine the utility of CCTE programs. One indicator of CCTE success would be a noticeable increase in the depth or richness with which IPs interpret a situation. This measure would require a comparison of baseline analytic performance to performance after CCTE. Instructors might evaluate the utility of CCTE programs across multidisciplinary and multi-agency teams of IPs, including technology experts and social scientists.

Furthermore, instructors can develop evaluation forms for subject matter experts to use in evaluating IPs' reports prior to training and then again after have had a chance to revise their reports post-training. Evaluators would look for content changes that relate to cultural understanding, such as those found in collateral or commentary, indicative of more expert understanding of the culture. We would expect that IPs who receive cross-cultural training would provide more culturally informed and relevant explanations in their products than IPs who had not received the training.

Another measure of CCTE effectiveness is whether analytic reports more accurately characterize, explain, or forecast future events in a given situation. This is a difficult measure to derive, however, given that no one can be certain that sociocultural analysis was accurate until an event occurs and the analysis is found to have flaws. Airlines have learned to prevent accidents and incidents by studying data available from FAA logs, and therefore now take preparatory steps to enable flight crews to communicate with each other and tower control through training and education (McIntyre, 2000). Similarly, scholars of national culture must study factors omitted from earlier reports that, viewed through a sharp cultural lens, would have indicated cultural signatures alerting to imminent danger. Through this type of evaluation, CCTE designers can ensure inclusion of relevant cultural factors that would become required features of improved CCTE for IPs.

Ultimately, the return on investing in CCTE will take the form of increased security from foreign threats and smoother interactions with foreign national diplomats, but transitioning CCTE into operations requires policy makers to reinforce policy directives, such as Intelligence Community Directive 2.0.3, Analytic Standards. This directive encourages inclusion of collateral and commentary in reports.

We also strongly recommend that members of the analytic community work with people outside their own groups or agencies. The sharing of expertise between people from different groups and agencies can lead to insights and perspectives across disciplines—a process very much akin to detecting cultural signatures in the world at large.

## 6. Conclusion

In this chapter, we argued that the ability to detect those aspects of a situation central to defining the sociocultural context depends on the observer's deep knowledge of the cultures involved and what the artifacts mean in each of them. We proposed that an important step toward achieving this knowledge is for IPs to obtain CCTE that, over time, will help them become more sensitive to the relevant sociocultural signatures.

As we have shown, the key questions that must be answered in order to detect cultural patterns are "how?" and "why?"—not just "what?" CCTE enables IPs to develop awareness of the ways in which their own culture influences their thinking, become more adept at seeing events or artifacts from others' point of view, and more clearly understanding the multiple layers comprising every culture. We have also pointed out how network analysis and social radar can be useful tools for mapping potential factors that contribute to a social situation, and that training in social relational mapping can equip IPs to explain the observations made through these tools. Further, we recommended considering SBT as an especially cost-effective approach to improving people's sensitivity to culture cues. Given the findings of CCTE researchers, we appear to have good grounds for expecting that increased cross-cultural experience will help IPs provide contextual background that policy makers could use to forecast and mitigate potential threats and to facilitate peaceful operations.

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