

**ARI Research Note 2009-12**

**TRAINING SOLDIERS TO DECODE NONVERBAL CUES  
IN CROSS-CULTURAL INTERACTIONS**

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**June 2009**

**United States Army Research Institute  
for the Behavioral and Social Sciences**

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# LEARNING THE LESSONS OF LEADERSHIP: CASE METHOD TEACHING WITH INTERACTIVE, COMPUTER-BASED TOOLS AND FILM-BASED CASES

## EXECUTIVE SUMMARY

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### Research Requirement:

Cultural and communication competencies are emerging as critical components of the successful Soldier skill set given the nature of counterinsurgency and counterterrorism operations. The focus of the present effort concerned the ability of Soldiers to accurately read nonverbal cues. While nonverbal cues (NVC) represent a “thorny problem for research and analysis” (Blascovich & Hartel, 2008, p. 47), research tends to suggest that nonverbal understanding is important for a number of different situations relevant to Soldier duties including building rapport (Tickle-Degnen & Rosenthal, 1990), exhibiting leadership (Riggio, 1987), conflict resolution (Van Kleef, DeDreu, & Manstead, 2004), and negotiating terms of an agreement (Drolet & Morris, 2000).

The objective of this Phase I Small Business Technology Transfer (STTR) effort was to obtain information to help design an automated, deployable training system to increase Soldiers’ ability to decode nonverbal cues in cross-culture interactions. In particular, this effort focused upon determining a strategy to identify and train Soldiers on how to accurately interpret NVCs that are specific to the country in which they are deployed.

### Procedure:

The country of Iraq was selected as the target location for this effort. The methods used to collect information included a literature review, focus groups with Soldiers returning from Iraq, and development of videotaped examples of non-verbal cues using Iraqi actors.

The literature review covered the early theories of universality in emotional recognition and the more recent findings of the existence of culture-specific NVCs. The review presented the strategies most commonly used by researchers to investigate this topic. The review also presented ways that training has been conducted to teach accurate interpretation of NVCs.

Two focus groups were held at Fort Riley, Kansas, with 11 Soldiers that had just returned from Iraq. Questions were asked to gain insights into three areas:

- Situations Soldiers considered NVC to be important for mission success
- Differences in the display of non-verbal cues between Iraqis and Americans
- Soldiers’ opinions regarding content and the medium for effective NVC training

A goal of this effort was to gain experience in the collection and editing of samples of Iraqi nonverbal behaviors. We hired two male Iraqi expatriates in the Washington D.C. area to display a series of emotions, actions, and gestures exhibited in Iraqi culture. Their actions were videotaped with the intention of integrating tape into the NVC training program.

#### Findings:

The preponderance of research suggests that there is a strong universal, cross-cultural element in nonverbal communication (Ekman, 1972; Izard, 1971). Even so, research has also clearly documented an in-group advantage. That is, the group with the highest performance is also the same group from which the experimental stimuli originated (Elfenbein & Ambady, 2002b).

Thus, while some differences in NVC between Iraqi and US cultures likely exist, it remains unclear how much they differ and the impact on Soldier job performance. In our work with Iraqi actors we were able to document a few gestures that would not be recognizable to most Americans. For example, one gesture is made by touching the end of all four fingers to the thumb to create a pear shape. Displaying this hand gesture at eye level with the fingers pointing forward, palm down, is an expression of unhappiness with the person in front of you. Making the same gesture, but holding your hand above your head, expresses even stronger dissatisfaction and is equivalent to delivering a curse. On the other hand, the American Soldiers we interviewed did not feel that they had experienced trouble reading the Iraqi's nonverbal behaviors. However, existing literature suggests self assessment of skills and abilities can be inaccurate, which raises the possibility that the Soldiers may in fact not be as good at reading NVC as they believe (Wells & Sweeney, 1986).

The effort to enlist the service of Iraqi expatriates to provide taped examples of nonverbal cues for training purposes resulted in several lessons learned. First, the majority of expatriates we approached did not wish to participate because they feared insurgents would view their images in U.S. Army training materials and retaliate against relatives still living in the Iraqi region. Second, the few expatriates willing to participate in the development process did so with the stipulation of several safeguards including a) our assurance that their pictures would never enter the public domain and b) no recording would be made of any words they spoke during the session. The expatriates had little difficulty re-enacting selected emotions. However, no attempt was made to validate the displayed emotions in terms of accuracy (i.e., whether the displays were more stylized than if displayed in natural settings) or the extent to which they were culturally specific.

Another interesting implication that emerged from this effort is the suggestion that pre-deployment cultural training may not represent the most pertinent knowledge Soldiers need for mission success. Soldiers that participated in the discussion groups at Fort Riley commented that the cultural information they were given was not always accurate. For instance, Soldiers found that Iraqi women did look at them as they drove through town. Other examples were that Iraqis were not offended if the Americans showed them the

bottoms of their shoes or ate using both hands. The general perception was that the Iraqis engaged in behaviors similar to those seen in America and that Iraqis appeared to be accepting of Soldiers lack of understanding specific cultural particularities.

#### Utilization of Findings:

We have four recommendations for any Phase II research and training work that builds upon this Phase I effort. First, future research to develop training for understanding NVC should be conducted in a specific, well defined context such as negotiations. There are several reasons for this recommendation.

- The focus groups did not reveal a need to train Soldiers in how to interpret general emotional communications from Iraqis. The Soldiers were quite certain that basic emotional expressions between Iraqis and Americans were highly interpretable to them.
- Using a context such as negotiations should greatly enhance NVC training authenticity and relevance to trainees.
- The National Research Council (Blascovich & Hartel, 2008) made a very compelling case for the importance of NVC in specific areas such as negotiations.
- Negotiations that Soldiers conduct in Iraq have tactical importance and have been the focus of recent articles and training (e.g., Tressler, 2007; Wunderle, 2007).
- Correctly reading the other party is considered one of the skills an effective negotiator should possess. It would be important to know if there are subtle culture-specific NVCs that Iraqis tend to display in negotiations and that Soldiers could be taught to observe and use.
- Negotiations have fairly well-defined stages that can be sequenced for NVC research and training.
- It should be possible to develop or adapt a negotiation simulation that would engage subjects enough so they would provide spontaneous displays of their NVCs.
- Finally, a nonverbal training package for negotiations could supplement or complement the Army's current efforts in negotiation training.

The second recommendation is to take the time required at the beginning of the effort to carefully collect and validate Iraqi culture-specific NVC. This effort should occur prior to starting any training development activities. The methodology we recommend for capturing nonverbal cues is to (a) videotape Iraqis in a negotiation simulation, (b) ask

individuals from Iraq and the U.S. to rate the emotional content resulting from the gestures, expressions, and other nonverbal cues in the videotapes and/or stills, and (c) analyze the data to identify cues for which there is a difference between in-group (Iraqi) and out-group (American) performance on the task.

The final recommendation is to develop a training program by giving attention to four areas. The areas are a) the settings (i.e., realistic situations in which Soldiers are asked to achieve a successful negotiated outcome) b) the training stimuli (i.e., video segments using actors or Iraqi citizens), c) the response format and scoring, and d) practice and feedback based upon adult learning principles. In addition, we recommend pursuing several different assessment strategies in an effort to improve the overall training tool.

# TRAINING SOLDIERS TO DECODE NONVERBAL CUES IN CROSS-CULTURAL INTERACTIONS

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# **TRAINING SOLDIERS TO DECODE NONVERBAL CUES IN CROSS-CULTURAL INTERACTIONS**

## **INTRODUCTION**

### **The Army's Need for Cultural Training**

Cultural and communication competencies are emerging as critical components of the successful Soldier skill set given the nature of counterinsurgency and counterterrorism operations (Wunderle, 2006). More and more, it is becoming apparent that the war on terrorism is a battle in which thoughts, ideas, words, and behaviors are as critical as bullets and technology (Baker & Hamilton, 2006; Quadrennial Defense Review Report, 2006). The Army is aware of these needs and has provided specialized groups (Special Forces, Foreign Area Specialties, and Civil Affairs) culturally oriented communications skills training. However, with the increased understanding of the nature of the war on terror has come an appreciation that all Soldiers need cultural competencies.

Training in cultural competence, like tactics, needs to be perceived as a long term effort. An effective program should consider pre-deployment, generalized and specialized situations, reinforcement training, and even unforeseen or unplanned requirements. But other realities must be recognized as well. Soldiers preparing to deploy must assimilate a vast amount of knowledge and hone a diverse bank of skill sets. The time available to train Soldiers is finite and the demands often exceed the time available. Training in cultural competence is just one of many necessary requirements that will compete for priority.

### **The Importance of Understanding Nonverbal Cues**

A recent National Research Council (NRC) report (Blascovich & Hartel, 2008) stressed the importance of Soldier's understanding of nonverbal cues in the context of the culture. As an introduction, they describe an analysis by Triandis (Carnevale & Choi, 2000) suggesting that the Gulf War could have been avoided if Saddam Hussein's half-brother had correctly interpreted nonverbal cues. U.S. Secretary of State James Baker had calmly stated that the U.S. would attack if Iraq did not move out of Kuwait. Mistaking Baker's calm demeanor as a sign of weakness, Hussein's half-brother concluded that the Americans would not attack. In contrast, the U.S. interpretation of a calm demeanor in this context would likely communicate passive resistance and threat if the other would engage in this undesired behavior. It is differences in NVC interpretation such as this that could result in undesirable outcomes.

Nonverbal cues contain a wealth of information about the emotion of individuals, power distribution, what someone's thinking, and generally what's going on. While NVC is a "thorny problem for research and analysis" (Blascovich & Hartel, 2008, p. 47), research tends to suggest that nonverbal understanding is important for a number of different situations relevant to Soldiering such as building rapport (Tickle-Degnen & Rosenthal, 1990), exhibiting leadership (Riggio, 1987), conflict resolution (Van Kleef et al., 2004), and negotiating terms of an agreement (Drolet & Morris, 2000).

## Current Soldier Nonverbal Communication (NVC) Training

Most Soldiers currently being deployed undergo some type of pre-deployment orientation on the culture of their deployment location. This training ranges from classroom instruction to “theater immersion” situational training exercises (STX) involving role players and culturally-oriented vignettes. Soldiers are generally provided SMART Cards for use in theater which includes information on religion, religious holidays, clothes and gestures, ethnic groups, cultural groups, customs and history, social structure, and Arabic names. Also included are some helpful words and phrases.

Additionally, specialized programs targeted at certain groups or units provide models that may eventually be generalized to the entire Soldier population. For example, the joint American-Jordanian Peace Operations Training Center (POTC) in Amman, Jordan uses Arab instructors to teach a broad range of topics from basic language to dealing with Arabian women during checkpoint inspections.<sup>1</sup> Another example is the Military Transition Team (MTT) training program at Fort Riley, Kansas (Fort Riley training mission standard training model notes, 2007). This program provides Arab language, cultural, and tactical training to help Soldiers become more successful in advising Iraqi and Afghan security forces in areas of intelligence, communications, fire support, logistics, and infantry tactics. And finally, there are technology-based innovations such as Tactical Iraqi and Tactical Pashto (i.e., two computer-based games that teach how to avoid using gestures which might inadvertently cause offence).<sup>2</sup>

Although well intentioned, much of the generalized pre-deployment training is, partly out of necessity, superficial. Most cultures have evolved over hundreds of years and are extremely complex and nuanced. Moreover, cultures are far from monolithic. The tendency to typify “Arab,” “oriental,” “African,” “American,” “southern,” or “tribal” characteristics broadly can lead to a misconceived belief in the level of knowledge and understanding. Our experience is that Soldiers (like most people) prefer directive, non-complex answers to the issues they face.

With regard to nonverbal cues, many Soldiers receive training that covers “Do’s and Do Nots” of behaving consistently with cultural norms. Such information is included on Soldier SMART cards and in training modules from the Defense Language Institute that covered Middle Eastern gestures and taboos including:

- Smile. Smiles are rarely misunderstood across cultures.
- Use the right hand to eat, touch and present gifts. The left is general regarded as unclean.
- Avoid stretching legs in front of or sitting up higher than others, sitting with the left hand behind the back, or positioning oneself so the shadows fall upon half of one’s body.
- Do not show the soles of the feet, as they are the lowest and dirtiest part of the body.
- Do not stare at or “give the eye” to women.
- Shake hands with a woman only if she extends her hand first.

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<sup>1</sup> See [http://www.potc.mil.jo/aboutus\\_all.shtm](http://www.potc.mil.jo/aboutus_all.shtm) for additional information about this program.

<sup>2</sup> See <http://www.tacticallanguage.com/> for additional information about these software products.

- Avoid the thumbs-up gesture. Historically, it was offensive to Middle Easterners, although this may have recently changed.

### **Technical Objectives**

The goal of the present effort was to address an important aspect of cultural competence that we believe is not currently being addressed, that is, the ability to accurately read nonverbal cues. NVC training that is concrete and Soldier-relevant may mitigate or eliminate situations where things turn terribly wrong due to the simple misperception of nonverbal cues.

The ultimate objective of this effort is to design (Phase I) and produce (Phase II) an automated, deployable training system to increase Soldiers' ability to decode nonverbal cues in cross-culture interactions. This report describes the procedures and results of Phase I, which is essentially a proof-of-concept for developing the NVC training. Given the involvement of the U.S. Army in Iraq, we decided to focus our work on understanding and developing training to improve the ability of U.S. Army Soldiers to understand Iraqi nonverbal communications important to mission success.

### **Proposed Training System Overview**

The goal of Phase I was to evaluate and shape our proposed system for training Soldiers to decode nonverbal cues. We proposed training that would have (a) a general nonverbal communication (NVC) skills component and (b) a culture-specific component targeting NVC skills unique to a Middle Eastern culture. Both the culture-general and culture-specific portions of the training were to consist of three parts:

1. An initial assessment of NVCs that Soldiers tend to misinterpret.
2. A training section that allows the trainee to provide their initial interpretation of the stimulus followed by feedback and explanation (if incorrect response is chosen).
3. A testing section in which NVC channels (e.g., facial expressions, tone of voice, body language) are randomly ordered. Individual scores can be provided at the conclusion of this section.

The ultimate product of Phase II would be a training product that is deliverable via web technology or CD-ROM and would be SCORM compliant.

### **Our Approach in Phase I**

We performed four major activities to evaluate and shape the proposed NVC training. Each of these topics is presented as a separate chapter in this report.

1. Conducted a literature review
2. Collected data
3. Assessed results
4. Developed recommendations for Phase II

# LITERATURE REVIEW: ISSUES RELEVANT TO TRAINING ARMY PERSONNEL TO DECODE NONVERBAL CUES

## Background

### *Purpose*

This literature review focuses on the design features of the proposed training system such as stimuli, scaling, and scoring issues in particular. As a preface, we briefly summarize research on nonverbal communication. Each topical section closes with a list of implications for the current project.

### *Search Method*

We gathered literature for this review from a variety of sources. We searched the following databases:

- Defense Technical Information Center's (DTIC) database for relevant military reports
- Buros Institute's online test review database for reviews of commercial tests
- American Psychological Association databases including PsycINFO, PsycARTICLES, PsycEXTRA, PsycBOOKS, and PsycCRITIQUES for reviews and theoretical and empirical research on NVC and cross cultural NVC.

## Decoding Nonverbal Cues: Theory and Evidence

In this section, we briefly summarize the basic findings from research on nonverbal communication. These two areas form the theoretical basis for the training program.

### *Universality and Culture-Specificity*

The scientific research of how people express emotion has been intertwined with the question of whether or not emotions are universal across cultures and species. Many psychology textbooks describe classic research from the 1960s demonstrating that participants around the world could judge the intended basic emotional states portrayed in posed photographs at rates better than would be expected from random guessing (Ekman, 1972; Izard, 1971). On the basis of these and related studies, many psychologists concluded that the recognition of emotion is largely universal, with the implication that this skill is not learned but rather has an evolutionary and thus biological basis.

The communication of emotion certainly does appear to have a strong universal component. For example, people of different cultures can watch foreign films and understand much of their original feeling. Thus, it appears that emotional laden messages generalize to some degree across cultural boundaries.

However, more recent research has demonstrated that there are systematic differences in emotional expressions across cultures. For example, Mastumoto (1989) found that American participants performed differently than non-American participants in his research.

### ***The In-Group Advantage/Dialect Theory***

Examining data from Ekman and Izard's classic studies, Elfenbein and Ambady (2002b) noted that the group with the highest scores in assessing NVC was the group from which the experimental stimuli originated (Elfenbein & Ambady, 2002b). All participants in the research viewed photographs of American facial expressions, so Americans were the only participants to view members of their own cultural group, or in-group. Everyone else in the research judged expressions from a foreign group, or out-group. Further, performance appeared to be higher for groups that were more culturally similar to the United States, and lower for groups that were more culturally distant. In a meta-analysis, Elfenbein and Ambady (2002a) assembled the results of 97 studies, which involved 182 different samples representing more than 22,000 total participants. On the basis of this large-scale investigation, a clear result emerged that participants were generally more accurate in recognizing emotions expressed by members of their own culture than in recognizing emotions expressed by members of a different cultural group. That is, we have an in-group advantage in recognizing expressive behaviors from members of our own cultural groups. The in-group advantage was replicated across a range of experimental methods, positive and negative emotions, and different nonverbal channels of communicating emotion, such as facial expressions, tone of voice, and body language.

Tomkins and McCarter (1964) articulated the metaphor that cultural differences in emotional expression are like "dialects" of the "more universal grammar of emotion" (p. 127): Just as dialects of a language (e.g., American vs. British English) can differ in accent, grammar, and vocabulary, the universal language of emotion may also have dialects that differ subtly from each other. Using this metaphor, the *Dialect Theory* of nonverbal communication begins with a universal affect program, a guide for expressing emotions that is the same for all cultural groups. Additionally, each cultural group has a *specific affect program* that incorporates some adjustments to the universal program.

Acquired through social learning, these adjustments create subtle differences in the appearance of emotional expression across cultures. These stylistic differences do not necessarily have a specific purpose or meaning; thus, they differ from display and decoding rules, which are conscious management techniques for the benefit of social harmony. Figure 1 illustrates the relation between the universal affect program and specific affect programs from different cultures.

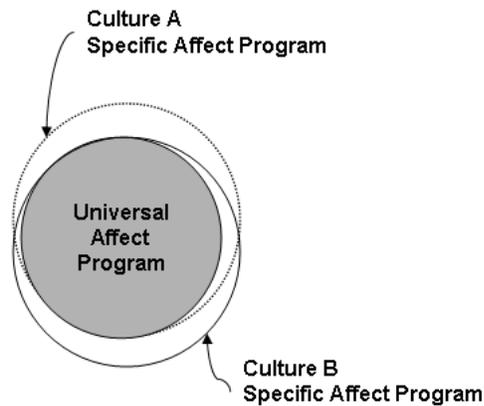


Figure 1. Representation of specific affect programs for different cultures.  
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The specific steps proposed by the Dialect Theory have been supported by a number of research studies (e.g., Elfenbein & Ambady, 2003a, 2003b, 2003c; Elfenbein, Mandal, Ambady, Harizuka, & Kumar, 2002, 2004; Marsh, Elfenbein, & Ambady, 2003). More recently, Elfenbein, Beaupré, Lévesque, and Hess (2007) elaborated greater detail about *Dialect Theory* and documented each of its basic propositions systematically, using a carefully constructed research design that ruled out alternative explanations. For example, prejudice or bias against members of other groups cannot explain away the in-group advantage—because the in-group advantage went away when members of visibly different groups posed the same facial movements rather than their locally authentic expression. This suggests that merely attempting to make Soldiers more sensitive and caring about the local citizens will not erase their communication gaps.

### ***Implications for the Current Project***

- *Expect universality in reading nonverbal cues.* The preponderance of research suggests that there is a very strong universal, cross-cultural element in nonverbal communication. Some emotions such as happiness might be more universally readable than others (Elfenbein, 2006). This suggests it may be worthwhile to look beyond facial expressions and consider culture-specific behaviors as nonverbal cues important in military operations.
- *Photograph and involve Iraqis in order to capture the culturally-specific in-group advantage.* Culture-specific nonverbal cues are likely to be subtle and could be difficult to capture. Elfenbein and Ambady (2002b) noted that the group with the highest performance is also the same group from which the experimental stimuli originated.

### **Measurement Issues**

We found that a many empirical studies that assessed nonverbal communication skills used the same experimental design. The experimental design is presented in Table 1.

**Table 1. General Research Design for Evaluating Affective Responses to Stimuli**

Participants (Raters)	Nonverbal Stimuli	
	Culture A	Culture B
Culture A	I	II
Culture B	III	IV

These studies typically involve the following four components:

- *Participants*—Participants from one or more cultures rate the affective content of nonverbal stimuli.
- *Stimuli*—Stimuli are usually facial expressions but can be postures, gestures and so on. Facial expressions may be posed or spontaneous and may come from multiple cultures.
- *Response Format/Scaling*—Participants are asked to judge the emotional content of the stimuli. Several different response formats have been used (e.g., pick one emotion from a list, judge intensity of emotion).
- *Scoring*—Data are scored against a key which can be based on expert or consensus judgment, the poser’s self-reported emotion, or an objective keying system.

This section focuses on three important design features that affect measurement quality and precision: the stimuli, response format, and scoring. In each section, we discuss implications of the findings for the current effort.

### ***Stimuli***

Stimuli in NVC research and training vary in a number of ways. Pictorial content might be spontaneous or posed and could represent a number of different emotions. Stimuli can be gestures as well as facial expressions and could be animated instead of pictorial. The following paragraphs summarize research on the different types of stimuli.

*Spontaneous or Posed.* There has been a great deal of concern that posed expressions are unnatural (Blascovich & Hartel, 2008). Naab and Russell (2007) contend that much of the data supporting the universality hypothesis has been based on posed expressions that were selected to be as recognizable as possible. The selected expressions exaggerate relevant physical features and remove distracting ones.

While quite a few studies have used spontaneous facial expressions, only a few have tested recognition of emotion across a range of emotions. Naab and Russell (2007) reviewed those studies and found that, in general, “spontaneous expressions do not achieve the level of recognition achieved by posed expressions” (p. 736). Also, participants have greater difficulty recognizing negative emotions than positive ones from spontaneous facial expressions. It is important to note here that Naab and Russell (2007) explain that the results of their own research

of spontaneous facial expressions could also be due, in part, to cultural differences. The stimuli were Ekman's photographs of New Guineans, and the participants were university students in the U.S.

While we would like to capture spontaneous expressions in the current effort, there are several obstacles that make doing so impractical. For example, one method to capture spontaneous emotions is to videotape participants as they respond to emotion-eliciting slides (Wagner, Lewis, Ramsay, & Krediet, 1992; Wagner, MacDonald, & Manstead, 1986; Yik, Meng, & Russell, 1998). Typically, participants are not aware that they are being taped with the idea that true emotions will be exhibited. However, we do not believe that we can ethically tape Iraqis in their natural environment without some sort of assent or acknowledgement of participation.

As another example, Ekman and Friesen (1975) set up the camera and captured New Guineans as they went about their daily tasks. The New Guineans were unfamiliar with the camera and therefore did not pose. This, indeed, was a rare opportunity. Most people we could tape on this project would be aware of the camera. Here again, there could be ethical issues involved in taping people surreptitiously. Based on issues presented above, our conclusion is that we should create naturalistic settings for gathering stimuli and coach our actors who volunteered to participate in the research to express emotions as genuinely as possible.

*Emotions Represented.* Emotion labels used in response ratings in a sample of recent or classic studies appear in Table 2. While several emotions are represented in most research designs (i.e., happiness, sadness, anger, fear, disgust, and surprise), researchers typically tailor the list of emotions to the particular research paradigm at hand. For the purposes of the current project, we want to represent a wide range of emotions. As shown, in Table 2, we selected a number of emotions that have been used frequently. We also added several emotions to our list based on our conversations with Soldiers at Fort Riley. Those emotions were shame, serenity, disrespect, and pride.

*Stimuli Other than Facial Expressions.* Although the greatest amount of academic research on nonverbal communication has focused on facial expressions, a body of literature suggests people can also recognize the expressive behaviors of others via vocal tones, body language, physical distance, gestures, and other channels. Vocal expressions are considered more difficult to control consciously and, therefore, provide more "leaky" information that can be considered more authentic and reliable cues to internal states (Elfenbein & Ambady, 2002c; Ekman & Friesen, 1969). Even so, vocal cues add another layer of complexity on the stimuli. For the current effort, we plan to focus on visual cues, body language, and gestures.

*Animated versus Pictorial Stimuli.* There is little research on the recognition rates of facial expressions based on either animated or pictorial stimuli. However, the research that does exist suggests that people can recognize emotions in animated faces, with accuracy approaching that for pictorial stimuli. Wehrle, Kaiser, Schmidt, and Scherer (2000) evaluated individuals' ability to accurately identify emotions based solely on the configuration of the facial muscle movements. Participants viewed photographs from the Ekman's Pictures of Facial Affect as well as 3-dimensional animated images. Although the recognition rate for photographs was higher

than animated images, with the exception of fear, participants recognized the emotion of the animated images at a better-than-chance accuracy.

**Table 2. Emotion Labels used in Recent or Classic NVC Research**

Label	Ekman (1972)	Ekman et al. (1987)	Naab & Russell (2007)	Mikels et al. (2005)	Elfenbein (2006)	Current Project
Happiness	X	X	X			X
Sadness	X	X	X	X	X	X
Anger	X	X	X	X	X	X
Fear	X	X	X	X	X	X
Disgust	X	X	X	X		X
Surprise	X	X	X		X	X
Embarrassment			X			X
Contempt			X			X
Interest			X			
Relaxed			X			
Perplexed			X			
Hesitant			X			
Awe				X		
Amusement				X		
Contentment				X		
Excitement				X		
Shame						X
Serenity						X
Disrespect						X
Pride						X

Spencer-Smith and colleagues (2001) used Ekman and Friesen's (1976) Facial Action Coding System (FACS), a methodology that codes facial muscle movements associated with emotions, to synthesize natural face movements by means of computer animation. They presented photographs and animated faces to subjects and asked them to identify the emotion (anger, disgust, fear, happiness, sadness, surprise or neutral) shown in the face and the intensity of that emotion. Results indicate that participants judged photographs and high-magnitude computer-generated stimuli with the same level of accuracy. Furthermore, in a multidimensional scaling research paradigm, where participants viewed the photographs alongside of the computer generated images, there were no systematic deviations between the images.

Because subtle cues can communicate extensive knowledge, it is unknown whether the use of animated faces would communicate the same cues as true faces. A wealth of research suggests that people can identify universal emotions in pictures, and it is not too surprising that

human could identify emotions in animated faces. However, research suggests that cultural aspects of stimuli might be quite subtle (Marsh, Elfenbein, & Ambady 2003). Animated features, if less detailed than human faces, could therefore, miss, important, but critical, cultural cues. Additionally, the FACS is based on judgments of American researchers and may not be entirely valid for other cultures. Indeed, Elfenbein, Beaupre, Levesque, and Hess (2007) recently demonstrated that individuals from Quebec and Gabon used slightly different combinations of facial codes from each other for their portrayals of basic emotions. Therefore, we chose to use pictorial stimuli in the current effort.

### ***Response Format and Scoring***

Training and measurement instruments need to be scored reliably so that individual progress can be accurately measured. When we reviewed the literature on response format and scoring of responses to emotional stimuli, we found a dearth of reports of reliability for different scoring methods, with exception of the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer, Salovey, Caruso, & Sitarenios, 2003) which does report score reliabilities. Because we refer to it in several places in this section, we first briefly describe the MSCEIT and then discuss response format and several different scoring methods.

*The Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT).* Emotional Intelligence (EI) theorists view NVC as a component of EI. Consequently two of the eight tasks on the MSCEIT are relevant to NVC: the Faces task and the Picture Task. In the Faces task, the MSCEIT presents a picture of a person expressing an emotion. A list of five emotions appears below the picture. The participant is asked to rate how much of each particular emotion is expressed in the picture. The Picture task presents artistic designs and landscapes and asks for the emotion ratings. Clearly, the Faces task is most relevant to the current effort.

MSCEIT results suggest that NVC can be measured reliably. There are two scoring keys for the MSCEIT tasks, one based on consensus judgment and one based on expert ratings. Consensus scores are based on a norming sample of over 5,000 people from various parts of the U.S. The sample was designed to match the characteristics of the U.S. population. Expert ratings were made by 21 members of the International Society of Research on Emotions (ISRE). Scores from the two methods correlate highly,  $r = .91$ . The MCEIT yields acceptable reliability estimates. For the Faces task, Mayer reported coefficient alphas of .80 for the proportional consensus score and .82 for the expert score on a sample of over 2,000 respondents.<sup>3</sup>

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<sup>3</sup> We did find one research effort using a Persian version of the MSCEIT. Yousefi (2006) created a Persian version of the MSCEIT using standard translation and back-translation methods and administered it to 353 senior high school students in Shiraz Iran and 394 students from Shiraz University. Based on consensus scoring, women scored significantly higher than men by about 1/3 of a *SD*. A gender difference favoring females is a common finding in the EI literature. The reliability coefficients for two of the branches (Understanding and Facilitating) were lower than those typically reported for the MSCEIT, while the reliabilities for the other two branches (Perceiving and Facilitating) were in the range of those typically reported. Yousefi suggested that the lower reliabilities for the Understanding and Facilitating branches may have been due to cultural differences between Iranian culture and the U.S. culture on which MSCEIT was normed. Even so, the reliability of the total score was high and the author recommended use of the instrument in research in the Iranian culture.

*Response Format.* Research paradigms typically present pictures of facial expressions and ask the subject to select an emotion from a list of emotions for each expression. This approach has been widely used. The main problem associated with it is that pictures can portray a mixture of emotions and asking the participant to pick one of several emotions results in the loss of data

Another common response format requires the participant to rate the intensity of the emotion(s) perceived on the presented face (Ekman et al., 1987; Mayer et al., 2003; Naab & Russell, 2007). For example, Naab and Russell (2007) asked for ratings on a 5-point scale ranging from 0 (not present) to 4 (maximum intensity). Similarly, the MSCEIT asks participants to rate the intensity of five different emotions for each face. Participants make ratings using a 5-point scale indicating the degree to which a specific emotion is present in a face (Mayer et al., 2003). Ekman's work provides another example. Ekman et al. (1987) had subjects view stimuli twice. In the first round, participants were instructed to pick the emotion from a list of seven terms that was depicted in the stimulus. For the second round, Ekman asked participants to (a) indicate whether each of the seven emotions was present or absent in the picture and (b) for those emotions present, to rate its strength on an 8-point scale from slight (1) to strong (8).

Rating the intensity of several emotions for a picture has two main advantages. First, because there are more data points (i.e., an intensity rating for each of several emotions for each picture) reliability is likely to improve. Second, again because there are more data points for each emotion, emotion composite scores could be formed across pictures. This could reveal which emotions are more difficult to judge.

*Expert and Consensus Scoring.* In expert scoring a pool of recognized experts is asked to make judgments about the affective content of the stimuli. Participants' responses are right or wrong when compared to experts. For example, Meyer et al. (2003) drew 21 experts (10 male and 11 female) from the International Society for Research on Emotions (ISRE). The experts rated the intensity of emotions in faces. The expert key was created by computing the proportion of experts selecting each value of intensity for each emotion. For an emotion such as happiness, the proportion of experts selecting an intensity of "1", an intensity of "2" and so on was computed. In turn, each one of the participant's responses is scored against the proportion of the experts that endorsed the same answer. If the subject indicated that happiness was definitely present in a face and that intensity was chosen by 70% of the experts, the subject's score on that item would be .70.

In consensus scoring, the participants score on an item is based upon the responses of the norm group. There are a couple of different types of consensus scoring (Barchard & Russell, 2006) methods:

- Mode consensus scoring—the most frequent response in a norm group is given a score of 1 and all other responses a score of 0.
- Proportion consensus scoring—Each respondent's score on an item is equal to the proportion of the norm group who match the respondent's answer.

For example, imagine that the respondent is asked to indicate which of four emotions is conveyed by a facial expression: (A) happy, (B) afraid, (C) disgusted, (D) surprised. Thirty percent of the normative group selected A, 40% selected B, 20% C, and 10% D. In proportion scoring, subjects selecting A would receive a score of .30, those selecting B would receive .40, and so on. In mode consensus scoring, subjects selecting B would receive a score of 1 and everyone else would receive a score of 0.

Mode consensus scoring is biased against smaller subgroups within the norm group (Barchard & Russell, 2006). When sub-groups differ in their modal responses the size of the subgroups will influence the average group score. Proportion consensus scoring minimizes but does not eliminate this effect.

*Target Scoring.* When actors (also called posers) are asked to portray a particular emotion, the instructions to the actor can be used to score the item. That is, the correct response is “surprise” if that is what the actor had been instructed to portray. If pictures are taken spontaneously, the poser could be asked retrospectively what emotion he or she was feeling. Posers could be asked to look at emotionally evocative stimulus material and describe their emotions in response to the stimulus while the session is being videotaped. This would be advantageous because posers’ responses would be more spontaneous than they would be if they were asked to portray a particular emotion.

*The Facial Action Coding System (FACS).* The Facial Action Coding System (FACS; Ekman & Friesen, 1978) is an “alphabet” of the facial muscles. Trained coders can examine a still photograph or videotape of a facial expression and record which facial muscles are activated, among a total of 66 different types of codes. FACS defines action units (AUs)—contractions or relaxations of one or more muscles. One AU, for example, is a raised inner brow. The muscle involved is *frontalis, pars medialis*. This coding system was the result of an ambitious effort to systematize the research of facial expressions. In addition to the descriptive “alphabet” of the face, the creators of the FACS system also proposed a prescriptive “definition” of basic emotions in terms of a mapping whereby certain emotions are associated with certain combinations of facial codes. However, this “definition” was developed within the United States by American researchers, and has not been validated as an accurate characterization of emotional expressions from other cultural groups. Indeed, Elfenbein, Beaupre, Levesque, and Hess (2007) recently demonstrated that individuals from Quebec and Gabon used slightly different combinations of facial codes from each other for their portrayals of basic emotions.

### ***Interpersonal Perception Task and Affect Blend Test***

ARI has experimented with measures of sensitivity to nonverbal cues (Marshall, 1990). The goal was to identify a measure that could be added to a test battery used to select military intelligence interrogators. They selected two tests, the Interpersonal Perception Task (IPT: Costanzo & Archer, 1989) and the Affect Blend Test (ABT: O’Sullivan, 1983) for use in a research paradigm. The IPT presented 30 short (30 to 60 second) videotaped segments of people interacting in natural situations. The people were diverse in terms of age, race, and gender, were not actors, and their interactions were unscripted. The 30 segments were divided into 5 categories of interpersonal relationship. After each segment, the participant responded to several

questions about the observed interaction (e.g., What was the relationship between the man and the woman?).

In contrast, the ABT focused on assessing ability to detect minute changes in facial musculature associated with emotional expression (e.g., raised eyebrow, slight downward curl of the mouth). Fifty-six facial expressions were presented. Participants were instructed to identify one or more emotions presented in each picture from a list of 6 emotions (i.e., happy, sad, fear, anger, surprise, disgust, or contempt).

The ABT and IPT were administered to 32 interrogator trainees (8 of whom were women) and 21 male instructors for the course. There was no significant difference between instructors and trainees on the IPT. However, the ABT scores of trainees were significantly higher than those of instructors, even after women's scores were removed from the analysis to eliminate gender differences as an explanation. This finding created a problematic contradiction of experienced experts being less able to identify affective expressions than the novice student.

### ***Implications for the Current Project***

- *Photograph actors portraying emotions.* While we would like to capture spontaneous expressions in the current effort, there are ethical issues involved in taping people surreptitiously. We plan to create naturalistic settings for the stimuli and coach our actors to express emotions as genuinely as possible.
- *Have actors portray a number of emotions.* Researchers typically tailor the emotions represented to the needs of the research at hand. For the purposes of the current project, we want to represent a wide range of emotions. We selected eight emotions that have been used frequently and added four emotions to our list based on our conversations with Soldiers at Fort Riley.
- *Use pictorial stimuli, not animated ones.* Our concern has to do with identifying cultural cues in animated faces. Research suggests that cultural aspects of stimuli might be subtle accents, as referred to by Marsh et al. (2003). Animated features, if less detailed than human faces, could miss, important, but subtle, cultural cues.
- *Obtain multiple responses for each picture.* This will increase the number of data points (or items) and likely increase the reliability of the total score. The MSCEIT achieves reasonable reliabilities for both proportional consensus and expert scoring using this approach. Recall that it asks participants to rate the expression of five different emotions for each face. Participants make ratings using a 5-point scale indicating the degree to which a specific emotion is present in a face (Mayer et al., 2003).<sup>4</sup> Also rating multiple

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<sup>4</sup> A similar approach has been used to increase the reliability of Situational Judgment Tests (SJTs). SJTs provide a verbal or written description of a scenario and a list of potential actions that could be taken. In some instances, the respondent reads the situation and indicates (a) which action he/she believes is *most* effective and (b) which action he/she believes is *least* effective. Other formats have asked the respondent to indicate what he or she would be most or least likely to do in the situation or to rate the effectiveness of several actions. Research by Waugh and Russell (2005) and colleagues has shown considerable improvement in SJT reliability when subjects rate the effectiveness of multiple actions for each situation.

emotions for each picture allows the opportunity to better score pictures that are capturing more than one emotion at a time.

- *Create expert, proportion consensus, and target scoring keys and pit them against each other.* The findings by ARI that instructors were unable to score better on the ABT than trainees raises questions about what method of scoring is the best. We recommend that in our future research we create different approaches to scoring, compare the results, and examine their psychometric properties.
- *Use the FACS for documentation, not for scoring.* The FACS scoring is complicated and expensive. Additionally it is based only on American data and may not fully represent facial movements in other cultures. In the future, it would be useful to score Iraqi facial emotions using FACs to determine American-Iraqi differences. But, we do not recommend using the FAC System for scoring purposes.

### **Training Issues**

Regardless of the extent to which a difference exists between two cultures, that difference can have important real-world consequences. If cross-cultural interactions are slightly less smooth than same-culture interactions, then misunderstandings can accumulate over time and make interpersonal relationships less satisfying. However, the findings of this and our other studies also provide a hopeful message regarding cross-cultural communication. That is, the in-group advantage is lower when groups are nearer geographically or have greater cross-cultural contact with each other, and over time participants appeared to learn how to understand the emotions of people from foreign cultures (Elfenbein & Ambady, 2002b, 2003a, 2003b). Although differences in emotion across cultures can create a barrier to effective communication, it is important to note that people can overcome these barriers through natural interactions and potentially through designed interventions.

Research that has attempted to validate training in nonverbal sensitivity has been relatively sparse (Ambady, Bernieri, & Richeson, 2000), but holds promise as well. Practice alone can be a valuable teacher (Costanzo, 1992; deTrurck, Harszlak, Bodhorn, & Texter, 1990; Grinspan, Hemphill, & Nowicki, 2003; Zuckerman, Koestner, & Alton, 1984). Even in the absence of any feedback, participants achieve higher accuracy in the second half of standardized test instruments (e.g., Rosenthal, Hall, DiMatteo, Rogers, & Archer, 1979).

Training to overcome in-group advantage can be improved by incorporating diagnostic feedback regarding NVC perception and judgment formation into the process. In Beck and Feldman (1989), adolescents randomly assigned to receive feedback about the accuracy of their judgments subsequently outperformed those who received only the same amount of practice in judging the same stimuli. Feldman, Philippot, and Custrini (1992) documented that feedback about whether responses were correct or incorrect improved children's accuracy in making judgments on a set of facial expressions.

Grinspan et al. (2003) demonstrated improvement in children's accuracy judging facial expressions following group exercises illustrating examples and components of facial

expressions. Gillis, Bernieri, and Wooten (1995) examined the impact of two types of feedback on judgments of interpersonal rapport. They found that cognitive feedback—that is, receiving general information about the nonverbal cues that are typically diagnostic in predicting rapport—benefited only relatively mechanical and purified judgments in which participants viewed bar charts that illustrated the levels of those cues. However, participants who judged actual nonverbal behavior, appearing in videotaped dyadic interactions, benefited from outcome feedback—that is, receiving the criterion variable which was in this investigation the targets' own ratings of their interpersonal rapport. This investigation corroborates other evidence that training programs instructing participants about diagnostic cues do not appear measurably to improve nonverbal decoding accuracy (Costanzo, 1992). Taken together, this prior research suggests that participants who make gestalt judgments of nonverbal behavior benefit less from instructional materials regarding the diagnostic cues, and more from feedback about the correct responses that allows them to make personal sense of the cues contained within stimuli. This prior work also strongly suggests that there is no substitute for using real human nonverbal expressions rather than animated figures because our judgments are made based on a range of cues. It is unclear whether all relevant NVC have been identified and can be programmed into animated facial expressions.

Recently, Elfenbein (2006) was the first researcher to develop and validate a cross-cultural training program in understanding nonverbal cues. Her program included a training phase that provided immediate feedback for Chinese and non-Asian American participants after making cross-cultural and within-culture judgments of Chinese and US emotional expressions. Participants greatly increased their accuracy from the training to the testing phase. Strikingly, she also found that the 10-minute long training program completely erased the in-group advantage for participants during their later testing phase. This result suggests the great—and largely untapped—promise of cross-cultural nonverbal skills training. We argue that increases in total accuracy—as well as a reduction in in-group advantage—are the best methods for evaluating the effectiveness of such training programs.

### ***Implications for the Current Effort***

Our recommendations for the current effort, based on the NVC training literature appear below:

- *Training should be practice-based, not lecture-based.* The centerpiece of the training program should be practice and feedback. Trainees will learn by practicing identifying the emotions represented in NVC stimuli and through feedback on the accuracy of their assessments.
- *Training should provide immediate feedback.* Research also suggests that trainees benefit most from immediate feedback about their judgments of stimuli. Feedback for other nonverbal cues can be done via arrows that point to the key features in the scene or the individual's body that provide diagnostic information (e.g., arrangement of individuals that could signal who is in charge, or most influential and their behavioral intentions).

## EMPIRICAL INVESTIGATIONS TO INFORM NVC TRAINING REQUIREMENTS

The primary objective of Phase I was to test the feasibility of our NVC training design and to shape it as needed to best reflect NVC training needs. Toward that end, we conducted two data collection activities. First, we conducted focus groups with Soldiers immediately upon their return from Iraq to learn about Iraqi nonverbal behaviors they had observed and situations where it is important to be able to read nonverbal cues. Next, we tried out our proposed method of videotaping actors expressing different emotions. This section describes the subjects, methods, results, and implications of these data collections.

### Fort Riley Focus Groups

We led two focus groups at Fort Riley, Kansas to ascertain situations where the interpretations of NVC are critical for mission success, and to learn about nonverbal behaviors of Iraqis the Soldiers had encountered.

#### Method

##### *Participants*

A total of 11 Soldiers participated in the focus groups, six in one group and five in the other. In both groups, there was a mix of senior non-commissioned officers (NCOs), company grade officers (i.e., captains) and in one group, one field grade officer (i.e., major). Each Soldier represented a different military occupational specialty (MOS) ranging from Infantry to Health Care Specialist to Intelligence.

##### *Procedure*

Researchers led discussions with Soldiers in two separate groups for approximately two hours. Participating Soldiers had recently returned from deployment in Iraq. A protocol was developed to guide discussions (see Appendix A). After defining situations in which NVC is critical for effective performance (e.g., interacting with Iraqi Soldiers), Soldiers were instructed to describe specific critical incidents that illustrated the role of NVC in those situations.

#### Results

*Gestures and Personal Space.* Compared to Americans, participants thought Iraqis were more animated and used more hand gestures when they spoke. They also found that physical proximity and space was much closer among Iraqis and that it was not unusual for men to have close physical relationships with other men. One Soldier recalled that Iraqis say a phrase roughly translated to mean “you are my friend; you are my love”. Iraqis enjoyed saying this phrase to Americans and expected Americans to say it in return. The hand gesture for the phrase, rubbing index fingers together, has different interpretations (including sexual) depending on the context.

They noted that when Iraqis are happy, they put their arm around the Soldier's shoulder or touch the Soldier's leg. Conversely, a lack of affection or disengagement was a sign that something was amiss.

*Expressions/Emotions.* Soldiers believed that for the most part, Arab facial expressions of emotions were the same as those in the U.S. (e.g. smiling means happy). Distinctly, however, they observed that Iraqis expressed grief differently than Americans. When the Soldiers encountered a man that recently lost a loved one, the man was crying, wailing and screaming to express his grief. Soldiers noticed that there were no inhibitions or shame in expressing grief.

Soldiers noted a technique that the Kurdish may use to publicly signal misbehavior. A Kurdish Soldier caught disobeying orders was punished by having his head shaved. This was analogous to having a "scarlet letter" on the Kurdish Soldier's chest. With a shaved head, the Kurdish Soldier was seen expressing his shame by sitting down, face low to the ground, holding still.

*Negotiation and other interactions with Iraqis.* Soldiers observed that reconciliation was accomplished through negotiations between tribal leaders and U.S. company commanders. In addition to the tribal leaders and commanders, interpreters and armed tribal representatives were also present during negotiations. In an effort to get their agendas at the top, Arabs would shout and scream. Their raised voices were not necessarily an indication of anger. The Soldiers also felt that the concept of "face" was important. If negotiations were proceeding well, Arabs offered their hospitality through food, chai, and cigarettes. They also noticed that sometimes U.S. Soldiers offended Arabs by declining their hospitality.

Soldiers remarked that Arabs broke the ice by showing pictures of and talking about their sons. Iraqis and Kurds were indifferent about discussing daughters or wives. Participants also noticed that Arabs were interested in talking about religion. They interpreted the discussion of religion as a positive sign in their relationship with the individual.

*Other Situations where Interpreting NVC are important.* Soldiers described situations where they felt that reading the NVC were important. They interpreted the presence of children in the streets as a positive sign since parents often knew about insurgent activity near them. Conversely, they interpreted deserted marketplaces and the lack of people in the streets and buildings at night as a sign of possible danger.

Soldiers also observed NVC shortly after major events. Iraqis may use NVC to signify where an event took place. For instance, two Iraqis signaled to the Soldier that a bomb went off and indicated the location of the bomber. One Iraqi made the sign of a person exploding a bomb by holding out his fist with his thumb pointing up. He then moved his thumb down on top of his index finger (to indicate triggering a bomb) and pointed to the roof.

Soldiers also indicated that interpreting facial expressions was critical to their success. Participants monitored moving vehicles and observed facial expressions of the driver. Specifically, if the car contained a family and the driver looked frustrated or was signaling to

move, than participants read this as a non-threatening situation. However, they interpreted lone drivers, staring ahead with no expression, as a potentially dangerous situation.

*Status.* Soldiers observed the tiers of the status system as being more important in the Iraqi society than in the American society. Specifically, they noted that elders and leaders were well respected in the community and that often times, older males were ones who had the higher rank or were in charge. When a leader entered the room, the people became silent and turned to look at the leader. Furthermore, participants noted that higher status individuals were better groomed, wore clean attire, and had superior living accommodations (e.g., electricity) than low level Iraqi Soldiers.

Soldiers also noticed that individuals wearing suits (symbolizing progressiveness) were typically liaisons with officials and leaders outside the military. These “sell-outs” worked with Americans in an effort to improve relationships.

*Current Intercultural Training.* Soldiers felt that the intercultural training that they received was inaccurate or overemphasized. Specifically, intercultural training erroneously stressed the avoidance of using the left hand, showing the sole of your foot, and interactions with women. In fact, they indicated that, out of curiosity, it was common for women to stare at Soldiers or be involved in conversations when Soldiers entered their homes. Participants noted that the current training stereotyped Arabs and was too simplistic.

Soldiers believed that it would be valuable to identify individuals who are good at interpreting NVC and have strong interpersonal skills. One possibility would be to send those individuals to a specialized training, emphasizing skills of observation, listening, and learning on the spot. As tasks are shared among team members, another option would be to train the team by presenting scenarios for them to accomplish and discussing possible solutions.

Participants reported that past training they found constructive involved mock negotiations and watching others (e.g., fishbowl exercise). They felt that future training should emphasize the importance of listening, watching, and continuously learning. It should also highlight the need for being respectful, polite, and being attentive to your surroundings.

### ***Implications for the Current Effort***

- *Enhance the authenticity of NVC training to appeal to Soldiers.* One major conclusion that we drew from our discussions with Soldiers was that training needs to have a job-relevant context. Otherwise, it is likely to appear irrelevant or trivial.
- *Negotiations are a relevant context for junior officers in Iraq.* In describing the context for NVC situations, Soldiers tended to talk most about situations involving some sort of negotiation. Patrolling is also a relevant context but does not appear to offer as many different settings as negotiations do.

## *Recording Iraqi NVC on Video*

One of our goals in Phase I was to gain experience in the collection and editing of samples of Iraqi nonverbal behaviors. Lessons learned in this effort would enable us to better understand the challenges we would likely face in obtaining the full set of content we would need in Phase II.

### Method

#### *Participants*

For this effort we sought Iraqi nationals that were working in the United States as professional actors. We used our professional networks to identify and contact 15 Iraqi actors working in the local Washington D.C. area. However, very few of these actors were willing to support us in this particular effort. The actors were concerned that their pictures might be seen by people in their home country opposed to the U.S. involvement which would label the family as collaborators. The actors feared their families in Iraq would become targets of violence or they themselves would be targeted the next time they returned.

We finally found two male Iraqi actors willing to participate in return for several safeguards. First, we agreed not to record any audio of them. Second, we provided them assurance that the actor's faces would never be shown in any manner that would allow them to enter the public domain.

#### *Procedure*

We created a script describing the nonverbal behaviors we wanted the actors to display. The script began with a list 11 emotions (e.g., happiness, sadness, fear). Each emotion was listed and defined. Our instruction to the actors was to express each emotion in a way that a stranger from their home neighborhood would be able to understand easily what they were feeling.

Second, we were interested in nonverbal behaviors that Iraqis display in situations that might be witnessed by U.S. Soldiers. For example one vignette appears below:

- In a crowded city street, an Iraqi is trying to make a left turn. He requests the approaching traffic to slow down by motioning with his hands.

Many of the vignettes concerned an Iraqi's reaction to an exchange with a U.S. Soldier. Finally, we asked the actors to display gestures that they felt were truly unique to their country and unlikely to be seen in the United States.

A copy of our script appears in Appendix B. We provided the actors with a copy to review in advance of the video shooting. The shoot was conducted at a professional studio in the D.C. area. This helped us ensure the lighting was adequate. It also allowed us to record the action in front of a blue screen. By shooting against a large blue backdrop, this allowed us the option to later superimpose the actor's images upon a different background. The actors must imagine the set they are on and be aware of the limitations of their movements. Two video cameras were

used to capture both front and side views of the actors. We asked the actors to wear every-day clothing they would be comfortable wearing in their home country.

## Results

The actors followed our instructions and the filming was completed in about half a day. The displays of emotions that the actors provided to us all seemed reasonable as displays one might see a Westerner use in expressing these same emotions. In some cases however, we would have had trouble knowing what specific emotion the actor was displaying (e.g., was it anger, contempt, or disgust) if we did not have the script in front of us.

When we asked the actors for a display we would not likely see in the West, the actors demonstrated a gesture made by touching the fingers and thumb together of their right hand to create a pear shape. They then held their hand in this form above the head with the palm facing forward. The actors indicated this expresses a very high level of unhappiness and anger directed to the person in front of them.

### ***Implications for the Current Effort***

- *It is possible to efficiently collect samples of NVC using Iraqi actors.* The actors understood our objectives, followed our instructions, and were able to provide the displays we wanted. We do not know, however, if these displays are truly accurate representations of emotions as people express them in Iraq or the degree to which the actors may have given us stylized versions.
- *Conduct additional NVC research in Phase II on Iraqi-American NVC differences.* This exercise does not take us very far in addressing the nature and extent of possible differences in NVC displayed by Iraqis and Americans. Further research would obviously be needed. But based on this small and admittedly limited exercise, we would not be surprised to learn that NVC differences in facial expressions of emotion tend to be subtle.
- *Finding some way to use Iraqi actor's input without putting them or their families at risk is a clear challenge.* One possibility might be to find actors that had no relatives in Iraq and did not intend to return to their country in the near future. Another might be to use make-up and other prosthetics to disguise the actor's face to the point he or she could not be recognized.
- *It would be a relatively easy to manipulate the pictures (and possibly video clips) to suit our needs if filming is done with a blue screen for the backdrop.* Replacing the background for a picture was simple and the product was credible in appearance.

## **Major Findings**

### ***Soldiers sent to Iraq may not be getting useful/accurate intercultural information at the current time***

Among the comments we heard from Soldiers in our focus groups was that the intercultural information they were given proved not to be true. For instance, the Soldiers found that Iraqi women did look at them as they passed through town. Iraqis were not offended if the Soldiers showed them the bottoms of their shoes or ate using both hands. The general perception was that the Iraqis have more in common with Americans than pre-deployment training led the Soldiers to believe.

### ***Some differences in NVC between Iraqi and U.S. cultures appear to exist, but it remains unclear how much they differ and the impact on Soldier's job performance. More research is needed at this stage as preliminary to designing a full training program***

In our work with Iraqi actors we were able to document some gestures that would not be recognizable to most Americans. In addition, the research on intercultural differences reviewed in this document suggests there is likely an in-group advantage for Iraqis in interpreting Iraqi nonverbal behaviors.

On the other hand, the American Soldiers we met with did not feel that they experienced trouble reading the Iraqi's nonverbal behaviors. Similarly, we did not see any striking "oddities" about the nonverbal behaviors displayed by the Iraqi actors to us when asked to display a series of emotions. Thus, a basic question remains about what are the cross-cultural differences and what is their level of significance.

### ***Finding some way to use Iraqi actor's input without putting them or their families at risk has challenges.***

One possibility might be to find actors that have no relatives in Iraq and do not intend to return to their country in the near future.

### ***Care should be taken in using animated characters instead of video or pictorial stimuli to train the decoding of expressions.***

Given actors' concerns about use of their photographs in military training materials, one possible alternative might be to use animated characters. As indicated in the literature review some research has been done in this area. We have two concerns. The first has to do with ensuring the right cues are displayed in the animated faces. We raise the concern that if the goal is to train culture-specific NVCs, then we just do not have enough basic research at the present time to describe to an animator what constitutes Iraqi culture-specific nonverbal behavior. Related to this concern is that the FACS, which is often used by animators to create expressions, is based on judgments of American researchers and may not be entirely valid for other cultures. Indeed, Elfenbein et al. (2007) recently demonstrated that individuals from Quebec and Gabon used slightly different combinations of facial codes from each other for their portrayals of basic

emotions. A second concern is that animated features are generally much less detailed than human faces, and therefore could be missing subtle, but important information.

***While challenges exist in gaining the cooperation of Iraqi actors, it appears relatively easy for them to provide requested emotional displays***

We found that the actors could easily follow our instructions and display expressions and actions that, on the surface, appeared to reflect what one might see in Iraq. We did not go further, however, to actually validate the nonverbal displays or determine the extent to which they were culturally specific. It is also possible that the displays are more stylized than what one might actually see in real life.

We found that working with actors in a studio yielded high quality images and video which can be manipulated to modify backgrounds as needed.

***Methods exist to document and validate differences that may exist in NVC between cultures***

The preponderance of research suggests that there is a very strong universal, cross-cultural element in nonverbal communication. Some emotions such as happiness might be more universally readable than others. Indeed some research has dropped emotions because there was no variance. That is, everyone could read the emotion (Elfenbein, 2006).

Even so, research has documented an in-group advantage. That is, the group with the highest performance in judging emotions is also the same group from which the experimental stimuli originated (Elfenbein & Ambady, 2002b). The methodology involved is (a) to photograph individuals from the target culture, in this case Iraq, (b) ask individuals from Iraq and from the U.S. to rate the emotional content of the pictures, and (c) document differences between in-group (Iraqi) and out-group (American) performance on the task. One method of validation would be to repeat step (b) and (c) in new samples.

***Scoring methods used in much NVC research need improvement.***

Training and measurement instruments need to be scored reliably so that individual progress can be accurately measured. When we reviewed the literature on response format and scoring of responses to emotional stimuli, we found a dearth of reports of reliability for most scoring methods.

## **RECOMMENDATIONS FOR PHASE II WORK**

In our Phase I proposal, we described the vision of an interactive, computer-administered training program that would have a culture-specific component targeting NVC skills unique to a Middle Eastern culture. The training was to include:

1. An initial assessment of skills at NVC across the individual and group facial displays, clips of body postures, and vocal tones. Facial displays were to be presented for two seconds forward and backward masked by neutral expressions.
2. A training section that allows the trainee to provide their initial interpretation of the stimulus followed by feedback and explanation (if incorrect response is chosen).
3. A testing section in which NVC channels are randomly ordered and individual scores provided at the conclusion of this section.

While we believe that this general plan is sound, several components could be refined based upon what we learned in this effort. We have the following four recommendations for Phase II research and development:

- Pursue future NVC research within a well defined context such as negotiations
- Carefully document/validate intercultural differences before devising any training
- Develop prototype training program
- Collect and analyze data on training effectiveness

This section expands on each of the recommendations.

### **Pursue NVC Research in a well Defined Context such as Negotiations**

We believe it would be prudent to pursue NVC research in a specific, well defined context such as negotiations. The target for this training would be officers preparing for their first time deployment to Iraq. Reasons for concentrating upon negotiations are:

- Our focus groups did not reveal a need to train Soldiers in how to interpret general emotional communications from Iraqis. The Soldiers were quite certain that basic emotional expressions between Iraqis and Americans were highly interpretable to them.
- Using a context such as negotiations should greatly enhance NVC training authenticity and relevance to trainees. As we have already mentioned, one major conclusion that we drew from our discussions with Soldiers is that the training should have a clear job-relevant context.
- The National Research Council (Blascovich & Hartel, 2008) made a very compelling case for the importance of NVC in rapport building, persuasion, conflict resolution, and more generally in negotiations.

- Negotiations that Soldiers conduct in Iraq have tactical importance and have been the focus of recent articles and training (e.g., Tressler, 2007; Wunderle, 2007).
- Correctly reading the other party is considered one of the skills an effective negotiator should possess. It would be important to know if there are subtle culture-specific NVCs that Iraqis tend to display in negotiations and whether Soldiers could be taught to observe and use this information.
- Negotiations have fairly well-defined stages that can be sequenced for the NVC research and training. In particular, Wunderle (reported in Hill et al., 2006) has applied the classic negotiation approaches developed by Roger Fisher and his colleagues at the Harvard Negotiation Project to military decision-making. At a broad level, this approach has three phases—a preparation phase, the negotiation, and post-negotiation. Specific steps occur within each phase.
- It should be possible to develop or adapt a negotiation simulation that would engage subjects enough so they would provide spontaneous displays of their NVCs. Subjects could be Iraqi citizens living in the U.S. Their NVCs could be videotaped for research purpose and also used to derive stimuli for training.
- Finally, a nonverbal training package for negotiations could supplement or complement the Army's current efforts in negotiation training. One example might be the Elect Bilat simulation which focuses on training negotiation.

### **Document/Validate Intercultural Differences**

The methodology we recommend for capturing nonverbal cues that result in an in-group advantage for Iraqis is to (a) videotape Iraqis in a negotiation simulation, (b) ask individuals from Iraq and the U.S. to rate the emotional content resulting from the gestures, expressions, and other nonverbal cues in the videotapes and/or stills, and (c) analyze the data to identify cues for which there is a difference between in-group (Iraqi) and out-group (American) performance on the task.

We can further validate these differences by collecting data on the frequency to which the same culture-specific display is shown to the same experimental manipulation across a number of different Iraqis subjects.

### **Develop Prototype Training Program**

The prototype training program we recommend would have four main features—negotiation settings, stimuli, a response format and scoring, and practice and feedback.

### ***Negotiation Settings***

We recommend conducting focus groups with experienced junior and company grade officers who have recently returned from Iraq to develop negotiation vignettes for the training program. The vignettes should explain (a) the situation and the objective of the negotiation, (b) the characteristics of Iraqis present in the negotiation (e.g., what they are wearing, the power differential); each character must be defined, (c) the features of the environment, and (d) any other contextual factors. The vignettes should address different stages in the negotiation explaining the situation as it unfolds and behaviors likely to be observed.

### ***Stimuli***

It may be possible to directly use the video segments we collect from Iraqi citizens in the role plays as stimuli for the training. However, it is also possible that the Iraqis will not want their pictures used in this manner. If so, one option might be to videotape Arab actors (maybe from countries outside of Iraq) and ask them to re-enact the videos we captured originally.

### ***Response Format and Scoring***

We recommend exploring several possible response formats for the training exercise. For example, trainees could be asked to identify the individuals in the videotapes whose NVCs suggested they were most satisfied (or dissatisfied) at a particular phase in a negotiation. We could ask traditional multiple choice questions, particularly questions that ask the trainee to rate the extent to which a particular expression, gesture, or picture as a whole reflects each of several emotions. We could ask trainees to make a judgment if the Iraqis appeared really committed to a final agreement or were simply agreeing because their American counterpart was in a position of superior power.

We recommend creating three different kinds of scoring keys (i.e., expert, proportion consensus, and target) and comparing their psychometric properties. The target scoring key will be based on the actor's intended portrayal in the vignette. The expert key will be based on the judgments of a set of Iraqis identified as experts. The consensus scoring key could combine judgments of Americans and Iraqis or just be based on judgments of people with at least some Iraqi heritage. We have done similar scoring activities for other types of instruments and have found that the results can have important implications for scoring.

### ***Practice and Feedback***

Adult learning principles concerning practice and feedback should be embedded throughout the training. For instance, trainees should be provided repeated practice on identifying the emotions represented in NVC stimuli. They should then be provided immediate feedback on the accuracy of their assessments.

### **Collect and Analyze Data on Training Effectiveness**

We envision a number of strategies that could be pursued to provide information about the effectiveness of a program designed to teach Soldiers about Iraqi NVCs in negotiation training. One approach would be to measure improvement in skills pre- to post-training. For example, Soldiers could be asked to make interpretations to an equivalent set of relevant NVCs at the start and end of the instruction. Or going further, Soldiers could be evaluated pre- versus post-instruction on how well they adjust their negotiation tactics following presentation of NVCs by Iraqis at specific phases in the negotiation process.

We also recommend exploring negotiation exercises used at JRTC as part of the training of Soldiers for missions in Iraq. Our understanding is such exercises employ Iraqis and the performance of the Soldiers is evaluated. It might be possible to compare the effectiveness of Soldiers who complete the NVC training against a control group.

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## Appendix A: Focus Group Protocol

Date: \_\_\_\_\_

Place: \_\_\_\_\_

Rank of Participants:	MOS of Participants
1.	
2.	
3.	
4.	
5.	

*Contractors and ARI scientist will lead discussion with Soldiers in independent groups of three to five. The estimated total duration is 2 hours, with 1.5 hours reserved for group discussion and an additional 30 minutes for informal discussion and question-and-answer session. Contractors and ARI scientist will record all information.*

1. Introductions

- Have participants describe deployment history and current job.
- Introduce self.

2. Project Background

*Cultural and communication competencies are emerging as critical components of the successful Soldier skill set given the nature of counterinsurgency and counterterrorism operations, particularly in the Middle East. Effective interactions with indigenous people require Soldiers to accurately interpret both verbal communication and nonverbal cues (NVC). The present effort addresses an important aspect of cultural competence that remains largely untapped. That is, the ability to accurately interpret nonverbal behaviors in cross-cultural interactions.*

*The goal of this effort is to develop a prototype of an automated, deployable training system, to increase Soldiers' ability to decode nonverbal behaviors in cross-cultural interactions. We expect the product to be computer-administered (e.g., deliverable via web technology or CD-ROM) and self-paced. The training will have a general nonverbal communication skills component and a culture-specific component targeting NVC skills unique to a Middle Eastern culture. The NVC stimuli will cover three channels: facial displays, vocal tones and body postures. The training will be practice-based, allowing the Soldiers to observe realistic situations and human nonverbal expressions. Both the culture general and culture-specific portions of the training will consist of three parts: 1) pretest--an initial assessment of skills at NVC across different channels, 2) training-- a training section that asks trainees to interpret/rate the stimulus and provide feedback, and 3) post-test-- a testing section in which NVC channels are randomly ordered. Individual scores can be provided at the conclusion of the post-test.*

### 3. Purpose of Focus Group

- To learn about situations where NVC is critical for mission success.

### 4. Agenda

- First we'll spend about 20 minutes defining the situations in which NVC is critical to for effective performance.
- Then, I'm going to ask the Soldiers to describe some specific, critical, incidents that illustrate the role of NVC in the situations you defined.
- Explain to Soldiers that names and troop-identifying specifics are not necessary. The actual people or troops in the situation are to be anonymous. In the event information is presented, the name or troop specifics will not be recorded.
- Any questions?

## I. Types of NVC Situations

*[Probe for a list of situations that you will explicate in the next step]*

1. What types of face-to-face situations arose that involved the use or decoding of nonverbal cues? E.g.,

- Patrolling a marketplace
- Searching a car

2. What types of situations with host nation troops or joint forces troops arose that involved decoding nonverbal cues? E.g.,

- Patrolling with other troops
- At a social event
- Doing everyday activities such as having lunch together
- Training host nation troops

3. What types of situations where the contact was from a distance, involved the decoding of nonverbal cues? E.g.,

- On reconnaissance
- While driving in a convoy

## II. Scenario Generation

*[For each type of situation described above, generate details describing the situation.]*

1. For each *face to face situation*, describe specific scenarios where NVC was important for successful performance (e.g., guarding a checkpoint, searching detainees, patrolling a village/city, etc.).

***What were the circumstances surrounding situation A (specific to face-to-face contact)?***

Sample probes:

- *What were the Soldiers tasked to do in this situation?*
- *What nationality or sect did the indigenous people represent?*
- *What were the indigenous people doing?*
- *Where were you when you encountered them (e.g. marketplace)?*
- *What was the climate (e.g., friendly, hostile) like when you encountered them?*
- *Who tried to communicate with you (e.g., town elders, children, and women)?*
- *How many people were present, who were they and what roles did they play in the interaction?*

2. List scenarios where NVC with **host nation troops or joint forces troops from the Middle East** was important for successful performance (e.g., working jointly on a mission or task, training other forces, etc.).

***What were the circumstances surrounding situation B (specific to interaction with foreign troops)?***

Sample probes:

- *Talk about and define each situation. Create a well defined list. Be sure that you understand what was happening in the situation.*
- *What were the Soldiers tasked to do in this situation?*
- *What were the other troops doing?*
- *What, if anything, did the Soldiers misunderstand about this situation?*
- *What was the consequence of what happened?*
- *What was the climate (e.g., friendly, hostile) like when you encountered them?*
- *What nationality or sect did the indigenous people represent?*
- *How many people were present, who were they and what roles did they play in the interaction?*

3. List scenarios where **observations of NVC from a distance** were important for successful performance (e.g., reconnaissance).

***What were the circumstances surrounding situation C (specific to observation from a distance)?***

Sample probes:

- *What were the Soldiers tasked to do in this situation?*
- *Who or what were they observing?*
- *What, if anything, did the Soldiers misunderstand about this situation?*
- *What, if anything, did the Soldiers misunderstand about this situation?*
- *What was the consequence of what happened?*

- *What was the climate (e.g., friendly, hostile) like when you encountered them?*
- *What nationality or sect did the indigenous people represent?*
- *How many people were present, who were they and what roles did they play in the interaction?*

### **III. Gather Critical Incidents to Illustrate the Scenarios**

*[Section II, Generate Scenarios, is the most important. Proceed to section 3 only after getting thorough situations in Section II. If there is not time, you may skip Section III].*

1. What type of nonverbal cues (e.g., body language) that you or other Soldiers decoded had a positive or negative outcome in those situations? *(Gather 1 illustrative critical incident for each type of nonverbal cue situation. If group is larger than 4 Soldiers, break them up into smaller groups to discuss/write critical incidents).*

- *What was the specific situation?*
- *What type or rank of Soldier is likely to encounter these situations?*
- *Who were the indigenous people, what nationality, sect, etc?*
- *What language did they speak?*
- *What did the Soldier do in the situation?*
- *What did the Soldier understand or misunderstand about the NVC in the situation?*
- *What were the consequences of the misunderstanding?*

**5. Critical Incidents**

Nonverbal Cue:

Rank:

Circumstances:

Behavior:

Outcome:

## **Appendix B. Protocol for Filming Nonverbal Communication**

**PURPOSE:** Filming session to record expressions of emotion and other nonverbal communication. We will provide stimulus cues and also ask the Iraqi participants to identify any differences in nonverbal communication (e.g. expressions, gestures) they may have observed when interacting with Americans.

### **REQUIREMENTS:**

- Iraqis, all of the same religious sect
- 2 males
- Clothes appropriate to every day life in Iraq
- At least 2 participants interacting with each other

### **ADDITIONAL REQUESTS (for discussion):**

- 2 video cameras
- Full front and side views
- Request actors to walk from point A to B (10 feet apart) i.e. angry vs. fearful walking
- Blue background
- Consistent lighting so we can add people and create a group

Express each of the following emotions in such way that a stranger from your home neighborhood would be able to understand easily what you feel.

#### **A. Standing still or sitting:**

Direct the actor to express following emotions to another person:

- **Surprise** - *“The feeling of emotion excited by something unexpected, or for which one is unprepared”*

Think of a situation where you experienced *something that you were not expecting and did or did not wish for to happen*. For example, something or someone unexpectedly helps or hinders you from achieving a valued goal. The situation is very unexpected and you need time to take it in.

- **Sadness** - *“The condition or quality of being sad and sorrowful”*

Think of a situation where you experienced an *irrevocable loss*. For example, you lose someone or something very valuable to you, and you have no way of getting back that what you want.

- **Contempt** - *“The feeling or attitude of regarding someone or something as inferior, base, or worthless; scorn”*

Think of a situation where you *disagree with the actions of a person that you regard as inferior to you*. For example, you the actions of a person are against your wishes. As a consequence you find the person repulsive and feel superior to him/her.

- **Anger** - *“A feeling of displeasure aroused by real or imagined injury and usually accompanied by the desire to retaliate”*

Think of a situation where you experienced a *demeaning offense against you and yours*. For example, somebody behaves rudely toward you and hinders you from achieving a valued goal. The situation is unexpected and unpleasant, but you have the power to retaliate.

- **Embarrassment** - *“The feeling that comes with having a socially or professionally unacceptable act revealed to others. Usually some amount of loss of honor or dignity is involved”*

Think of a situation when something you did or said caused you to feel embarrassed in front of others.

- **Happiness** - *“The state of pleasurable content of mind, which results from success or the attainment of what is considered good”*

Think of a situation where you *made reasonable progress toward the realization of a goal*. For example, you have succeeded in achieving a valued goal. Your success may be due to your own actions, or somebody else’s, but the situation is pleasant and you feel active and in control.

- **Disgust** - *“Aversion or repulsion excited by that which is offensive, as a foul smell or food”*

Think of a situation *where you were taking in or being too close to an indigestible object*. For example, somebody offers you food that smells rotten and that repulses you. The situation is very unpleasant.

- **Fear** - *“A feeling of agitation and anxiety caused by the presence or imminence of danger”*

Think of a situation where you faced *an immediate, concrete and overwhelming physical danger*. For example, something or somebody threatens to harm you and yours. The situation is unexpected and unpleasant, and you are uncertain about your ability to cope.

- **Serenity** - “*The quality or state of being peaceful; freedom from disturbance or agitation*”

Think of a situation where you experienced *the complete fulfillment of a want*. For example, you have achieved a valued goal, and now no longer have to put in any effort. The situation is pleasant, and you feel calm and secure.

- **Disrespect** - “*A lack of respect, holding someone in contempt*”

Think of a situation in which you felt someone did not deserve your respect. It could be someone in a position of authority. How would you show this feeling to others?

- **Pride** - “*The feeling of satisfaction deriving from some action, ability, possession, etc., which one believes does one credit*”

Think of a situation where you experienced *the enhancement of positive feelings about yourself by taking credit for a valued object or achievement*. For example, you (or someone you identify with) did achieve a valued goal. The situation is pleasant, and you deservedly receive the credit for the positive outcome.

B. Direct the actor to walk about 10 feet and:

Express the following emotions to another person:

- Surprise
- Sadness
- Contempt
- Shame
- Anger
- Embarrassment
- Happiness
- Disgust
- Fear
- Serenity
- Disrespect
- Pride

C. Vignettes:

Following are some situations. Please put yourself in this situation and act out the message we would like to convey:

### *Searching a Village*

Captain Jane Johnson along with her team is collecting intelligence in a small village. They are instructed to search from house to house to obtain information from the villagers.

- The team knocks on a door and an elderly man answers. Captain Jane Johnson reaches to shake his hand to greet the man. [A handshake is only an appropriate action between same sexes]
  - Action: Rather than shaking her hand, the man greets the Soldier by placing his hand on his heart and bowing slightly.
- The team approaches the next house and notices that the man who answered the door is armed. The Soldiers are anxious and start questioning the man about his family; including his wife and daughters [It is inappropriate to ask about female members of the family]. The man becomes agitated and asks them to leave.
  - Emotion/Action: Agitated; Points outward, directing them to leave
- The team approaches the third house and is allowed to enter. The man of the house encourages the team to have some chai. The team is in a hurry to check out the rest of the houses and declines. [Refusing hospitality can be seen as an insult.] The man of the house becomes offended, feels insulted, and asks them to leave.
  - Emotion: Contempt, Disrespected
- The team approaches another house and finds that no one in the house speaks English. The Soldiers pull out their manual and try to communicate in broken Arabic. The household appreciates their effort and finds their pronunciation comical.
  - Emotion: Happy

### *Member of a Convoy*

- MSG Johnson is the leader of a convey driving from city X to city Y. The convoy has been instructed not to stop for anything or anyone. During the drive, they see a traffic jam up ahead. Rather than stopping, the convoy plows through the traffic jam, hitting multiple cars in its path. Several civilians jump out of their car and stare at the convoy in shock/surprise that the Humvee just hit their car and kept driving.
  - Emotion: Surprise/shock
- In a crowded city street, an Iraqi is trying to make a left turn. He requests the approaching traffic to slow down by motioning with his hands.
  - Action: "Slow down"- By holding the fingers in a pear shaped configuration with the tips pointing up at about waist level and moving the hand slightly up and down signals "wait a little" or "be careful"<sup>1</sup>.
- An IED is found and a team is called over to secure the area and direct traffic. The Soldier uses hand signals to direct the Iraqi people. The Soldier is trying to hold up traffic by holding up the hand signal for stop (palm forward and out). The vehicle keeps proceeding towards the Soldier and the Soldier starts waving the hand signal to get the vehicle to stop. The Iraqi is confused and thinks that the Soldier is telling him to proceed. ['Come here' is demonstrated by "right hand out, palm down with fingers brought towards oneself repeatedly in a clawing motion"<sup>1</sup>].
  - Emotion: Confused
  - Collie said that Soldiers use signals that we would use here to try to direct traffic. Iraqis don't always understand our hand signals and the result can be fatal.

### *Guarding a Checkpoint*

- An elderly Iraqi approaches the checkpoint with a slight limp. The Soldier asks him to take off his outer garments to search him. The Soldier pats the elderly man down and then brings a dog over to assist. [Collie says that Iraqis are scared of dogs and don't like them being too close to them.]
  - Emotion: Fear
- A Soldier just completed searching an Iraqi man and shakes at him the "A-OK" sign. ["In the Arab world, if the A-OK gesture is shaken at another person it symbolized the sign of the evil eye. An Arab may use the sign in conjunction with verbal curses" <sup>1</sup>]. The Iraqis are insulted by this action.
  - Emotion: Anger
- A long line of civilians wait outside to get into the compound. The weather is extremely hot and the Soldiers hand out water to those standing in line. The Iraqis appreciate the cold water on a hot day and are happy.
  - Emotion: Happy

D. In your experience, please describe emotions and/or actions that you have perceived that Americans commonly misinterpret. Please act out each of these [request full front and side views].