

## CHAPTER 8

# Using Cultural Models of Decision Making to Develop and Assess Cultural Sensemaking Competence

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### ABSTRACT

In this chapter we outline a theoretical framework for cultural sensemaking that connects high level metacognitive skills to region-specific knowledge. We also describe a novel instructional analysis and design approach, specifically developed to identify learning objectives and content for cultural sensemaking training. This approach leverages cultural models of decision making in the development and assessment of cultural competence. The cultural sensemaking framework describes a possible avenue through which culture-specific learning can contribute to culture-general competence.

**Keywords:** Culture, Sensemaking, Competence, Training, Assessment

## INTRODUCTION

*“(The Afghan National Police officer) came in and shook everyone’s hand. He came in and it was a quick walk around the room. And then he sat on the couch and blew up. Afghans will shake your hand and walk out the door and then have you killed. A handshake means nothing to them. ... It makes no sense.”*

(Marine Corps SGT, Special Operations Team Leader)

Understanding and having the ability to influence foreign decision makers within the cultural terrain is increasingly recognized as a core warfighter competency. Providing warfighters with region-specific knowledge needed for current missions, as well as the cross-cultural competence required for future missions presents a theoretical as well as practical challenge for culture programs across the services. Current efforts towards defining and scoping culture-general capabilities, or Cross-Cultural Competence (3C) include high level cognitive skills such as sensemaking and perspective taking (Abbe, Gulick, and Herman, 2008)—however, the field has yet to effectively characterize the cognitive processes that these skills entail.

In this paper we will present a theoretical framework that specifies the role high level cognitive and metacognitive processes, such as cultural sensemaking and perspective taking, play in 3C and connect these processes to specific content knowledge. We will also describe the role of cultural models of decision making within the cultural sensemaking process and explain how cultural models can be used within an instructional analysis and design process to assess competence and develop learning objectives. For purposes of illustration, we will describe a specific study where we employed cultural models of Afghan decision making to assess competence in a target learner population and to derive learning objectives.

## CULTURAL SENSEMAKING

Sensemaking in general refers to the processes involved in understanding events and behaviors in a broad sense. *Cultural sensemaking* refers to the processes by which people make sense of and explain culturally different behaviors (Osland and Bird, 2000). When people try to make sense of events, they begin with some perspective, viewpoint, or framework (Klein, Phillips, Rall, and Peluso, 2004). Within the context of culturally different behaviors, this initial perspective is often grounded in expectations stemming from the normal situational behavior learned within one’s own culture (Archer, 1986).

In the social and personality literature, perspective taking is described as the capacity to think about the world from other viewpoints that *“allows an individual to anticipate the behavior and reactions of others”* (Davis, 1983, p. 115). We propose that perspective taking is a component of cultural sensemaking in that it is an approach people can use to generate explanations for cultural behavior. We further propose that in order to use perspective taking to generate culturally appropriate explanations for a behavior, one needs insight into what people from the

other culture think and care about, what motivates them. In the following section we describe a model that outlines the components of cultural sensemaking competence.

## **CULTURAL SENSEMAKING COMPETENCE**

To talk about cultural sensemaking as a competency, we need to define its requisite knowledge, skill, and attitude components. Based on our previous research into the cognition that drives the decision making of US military servicemen within intercultural situations, we have developed a model of cultural sensemaking competence. This model, described below, defines the cognitive content (knowledge) as well as metacognitive processes (skills) involved in cultural sensemaking and relates these to attitudinal outcomes.

### **Cognition: Culture-Specific Content Knowledge**

In our model, the knowledge component of cultural sensemaking competence is the knowledge that allows you to successfully explain and predict the behavior of people with different cultural backgrounds within specific situations. In order to effectively take the perspective of another within an intercultural situation, a person requires insight into what the other person thinks and cares about, what motivates them. That is, a *mental model of the factors that influence members of another culture's decision making within specific contexts* can assist a person in making sense of and anticipating their behaviors. Particularly, this knowledge should enable the person to make sense of cultural behaviors that appear paradoxical. Cultural scholars have long argued that culture is both paradoxical and context-specific (Kluckhohn and Strodtbeck, 1961), which means that an etic approach utilizing comparative bipolar cultural value dimensions is not sufficient to understand cultural complexity (Osland and Bird, 2000). Importantly, we are proposing an *emic* approach to defining the knowledge that is necessary for cultural competence.

### **Metacognition: Culture-General Question Asking Skills**

The first sensemaking challenge within an intercultural situation is recognizing when the frames one would normally use for sensemaking no longer apply (Osland and Bird, forthcoming). Next, one must seek the information one needs in order to be able to develop culture-appropriate understanding. We therefore propose that the most important skill-component of cultural sensemaking is “skill in the process of knowledge-getting” (Bruner, 1966). That is, the ability to obtain and/or construct the knowledge required to successfully ‘make sense of’ and subsequently explain and predict behavior. Further, this overall skill is embedded within a framework of related metacognitive skills which allow the individual to obtain, apply, test, and refine their cultural knowledge. These metacognitive skills are culture-general in the sense they support attainment of culture-specific knowledge within any culture. Figure 1 illustrates the metacognitive skill components of cultural sensemaking.

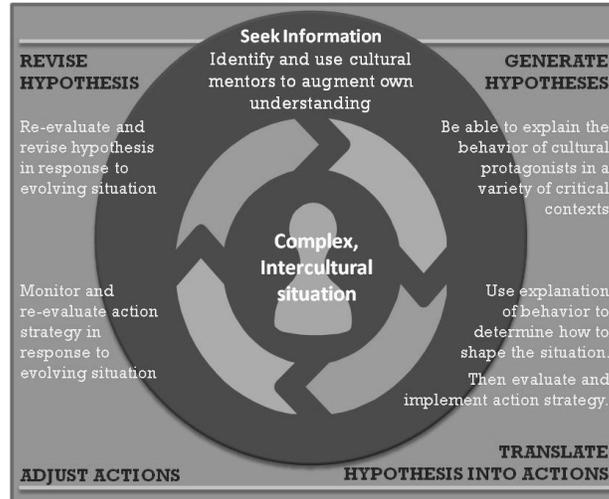


FIGURE 1. Metacognitive skill components of cultural sensemaking.

So, how does one ‘get knowledge’? Educational research has shown that students who ask more questions during classroom sessions tend to acquire learning materials better (Ciardiello, 1998). Further, the students who ultimately end up developing the highest levels of competence (i.e. comprehend the learning materials more deeply) are students who tend to ask a certain kind of questions. These are questions that tap explanatory reasoning (Graesser, Baggett, and Williams, 1996). Similarly, cultural research has shown that cultural sensemaking experts ask explanation-based questions and, more specifically, they ask questions that can explicitly challenge the fundamental assumptions underlying their conception of a culture (Sieck, Smith, and Rasmussen, 2008). Question-asking is an indicator that a student is self-regulating their learning by (metacognitively) reasoning across their knowledge base, identifying knowledge deficits and asking questions to repair them. However, educational research has also shown that students often need training to improve these skills (Rosenshine, Meister, and Chapman, 1996). In the following we will describe an instructional analysis approach for building training that targets both the knowledge and metacognitive skill components of cultural sensemaking.

## INSTRUCTIONAL ANALYSIS

Cultural learning presents a unique challenge to traditional approaches for instructional analysis and design. One reason is that the ‘meaning’ of cross-cultural situations is subjective—it depends on the person’s cultural perspective. This includes the outcomes of actions and interventions. For instance, because a person believes he has successfully resolved an intercultural conflict does not mean that the person from a different culture on the other side of the conflict holds the same

opinion. Cognitive Task Analysis methods, for example, are useful for identifying the knowledge and cognitive skills needed for complex tasks, but they need to be embedded within an empirical framework that allows examination of cross-cultural situations from different cultural perspectives. We have developed a suite of field research and analysis methods that meets this requirement, and can be employed to identify knowledge and skill requirements for cultural sensemaking training.

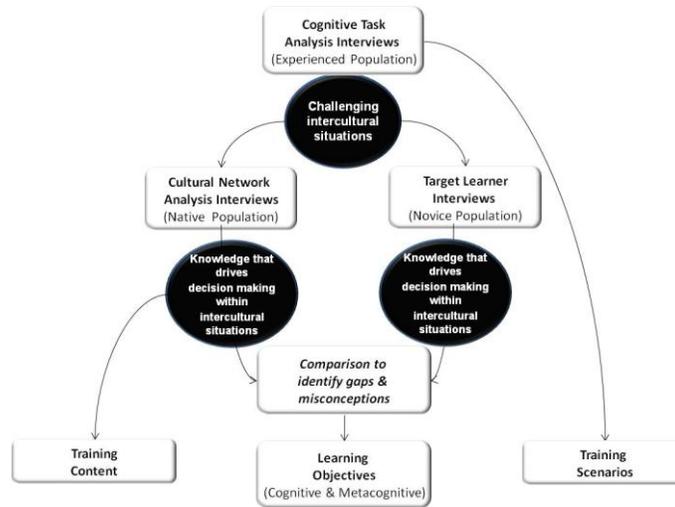


FIGURE 2. Instructional analysis methodology for cultural sensemaking.

This approach starts with Cognitive Task Analysis methods to identify the culturally and cognitively challenging intercultural interactions to include in a scenario-based training program (see figure 2). It then uses the *Cultural Network Analysis (CNA)* mental models based approach to cognitive modeling to characterize native decision making within these challenging interactions. Further, specific knowledge learning objectives result from a comparison between target learner models and native models that identifies gaps and misconceptions.

## COGNITIVE TASK ANALYSIS

Cognitive Task Analysis is a set of methods for identifying and documenting the cognitive processes, cognitive challenges, and cognitive requirements for a task or work domain. We employed Critical Decision Method (CDM) interview techniques, adapted to focus on the cognitive nature of the challenges experienced by warfighters within intercultural interactions. We conducted 21 individual, face-to-face CTA interviews with Marines and soldiers who had returned from deployments in Afghanistan less than one month prior. The interviews were conducted by a pair of interviewers at Camp LeJeune, NC, and Fort Riley, KS. We asked the interviewees to “tell us about a time, in Afghanistan, when you interacted with the local populace (civilians, tribal leaders, local officials, etc), and found the

*interaction challenging or puzzling.*” A full description of the methodology and results can be found in Rasmussen, Grome, Crandall, and Sieck (2009).

The outcomes of a thematic analysis of the data included a typology of situations in which U.S. warfighters are experiencing sensemaking challenges as well as a typology of cultural sensemaking challenges. We selected six incidents that represented both typologies—a range of types of interactions and a significant proportion of the identified sensemaking challenges. An example incident described a situation in which a Mullah is working with Americans to provide humanitarian assistance supplies to villages near his own. Towards the end of the operation, the American team leader discovers that the Mullah has set aside one truck load of the supplies. At first, the Mullah denies the existence of left-over supplies; when pressured, however, he declares that they were set aside to be passed out to villages on the return trip. The next section examines the knowledge that drives decision making in natives within this type of situation.

### **CULTURAL NETWORK ANALYSIS**

We employed the *Cultural Network Analysis* process for creating cultural models (Sieck, Rasmussen, and Smart, 2010) to represent native (in this case, the Afghan protagonist) thinking and decision making in the context of a specific scenario. We used the six challenging incidents identified in the CTA stage as the basis for developing cultural models of the decision making of native Afghans within intercultural interactions with Americans. We conducted 14 scenario-based interviews with Afghan expatriates. The sample included 12 men and 2 women, with an average age of 27 years, who had lived in the United States for an average of 3.3 years. Within these interviews we probed their understanding of the situation, their understanding of the beliefs and values that would likely be driving the behavior of the Afghan characters within the scenarios, and their expectations about how the Afghans in the scenario might respond to various actions the American might take in the situation. The interviews were conducted individually and lasted 2 hours each. Each participant responded to two different scenarios. The interviews were recorded and transcribed.

In order to develop Afghan cultural models of the situations described in the scenarios, the following procedure was conducted separately for each of the scenarios. First, two independent coders read through all of the transcripts and identified excerpts from the interviews that contained causal beliefs. Next, the two analysts coded each excerpt by identifying for each causal belief the antecedent, the consequence, and the direction of the relationship between them (i.e. a certain antecedent increases or decreases the likelihood of a certain consequence). The inter-rater reliability across scenarios was .81. For the Mullah scenario, examples of common causal beliefs from the native interviews include:

1. Reciprocity: Mullah aims to help those who will help him
2. No theft: Mullah does not consider himself to be stealing
3. Status/Power: Mullah aims to increase his status among his own people
4. Privacy: Talk to Mullah in private; he loses face if confronted in public
5. No lie: Mullah does not think he’s lying; ok to “tell stories” to save face

Importantly, the natives did not attribute to the Mullah the desire to increase his own wealth. Alternatively, they believed that the Mullah aimed to use the supplies to increase his status among his own people. In the next section we will present the results of the target learner analysis, in which we evaluate the novice American perspective on these six challenging intercultural situations.

### **TARGET LEARNER ANALYSIS**

In the learner analysis, content knowledge learning objectives are derived from a comparison between a native cultural model of the concepts, beliefs, and values that drive the decision making of natives within specific contexts and the target learners' understanding of their decision making. For the purposes of deriving learning objectives for training, the cultural model provides the target concepts for training Americans to understand Afghan behavior—in other words, *the cultural model represents the hypothesized learning objectives*.

We conducted scenario-based target learner interviews with 20 newly recruited Marine Corps officers enrolled at the Marine Basic School in Quantico, Virginia. These officers of course had no prior deployments and overall had very little experience traveling overseas. We presented them with the same six scenarios we used in the native interviews. We probed their understanding of the situation, the cultural characters within the scenarios and their informational requirements (i.e. what would they like to know prior to making a decision), and their strategies for acting/interacting in this situation.

The interviews were taped, transcribed and then segmented into simple idea units. The idea units were coded using a coding scheme that consisted of five broad categories corresponding to the key cognitive and metacognitive aspects of cultural sensemaking probed in the interview guide: Understanding, Actions, Questions, Attitudes and an Other category. We then derived learning objectives by comparing the Understanding and Action ideas to the native cultural model. We evaluated the Questions against the expert sensemaking questions, and we coded the Attitudes idea units in terms of valence (positive/negative) and target (Afghan protagonist or Afghans as a group). In the following sections we will discuss the outcomes of this analysis and the resulting learning objectives (a complete description can be found in Rasmussen, Grome, Sieck, and Simpkins, 2009).

### **Cognitive Learning Objectives**

The high-level knowledge oriented learning objectives for cultural sensemaking includes the ability to *identify likely belief-value drivers in critical situations for the target culture*. We used the previously described coding scheme to perform a quantitative assessment of the accuracy of the target learners' understanding of the cultural model and identify critical belief-value relationships that they either failed to perceive (gaps) or had misunderstood (misconceptions).

The analysis revealed a number of gaps and misconceptions listed below. For example, the Americans failed to apply the concepts of reciprocity, status/power, and privacy which constitute a gap. For example, none of the target learners

considered the possibility that the Mullah would give the supplies to his own people in order to maintain his status to possibly increase his power. In terms of misconceptions, while a few target learners acknowledged that the Mullah may not consider himself to be ‘stealing’ or ‘lying’, these were common interpretations.

1. Reciprocity: *Missing concept* (gap)
2. Theft: Mullah is stealing (misconception)
3. Status/Power: *Missing concept* (gap)
4. Privacy: Discuss with Mullah in public (gap/misconception)
5. Lie: Mullah is lying; change in story means covering up lie (misconception)

Overall, an analysis of the target learners’ errors indicated gaps between their conceptions and that of the Afghan natives related to facework, theft, lying, reciprocity, status and power, privacy, boldness, revenge, US status/reciprocity, and attention. Therefore, these are the knowledge-specific learning objectives for the Mullah scenario for the target learners. The next section addresses the metacognitive learning objectives that prepare trainees for any situation that requires cultural sensemaking.

### **Metacognitive Learning Objectives**

The cognitive learning objectives are culture-specific, but effective intercultural training also includes culture-general learning or metacognitive objectives that build sensemaking competence. In the following we will focus on the metacognitive skills related to information seeking for illustrational purposes. For a full description of learning objectives see Rasmussen et al. (2009<sup>b</sup>). We derived learning objectives targeting the improvement of information seeking strategies by comparing the questions that the target learners asked to better understand the situation to the questions that expert cultural sensemakers tend to ask in order to create deep understanding. Generally, such questions take the form of “why,” “why not,” “how,” “what if,” or “what if not” (Graesser et al., 2003). Expert sensemaking questions provide deeper insight into the belief-value relationships driving behavior and as such support perspective taking (see Sieck, et al., 2008). For example, for the Mullah scenario, expert sensemakers could ask “*why did the Mullah take the goods?*” and “*how did the Mullah decide?*”

The analysis revealed that very few of the target learners’ queries addressed the kind of information that expert cultural sensemakers would pose within a surprising intercultural situation. Instead their questions tended to focus on aspects of the situation that would allow them to determine the severity of the transgression, e.g. “*how much stuff did the Afghans set aside?*” or “*What kind of supplies were they?*” Many of the target learner’s questions also directly illustrated their misdirected application of Western or U.S. belief-value systems to interpret the behavior of the Afghans. For example “*Why is the Mullah lying?*” and “*Why do they feel the need to short-change their fellow citizens and keep it for themselves?*”

This particular target learner population did not ask the questions that could provide insight into the native model. This raises the question of whether they are a likely target population for complex cognitive skills training. Interestingly, this

population was rarely confident in the explanations they generated for the Afghans' behaviors. They often followed up an explanation with "I don't really know." Further, some of them would even hint towards cultural relativity and cite it as a source of uncertainty for them: "*Is lying looked upon in the same way in Afghan culture as it is in the U.S.?*" Their lack of confidence places them in Howell's (1982) "conscious incompetence" quadrant; i.e., "they know that they do not know." For these reasons, this population may constitute a favorable audience for cultural sensemaking training.

## DISCUSSION

In this chapter we have outlined a theoretical framework for cultural sensemaking that connects high level metacognitive skills to region-specific knowledge. As such, the cultural sensemaking framework describes a possible avenue through which culture-specific learning can contribute to culture-general competence. The fundamental proposition put forth is the following: *if you provide people with baseline (cognitive) content knowledge of the factors that influence culturally different people's decision making within specific contexts and if you provide them with metacognitive skills needed to build upon that initial understanding they will be able to use this initial knowledge and basic skill set to learn from the complex, real-life situations they encounter and thereby build and expand their database of experiences.* In this way, learning programs designed to enhance cultural sensemaking competence can provide a springboard for life-long cultural learning.

In terms of performance outcomes, this chapter has mainly focused on the early stages of the cultural sensemaking process, information seeking and hypothesis/explanation generation. To truly be effective within cross-cultural contexts it is paramount that people are also able to translate their understanding of a situation into appropriate behaviors and adjust their actions (see Figure 1). In the context of normative or highly rule-based behavior, this is sometimes referred to as code switching. Cross-cultural code-switching is *the act of purposefully modifying one's behavior in an interaction in a foreign setting in order to accommodate different cultural norms for appropriate behavior* (Molinsky, 2007, p.624). In very complex situations, learning culturally specific norms for behavior is not enough. In the Mullah scenario, a person could rely on norms relating to interpersonal interactions to decide whether he or she should confront the Mullah in public or private. But there is no 'norm' that can help a person decide whether to confront the Mullah at all. In situations, such as this, where there is no right or wrong decision, people must rely instead on their ability to make sense of the complexity in order to make better informed decisions.

## CONCLUSION

This chapter has provided a theoretical framework and outlined a practical approach for assessing cultural sensemaking competence. The instructional analysis and design approach outlined in this chapter, i.e. comparison between novice understanding and native cultural models can meaningfully be applied as part of a

pre-test, post-test paradigm to evaluate a trainee's increase in competence as a result of a training intervention. Within this paradigm, changes in the trainees' content knowledge as well as in their metacognitive skills can be assessed, seeing that clear learning objectives can be established for both areas. Conceivably, the same assessment process could be used to evaluate cultural sensemaking competence for the purposes of job placement and/or promotion.

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