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Cross-Cultural Competence in Army Leaders: A Conceptual and Empirical Foundation

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Military operations increasingly require Army leaders to anticipate the actions of, interact with, and influence individuals and groups whose cultural context differs widely from their own. The Army and other Services have responded by increasing the availability of language and regional training. These efforts develop the knowledge and skills needed to understand and interact with a particular population in a particular location. However, full-spectrum operations demand a broader cultural capability, whereby Army leaders are able to adapt successfully to any cultural setting. Meeting this capability will require the development of culture-general knowledge and skills as a necessary complement to language skills and regional knowledge. This report presents a framework for cross-cultural competence in Army leaders, reviews empirical research on predictors of intercultural effectiveness, and describes existing measures of cross-cultural competence and related constructs.

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FOREWORD

The U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) is the Army's lead laboratory conducting research, development, and analysis on training, leader development, and Soldier issues. ARI's focus is the human element in the Army. Within its mission, ARI conducts studies and analyses to address short-term issues and respond to emerging topics as requested by Army leaders or organizations.

The Cultural Understanding and Language Proficiency (CULP) study was conducted in response to a request from the U. S. Army Training and Doctrine Command (TRADOC), carried out under a memorandum for record between the Director of Center for Army Leadership, Combined Arms Center, and the Chief of the Leader Development Research Unit (LDRU), ARI. The goal of this study was to provide a scientific research perspective on increasing linguistic and cultural capability in the Army.

The CULP study had three objectives: 1) to identify the knowledge related to culture and identity needed by Army leaders, 2) to identify measures and predictors of effective performance in cross-cultural settings, and 3) to identify the extent to which proficiency in a foreign language provides transferable skills. This report addresses the second objective. The first and third objectives are addressed in two companion reports.

CROSS-CULTURAL COMPETENCE IN ARMY LEADERS: A CONCEPTUAL AND EMPIRICAL FOUNDATION

EXECUTIVE SUMMARY

Research Requirement:

Military operations increasingly require Soldiers to interact with individuals and groups whose cultural context differs from their own. The Army and other Services have responded by increasing the availability of language and regional training. These efforts develop the knowledge and verbal communication skills needed to understand and interact with a particular population in a particular location. However, full-spectrum operations demand a broader cultural capability, whereby Army leaders are able to adapt successfully to any cultural setting. Meeting this capability will require the development of culture-general knowledge and skills as a necessary complement to language skills and regional knowledge. Whereas language and regional expertise provide the depth to operate in a specific culture, cross-cultural competence provides leaders the breadth to operate in any culture.

Procedure:

This report presents a framework for cross-cultural competence in Army leaders, reviews empirical research on predictors of intercultural effectiveness, and describes existing measures of cross-cultural competence and related constructs. This report draws on literature from psychology, management, international business, and intercultural communication, identifying the characteristics of successful expatriate managers, study-abroad students, Peace Corps volunteers, and bicultural individuals that are relevant to Army leaders and Soldiers.

Findings:

This review provides support for cross-cultural competence as a culture-general construct that contributes to intercultural effectiveness across a range of different cultures and contexts. Cross-cultural competence is conceptualized as a set of knowledge, affect, and skill components that develop in response to experience, training, and education. Evidence shows that culture-general competencies contribute more to intercultural effectiveness than do more specific skills and knowledge, including language proficiency, culture/region-specific knowledge, and prior international experience. Traits such as extraversion, conscientiousness, emotional stability, and self-monitoring are also associated with adjustment and performance in intercultural settings.

Existing measures tend to conceptualize cross-cultural competence and related constructs in terms of one of three categories: multi-dimensional, developmental, or trait-based. Measures with validity evidence in the scientific literature were selected for review, and strengths and weaknesses of the measures are discussed.

Utilization and Dissemination of Findings:

Cross-cultural competence should be developed in a program that includes both culture-general and culture-specific components. Training, education, and self-development should target the competencies identified, and additional research should further specify competencies and determine the appropriate sequence of development. Although existing measures are available to measure some aspects of cross-cultural competence, the validity of these measures has not been established for a military population. Context and population differences warrant the development of measures specifically for the population of interest, with an emphasis on constructs and methods for use in training and development.

CROSS-CULTURAL COMPETENCE IN ARMY LEADERS: A CONCEPTUAL AND EMPIRICAL FOUNDATION

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Cross-Cultural Competence in Army Leaders: A Conceptual and Empirical Foundation

Military operations increasingly require Army leaders to anticipate the actions of, interact with, and influence individuals and groups whose cultural context differs widely from their own. The Army and other services have responded by increasing the availability of language and regional training. These efforts develop the knowledge and verbal communication skills needed to understand and interact with a particular population in a particular location. However, full-spectrum operations demand a broader cultural capability, whereby Army leaders are able to adapt successfully to any cultural setting. Meeting this capability will require the development of culture-general knowledge and skills as a necessary complement to language skills and regional knowledge. Whereas language and regional expertise provide the depth to operate in a specific culture, cross-cultural competence provides leaders the breadth to operate in any culture. Cross-cultural competence provides capability for a range of settings, including but not limited to interactions between two nations. This culture-general capability is particularly relevant when knowing one particular foreign culture or region is insufficient, such as in multinational operations, and when cultural differences are not just national or ethnic, but also organizational in nature.

U. S. involvement in Afghanistan and Iraq has prompted a recent surge of interest in culture within the military. Although very little research has addressed the leader and Soldier characteristics that contribute to success in such settings, a large body of literature on cross-cultural competence and related constructs has accumulated within other contexts. Research has examined the variables associated with intercultural effectiveness among other populations who live and work outside their country of origin for extended periods of time: expatriate managers, study-abroad students, and Peace Corps volunteers. This literature provides the basis for the current report, which reviews empirical research on variables associated with an individual's ability to adapt successfully to other cultures. In addition, previous attempts to identify and measure the characteristics that comprise cross-cultural competence are reviewed and applied to the military context.

A Framework for Understanding Cross-Cultural Competence

Working effectively in intercultural settings relates to outcomes in three domains: personal, work, and interpersonal. The personal domain consists of psychological and physical adjustment, including health and well-being, and general adjustment to the day-to-day aspects of living in a foreign culture. The work domain includes job performance and adjustment to work (Harrison, Chadwick, & Scales, 1996), as well as early termination vs. completion of the assignment (e.g., in Peace Corps volunteers – Detweiler, 1980; Mischel, 1965). The interpersonal domain refers to one's ability to communicate effectively and build relationships with individuals from other cultures. For the military context, a critical, additional interpersonal outcome is the ability to exert influence across cultural boundaries.

Because early termination is not a voluntary option for military personnel as it is for Peace Corps volunteers or for expatriate managers, cross-cultural competence is likely even more important for the Army than for other contexts. Expatriate managers, Peace Corps volunteers, or students can opt to terminate and return home; military personnel do not have comparable options for early return. The implications of this difference are not trivial; deploying Soldiers and leaders without the requisite

knowledge and skills to succeed may have consequences that extend far beyond the individual. The potential for individual Soldier actions to have far-reaching, sometimes strategic, consequences highlights the need for clear conceptualization and training of cross-cultural competence. In addition, these potential consequences highlight the need to consider outcomes in addition to job performance. Building interpersonal relationships across cultural boundaries has implications for overall mission success, even after the particular individual has left the area of operations, and personal adjustment outcomes may have implications for the organization's ability to retain and further develop individual leaders.

Cross-cultural competence refers to the knowledge, skills, and affect/motivation that enable individuals to adapt effectively in cross-cultural environments. Cross-cultural competence is defined here as an individual capability that contributes to intercultural effectiveness regardless of the particular intersection of cultures. Although some aspects of cognition, behavior, or affect may be particularly relevant in a specific country or region, evidence suggests that a core set of competencies enables adaptation to any culture (Hammer, 1987). This paper reviews previous research on the variables that contribute to those outcomes. Figure 1 depicts a model of cross-cultural competence and intercultural effectiveness, which reflects our synthesis of the literature and a preliminary attempt to organize it in a way that is relevant to Army leaders.

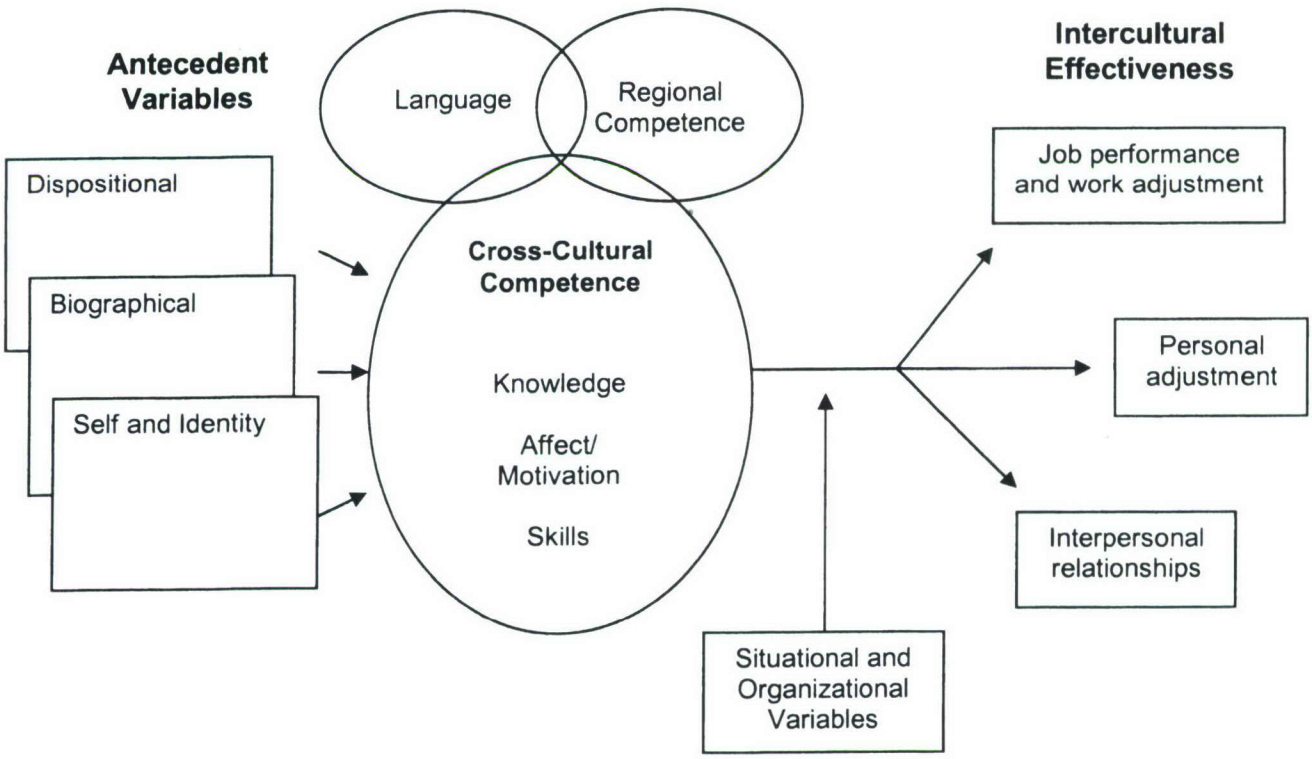

Figure 1. A general framework for cross-cultural competence in Army leaders

This model is intended to be comprehensive, including both antecedents to and consequences of cross-cultural competence. Cross-cultural competence is not an end in itself, but is a set of variables that contribute to intercultural effectiveness. Whereas previous models have tended to emphasize subjective outcomes, by focusing primarily on adjustment, outcomes of interest here include both subjective and objective outcomes. Objective outcomes, such as job performance, have been addressed in previous research, but to a lesser degree than the subjective outcomes. Research indicates that the outcomes are linked, with personal and interpersonal adjustment linked to work adjustment, which has in turn been linked with job performance (Shay & Baack, 2006). However, these relationships are small, and some research has demonstrated that subjective outcomes can diverge from objective outcomes (Kealey, 1989), with expatriates sometimes showing relatively poor adjustment but high effectiveness in their organizational role.

This paper focuses primarily on cross-cultural competence, which appears at the mid-level of this model with other characteristics of an individual that contribute most directly to intercultural effectiveness: cross-cultural competence provides culture-general capability, and regional/cultural expertise and language proficiency provide culture-specific capability. The research reviewed here focuses primarily on the characteristics and outcomes of individuals who face cultural differences at a national or societal level. However, the particular cultural expertise required in some circumstances may be of an organizational nature, rather than national or societal. Army leaders working with the other services, other government agencies, or non-governmental organizations may benefit from culture-specific knowledge of the particular organizations involved.

Some findings even suggest that differences at the organizational level, between military services and civilian organizations, may be more influential than differences at the national/societal level, between the militaries of different nations (Soeters, Poponete, & Page, 2006). Though 'intercultural' is generally assumed to mean 'international,' it also includes inter-service, interagency settings, to the extent that differences can be attributed to the culture of those organizations[1]. Because the research foundation for this model focuses almost exclusively on individuals working in foreign countries, we conceptualize the culture-specific portion of the model primarily as reflecting the culture of a host country or region.

The other predictors of effectiveness proposed in this model include distal, or antecedent, variables as well as more proximal, situational variables. Antecedent variables contribute to the development of cross-cultural competence and will therefore be discussed in detail. Other predictors are either omitted or will be mentioned only briefly in this report. For example, effective work performance in a cross-cultural setting is influenced by many of the same factors as work in a domestic or monocultural setting (e.g., technical competence), but because these factors are not unique to the cross-cultural setting, they are not addressed here. Other variables are directly related to the cross-cultural setting, but are a function of the situation rather than the person. Because these situational variables have particularly salient implications for military personnel, they are included but not addressed in great detail.

[1] Defining culture is not among the goals of this report, but the working definition for current purposes is that culture is a pattern of values, beliefs, and behavior shared among individual members of a group, organization, or other collective, and acquired through learning.

The components of cross-cultural competence and the antecedent variables likely predict outcomes differentially; some components may be better predictors than others for certain outcomes. We differentiate these outcomes in subsequent sections where indicated by the literature. The framework used here is intentionally broad, and the relevance of the various predictors is expected to differ for different roles and functions of military personnel working in a cross-cultural setting. The current framework may serve as a starting point for further specification of relationships by outcome or job function.

The remainder of this report is comprised of three parts. The first discusses empirical research on predictors of cross-cultural effectiveness and outlines a framework of cross-cultural competence. The second reviews existing measures of cross-cultural competence and related constructs. In the third, some recommendations for education, training, and further research are discussed.

Predictors of Intercultural Effectiveness

A list of antecedent variables and components of cross-cultural competence is included in Table 1. Evidence supporting the role of these variables is discussed in detail below.

Antecedent Variables: Dispositions

Previous work in the field of cross-cultural research has examined the influence of personality on the cross-cultural effectiveness of individuals working overseas. Some researchers argue that there is a direct relationship between personality and performance (see Hogan & Roberts, 2000). For example, both Mischel (1977) and Hogan and Roberts (2000) discussed the notion that initial cross-cultural experiences may be classified as weak or ambiguous situations, respectively. That is, when individuals first arrive in a host country they are confronted with many unknowns, such as uncertainty regarding the norms of behavior, social roles, and expectations. When individuals are operating in these ambiguous situations, personality may be the dominant factor that guides individual behavior (Shaffer, Harrison, Gregersen, Black, & Ferzandi, 2006). If so, then it is likely that some individuals may be more adept than others when placed in foreign environments. Prior research has suggested that personality, over technical competence, is important for effective overseas performance (Harris, 1973). Some researchers go so far to imply that there is an "overseas type" that adapts well in any cross-cultural situation (Kealey & Protheroe, 1996).

Big Five Traits

The personality traits known as the Big Five have received general research support as contributors to various outcomes, such as adjustment, performance, and termination. The Big Five include openness/intellect, conscientiousness, extraversion, agreeableness, and emotional stability (neuroticism). These traits were empirically derived using a variety of methods and represent a comprehensive approach to personality structure (Wiggins & Trapnell, 1997). In addition, these dimensions show high stability over the lifespan (Conley, 1985; Costa, McRae, & Arenberg, 1980; Johnson, McGue, & Krueger, 2005), particularly in adulthood (Hampson & Goldberg, 2006).

Table 1. Predictors of Intercultural Effectiveness

Construct	Dimension	Outcome	Citations
Agreeableness	Antecedent: Disposition	Interaction adjustment; job performance; desire to terminate assignment*	Caligiuri, 2000; Dalton & Wilson, 2000; Mol, Born, Willemsen, & van der Molen, 2005; Shaffer, Harrison, Gregersen, Black, & Ferzandi, 2006
Bicultural identity	Antecedent: Self and Identity	Flexibility in attributions; culture-specific affect; cognitive complexity	Benet-Martinez, Lee, & Leu, 2006; Benet-Martinez, Leu, Lee, & Morris, 2002; Chao & Moon, 2005
Cognitive complexity / category breadth	CCC: Knowledge	Termination of assignment (time completed)	Black et al., 1991; Detweiler, 1975, 1978, 1980
Conscientiousness	Antecedent: Disposition	General adjustment; job performance	Caligiuri, 2000; Dalton & Wilson, 2000; Mol et al., 2005; Ones & Viswesvaran, 1999; Shaffer et al., 2006
Coping, stress management	CCC: Skill	General adjustment	Feldman & Thomas, 1992; Hammer, 1987; Hammer, Gudykunst, & Wiseman, 1978; Selmer, 1999
Cultural distance	Situational	General and interaction adjustment*; culture-general and specific understanding*	Bhaskar-Shrinivas et al., 2005; Stahl & Caligiuri, 2005
Cultural knowledge, cross-cultural schema	CCC: Knowledge	General and interaction adjustment; culture-general and specific understanding	Bhawuk, 1998; Gannon & Poon, 1997; Wiseman et al., 1989; Takeuchi, Yun, & Russell, 2002
Emotional stability, emotional regulation	Antecedent: Disposition and CCC: Skill	General, interaction, and work adjustment	Ali, Van der Zee, & Sanders, 2003; Mol et al., 2005; Shaffer et al., 2006; Matsumoto et al., 2001; 2003; Yoo, Matsumoto, & LeRoux, 2006; Van der Zee & van Oudenhoven, 2000; van Oudenhoven, Mol, & Van der Zee, 2003
Empathy	CCC: Affect/Motivation	Interaction and personal adjustment; non-ethnocentrism; physical and mental health	Leong, 2007; Ruben, 1976; Stephan & Finlay, 1996; Van der Zee, Zaal, & Piekstra, 2003; van Oudenhoven & Van der Zee, 2002
Extraversion	Antecedent: Disposition	General and work adjustment; job performance	Caligiuri, 2000; Mol et al., 2005; Searle & Ward, 1990; Shaffer et al., 2006
Flexibility	CCC: Skill	General adjustment; intercultural stress management; job performance	Lievens et al., 2003; Mol et al., 2005; Ruben & Kealey, 1981; Shaffer et al., 2006; Redmond & Bunyi, 1991; van Oudenhoven & Van der Zee, 2002
Frame shifting / code switching	CCC: Skill	(See bicultural identity above.)	Benet-Martínez & Haritatos, 2005; Benet-Martínez et al., 2006; Hong et al., 2000; Perunovic et al., 2007
Gender	Antecedent: Biographical	General adjustment; interaction	Caligiuri & Cascio, 1998; Caligiuri & Tung, 1999;

		and work adjustment	Hechanova et al., 2003; Varma, Toh, & Budhwar, 2006
Initiative	CCC: Affect/Motivation	Interaction adjustment	Takeuchi et al., 2002
Interpersonal skills	CCC: Skill	General, interaction, and work adjustment; job performance	Bhaskar-Shrinivas et al., 2005; Cui & Awa, 1992; Cui & Van Den Berg, 1991; Hammer, 1987; Hammer et al., 1978; Hawes & Kealey, 1981; Hechanova et al., 2003; Smith, 1966
Language ability	Culture-Specific	General[†], interaction, and work adjustment; job performance	Bhaskar-Shrinivas et al., 2005; Hammer et al., 1978; Hechanova et al., 2003; Mol et al., 2005; Nishida, 1985; Redmond & Bunyi, 1993; Takeuchi et al., 2002; van Oudenhoven et al., 2003
Need for cognitive closure	CCC: Affect/Motivation	Interaction adjustment[*]; avoidance coping, avoidance of host nationals; stereotyping	Chiu et al., 2000; Kashima & Loh, 2006; Kosic, 2004; Kruglanski & Webster, 1996; Nicholls, Rothstein, & Bourne, 2002
Non-ethnocentrism	CCC: Affect/Motivation	Interaction adjustment; job performance; culture-general and -specific understanding	Hechanova et al., 2003; Shaffer et al., 2006; Wiseman et al., 1989
Nonverbal decoding	Culture-Specific	General adjustment; intercultural communication competence	Molinsky, Krabbenhoft, Ambady, & Choi, 2005; Yoo, Matsumoto, & LeRoux, 2006
Openness/Intellect	Antecedent: Disposition	Work adjustment; job performance; training performance	Ali et al., 2003; Lievens, Harris, Van Keer, & Bisqueret, 2003; Shaffer et al., 2006
Perspective taking	CCC: Skills	Non-ethnocentrism	Epley et al., 2004; Galinsky & Moskowitz, 2000; Stephan & Finlay, 1999; Wu & Keysar, 2007
Prior experience	Antecedent: Biographical	General, interaction, and work adjustment	Bhaskar-Shrinivas et al., 2005; Black, 1988; Hays, 1971; Hechanova et al., 2003; Kealey, 1989; Martin, 1987; Mol et al., 2005; Parker & Evoy, 1993; Takeuchi et al., 2005; Yavas & Bodur, 1999
Self-efficacy	Antecedent: Self and Identity	General, interaction, and work adjustment	Bhaskar-Shrinivas et al., 2005; Hechanova et al., 2003; Mischel, 1965; Palthe, 2004; Saks, 1995
Self-monitoring	Antecedent: Disposition	General and interaction adjustment; job performance[†]	Caligiuri & Day, 2000; Harrison et al., 1996; Kosic, Mannetti, & Sam, 2006
Tolerance for ambiguity	Antecedent: Disposition	Culture shock[*]	Nishida, 1985
Note: Relationships are positive in direction except where indicated by a [*], indicating a negative relationship, or a [†], indicating findings are mixed.			

Research has shown that these broad traits are useful in predicting work-related outcomes. In a meta-analysis that included self-, co-worker, and supervisor ratings of job performance, four traits – extraversion, emotional stability, agreeableness, and conscientiousness – were positively related to job performance, with only openness showing no relationship (Mol et al., 2005). In addition, although emotional stability and conscientiousness showed comparable correlations with performance for expatriate and domestic samples, extraversion and agreeableness showed larger correlations in the expatriate samples (Mol et al.). Providing further support for these two traits, extraversion and agreeableness also predicted decreased desire to terminate an overseas assignment (Caligiuri, 2000).

Closer examination of supervisor ratings shows somewhat different patterns. Conscientiousness emerged as the strongest predictor of supervisor-rated performance for American expatriates working overseas (Caligiuri, 2000). In addition, when managers rated hypothetical job applicants in a scenario-based exercise, conscientiousness emerged as the most important personality dimension for all outcomes considered: completion of assignment, job performance, and adjustment (Ones & Viswesvaran, 1999). In a sample of Middle Eastern expatriates, employees higher in conscientiousness and agreeableness received more positive performance ratings from their home country supervisor (Dalton & Wilson, 2000). However, other Big Five traits in this study were not related to home-country ratings, and none of the five showed significant correlations with rating from host-country supervisors. Thus, conscientiousness shows high consistency in its importance for performance outcomes.

Research on performance has shown mixed support for openness. Despite showing no predictive utility in a meta-analysis (Mol et al., 2005), openness more recently predicted both task and contextual performance outcomes, as rated by the expatriate and a coworker (Shaffer et al., 2006). Openness also predicted lower desire to terminate the assignment. Another study showed that openness to experience was positively related to cross-cultural training performance (Lievens, Harris, Van Keer, & Bisqueret, 2003).

In addition to predicting performance, the Big Five contribute to subjective outcomes of adjustment. Emotional stability positively related to psychological adjustment (Ali, Van der Zee, Sanders, 2003), interaction adjustment, and work adjustment (Shaffer et al., 2006). Openness predicted work adjustment (Shaffer et al., 2006) and, for expatriate spouses, related to psychological and sociocultural adjustment, as well as to intercultural interactions (Ali et al., 2003). Extraversion, agreeableness, and conscientiousness also positively relate to adjustment (Searle & Ward, 1990; Shaffer et al.), although do not always contribute to the same domains of adjustment. For example, agreeableness predicted interaction adjustment, whereas extraversion and conscientiousness were more relevant to general adjustment (Shaffer et al.).

The somewhat inconsistent findings across studies, as well as the relatively small effect sizes, provide rationale for seeking other predictors of intercultural effectiveness. Some researchers have argued that broad, dispositional traits like the Big Five may not be appropriate for the narrow domain of adjustment and performance in cross-cultural settings (Van der Zee & van Oudenhoven, 2000).

Tolerance for Ambiguity

As conceptualized by Frenkel-Brunswik (1949), tolerance for ambiguity is a general disposition that broadly influences cognition, attitudes, and behavior. Low tolerance for ambiguity is characterized by rigidity, dichotomous thinking, authoritarianism, and ethnocentrism. Research at organizational or national levels of analysis has examined a similar, but not identical, construct of uncertainty avoidance (Hofstede, 1980; House et al., 2004), showing cultural differences in this variable.

Tolerance for ambiguity has also been linked with intercultural outcomes. In a study of Japanese students studying in the U.S. (Nishida, 1985), participants and the researcher rated each student on seven interpersonal communication skills (cf. Ruben & Kealey, 1979). Several weeks later, students were also rated on their level of cross-cultural adaptation, measured by the level of culture shock (i.e., self-ratings of positive, negative, or neutral feelings about their international experience), psychological adjustment (i.e., three self-reported measures assessing participant's feelings toward life in America), and interaction effectiveness (i.e., self-reported feeling about interacting with Americans; researcher-reported assessment of effective interaction). Results indicated that behavioral ratings of tolerance for ambiguity were substantially related to culture shock. That is, individuals who were able to react to new and uncertain situations with minimal discomfort reported more positive feelings toward their experiences, and thus experienced less culture shock than those who were reacted to ambiguous situations with greater discomfort (Nishida, 1985). Despite these findings, there are problems with the conceptualization and measurement of tolerance for ambiguity (Furnham & Ribchester, 1995). The lack of consensus on a definition and the construct's component dimensions may limit its utility.

Self-Monitoring

Self-monitoring refers to an individual's motivation and ability to observe and adjust his/her behavior in a socially appropriate way depending on situational cues (Snyder, 1974). Self-monitoring is, in part, related to dispositional extraversion (Gangestad & Snyder, 2000) and has been demonstrated to have a biological basis, with research supporting the role of genetic influences (Snyder & Gangestad, 1986). Self-monitoring enables individuals to determine when and how to adjust their behavior, an ability that facilitates social interaction across divergent situations. A study of U.S. American expatriates working in Europe showed that individuals higher on self-monitoring reported feeling more adjusted to general life abroad and more comfortable interacting with host nationals (Harrison et al., 1996).

Although self-monitoring was unrelated to work adjustment in this sample (Harrison et al., 1996), other research has linked self-monitoring to job performance. Supervisors of U.S. expatriates working in a variety of countries provided ratings on subordinates' contextual performance (i.e., helping behaviors that benefit the organization) and expatriate specific performance (i.e., information transfer and language/culture proficiency) (Caligiuri & Day, 2000). Results indicated that low self-monitors were rated more positively by their supervisors on contextual performance, whereas high self-monitors received higher supervisor ratings on expatriate-specific performance. Additionally, high self-monitors were rated less positively on contextual performance than low self-monitors when rated by supervisors from a different nationality than the subordinate. Overall, findings suggest that self-

monitoring does affect performance, but direction of the relationship depends on the type of performance being evaluated.

Research on immigrant samples has also found support for self-monitoring. Polish immigrants to Italy who were higher in self-monitoring tended to show better social and personal adjustment than those lower in self-monitoring (Kosic, Mannetti, & Sam, 2006). High self-monitors also tended to associate more with host nationals than did low self-monitors, a pattern predictive of improved adaptation. Although immigrant and expatriate populations face somewhat different challenges, these findings converge with those from expatriate samples. That is, self-monitoring appears to be beneficial for general and social aspects of adjustment, and may be beneficial for work-related outcomes to the extent that job functions include cross-cultural interactions.

Antecedent Variables: Biographical

Prior Experience

Researchers have frequently discussed the importance of prior international experience in preparing individuals to work overseas. Prior experience may facilitate an individual's ability to adjust to and cope in different situations (Black, Mendenhall, & Oddou, 1991; Church, 1982; Louis, 1980). Empirical research has supported this rationale. One study showed that students who had previously spent between three and twelve months abroad felt they were better able to facilitate communication and were more aware of themselves and the culture (Martin, 1987). Others have linked prior experience with work adjustment (Black, 1988; Yavas & Bodur, 1999), interaction adjustment (Yavas & Bodur) and general adjustment (Parker & McEvoy, 1993). In addition, prior international experience may also improve training outcomes (Hays, 1971).

A variety of mechanisms for this relationship have been proposed. Kealey (1989) argued that previous experience may positively affect the expectations an individual holds about going abroad. A study of Canadian technical assistance advisors working in developing countries showed that people with prior international experience reported less difficulty in adjusting to overseas conditions, were more satisfied and less stressed, and felt that they were better able to transfer skills and knowledge to others than those lacking past experience (Kealey). Consistent with those findings, Black (1988) suggested that prior experience may mitigate feelings of uncertainty that arise in cross-cultural situations, which may in turn improve adjustment. Another explanation is motivational in nature; previous cross-cultural experience may strengthen an individual's interest and desire to learn about a new culture (Triandis, 1995; Hays, 1971). Prior international experience may also have more enduring effects, with such experiences shaping one's values, cognition, and ultimately personality (Ronen, 1989).

Despite these arguments for the benefits of prior experience, other research suggests that prior international experience can, but does not necessarily improve cross-cultural effectiveness. Meta-analysis has shown that prior international experience has small associations with adjustment (general/personal, interaction, and work – Bhaskar-Shrinivas et al., 2005; Hechanova et al., 2003). However, it appears unrelated to job performance overseas (Mol et al., 2005; Sinangil & Ones, 1997) and is a relatively weak predictor even of adjustment, with language, self-efficacy, and interpersonal

skills all showing larger effects (Bhaskar-Shrinivas et al.). Some researchers have therefore concluded that prior international experience is "of little practical use as a predictive tool" (Bhaskar-Shrinivas et al., p. 268).

An alternative perspective is that the role of prior experience may be more complex than previous research has acknowledged. Taking a micro-view of previous international experience, some researchers argue that this domain is actually multidimensional. That is, different types of international experience (i.e., current/tenure, prior, work, non-work, and culture-specific experience) may differentially affect outcomes (Takeuchi, Tesluk, Yun, and Lepack, 2005). In examining adjustment of Japanese expatriates working in the U.S., one study showed that current assignment tenure was positively related to both work and general adjustment, but that this relationship was moderated by the length of previous work experiences. For expatriates with shorter prior international assignments abroad, current tenure had a more positive effect on work adjustment than for those with longer previous international work assignments. For expatriates with shorter, culture-specific (i.e., in the same country they are currently working in) prior international assignments, current tenure had a more positive effect on general adjustment than it did for those with longer international work assignments. These findings provide evidence that closer examination of the nature and role of previous cross-cultural experiences is warranted. In particular, a consistent and conceptually meaningful measurement approach to international experience is needed.

Gender

According to the Global Relocation Trends Survey (2005), women now make up 23% of the expatriate population. Although the number of women expatriates is on the rise, women still remain in the minority for international assignees compared to their male counterparts. This difference persists despite research suggesting that women and men do not differ in their desires to engage in an international assignment (Adler, 1986, 1987). As more women enter the global market, interest has also grown in understanding whether gender makes a difference in the cross-cultural success of expatriates. Some scholars have suggested that expatriate gender may influence effectiveness abroad, but empirical evidence has been equivocal.

Some research has shown that gender is not a distinguishing factor for cross-cultural success. For instance, Parker and McEvoy (1993) showed that gender was not correlated with any of the three types of adjustment. However, subsequent work has implied that gender may, in fact, be a relevant variable for international assignments. Research comparing female and male expatriates suggests that women and men may be equally successful on outcomes such as supervisor-rated performance and retention, but that women may be less successful at adjusting in certain cross-cultural settings (Caligiuri & Tung, 1999). Specifically, one study of expatriates suggested that women may have more difficulty adjusting in countries where fewer women are active in the workplace or where relatively few women hold management positions (Caligiuri & Tung, 1999).

Although many predictors of cross-cultural success do not depend on gender, Caligiuri and Cascio (1998) suggest that one factor, namely host-country attitudes towards expatriates, may differentially affect female expatriates. One study found that women tended to be less adjusted in countries high on the cultural dimensions of masculinity and uncertainty avoidance (Caligiuri & Tung,

1999). However, there were no differences by gender for supervisor-rated performance or prematurely ending the assignment. Additionally, men and women did not differ on ratings of cross-culture success (i.e., early termination, adjustment, performance) when considering a country's standing on the cultural value dimensions of power distance or individualism/collectivism.

Alternatively, some research has suggested that being female may have advantages. A meta-analysis by Hechanova et al. (2003) revealed that women expatriates reported higher levels of interaction adjustment (with host nationals) than men. Women from the U.S. were also less likely than U.S. men to be categorized as a member of the out-group by host national employees (both men and women) when presented with information about a prospective co-worker (Varma, Toh, & Budhwar, 2006). Furthermore, women do not seem to perceive their gender as a disadvantage. In a survey of female expatriates working in various locations in Asia, 42 percent believed that being female was advantageous to their international success. This could be because they were more visible to their foreign counterparts, and thus received more attention, displayed quality interpersonal skills, or benefited from the assumption that they were highly skilled if sent to a country where women are less likely to hold positions of management (Adler, 1987). Another study showed that male and female expatriates felt they were equally able to achieve their organizational objectives abroad (Tung, 2004).

Age

Although age of the expatriate is not related to some adjustment outcomes (Hechanova et al., 2003), age has shown a small relationship with work outcomes. In expatriates on assignment in Singapore, age was positively correlated with work adjustment (Templer, Tay, and Chandrasekar, 2006), a finding supported by meta-analysis (Hechanova et al., 2003). Meta-analysis has also revealed positive effects of age on expatriate job performance (Mol et al., 2005).

Antecedent Variables: Self and Identity

We identified a third set of antecedent variables that includes constructs related to the self. Mendenhall and Oddou (1985) argued for a self-oriented dimension as one of several dimensions related to the adjustment process overseas. This dimension includes an expatriate's feelings of self-confidence, the self-concept, and general well-being. Early research on Peace Corps volunteers showed that ego strength was predictive of volunteer success in teaching and interpersonal interaction (Mischel, 1965). Though the self-related constructs may overlap with or be influenced by dispositional traits, they may be domain-specific and are likely less stable, emerging from the interaction of an individual with his or her environment (Bandura, 1997). Research has focused on two aspects of the self in predicting cross-cultural effectiveness.

Self-Efficacy

Bandura (1997) defined self-efficacy as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (p. 3). Individuals high in self-efficacy may be more likely to persist in overcoming obstacles in an unfamiliar setting. Research has supported

the link between self-efficacy and domestic adjustment (Saks, 1995), as well as expatriate adjustment (Palthe, 2004; Hechanova, Beehr, & Christiansen, 2003). A study of U. S. expatriates indicated that greater self-efficacy was associated with both higher work and interaction adjustment (Palthe, 2004). This relationship is supported by meta-analytic findings that self-efficacy is related to both interaction and work adjustment (Bhaskar-Shrinivas et al., 2005; Hechanova et al.), as well as general adjustment (Hechanova et al.).

Cultural Identity

Another aspect of the self that may be relevant for intercultural effectiveness is cultural identity. Published research linking cultural identification to cross-cultural performance has focused primarily on the effects of identification with specific national cultures or ethnic groups on acculturation, adaptation or performance within that particular context (e.g. Berry, 1987; Forehand, Deshpande, & Reed, 2002; Tajfel, 1982; Ward & Kennedy, 1994). A range of conceptual models suggest ways in which complex interrelations among identity components may be beneficial for cultural adaptation and interpersonal interaction (Benet-Martinez, Lee, & Leu, 2006; Chao & Moon, 2005; LaFromboise, Coleman, & Gerton, 1993; Markus & Kitayama, 1991). Researchers of global identity, defined generally as identification with a higher-level world culture, have argued for this identity facet as predictive of various processes. However, published empirical research is scarce, and has come from different perspectives on measurement of the construct (Arnett, 2002; Leslie, Dalton, Ernst, & Deal, 2002; Shokef & Erez, 2006).

Thus, although cultural identity is implicated as an important organizing force for specific cross-cultural skills and processes (cf. Chao & Moon, 2005; Elron, Shamir, & Ben-Ari, 1999), basic research is needed. First, novel constructs such as global identity must be clearly defined in a way that transfers across research contexts. Second, empirical research needs to establish the criterion validity of these identity elements. Third, interrelationships and interactions among various identity facets must be empirically tested as well. As the research currently stands, empirical evidence does not support strong assertions about the role of cultural identity in predicting cross-cultural outcomes.

Cross-Cultural Competence

Research has identified traits and other personal characteristics that predict intercultural effectiveness, but the relationships have tended to be small and sometimes inconsistent. Focusing more specifically on what individuals know, do, and feel with regard to cross-cultural experiences may be a more productive approach. As defined here, cross-cultural competence refers to the knowledge, affect/motivation, and skills that enable individuals to adapt effectively in cross-cultural environments (see Table 2). The definition and structure adopted here are patterned after previous conceptualizations of interpersonal competencies and intercultural communication (Chen & Starosta, 1996; Spitzberg, 1990, 1991; Wiseman, Hammer, & Nishida, 1989), but are construed more broadly. The dimensions presented here not only directly support effective intercultural communication, but also contribute to personal adjustment and work outcomes. Some knowledge and skills, such as cognitive complexity and perspective taking, are relevant even when job functions may not necessarily include routine interaction with foreign nationals (intelligence analysis or operational planning).

In addition, we conceptualize cross-cultural competence as a developmental construct, for which the component dimensions may show substantial shifts over time. Thus, cross-cultural competence is defined here as dynamic in nature. Traits or competencies for which evidence suggests a high degree of stability appear only in the antecedent variables of the model presented in this report. This approach is consistent with some perspectives in the expatriate literature (Leiba-O'Sullivan, 1999) and intercultural communication (Bennett, 1986, 1993). The emphasis here on dynamic competencies is intended to provide a model useful for training and education efforts. Whereas research on expatriate managers has frequently targeted traits for selection purposes, the Army does not have the luxury of deploying only personnel with the preferred personality profile. Such a profile may be useful for particular assignments, but full-spectrum operations require that every Soldier have some degree of cross-cultural competence.

Despite similar distinctions in previous frameworks, research on cross-cultural skills provides little empirical basis for the stable vs. dynamic distinction. Theoretical work has emerged to address this issue in the context of cross-cultural training and education (Oddou, Mendenhall, & Ritchie, 2000; Leiba-O'Sullivan; Shaffer et al., 2006; Yamazaki & Kayes, 2004). However, empirical work still lags behind, and the existing empirical literature on cross-cultural training has been criticized for its lack of methodological rigor (Kealey & Protheroe, 1996).

In addition, cross-cultural training does not explicitly target the competencies identified as contributing to intercultural effectiveness. Although empirical research has found some skill sets to be responsive to training, such as interpersonal skills (Deshpande & Viswesvaran, 1992), studies do not necessarily distinguish between the end result (intercultural effectiveness) and the changes in trainees that enabled that result (cross-cultural competence). For example, one meta-analysis found cross-cultural training in general to have small positive effects (Morris & Robie, 2001), but did not distinguish between skill development and performance in the cross-cultural setting. Few studies designed to evaluate the effectiveness of training have linked the specific knowledge or skills targeted by the training to performance or adjustment outcomes. This pattern may reflect the atheoretical nature of much of cross-cultural training and limits the contribution of the training literature to the development of a model of cross-cultural competence[2]. Thus, although the dynamic nature of many competencies described here has been established by previous research, the degree to which each is developmental or directly trainable may vary substantially. In addition, research regarding some of the competencies is suggestive rather than conclusive in linking to cross-cultural outcomes.

Table 2. Three Components of Cross-Cultural Competence

Knowledge and Cognition	Affect and Motivation	Skills
Cultural awareness	Attitudes and initiative	Interpersonal skills
Cross-cultural schema	Empathy	Self-regulation
Cognitive complexity	Need for closure	Flexibility

[2] Although theories of cross-cultural adjustment, acculturation, and learning are relevant to training, the development of and research on cross-cultural training has infrequently drawn on those theories. See work by Selmer and colleagues (e.g., Selmer, Torbiörn, & de Leon, 1998) and on the culture assimilator (e.g., Fiedler, Mitchell, & Triandis, 1971) for exceptions.

Knowledge and Cognition

Cultural Awareness and Cross-Cultural Schema

The term cultural awareness is generally used to refer to awareness that culture shapes beliefs, values, and behavior and that one's own beliefs, values, and behavior reflect a cultural context. Increasing this awareness is a common goal of cross-cultural training (Bhawuk & Brislin, 2000), including training funded by the military (Kraemer, 1973), with self-assessment exercises frequently recommended to support this approach (Brislin & Yoshida, 1994). However, exactly what this awareness contributes to intercultural effectiveness is unclear. It may be that such cultural self-awareness is a prerequisite for developing other cultural knowledge, but may not contribute directly to intercultural outcomes.

Evidence points more directly to the role of awareness and understanding of other cultures. Relevant knowledge includes both a culture-specific component, an understanding of the particular culture in which one will operate, and a culture-general component, an understanding of cultural differences in general. To distinguish these two types of knowledge, we refer to culture-general knowledge as cross-cultural schema, as this knowledge may be abstracted from the specific cultures or experiences on which it is based. Culture-specific knowledge will be discussed separately in a subsequent section.

Previous conceptualizations of intercultural communication competence have included cross-cultural schema (Wiseman, Hammer, & Nishida, 1989), and this knowledge has more typically been treated as an outcome variable rather than a predictor. Despite the emphasis on knowledge in cross-cultural training, evidence for the contribution of cross-cultural schema to intercultural effectiveness is limited. In one study, training on culture-general concepts, such as cultural metaphors, Hofstede's dimensions, and Kluckhohn and Strodbeck's dimensions, produced gains in perceived competence on posttest relative to pretest scores, but not cultural interest or cultural awareness (Gannon & Poon, 1997).

Another approach to cross-cultural schema is represented by the culture assimilator, a technique used in cross-cultural training. Brislin (1986) developed a culture-general assimilator that included themes of anxiety, disconfirmed expectations, ingroup-outgroup distinctions, prejudice, and attributions. One study showed that such training in culture-general themes and principles was helpful, but not for all criterion measures (Bhawuk, 1998). Culture-general training improved the use of culture-appropriate attributions, but did not impact category width or behavior in an intercultural interaction.

These results are consistent with other research using a culture-general assimilator, which found no overall advantage relative to a control group in terms of culture shock, but did find improvement in attributions, interpersonal problem-solving, and ability to analyze cultural misunderstandings (Cushner, 1989). Thus, culture assimilators are quite effective for improving knowledge and attributional skills of cross-cultural competence, but the knowledge and skills resulting from assimilator training have not yet been clearly measured and directly linked to cross-cultural outcomes. Research suggests that the cross-cultural schema addressed by culture assimilators may be linked with other cross-cultural skills. For example, learning to make culturally-appropriate

attributions may help in managing negative emotions that arise in intercultural interaction (Landis, Brislin, & Hulgus, 1985) and contributes to perspective taking, a skill discussed below.

Cognitive Complexity

Working outside one's own culture entails unexpected situations and experiences that may not fit into existing categories and scripts. Increasing complexity in one's understanding of culture or of a particular culture helps in interpreting these experiences and applying the new knowledge in future situations. This dimension is critical to the process of learning about culture (Triandis, 1972) and relates to perceptual components of other models (Kelley & Meyers, 1995; Leiba-O'Sullivan, 1999; Mendenhall & Oddou, 1985). Although empirical research on this aspect of cross-cultural competence is scarce, several sources point to its importance.

Detweiler (1975, 1978) operationalized cognitive complexity in terms of category width and related it to the process of making attributions for the behavior of individuals from another culture. Category width refers to the amount of variability allowed in a single category of objects or events. Narrow categories show little within-category variability between exemplars, whereas wide categories reflect a more complex representation. This cognitive style is important in cross-cultural settings because narrow categories result in consideration of a restricted range of explanations, causing the individual to overlook culturally-based explanations. When participants evaluated the behavior of a target from a different culture (Haiti), American participants with narrow categories were more likely to perceive negative outcomes of that behavior as intentional than when the same behavior was performed by a culturally-similar target. Individuals with wide categories were more likely to withhold judgment, implying that they considered a range of explanations as potentially appropriate, at least at an implicit level. Category width also predicted early termination of service in Peace Corps volunteers (Detweiler, 1980), with narrow categorizers terminating much earlier than moderate and wide categorizers. Detweiler's results (1978) support the view of category width as a cognitive style distinct from attitudes, as ethnocentrism did not account for the differing attributions.

More recently, theorists have argued for the role of sensemaking processes in cross-cultural adjustment (Black et al., 1991; Osland & Bird, 2000). These processes enable individuals to cope when expectations are violated and to continue learning about a culture over time. An increasingly complex understanding of culture allows one to recognize and make sense of cultural paradoxes – apparent contradictions between cultural values or practices that emerge as one becomes more familiar with a foreign culture (Osland & Bird). In addition, one must be able to distinguish when cultural factors are a primary influence on behavior, and when other factors are more relevant, such as immediate situational variables or individual differences (cf. Matsumoto, Grissom, & Dinnel, 2001). Cognitive complexity requires continual learning and updating of one's knowledge base as new situations are encountered. Persistent reliance on generalizations (e.g., stereotypes), even when expectations are inevitably violated, will cause one to miss out on subtle, but important cultural cues (Bird, Osland, Mendenhall, & Schneider, 1999). Although a superficial understanding of cultural difference may be sufficient for initial or brief contact with other cultures, such a view will be limiting where there is prolonged contact with a specific culture.

Affect and Motivation

Attitudes and Initiative

Although past research has shown that attitudes are not always a good predictor of behavior (LaPiere, 1934), attitudes appear to be a very useful predictor of intercultural outcomes. Previous research has addressed attitudes toward other cultures using several different, but overlapping constructs, such as non-ethnocentrism, tolerance, and sensitivity. One study of intercultural communication competence showed non-ethnocentrism to be the strongest predictor of understanding of foreign cultures and impressions of a specific foreign culture (Wiseman, Hammer, Nishida, 1989), relative to attitudes toward and knowledge of the specific culture. More recently, Shaffer et al. (2006) showed that non-ethnocentrism predicted variance in interaction and work adjustment beyond that predicted by the Big Five dispositions, demonstrating that attitudes toward other cultures are distinct from personality traits in contributing to intercultural outcomes. Meta-analytic findings also provide evidence for the importance of attitudes relative to context-specific predictors (Mol et al., 2003), with cultural sensitivity emerging as a more consistent predictor of job performance than language ability and prior international experience. It is unclear to what extent these attitudes may be related to dispositional openness, but the Shaffer et al. findings suggest that at least some portion of open-mindedness toward other cultures is not explained by disposition.

Research has also examined attitudes in terms of social initiative, or willingness to communicate when in cross-cultural settings (Mendenhall & Oddou, 1985; Takeuchi, Yun, & Russell, 2002). If an individual is uninterested or unwilling to verbally interact with the host nationals of a foreign culture, it may be difficult for him or her to adjust to and function effectively in the new environment. These attitudes may also serve as an obstacle to learning about the culture. In a study of Japanese expatriates on assignment in the United States and their spouses (Takeuchi et al.), willingness to communicate positively and significantly related to interaction adjustment. Overall, these findings show that attitudes toward other cultures and motivation to engage in intercultural interactions are important both to adjustment and to job performance in cross-cultural situations.

Empathy

Although certain variables are frequently mentioned in the literature as being important for intercultural effectiveness, not all of these relationships have been empirically linked to outcomes. Empathy is an example of a variable that is often discussed, but rarely tested. Kim (1986, as cited in Cui & Awa, 1992) suggested that empathy is particularly important for intercultural communication, and others have included it as either a central (Cui & Van der Berg, 1991) or a secondary (Hays, 1971) aspect of intercultural communication competence. Empathy has been defined as the ability to "'put oneself in another's shoes' or to behave as if one could," where "some people are able to project as interest in others clearly and seem able to obtain and reflect a reasonably complete and accurate sense of another's thought, feelings, and/or experiences" (Ruben, 1976, p. 340). For the present purposes, we distinguish between emotional empathy, the ability to *feel* as another person feels, and cognitive empathy, the ability to *think* as another person thinks. To distinguish them, cognitive empathy is termed perspective-taking here and is discussed as a skill below. The two may be cognitive and

affective components of the same process, but may or may not develop in tandem, and thus are distinguished here as in some previous research (e.g., Stephan & Finlay, 1999).

Recent empirical research has begun to provide support for the role of empathy. In exchange-student samples, empathy predicted interaction and personal adjustment (Leong, 2007), as well as more specific adjustment outcomes of physical health, mental health, subjective well-being, and peer support (van Oudenhoven & Van der Zee, 2002). Empathy has also been linked to behavioral competency in a non-student sample (Van der Zee, Zaal, & Piekstra, 2003). Researchers found that job applicants' self-reported levels of empathy were positively related to behaviors observed by assessment-center personnel, who rated applicants on leadership, decisiveness, initiative, problem-solving, stress tolerance, and other characteristics demonstrated in interviews and exercises. An earlier study found no correlation between empathy and adjustment, effectiveness, or culture shock (Nishida, 1985); however, the sample size in this study was very small (17 students) and relied on only a behavioral measure of empathy.

Need for Closure

The need for cognitive closure is a motivational factor related to, but distinct from dispositional tolerance for ambiguity. It refers to the motivation to find immediate answers and solutions and to resist any new information that conflicts with those answers (Kruglanski & Webster, 1996). Need for closure includes the need for structure and predictability, a tendency toward decisiveness and closed-mindedness, and low tolerance for ambiguity (Webster & Kruglanski, 1994). Individuals high in need for closure are more likely to rely on stereotypes and to be resistant to revising stereotypes in light of new information (Kruglanski & Webster). This tendency has been shown to shift in response to situational constraints; for example, time pressure increases the motivation to achieve closure (Chiu, Morris, Hong, & Menon, 2000; Kruglanski & Webster).

Research on the need for closure in intercultural contexts is limited, but provides evidence that this construct deserves further attention. In one study, immigrants with higher need for closure reported using avoidance coping strategies in adjusting to the new culture, which was also linked to reduced contact with host nationals (Kosic, 2004). Other studies suggest that need for closure is particularly important for personal and interaction adjustment. In expatriates, higher levels of need for closure were associated with lower social adjustment and lower cultural sensitivity, but not with work-related outcomes of work adjustment and job satisfaction (Nicholls, Rothstein, & Bourne, 2002). In another study, study-abroad students high in need for closure experienced more distress than did students low in need for closure (Kashima & Loh, 2006).

Experimental research has shown that individuals higher in need for closure tend to rely more heavily on implicit cultural theories (Chiu et al., 2000), causing them to make ethnocentric attributions for behavior. This tendency provides one explanation for the intercultural adjustment difficulties experienced by these individuals. Knowledge and assumptions from one's own culture may be a mismatch for the new environment, and high need for closure would interfere with adopting more appropriate alternatives.

Skills

Interpersonal Skills

Interpersonal skills have long been recognized as critical to the success of individuals working overseas. Intercultural communication competence has been conceptualized by some researchers as consisting primarily of interpersonal skills, such as the ability to initiate conversation and the ability to establish and maintain relationships (Cui & Van Der Berg, 1991). Although other researchers distinguish communication skills from relationship skills (e.g., Hammer, 1987), there is general agreement on the importance of the two. These skills are related to holding non-ethnocentric attitudes, but also depend on one's ability to convey those attitudes through behavior. Individuals who interact successfully across cultures are able to display respect and maintain a nonjudgmental stance in interaction (Ruben & Kealey, 1979).

Interpersonal skills have consistently shown predictive utility. In a study of Peace Corps teachers working in Ghana, a performance factor emerged that included both items directly related to teaching and items on interpersonal relationships (Smith, 1966). Conveying warmth toward students, showing consideration toward the local adults, and displaying tact were important to effective performance. In fact, research has shown interpersonal skills to be the strongest overall predictor of outcomes rated both by the self and by host nationals (Cui & Awa, 1992; Hawes & Kealey, 1981). In addition, recent meta-analyses found that interpersonal skills were predictive of general adjustment (Hechanova et al., 2003) and interaction and work adjustment (Bhaskar-Shrinivas et al., 2005).

It is not the case that interpersonally-skilled individuals are naturally at ease in cross-cultural settings. In a study of technical advisors working in international development, higher interpersonal skills were associated with greater initial adjustment difficulty (Kealey, 1989). However, these findings also showed that interpersonal skills were associated with better transfer of skills to the local counterpart, confirming the importance of these skills for job performance. Such findings have led some researchers to conclude that relational skills are more important than context-specific predictors, such as prior international experience and language skills.

Interpersonal skills represent a potentially very broad category of skills that need further specification, as noted in previous research (Bhaskar-Shrinivas et al., 2005). For example, in Hawes and Kealey's research (1981), interpersonal skills were comprised of items related to flexibility, respect, listening skill, relationship building, self-control under stress, sensitivity to host country issues, some of which have emerged as separate constructs in other research. In addition, some interpersonal skills are likely to have important roles in job performance and goal achievement, such as conflict resolution and negotiation skills, whereas others are more directly relevant for relationships, like rapport-building and nonverbal communication. Further research is needed to identify how specific interpersonal skills contribute to intercultural outcomes.

Self-Regulation

Whereas interpersonal skills have been linked primarily to positive work and interpersonal outcomes, self-regulation is important to personal adjustment. Self-regulation refers to emotion

regulation, stress management, and coping, constructs that are consistently represented in empirically-derived definitions of cross-cultural competence. Stress management has been identified as a critical component of intercultural communication competence (Hammer, 1987; Hammer, Gudykunst, & Wiseman, 1978), and emotional regulation has emerged as an independent factor in intercultural measures (Matsumoto et al., 2001; Van der Zee & Van Oudenhoven, 2000). This facet has a clear basis in disposition, with trait measures of emotional stability successfully predicting intercultural outcomes in the interpersonal and work domain (e.g., Caligiuri, 2000; Shaffer et al., 2006), but research also suggests that self-regulation is a skill set that can be developed for cross-cultural assignments. Self-regulation is generally included in definitions of emotional intelligence (Matthews, Zeidner, & Roberts, 2002), which increasingly appears not to be a stable mental ability, but rather a set of knowledge and skills that are, at least in part, context-dependent (Matthews et al., Ch. 13). Thus, self-regulation can potentially be trained (Bar-On, Maree, & Elias, 2007; Ciarrochi & Mayer, 2007).

In the cross-cultural domain, emotion regulation appears to be especially important for personal and interpersonal outcomes. Emotion regulation has been shown to predict subjective adjustment, satisfaction with life, and culture shock in immigrant and expatriate samples (Matsumoto et al., 2003). In addition, emotional stability has been linked with flexibility to form a single factor, referred to as adaptation (Van der Zee, van Oudenhoven, & de Grijs, 2004). Participants high in adaptation appraised a stressful intercultural situation as less threatening than did participants lower in adaptation (Van der Zee et al., 2004). Recent research has shown emotional regulation to be the most consistent predictor of adjustment (van Oudenhoven, Mol, & Van der Zee, 2003).

Self-regulation in a cross-cultural setting may be reflected in one's choice of coping strategies. Coping has been defined as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands" (Lazarus & Folkman, 1984: 141, as cited in Aycan, 1997, p. 448). Coping strategies may be either problem-focused, which involve active attempts to manage the environment or source of stress, or symptom-focused, which tend to focus more on the negative emotion itself rather than the source of the emotion (Selmer, 1999; Stahl & Caligiuri, 2005; Folkman, & Lazarus, 1980).

Research has shown that these coping strategies differentially affect expatriate effectiveness abroad. For example, one study (Feldman and Thomas, 1992) found that the symptom-focused strategy of palliative coping (e.g., engaging in drinking or sleeping to minimize intense feelings) was negatively related to intent to remain on the assignment. Another study of expatriates working in China investigated the role of problem-focused strategies (i.e., tolerance, problem-solving, involvement) and symptom-focused strategies (i.e., dreaming of being home, spending time with other expatriates) as they related to adjustment (Selmer, 1999). Results showed that problem-focused coping strategies were positively related to work and nonwork adjustment, whereas symptom-focused strategies were negatively related to nonwork, interaction, and psychological adjustment. Although the choice of coping strategies may depend on other variables (e.g., the expatriate's culture of origin, Selmer, 2002; cultural distance, Stahl & Caligiuri, 2005), research suggests that problem-focused strategies are preferable to symptom-focused strategies in regulating the emotions that arise when living and working in a foreign culture. Future research on proactive coping (Aspinwall & Taylor, 1997) would be valuable, particularly as a component of cross-cultural training aimed at anticipating and minimizing potential stressors.

Flexibility

Flexibility refers to the ability to adjust one's behavior or cognitive frames of reference in response to situational cues – in particular, in response to cultural cues. The same concept has also been referred to as adaptability (Lievens, Harris, Van Keer, & Bisqueret, 2003; Redmond & Bunyi, 1993) and has been identified by expatriates as an important contributor to successful completion of international assignments (Arthur & Bennett, 1995; Arthur, Bennett, Edens, & Bell, 2003; Graf, 2004). Research has linked flexibility to various intercultural outcomes. Black (1990) found that flexibility correlated with general, interaction, and work adjustment in a sample of Japanese expatriates working in the U.S. Another study found that flexibility predicted both general and work adjustment in expatriate managers working in a variety of countries (Shaffer et al., 2006). Flexibility also has benefits in cross-cultural training for European managers preparing to work in Japan (Lievens et al., 2003). Results showed that manager trainees who were "willing and able to adjust to changing demands and objectives" (pg. 478) performed better in training and scored higher on tests of language acquisition.

Although one meta-analysis did not find flexibility to be a significant predictor (Mol et al., 2005), the analysis included few studies that measured it, and those studies may have operationally defined it quite differently. For example, Mendenhall and Oddou (1985) have discussed the importance of flexibility with regard to reinforcement, or finding substitutes for the rewarding activities that an expatriate would normally enjoy at home, a definition adopted by some researchers (Shaffer et al., 2006). Others have described flexibility in terms of interpersonal behavior (Hawes & Kealey, 1981; Redmond & Bunyi, 1993) or of roles (Ruben & Kealey, 1979).

The contribution of this characteristic is unclear due to the lack of consensus on its definition and a corresponding measure; thus, it may be worthwhile to discard the term in favor of terminology more reflective of the intended meaning. As conceptualized here, flexibility may encompass several more specific skills, including perspective taking, frame shifting, and code switching.

Perspective taking refers simply to the ability to see events as another person sees them. Related constructs include empathy and social decentering. Each includes the suspension of egocentrism in order to experience an alternate affective or cognitive state. Although empirical research has not addressed perspective taking as a specific aspect of cross-cultural competence, perspective taking is a particularly important skill to develop, as the United States' individualistic national culture seems to foster egocentrism. One recent study showed that American participants failed to consider the perceptual perspective of a communication partner, a pattern vastly different than that of Chinese participants (Wu & Keysar, 2007). Thus, Americans may generally lack this skill, which could put U.S. military leaders at a disadvantage when attempting to work against a more collectivist adversary or within a foreign population that engages this skill far more readily. In addition, the conditions under which military personnel must operate may further inhibit perspective taking. One study showed that perspective taking occurred more slowly when the task included time pressure, which caused participants to stop the attribution process before the adjustment from an egocentric interpretation could occur (Epley, Keysar, Van Boven, & Gilovich, 2004).

Further research is needed to link perspective taking directly to intercultural outcomes, but indirect links have already been demonstrated. Low levels of perspective taking are associated with greater stereotyping (Galinsky & Moskowitz, 2000) and prejudice (Galinsky & Moskowitz; Stephan & Finlay, 1999), which are themselves predictive of intercultural adjustment and communication competence, as discussed above (Shaffer et al., 2006; Wiseman et al., 1989).

Frame shifting and code shifting are cognitive and behavioral tendencies, respectively, to apply different schemas depending on the current situational context. Frame shifting requires an individual to detect situational cues that indicate a particular cultural schema or behavioral script is relevant. For example, a culturally flexible individual may be able to express emotions either directly or indirectly and will situationally adapt expression in response to shifts in cultural frames. This skill is a likely mechanism for the role of identity in influencing behavior across cultures (Benet-Martínez, Lee, & Leu, 2006); a bicultural individual, by definition, is one who already identifies with two sets of cultural norms, beliefs, and values, and thus may be more experienced at attending to such cues. Bicultural individuals have more complex representations of culture than do monocultural individuals, particularly if the two cultures are experienced as incompatible (Benet-Martínez & Haritatos, 2005; Benet-Martínez et al.).

Research has shown that bicultural individuals apply different interpretations of behavior depending on exposure to cultural symbols. For example, Chinese students in Hong Kong were more likely to provide situational, externally-driven explanations after exposure to Chinese symbols, such as the Great Wall or a Chinese dragon, than after exposure to American symbols, such as the American flag or Superman (Hong, Morris, Chiu, & Benet-Martínez, 2000). Language can also serve as a cue. In one study, when Asian Canadians had recently spoken English or another non-Asian language, their emotional states reflected a pattern more typical of Westerners than when they had recently spoken an Asian language (Perunovic, Heller, & Rafaeli, 2007). One remaining issue is that we don't know whether these individuals generalize this skill; that is, do they acquire or adapt to a third culture more easily than individuals socialized into a single dominant culture?

Culture-Specific Variables: Language and Cultural Knowledge

Several studies have assessed both culture-specific variables, such as language proficiency and regional knowledge and culture-general predictors of intercultural effectiveness, allowing for a comparison of their contributions. Language ability has emerged as a significant, but not dominant, predictor: expatriates who are more proficient in the language of their host country tend to adjust and perform better (Bhaskar-Shrinivas et al., 2005; Mol et al., 2005). However, the *perceived* importance of culture-specific knowledge and skills is sometimes higher than their *actual* importance. Among U.S. and German MBA students, language skills were the most frequently mentioned capability when asked what factors facilitated their working in an intercultural setting (Graf, 2004). Culture-specific knowledge was the second most frequently mentioned, with culture-general factors appearing next (e.g., openness, tolerance, patience). A similar discrepancy emerged in a study of Peace Corps volunteers (Guthrie & Zektick, 1967). Americans' ratings of volunteers' performance was influenced by the level of proficiency in the local dialect; however, Filipinos from the local community rated the personality of the volunteer as much more important than verbal proficiency.

The perceived importance of language skills may decline with international experience. Arthur and Bennett (1995) asked expatriate personnel to rate the importance of a variety of factors in the success of an international assignee. Whereas participants in the Graf (2004) study were merely required to have worked in culturally diverse teams, these individuals had an average of more than four years on the international assignment. Participants' responses showed that language skills clustered with items related to interest in and openness to foreign cultures, and that this factor was the least important of five factors. All other factors received higher overall ratings: family situation, flexibility/adaptability, job knowledge and motivation, and relational skills. Thus, language skills fall from being perceived as the *most* important factor (Graf) to among the *least* important (Arthur & Bennett).

Despite inconsistencies in the perceived importance of language, research on the actual role of language confirms the contribution of culture-specific factors. Meta-analyses have shown language ability to be a significant predictor of general and interaction adjustment (Bhaskar-Shrinivas et al., 2005; Hechanova et al., 2003) and job performance (Mol et al., 2005). However, these meta-analyses also reveal that culture-general traits and skills are stronger predictors than language. For example, cultural sensitivity (Mol et al., 2005) and relational/interpersonal skills (Bhaskar-Shrinivas et al., 2005; Hechanova et al.) contributed more to the prediction of cross-cultural outcomes than did language proficiency. In addition, one meta-analysis showed that language proficiency did not predict work adjustment (Bhaskar-Shrinivas et al., 2005).

An examination of the results from individual studies helps to clarify the role of language skills. Evidence shows that language proficiency contributes to positive outcomes in the work domain, but not to personal or interpersonal outcomes. In Japanese expatriates assigned to the U. S., self-rated English skills were related to work adjustment but not to general or interaction adjustment (Takeuchi, Yun, & Russell, 2002). More specifically, one study showed that language fluency, as rated by co-workers, was predictive of trust and shared vision between subsidiaries of a multi-national corporation (Barner-Rasmussen & Björkman, 2007). Researchers who obtained both self- and observer ratings in students, as well as test scores, found that language skills were strongly related to effectiveness, but not to adjustment (Nishida, 1985). In another study, higher language ability was actually correlated with *lower* personal adjustment (van Oudenhoven et al., 2003). Other research showed that language was not a significant predictor of expatriates' perceptions of or responses to stress (Redmond & Bunyi, 1993), nor protective against the experience of culture shock (Nishida, 1985).

Parallel findings have emerged with regard to regional or culture-specific knowledge as a predictor of intercultural effectiveness. Studies have shown that knowledge of the host culture is beneficial for general adjustment to a foreign culture, but not for work adjustment (Black, 1988; Takeuchi et al., 2002) nor for handling stress (Redmond & Bunyi, 1993). As with language, one study showed this knowledge to be a negative predictor, indicating that American expatriates with more knowledge of Japan showed poorer adjustment to working there (Black, 1988).

Caution should be used in drawing conclusions on culture-specific knowledge due to methodological limitations of this variable. In the studies cited here, knowledge of the host country was measured by self-report on a small set of general dimensions. Participants were asked to rate their degree of knowledge about the country's political system, culture, and customs, and no objective source of data was included. In addition, findings do not speak directly to the role of pre-departure

knowledge of the culture. Although participants in two studies were asked to rate their *pre-departure* level of knowledge, predictor and outcome data were collected at a *single* time point, and it is unclear how accurately participants remembered their state of knowledge prior to their current assignment (Black, 1988; Takeuchi et al., 2002).

Due to these limitations and the inconsistency of findings, the role of regional/cultural knowledge remains unclear. Findings regarding language skills are more reliable, with some studies using self-report and others using objective test scores, such as scores on the Test of English as a Foreign Language in a sample of Japanese students (TOEFL; Nishida, 1985). Overall, findings suggest that language proficiency contributes to work and interpersonal outcomes, but has little effect on personal adjustment. Although low verbal proficiency may be perceived by the expatriate as an obstacle to communication (Hulinger, 1982, as cited in Hechanova et al., 2003), higher proficiency does not necessarily lead to effective communication. Some researchers have argued that verbal language skills are helpful only to the extent that they are accompanied by a willingness to communicate and motivation to use language to build relationships (Mendenhall & Oddou, 1985). Thus, language is beneficial for certain outcomes, but is not the most important skill set overall, nor perhaps even a relevant skill set for personal adjustment.

Situational and Organizational Variables

Other, external variables may influence the degree to which a cross-culturally competent person is successful. Intercultural outcomes are not determined solely by the capabilities of the individual, but are shaped by the larger context that can both influence outcomes directly and act indirectly through influencing an individual's behavior. One such variable is cultural distance, the actual or perceived discrepancy between one's own cultural practices and values and those of another culture. In general, the greater the discrepancy between one's own culture and the cross-cultural setting, the more difficulty an individual will have in adapting. Related variables have been included in other models, appearing as cultural toughness (Mendenhall & Oddou, 1985) or as cultural novelty (Bhaskar-Shrinivas et al., 2005). Cultural distance is frequently operationalized as the discrepancy between an expatriate's home and host cultures (Stahl & Caligiuri, 2005), in terms of Hofstede's (1980) or the GLOBE dimensions (House et al., 2004). Another approach is to measure perceived cultural distance using self-report (Galchenko & van de Vijver, 2007).

Findings regarding this variable have been mixed. Studies of adjustment show that greater cultural distance is associated with poorer adjustment across personal, interpersonal, and work domains (Bhaskar-Shrinivas et al., 2005; Galchenko & van de Vijver, 2007). In another study, greater perceived cultural distance was predictive of poorer physical well-being in Japanese students studying in the UK (Greenland & Brown, 2005). However, cultural distance has been shown to be unrelated to job performance (Mol et al., 2005). Evidence suggests that cultural distance has a negative effect on general and interpersonal adjustment, but may not impact work outcomes (Stahl & Caligiuri, 2005).

Other situational variables with clear relevance to the Army are conditions of stress, uncertainty, or threat. Research from terror and uncertainty management perspectives has shown that threat and uncertainty activate and exaggerate dominant modes of responding and bolster one's primary cultural values and norms (cf. Stephan, Stephan, & Gudykunst, 1999; van den Bos, Poorvliet,

Maas, Miedema, & van den Ham, 2005). Under some conditions, uncertainty also leads individuals to identify more strongly with their ingroup (Jetten, Hogg, & Mullin, 2000), which can harden intergroup boundaries (Hammer, Wiseman, Rasmussen, & Bruschke, 1998; Hogg, Sherman, Dierselhuis, Maitner, & Moffitt, 2007). Because the effects of some cross-cultural competencies and traits may emerge only under conditions of stress (van der Zee et al., 2004), it is important to take these variables into account. The conditions under which military personnel must frequently operate during deployment may inhibit the application of knowledge and skills that may be helpful in those conditions.

Family and spousal adjustment is another variable shown to influence intercultural outcomes (Bhaskar-Shrinivas et al., 2005). These studies typically involve participants whose Families accompany them on the expatriate assignment; however, research has also examined the effects of the absence of one's spouse, showing that a spouse's absence increased workplace strain experienced by the expatriate (Takeuchi, Wang, & Marinova, 2005). This finding represents another potential source of stress acting against the adjustment and effectiveness of military personnel.

Research on expatriate managers has also given much attention to the role of organizational variables. Guzzo, Noonan, and Elron (1994) assessed factors that could influence expatriate managers' levels of commitment to the organization and their intentions to leave their employers. Results showed that perceived organizational support for work was positively related to organizational commitment and negatively related to expatriate intentions to leave their employer. Organizational support has also been linked with adjustment. Specifically, in a meta-analysis of 64 studies on expatriate adjustment, logistical support (i.e., organization provides resources that help employees meet daily needs, such as finding housing) positively related to work adjustment (Bhaskar-Shrinivas et al., 2005). Expatriate commitment to the organization is also important. Expatriates working in 45 countries responded to a survey assessing various work and non-work related variables (Shaffer & Harrison, 1998). Findings revealed that normative organizational commitment was negatively related to expatriate intentions to leave an assignment early. In other words, expatriates who had internalized the values of their organization felt more obliged to persist in the assignment and showed less desire to terminate their expatriate assignments early. Thus, the relationship of an individual with the organization likely contributes to outcomes independent of the individual's cross-cultural competence.

Measures of Cross-Cultural Competence

Previous conceptualizations of cross-cultural competence have resulted in varied approaches to measurement. The measures of cross-cultural competence and related constructs reviewed here are organized by their conceptual definitions and assumptions about what makes individuals interculturally effective. These measures were selected for inclusion based on the availability of reliability and validity evidence in the research literature. Additional measures have been developed for specific contexts. For example, many consulting companies have developed scales for use with their training or coaching services. Other scales have been developed for specific populations, such as to assess the cross-cultural skills of counseling psychologists (e.g., the Cross-Cultural Counseling Inventory; LaFromboise, Coleman, & Hernandez, 1991). Such measures are not included here, either because evidence of their validity is not available in the published literature, as in the case of measures used by consultants, or because the domains of interest do not generalize to other populations. In

addition, scales intended to assess an individual's level of culturally-based values or beliefs were also excluded as falling outside the scope of this report. Table 3 provides a list of the measures reviewed here and includes the component dimensions of each.

Cross-Cultural Competence as a Multi-Dimensional Construct

One model proposes that cultural intelligence (CQ) is a multi-dimensional, specific intelligence that predicts an individual's capacity to perform effectively in cross-cultural situations. The CQ scale assesses four dimensions: cognitive, behavioral, motivation, and strategic (meta-cognitive) (Earley, 2002; Earley & Ang, 2003).

The CQ has only recently been developed, yet validation efforts have moved rapidly in the context of international management. As a self-report tool, the CQ correlates with criteria such as performance in international contexts and cross-cultural adjustment, with predictive power above emotional intelligence (Ang, Van Dyne, Koh, & Ng, 2004; Kim, Kirkman, & Chen, in press; Templer et al., 2006). CQ also is related to, but distinct from personality constructs. All dimensions of CQ have been shown to correlate with openness to experience. Specific positive relationships have been found as well between conscientiousness and cognitive CQ, extraversion with cognitive, motivational and behavioral CQ, and agreeableness with behavioral CQ. However, emotional stability has been found to have an unexpected negative relation with behavioral CQ (Ang, van Dyne, & Koh, 2006). Criterion validity related to performance in multinational teams appears imminent and has been called for in recent publication (Janssens & Brett, 2006).

Although developed as a self-report measure, the CQ lends itself to easy implementation in a multi-rater approach due to the brevity of the tool, which consists of only 20 items. Some CQ dimensions may be more appropriately measured using sources other than self-report (Lee & Templer, 2003). In particular, cognitive and behavioral dimensions may be subject to bias in self report (Herman, Buffardi, & Tetrick, 2006). Implementation of the CQ in multi-rater approaches (e.g., supervisor and peer ratings, behavioral observation) is likely to increase stability and accuracy, though results of these approaches have yet to reach publication. Multitrait-multimethod analysis of the CQ has been limited, but overall self- and other-reported CQ correlated significantly at .43. This correlation was higher than that between self-reported CQ and self-reported EI (.21) but lower than other-reported CQ and other-reported EI (.57) (Kim et al., in press). No research has yet reported multitrait-multimethod analysis among individual dimensions of CQ. Overall, the CQ measure offers a nascent but existing validation base that many other cross-cultural competence measures appear to lack.

Recent studies on the predictive validity of the CQ have shown that the measure predicts both general outcomes and more specific outcomes. A survey of expatriate employees working in Singapore from a variety of industries showed that motivational CQ correlated positively with the general outcomes of general adjustment, interaction adjustment, and work adjustment (Templer et al., 2006). In addition, motivational CQ contributed to both work and general adjustment over and above the influence of gender, age, time in host country, previous international experience and the presence of a realistic job preview. Another study showed that motivational CQ predicted both supervisor ratings and self-report of adjustment (Ang et al., 2007).

Studies examining correlations of the CQ with more specific criteria have found that cognitive CQ and metacognitive CQ related to the development of host culture attribution styles and decision making processes (Ang et al., 2004). These results received further support in subsequent studies showing that metacognitive CQ and cognitive CQ predicted cultural judgment and decision making and task performance (Ang et al., 2007). In addition to predicting cognitive variables, CQ has proven useful in predicting complex interpersonal behavior. Imai and Gelfand (in press) recently found that CQ, particularly the motivational and behavioral subscales, was predictive of integrative, cooperative behavior in intercultural negotiation – i.e., behavior linked to better joint outcomes in negotiation.

A different instrument using a set of dimensions similar to the CQ is the Munroe Multicultural Attitude Scale Questionnaire (MASQUE), which was developed for a multicultural education setting (Munroe & Pearson, 2006). The MASQUE is based in a transformative approach to multicultural education that seeks to engage students not just through cognitive means, but also through affective and psychomotor channels. Thus, like the CQ's cognitive, motivational, and behavioral domains, the MASQUE assesses a student's orientation to culture through subscales of knowing, caring, and acting. However, the item content in the MASQUE covers a broader range of topics than that of the CQ, including differences in culture, gender, race, sexual orientation, and socioeconomic status. In addition, although the scale reflects the three domains in its factor structure and has adequate reliability overall (Munroe & Pearson), the subscales have low internal consistency, particularly with the Act subscale.

Cross-Cultural Competence as a Developmental Construct

The Intercultural Development Inventory (IDI) is not a multi-dimensional measure of cross-cultural competence, but instead measures one's subjective experience of cultural difference. The IDI is based on the Developmental Model of Intercultural Sensitivity (Bennett, 1986; 1993; 2004), which characterizes individuals as having either an ethnocentric or an ethnorelative orientation to cultural difference. These two general orientations are further broken down into six stages, with three in each orientation, which individuals experience in sequence as they resolve the challenges associated with each preceding stage.

In an ethnocentric orientation, one's own primary culture strongly influences perceptions of and is central to reality. In extreme ethnocentrism, an individual may lack awareness of cultural difference altogether and awareness that his or her own culture is an influence, a state referred to as denial in the model. For example, an individual in this first stage of development may think of "foreigners" as an undifferentiated category of people and will avoid being confronted with situations involving cultural differences.

Defense follows the denial stage and reflects the ability to make simple cultural distinctions, but with the view that one's own culture is superior. Individuals at this stage have some cultural awareness, but stereotyping and prejudice are common. A corresponding, but opposite, level of development is reversal, in which an individual identifies in opposition to the primary culture and views a different culture as superior to one's own (e.g., the experience of "going native" in a foreign culture). Both defense and reversal are characterized by a recognition of cultural difference

Table 3
Measures of Cross-Cultural Competence and Related Constructs

Measure	Constructs or Dimensions	Author/Source	Format	Intended Population
Cultural Intelligence Scale (CQ)	Cognitive, meta-cognitive (strategic), behavioral, motivational	Ang, van Dyne, Koh, & Ng, 2004	Self-report	Any
Intercultural Development Inventory	Orientation toward cultural difference	Hammer, Bennett, & Wiseman, 2003	Self-report	Any
Multicultural Personality Questionnaire	Cultural empathy, emotional stability, social initiative, flexibility, open-mindedness	Van der Zee & van Oudenhoven, 2000	Self-report	
Intercultural Adjustment Potential Scale	Emotion regulation, openness, flexibility, critical thinking (creativity/autonomy)	Matsumoto, LeRoux, et al., 2001	Self-report	Any
Intercultural Sensitivity Inventory	Individualism/collectivism; flexibility and open-mindedness	Bhawuk & Brislin, 1992	Combination test/self-report	Expatriate managers
Munroe Multicultural Attitude Scale	Know, care, act	Munroe & Pearson, 2006	Self-report	Students
Cross-Cultural Adaptability Inventory	Flexibility/openness, emotional resilience, perceptual acuity, personal autonomy	Kelley & Myers, 1995	Self-report	Any
Cross-Cultural Adaptability Scale	Openness, attention to interpersonal relations, sense of identity, person-organization goal alignment, problem-solving, cross-cultural experience	Schmitdtchen, 1997 (as cited in Vanderpool, 2002)	Self-report	Military personnel in peacekeeping operations
Behavioral Assessment Scale for Intercultural Communication Effectiveness	Display of respect, interaction posture, orientation to knowledge, empathy, task related roles, relational roles, interaction management, tolerance for ambiguity	Koester & Olebe, 1988	Peer or observer report	Students
Prospector	Sensitivity to cultural differences, business knowledge, courage, brings out the best in people, integrity, insightful, committed, takes risks, seeks feedback, uses feedback, is cultural adventurous, seeks learning opportunities, open to criticism, flexibility	Spreitzer et al., 1997	Self or other report	International executives
Cross-Cultural Social Intelligence	Empathy, ethnocentrism	Ascalon, 2006	SJT	Expatriate managers

accompanied by judgments about the relative value of a culture. The resolution of this judgment leads to the third stage within an ethnocentric orientation - minimization. Cultural tolerance is characteristic of this stage. Individuals are aware of cultural differences but tend to assume that their own values apply to other cultures. They fail to recognize that their own values are culturally based and therefore would not necessarily be shared or appreciated by individuals from other cultures. They tend to view cultural difference as less important than universal values or characteristics, which represents an important step toward the transition to an ethnorelative orientation. The drawback of this view is that universalism masks cultural difference and does not equip individuals with the ability to deal effectively with difference.

The entry into an ethnorelative orientation is acceptance. In this stage, individuals experience a cognitive shift that enables them to see a culture from the perspective of its members, without compromising their own cultural values or beliefs. Acceptance then allows for the development of adaptation, which is the ultimate goal for individuals working in a foreign culture. Adaptation consists of the ability to adjust one's behavior for a different cultural setting. At this stage, the individual is able to shift in and out of different cultural frames and behavioral codes. A sixth stage in this model is integration, which provides no incremental advantage in effectiveness over adaptation, but is instead a change in identity experienced by some individuals who routinely shift between two cultures. For some individuals, integration is a positive aspect of their identity, whereas for others it may be negative, if experienced as a hindrance to coherence or stability in identity. According to the developmental model of intercultural sensitivity, integration is independent from the other stages.

In the IDI, the defense and denial stages are indistinguishable in terms of measurement and comprise a single subscale (Hammer, Bennett, & Wiseman, 2003). The acceptance and adaptation stages also comprise a single subscale. Thus, the IDI consists of five subscales with adequate reliability (Paige, Cohen, & Shively, 2003). Notably, the IDI does not correlate with a commonly accepted measure of social desirability (Hammer et al.; Paige et al.); thus, evidence suggests that responses to the IDI generally do not reflect attempts to endorse a politically correct view. Validation research has shown that the IDI successfully distinguishes individuals with prior intercultural experience, prior experience studying cultures or languages, and a tendency to socialize with people from other cultures (Paige et al.). The overall IDI shows no gender differences (Altshuler, Sussman, & Kachur, 2003; Hammer et al.; Paige et al.), with the exception of the Defense/Denial subscale, on which higher scores emerge in males than females (Altshuler et al.; Hammer et al.). Use of the IDI in a training intervention among physicians suggests that gender differences may influence response to training (Altshuler et al.), with female physicians benefiting more than males.

Research has shown that higher intercultural sensitivity, as measured by the IDI, is associated with foreign language proficiency. In one study of university faculty and staff, self-rated foreign language proficiency was associated with higher scores on the IDI (Olson & Kroeger, 2001). Another study using a student sample showed results suggestive of such an association, but did not test that relationship directly (Engle & Engle, 2003). In addition, IDI scores are associated with intercultural experience. Faculty and staff who reported greater experience abroad, either living or frequently traveling abroad, had higher IDI scores than those with less experience abroad (Olson & Kroeger). A longitudinal study of study abroad students revealed a similar finding, with students showing higher IDI scores after study abroad than before (Paige et al., 2004). More specifically, these students showed a decrease in reversal and an increase in acceptance/adaptation. The generalizability of this measure

across languages and cultures has been called into question (Greenholtz, 2005), but when used with a U.S. sample, the IDI has accumulated criterion validity from a variety of sources.

Cross-Cultural Competence as Trait-Based

Conceptualizing cross-cultural competence as a set of personality traits represents an attempt to identify culture-general predictors of intercultural effectiveness (Matsumoto et al., 2001), by using a narrower set of traits than found in universal dimensions of personality (Van der Zee & van Oudenhoven, 2000). Two such measures are the Multicultural Personality Questionnaire (MPQ; van der Zee & van Oudenhoven) and the Intercultural Adjustment Potential Scale (ICAPS; Matsumoto et al., 2001). The items on both of these scales generally are not worded explicitly to address attitudes toward or knowledge of different cultures, which may be an advantage over measures like the CQ and MASQUE in terms of reducing the potential influence of socially desirable response sets.

Multicultural Personality Questionnaire

The MPQ was developed on Dutch student samples and includes subscales for cultural empathy, emotional stability, social initiative, open-mindedness, and flexibility (Van der Zee & van Oudenhoven, 2000; Van der Zee & van Oudenhoven, 2001). Versions of this instrument are available in English and in Dutch. Evidence indicates that the MPQ subscales correlate with more general personality constructs. Correlations between the MPQ and the Big Five, as measured by the NEO-PI-R, showed strong relationships between social initiative and extraversion and between emotional stability and neuroticism (negative relation) (Van der Zee & van Oudenhoven, 2000). Moderate relationships emerged between open-mindedness on the MPQ and openness on the NEO-PI-R, between MPQ flexibility and NEO openness, and between flexibility and extraversion. Self-efficacy also shows small to moderate correlations with all of the MPQ subscales (van Oudenhoven & Van der Zee, 2002).

Although correlated with these constructs, the MPQ contributes predictive power over and above the more general measures of personality. The MPQ predicted additional variability in both international orientation and interest in an international career beyond that predicted by the Big Five personality traits (Van der Zee & van Oudenhoven, 2000; Leone, Van der Zee, van Oudenhoven, Perugini, & Ercolani, 2005) and in behavioral competence beyond that predicted by the Big Five (Van der Zee et al., 2003).The MPQ also predicts adjustment beyond that predicted by self-efficacy (van Oudenhoven & Van der Zee, 2002).

The MPQ also correlates with more specific traits. One study showed that need for cognitive closure was negatively related to both open-mindedness and flexibility on the MPQ (Leone et al., 2005). Higher levels of open-mindedness were also associated with greater need for cognition, which reflects motivation to seek complex and challenging situations. It should be noted that need for cognition predicted international orientation beyond both the MPQ and Big Five traits, suggesting one potentially important motivational factor not sufficiently represented in the MPQ.

Additional evidence of the scale's validity emerged from self and other ratings, with moderate correlations emerging for open-mindedness, emotional stability, social initiative, and flexibility between students' self-ratings and ratings by a close friend or family member (Van der Zee & van Oudenhoven, 2001). The cultural empathy subscale is the least consistent of the subscales, as it failed to form an independent factor in initial research (Van der Zee & van Oudenhoven, 2000) and was the only subscale to show no significant self-other correlation (Van der Zee & van Oudenhoven, 2001). It should be noted that although this factor is labeled 'cultural empathy,' the items that comprise this factor refer to interpersonal sensitivity very broadly, and do not mention differing cultural groups.

In another student sample, differences emerged on the MPQ between students preparing to study abroad and first-year psychology students (Van der Zee & van Oudenhoven, 2001). Psychology students scored higher on cultural empathy and emotional stability, but study-abroad students scored higher on open-mindedness, social initiative, and flexibility. This finding was confirmed in a subsequent study of participants in an intercultural consulting program, in which previous experience living abroad was correlated with open-mindedness, social initiative, and flexibility, but not with cultural empathy or emotional stability (Van der Zee & Brinkmann, 2004). In students attending an international business school, the MPQ was related to adjustment, particularly for foreign students (van Oudenhoven & Van der Zee, 2002). Subjective well-being, perceived peer support, and self-rated mental health all showed stronger relationships to MPQ subscales in foreign-born students than in native-born students, with mental health correlations emerging at two time points six months apart. Thus, evidence indicates that the MPQ assesses traits important for the intercultural experience itself, not just for effective adjustment and performance more generally.

Evidence also suggests that the MPQ subscales may differentially predict intercultural outcomes. In an expatriate employee sample, emotional stability was the best predictor of personal adjustment, both physical and psychological, and social adjustment, whereas flexibility best predicted job satisfaction and perceived social support (van Oudenhoven et al., 2003). In a student sample, pre-departure scores on social initiative proved to be the best predictor of adjustment two to three months into an exchange program (Leong, 2007), demonstrating that different facets may be more relevant for particular populations or outcomes.

Intercultural Adjustment Potential Scale

As the MPQ, the ICAPS measures culture-general traits that contribute to intercultural effectiveness, but focuses primarily on adjustment outcomes and was initially developed for use with Japanese expatriates in the U.S. (Matsumoto et al., 2001). The ICAPS includes subscales for emotion regulation, openness, flexibility, and creativity. This fourth factor of creativity has been alternatively labeled critical thinking (Matsumoto et al., 2003; 2004); however, some items may be more accurately described as reflecting autonomy. The ICAPS correlates with a variety of adjustment measures, even after controlling for years in the U.S. and self-rated language proficiency (Matsumoto et al., 2001). Individuals with higher ICAPS scores report lower levels of depression (Matsumoto et al., 2001), anxiety (Matsumoto et al., 2003), and homesickness (Yoo et al., 2006). As the MPQ, the ICAPS has predictive utility over and above the Big Five traits of extraversion, agreeableness, conscientiousness, neuroticism, and openness (Matsumoto et al., 2004).

Although language proficiency does not account for the relationship between the ICAPS and adjustment, self-rated language proficiency is related (Matsumoto et al., 2003). English reading and speaking skills correlated significantly with ICAPS scores. Evidence suggests that the ICAPS is useful not only with Japanese expatriates, but also with other, non-Japanese sojourner and immigrant groups living in the U.S., with emotion regulation emerging as the most important factor in predicting adjustment (Matsumoto et al., 2003, Studies 5 and 6).

Other Trait Measures

Other measures include a trait-based component but also encompass other approaches, and validity for these measures is less well-established. The Intercultural Sensitivity Inventory (ICSI; Bhawuk & Brislin, 1992) combines a trait-based approach with a culture-specific component. The ICSI measures openness and flexibility, as well as the extent to which respondents endorse individualism or collectivism when asked how they would behave if working in Japan vs. the United States. In a study of graduate-level students, scores on the ICSI were related with interest in working with people from different cultures and experience living abroad, but not with knowing other languages or having friends from other cultures (Bhawuk & Brislin). The ICSI showed some ability to discriminate between students rated by academic program staff as highly effective in intercultural interactions and those rated as less effective. In contrast, the scale did not discriminate between individuals living in an intercultural dormitory and those living elsewhere (Bhawuk & Brislin). In a training intervention, participants who participated in cross-cultural training exercises did show increases from their pre-test ICSI scores to the post-test scores (Sizoo & Serrie, 2004). Additional research using the ICSI is needed to determine its utility for culture-general purposes and for predicting effectiveness.

The Cross-Cultural Adaptability Inventory (CCAI) includes a mix of traits (flexibility/openness, emotional resilience, personal autonomy) and skill in detecting and decoding verbal and nonverbal cues (perceptual acuity) (Kelley & Meyers, 1995). This measure has been used as an outcome in training programs (e.g., Goldstein & Smith, 1999); however, little evidence of this measure's validity is available. One study showed that the four dimensions of the CCAI did not emerge from factor analyses (Davis & Finney, 2006), and another revealed that higher CCAI scores were associated with a tendency to endorse items indicating self-deception (Montagliani & Giacalone, 1998). Thus, despite frequent use in training programs, the CCAI lacks sufficient evidence to warrant further use.

Despite some variation in sample nationalities for these measures, additional research is needed for these trait-based approaches to determine whether similar factor structure and similar predictive patterns emerge for a U.S. military population. The application of these measures also warrants further exploration. For example, one study showed that scores on the ICAPS increased immediately after a one-day seminar on intercultural communication (Matsumoto et al., 2001), suggesting that intercultural traits are responsive to training. However, this study included no control group and no follow up to measure actual adjustment, so it remains unclear whether the training itself produced the increase, whether these increases were sustained, and whether the increases related to actual adjustment during the sojourners' stay in the U. S. Because traits are generally assumed to be

stable, traits are an unlikely target for training. Instead, a trait-based approach may prove most useful in selection or in predicting which individuals would be most responsive to training.

Cross-Cultural Competence as Behavior

Behavioral approaches to assessing cross-cultural competence argue that personality traits are incomplete as predictors of intercultural effectiveness. Because traits describe general patterns, they do not specify what behaviors enable successful intercultural interactions (Hammer, 1987). This approach also views knowledge as insufficient, as knowledge does not necessarily enable an individual to enact the appropriate behaviors (Ruben & Kealey, 1979). Behavioral approaches focus instead on identifying the behaviors associated with effective communication (Martin & Hammer, 1989).

Measurement approaches drawing on the behavioral perspective depend on observational methods rather than self-report. Behavior can be assessed either by a third-party observer (Ruben, 1976) or by individuals who have personally interacted with a target (Koester & Olebe, 1988). One such measure is the Behavioral Assessment Scale for Intercultural Communication Effectiveness (BASIC) (Koester & Olebe). This scale uses behavioral dimensions based on work by Ruben (1976): display of respect, interaction posture, empathy, task roles, relational roles, interaction management, orientation to knowledge, and tolerance for ambiguity (Koester & Olebe). Ratings provided by roommates showed that these dimensions were relevant to communication effectiveness regardless of whether the target is from the U. S. or from another country (Olebe & Koester, 1989), although different dimensions were predictive of communication effectiveness for the two groups.

These behavioral measures have not been widely adopted. One disadvantage is that raters must either be trained to observe the dimensions or have extensive personal experience with the target to ensure sufficient opportunity to observe the relevant behaviors. The BASIC may be impractical to implement, as appropriate raters may not be readily available outside a research setting.

Other Measurement Approaches

A variety of other measurement approaches have been applied to cross-cultural competence. Developing measures of cross-cultural competence has been a popular subject of dissertations (e.g., Elmer, 1986; Myeni, 1983; Towers, 1990), with most of the resulting measures receiving little further testing. One promising approach is the development of a situational judgment test (SJT) for cross-cultural social intelligence (CCSI) (Ascalon, 2005). The CCSI SJT assesses responses to scenarios involving cross-cultural interactions along the dimensions of empathy and ethnocentrism. Thus, an individual with a high level of CCSI will show a pattern of empathic, non-ethnocentric responses. Because a scenario-based measure cannot be completely culture-general, the CCSI SJT includes a variety of cultures (American, Chinese, Dutch, German, and Spanish) (Ascalon, Schleicher, & Born, 2006). The CCSI SJT includes 14 scenarios with 4 options each, with each option corresponding to a quadrant of the Empathy-Ethnocentrism circumflex. Further development and testing of this measure is needed, as its criterion validity has not yet been demonstrated and its construct validity is questionable. Specifically, it is problematic that the CCSI SJT correlates more strongly with a measure of cognitive ability than with other measures of empathy and ethnocentrism (Ascalon et al., 2006). In

addition, the CCSI SJT may be incomplete as a measure of cross-cultural competence, representing only its affective aspects.

Another measure needing further testing is the Cross-Cultural Adaptability Scale (CCAS). The CCAS is the only measure obtained for the current report that was developed for use with military personnel (Vanderpool, 2002). This scale was developed as a self-report tool intended for use in selecting and training personnel for peacekeeping operations. Five factors emerged from this scale in an Australian sample: interpersonal relations/sense of identity, openness to experience, organizational goals/cross-cultural experience, personal goals, and problem solving. A similar factor structure was found in a Canadian sample. Evidence for criterion validity has not yet been published.

Other measures have been developed in research on global leadership, which is a rapidly growing field focused on competencies related to this review. However, global leadership research typically emphasizes middle and upper-level managers in private industry (Kets de Vries, Kets de Vries, & Florent-Treacy, 2004; Lane, 2004; McCall & Hollenbeck, 2002; Mendenhall, 2006; Morrison, 2000). Although this research draws from similar sources as this review (e.g., international assignments), the contextualized nature of the global leadership construct limits its relevance to cross-cultural competence as conceptualized here. In addition, item content of these measures reflects business and management concepts throughout. For example, the Global Leadership Life Inventory includes relevant dimensions, such as resilience to stress, but includes others specific to management roles, such as rewarding and giving feedback (Kets de Vries et al., 2004). The Prospector measure has similar limitations, although it includes learning dimensions that may be particularly relevant (Spreitzer, McCall, & Mahoney, 1997).

Other emerging measurement approaches use testing methodologies that minimize the role of self-report. For example, testing for proficiency in nonverbal communication is one promising approach. Individuals are generally better able to decode emotion and other nonverbal cues in their own culture and ethnic group (Elfenbein & Ambady, 2002), but understanding these cues is critical in cross-cultural settings where language may be a barrier. Research using the Gesture Recognition Task has shown that the ability to decode gestures in a foreign culture relates to one's communication competence and comfort in that culture (Molinsky, Krabbenhoft, Ambady, & Choi, 2005). Other research suggests that the ability to decode expressions of emotion is also predictive of intercultural adjustment (Yoo et al., 2006). Testing for knowledge of the display rules of a particular culture, the rules and norms for emotional expression, may be useful (Matsumoto, Yoo, Hirayama, & Petrova, 2005).

In addition to testing for knowledge, methods are available to assess attitudes without using self-report (Greenwald, McGhee, & Schwartz, 1998). The Implicit Association Test (IAT) uses reaction times in a categorization task to measure attitudes toward social groups. Participants are asked to categorize two types of images or text using words with positive or negative connotations. For example, participants in a race-based IAT may be presented with White faces and Black faces. Responding faster when categorizing the White faces with positive words than when categorizing Black faces with positive words reflects an implicit attitude that favors Whites over Blacks. This procedure has been used with a variety of stimuli, including names, faces, text, and symbols, representing both social groups and non-social objects.

Evidence of prejudice sometimes emerges in IAT responses that are not apparent from traditional self-report measures. One study presented male first names typical of Whites and of Arabs and asked participants to make the alternating categorizations described above (Park, Felix, & Lee, 2007). Responses on the IAT showed relatively negative attitudes toward Arabs, even when explicit measures did not. In another study, individuals who reported authoritarian and Christian fundamentalist beliefs showed strong preference for Christians over Muslims in explicit, self-report, However, these beliefs did not correlate with implicit attitudes toward Muslims relative to Christians (Rowatt, Franklin, & Cotton, 2005), suggesting additional variation in attitudes that is not explained by self-report.

Such findings are important, as IAT responses have been shown to predict behavior. Although research has not tested the IAT in the context of behavioral interactions with Arabs, studies have shown correlations in the context of interracial interactions. Whites who showed racial bias on an IAT also showed bias in their behavior toward Blacks in an interaction (McConnell & Leibold, 2001). Implicit attitudes are particularly predictive of nonverbal behavior toward members of other races (Heider & Skowronski, 2007).

One limitation is that the predictive utility of the IAT may depend on other variables, such as the accessibility of the attitude and the perceived homogeneity of a social group (Lambert, Payne, Ramsey & Shaffer, 2005). Another potential limitation of such methods is that, to this point, they have been developed only as culture-specific or group-specific measures. However, these indirect measures are promising, especially when used as part of a multi-method approach.

Conclusions

In this report, we have attempted to identify the cross-cultural knowledge, skills, and affect that Army leaders need to better understand the adversary, interact effectively with a local population, and work collaboratively with coalition partners. To this end, we presented a synthesis of the literature on predictors of intercultural effectiveness in order to sketch out a broad concept of cross-cultural competence for Army leaders. The resulting definition is intended to be general enough to allow modification for specific job functions and specific contexts. Because Army leaders may experience multiple deployments to different countries over their career, we have argued for the role of culture-general competence. Evidence suggests that these general dimensions are at least as important as, and may be more important than, culture-specific variables like language and regional knowledge. The literature reviewed here demonstrates that cross-cultural competence can be measured and is responsive to training, education, and developmental experiences. Recommendations for measurement, training and education, and further research are discussed below.

Measurement

Cross-cultural competence is multi-dimensional and develops over time, and measures are needed that reflect that conceptualization. Existing measures have focused either on development, as in the case of the IDI, or on component dimensions, as in the case of the CQ, and although these measures have accumulated evidence for their validity, their validity has not been established with a

military population. The Army and other services will likely need a measure developed for military purposes. The context of military operations differs from that of the expatriate and international student samples in the majority of studies reviewed here. Though the predictors in previous research are relevant to full-spectrum military operations, the relative importance of different knowledge, skills, and affect may be quite different, and the overall structure of cross-cultural competence in Army leaders may differ from that of expatriate managers or students.

Of particular importance to the Army is the development of assessment tools for training and education, to determine whether cultural training initiatives yield the anticipated benefits. Recent conflicts have highlighted the potential problems that emerge when operations require a high level of contact with the local population. All Soldiers and leaders need some amount of cross-cultural competence, and the Army may not be able to rely on a selection approach. The appropriate measures can help insure that limited time and resources for cultural training are being used in the most effective manner.

A measure of cross-cultural competence should incorporate a multimethod approach. Self-report measures have been shown to have predictive utility, but may be insufficient for some dimensions of cross-cultural competence. Using a 360-assessment approach would be helpful, but may not be practical. Thus, a testing approach may be an appropriate complement. Previous research has revealed some promising methods, such as Implicit Association Tests for assessing attitudes. Other testing methods are have also been used to a limited extent, including situational judgment testing and culture-specific nonverbal tests like the Gesture Recognition Test, but will require further development to determine whether these methods can be used effectively in a culture-general tool.

Knowledge aspects of cross-cultural competence have been particularly poorly addressed by existing measures. In research on culture-specific predictors, culture-specific knowledge has proven to be a rather weak predictor of effectiveness (Takeuchi et al., 2002); it is possible that one reason for the weak relationships is that the measures are insufficient. Rather than testing participants' knowledge, measures typically ask participants simply to give an assessment of their own knowledge, asking them, for example, to rate how much they know about customs and traditions around the world. It is unclear that differences between individuals' responses on these measures represent real differences in knowledge, or that the items reflect the most relevant knowledge domains. Identifying relevant culture-general knowledge and developing a test of that knowledge is an important aspect of a training program addressing knowledge. Given the common emphasis on knowledge in cross-cultural training (Littrell, Salas, Hess, Paley, & Riedel, 2006), it is somewhat surprising that such a measure has not been developed.

Implications for Training and Education

Current cultural training in the Army targets primarily the knowledge component of cross-cultural competence, with emphasis on culture-specific features of the contemporary operational environment. However, evidence for the contribution of knowledge to outcomes, independent of other dimensions of cross-cultural competence, is weak relative to that of other components. Thus, training should continue to address cultural knowledge, but should also target the other dimensions identified. Addressing the range of dimensions does not necessarily imply a linear increase in hours of training;

changes can be made in training approach and practical exercises to address multiple dimensions simultaneously. A long-term solution will require an integrated approach, in which the dimensions of cross-cultural competence are incorporated throughout training, education, and self-development.

Training and education should also consider timing and the cross-cultural developmental level of participants. Knowledge, skills, and affect that is broadly relevant for general-purpose forces, regardless of job function, should be addressed in a program that is progressive and sequential. Such a program will provide the scaffolding needed to structure knowledge and skill acquisition in a way that facilitates learning. For example, Soldiers who are highly ethnocentric or have very little experience interacting with other cultures may be resistant to retaining in-depth information about a foreign culture, either due to low motivation or to the lack of a framework for organizing the knowledge. One approach would be a relative emphasis early in institutional training and education (initial military training and professional military education) on culture-general capability, with operational training placing greater emphasis on the specific culture of the contemporary operational environment. In general, both culture-general and culture-specific training is recommended (Graf, 2004; Wiseman et al., 1989), and there are likely to be some aspects of the two acquired in parallel and some acquired in sequence. However, little research directly addresses how cross-cultural competence is acquired (Yamazaki & Kayes, 2004).

Research Gaps

In addition to determining how cross-cultural competence is acquired, research is needed to address the extent to which the dimensions and their components are responsive to education and training. With limited time and resources, training must prioritize the components that are likely to show the greatest progress. Researchers have tended to make assumptions about the degree of stability in the constructs of interest; however, the availability of a "trait" measure of a construct is insufficient to establish that a particular attribute is stable. The constructs measured by the MPQ, for example, are presented as personality traits, when, in fact, some of them may in fact be highly trainable and have only a small dispositional component. Research must address the basis for identifying constructs as either dispositional or learned, rather than simply labeling them as such. These are critical distinctions with potential implications for selection, as well as for training and education.

Research has shown consensus on conceptualizing broad traits like the Big Five and linking them to intercultural outcomes. More dynamic dimensions of cross-cultural competence show less conceptual convergence. This lack of consensus is one obstacle to measuring and training cross-cultural competence. For example, interpersonal skills and flexibility have been defined quite differently by different researchers. Better specification of the relevant constructs is needed so that appropriate training methods can be developed.

In particular, the knowledge dimension of cross-cultural competence has received very little attention and warrants closer examination. In the current conceptualization of cross-cultural competence, we have argued that the development of cross-cultural schema supports learning about and navigating through an unfamiliar culture. A schema is a knowledge structure containing abstract representations of concepts, situations, or events, which organizes pieces of information and specifies the relationships between them. Although schemas can produce biased cognition (see Fiske & Taylor,

1991), schemas provide direction to cognitive processing and can facilitate learning (Halford & Busby, 2007). Individuals with experience in multiple cultures may implicitly develop a cross-cultural schema that represents concepts related to culture, which may be beneficial if explicitly taught to individuals with less intercultural experience. Past research has asked individuals what they know or believe about communicating effectively across cultures (Graf, 2004; Martin & Hammer, 1989), but the questions only addressed the context of interpersonal interactions rather than the broader domain of cross-cultural knowledge.

Several frameworks have been developed that identify a small set of dimensions on which cultures differ, such as Hofstede (1980), Trompenaars-Hampden-Turner (1993), and the Global Leadership and Organizational Behavioral Effectiveness (GLOBE) project (House et al., 2004). The focus of this research has been primarily to determine how cultures differ, rather than to determine what knowledge enables effective adaptation in a foreign culture. Although these frameworks show promise when used as an education or training tool (Gannon & Poon, 1997), they do not directly identify what culture-general knowledge contributes to intercultural outcomes. In addition, researchers suggest that the complexity in one's understanding of culture is important (Osland & Bird, 2000); thus, a cross-cultural schema should be dynamic, updated as new information is encountered. Existing dimensional frameworks of cultural difference may lead to a static view of culture and could have the unintended side effect of promoting stereotyping of individuals within a culture.

In the military context, teaching cross-cultural knowledge is one goal of the Marine Corps Center for Advanced Operational Culture Learning, for which they have adopted the term 'operational culture.' However, to date, the content has not yet been empirically tied to outcomes, and no measures have been developed to assess this knowledge. ARI has initiated some research to address this issue, seeking to identify the content and structure of a cross-cultural schema. This research will contribute to the development of methods to assess cross-cultural schema.

Research from an intercultural communications perspective has emphasized the culture-general nature of cross-cultural competence (e.g., Hammer, 1987). However, the *acquisition* of cross-cultural competence likely builds, at least in part, from personal experiences involving the intersection of two or more cultures. Thus, culture-specific learning likely contributes to culture-general competence. Research has not yet addressed how regional/cultural knowledge or experiences contribute to *cross-cultural* (i.e, transferable) competence. In addition, research suggests that certain dimensions may be perceived as more relevant than others for particular cultures (Graf, 2004). Future research must address the relationship among the three cultural capability sets: regional expertise, language, and cross-cultural competence, as these are likely to interact in development. Ideally, a training and development program would identify opportunities to build on each, creating a scaffolding to support overall cultural readiness.

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