



## **5. Emotion and intercultural adjustment**

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Previous work on intercultural communication effectiveness has generally focused on its cognitive components, including cultural knowledge, language proficiency, and ethnocentrism. In this chapter, we examine the role of emotions in intercultural adjustment, and suggest that the ability to regulate emotion is one of the keys to effective intercultural communication. Our model focuses on the role of emotion in intercultural communication episodes, and particularly on the skills necessary for the resolution of intercultural conflict, arguing that emotion regulation is a gatekeeper ability that allows people to engage in successful conflict resolution that leads to effective, long-term intercultural communication.

Culture plays a large role in the communication process (see Žegarac in this volume). Building on that material, we first describe the concepts of intercultural adaptation and adjustment, then the factors that previous research has identified related to adjustment. We then discuss the role of emotions, but also highlight the importance of critical thinking and openness/flexibility, in a growth model of intercultural adjustment potential that has at its core the ability to regulate emotions. We review empirical support for this model, and then review literature examining cultural differences in emotion regulation. Throughout, we blend literature from both communication and psychology in producing a unique perspective on this topic.

### **1. Intercultural adaptation and adjustment**

#### **1.1. Definitions**

One of the most important consequences of and processes associated with intercultural communication is intercultural adaptation and adjustment. We have found that it is important to make a distinction between adaptation and adjustment. On one hand we believe that adaptation is based in the sociocultural domain (Ward 2001); that is, it refers to the process of altering one's behavior to fit in with a changed environment or circumstances, or as a response to social pressure. One of the most well known models of adaptation, for instance, is Berry's (Berry, Kim and Boski 1988) analysis of the interaction styles for sojourners, immigrants, and refugees. In this model, four categories of interaction style are identified: integrators, marginalizers, separators, and assimilators. These refer to behavioral changes made in response to different environments.

On the other hand we define adjustment as the subjective experiences that are associated with and result from attempts at adaptation, and that also motivate further adaptation. Previous researchers have incorporated a wide range of outcome measures as adjustment, including self-awareness and self-esteem (Kamal and Maruyama 1990), mood states (Stone Feinstein and Ward 1990), and health status (Babiker, Cox and Miller 1980; all cited in Ward 2001). Some have developed synthesizing strategies to integrate specific approaches in order to highlight a smaller number of features. For example, Brislin (1993) identified three factors of adjustment, including (1) having successful relationships with people from other cultures; (2) feeling that interactions are warm, cordial, respectful, and cooperative; and (3) accomplishing tasks in an effective and efficient manner. Gudykunst, Hammer and Wiseman (1977) included the ability to manage psychological stress effectively. Black and Stephens (1989) identified general adjustment involving daily activities, interaction adjustment involving interpersonal relations, and work adjustment related to work and tasks.

Adapting to a new culture can have both positive and negative adjustment outcomes. The positive consequences include gains in language competence; self-esteem, awareness, and health (Babiker, Cox and Miller 1980; Kamal and Maruyama 1990); self-confidence, positive mood, interpersonal relationships, and stress reduction (Matsumoto et al. 2001). Clearly when intercultural experiences go well, individuals report evolving in many qualitative, positive ways so that they are different, and better, individuals. These include the development of multicultural identities and multiple perspectives with which to engage the world.

Negative adjustment outcomes include psychological and psychosomatic concerns (Shin and Abell 1999); early return to one's home country (Montagliani and Giacalone 1998); emotional distress (Furukawa and Shibayama 1995); dysfunctional communication (Gao and Gudykunst 1991; Okazaki-Luff 1991); culture shock (Pederson 1995); depression, anxiety, diminished school and work performance, and difficulties in interpersonal relationships (Matsumoto et al. 2001). In extreme cases negative adjustment results in antisocial behavior (gangs, substance abuse, crime) and even suicide. Fortunately all sojourners do not experience this wide range of psychological and physical health problems, but most have probably experienced *some* of these problems at some point in their sojourn.

Intercultural experience is comprised of continuous adaptation and adjustment to the differences with which we engage every day. This engagement is not easy because of the occurrence of misunderstandings due to cultural differences. Our ethnocentric and stereotypic ways of thinking, which are themselves normal psychological functions, make it easy for us to create negative value judgments about those differences and misunderstandings. Negative emotions are also associated with these judgments. These negative reactions make it difficult for

us to engage in more constructive methods of interacting, and keep us from truly appreciating those differences and integrating with people who are different.

One of the goals, therefore, of intercultural adaptation is to adopt an adaptation pattern that minimizes these stresses and negative adjustment outcomes, and maximizes positive ones. Negative adjustment outcomes often serve as important motivators for continued or refined adaptations to the new environment, a concept that is rooted in the notion that emotions are motivational (Tomkins 1962, 1963) and that affect fuels the development of cognitive schemas (Piaget 1952). The development of strategies that deal with potential conflict and misunderstanding is imperative in order to produce successful and effective long-term intercultural communication and relationships.

## 1.2. Factors that predict adjustment

Studies have identified a wide range of variables such as knowledge, language proficiency, attitudes, previous experiences, levels of ethnocentrism, social support, cultural similarity, adventure, and self-construals as factors that influence intercultural adjustment (reviewed in Matsumoto et al. 2001; see also Brabant, Wilson and Gallois in this volume) Among these, three factors have consistently emerged as leading contributors: knowledge of host and home culture, ethnocentrism, and language proficiency. In fact it is precisely because of these factors that many intercultural training interventions involve language skill and knowledge training. The underlying assumption of such training is that if people can speak the language of the host culture, and if they know some basic facts about it, they can adjust to life better. Likewise, if people can recognize ethnocentric attitudes, they will have successful adjustments.

Fostering positive intercultural adjustment requires the development of effective intercultural communication competence (ICC). ICC has been studied extensively (Gudykunst and Kim 1984; Littlejohn and Jabusch 1982; Powers and Lowery 1984), and refers to the skills, talents, and strategies in which we engage in order to exchange thoughts, feelings, attitudes, and beliefs among people of different cultural backgrounds (cf. Prechtel and Davidson-Lund in this volume). ICC is reliant on a process that ensures successful and effective communication across cultures.

How can we develop such a process? (cf. Rost-Roth in this volume; Newton in this volume) One strategy would be to become thoroughly versant in a culture, recording the cultural similarities and differences found in it and building your own 'cultural dictionary'. This is a formidable task, as there is so much about culture to learn and so little time, energy, and storage space available. This approach, however, is not without merit, and certainly many people develop such almanacs in their minds about cultures with which they become intimately familiar through personal experiences. Related processes such as knowl-

edge of and attitude toward host culture, ethnocentrism, social distance, and exposure to host culture members are all related to ICC (Gudykunst and Kim 1984; Samovar and Porter 1995; Wiseman, Hammer and Nishida 1989).

But it is virtually impossible to create that dictionary of culture for all the cultures and peoples we will possibly come in contact with, and many of us do not have the opportunities to become truly culturally fluent in this fashion. Instead, the vast majority of us will need to rely on a *process model* of intercultural growth to engage in effective intercultural communication. As disagreements and misunderstandings based on intercultural communications are inevitable, it becomes important to be able to manage our negative emotional reactions when engaging with those differences. Those who can will then be able to engage in a more constructive intercultural process and open the door to more successful intercultural interactions. Those who cannot will have that door closed to them. Emotion management, therefore, is central to this process, and holds the key to adjustment.

## **2. An emotion-focused approach to intercultural adjustment: the psychological engine of adjustment**

Emotions, in fact, are a large part of our lives. Emotions are transient reactions to events or situations, and involve a package of cognitive, physiological, expressive, and behavioral components. When emotions are elicited, they affect our thinking, turn on a unique physiology, make us feel certain ways, and motivate us to engage in behavior. They color life and experiences, giving them meaning and relevance. Sadness, anger, disgust, fear, frustration, shame, and guilt – while all negative and unattractive – are all significant in that they tell us something important about ourselves and our relationships with other people, events, or situations. Happiness, joy, satisfaction, pleasure, and interest are also important emotions in that they, too, give us important information about our relationships with others. Emotions are ‘read-out mechanisms’ because they provide information to us about our relationship to the world around us (Buck 1984).

Emotions are important because they motivate behaviors. Sadness and anger make us do something, just as happiness and joy reinforce behaviors. The father of modern day research and theory of emotion in psychology – Sylvan Tomkins – suggested that emotions *are* motivation, and if you wanted to understand why people behave the way they do, you had to understand their emotions (Tomkins 1962, 1963). For these reasons, it is only natural that we give more consideration to this aspect of our lives vis-à-vis intercultural adjustment.

As mentioned above, we assume that intercultural misunderstandings occur because of cultural differences. We further assume that these misunderstandings

are laden with emotion such as anger, frustration, anxiety, or sadness. Thus how well people deal with their negative emotions and resolve conflicts is a major determinant of intercultural adjustment success or failure. While intercultural adaptation inevitably involves many positive experiences as well, one of the keys to successfully adjusting to a different culture is having the ability to resolve conflicts well.

When negative emotions are aroused during conflict, it is easy for people to be overcome by those feelings because they take over one's thinking and feeling. Even people who are usually adept at thinking critically and who can act in perfectly moral and altruistic ways may not be able to think or act in such a manner when overcome by negative emotions. It is at these critical moments in the intercultural interaction episode – when negative emotions are aroused because of inevitable cultural differences – that defines a key step in personal growth, which is a means to both intercultural success or stagnation. Individuals who can regulate their negative feelings, somehow put them on hold and not act directly upon them, or allow them to overwhelm them, will be able to then engage in other processes that will aid them to expand their appraisal and attribution of the causes of the differences. Once emotions are held in check, individuals can engage in critical thinking about the origins of those differences and the nature of misunderstandings, hopefully allowing themselves to go beyond their own cultural lenses to entertain the possibility of other causes of the differences that they may not have even been aware of. Once this type of critical thinking can occur, these individuals will have an active choice of accepting or rejecting alternative hypotheses concerning the causes of those differences, and can have the openness and flexibility to accept rival hypotheses if it turns out their initial reactions were inaccurate.

By engaging in critical thinking about cultural differences and being open and flexible to new ways of thinking, people continually add new cognitive schemas in their minds to represent the world. The addition of new schemas adds complexity to the ability to interact with diversity, creating new expectations and greater awareness of similarities and differences. All of this is possible only when emotions are regulated and negative emotions are not allowed to get the best of one. This is a growth model of development.

If, however, negative emotions overcome us and dictate how we think, feel, and act, we cannot engage in critical thinking about those differences. People revert to a previous way of thinking about those differences that is rooted in their ethnocentric and stereotypic ways of viewing the world and others. Instead of creating rival hypotheses and new schemas that will stimulate growth in ways of thinking, this process reinforces pre-existing, limited ways of thinking. Openness and flexibility to new ideas and to these rival hypotheses are not even options because the new ideas don't exist. Instead there is only a regurgitation of stereotypes and vindication of ethnocentric attitudes. This is a non-growth model.

The four main ingredients to personal growth in relation to dealing with cultural differences in our model, therefore, are Emotion Regulation (ER), Critical Thinking (CT), Openness (OP), and Flexibility (FL). These are psychological skills that are internal, and we call them the *psychological engine* of adaptation and adjustment. They are the psychological mechanisms by which intercultural success or stagnation, personal growth or vindication, will occur. Of these ER is the key ingredient as it is the gatekeeper of the growth process, because if we cannot put our inevitable negative emotions in check, it is impossible to engage in what is clearly higher order thinking about cultural differences.

These psychological processes are crucial to intercultural adjustment. It does not matter how much information about host or home culture, or the degree of language skills one may have; if one cannot regulate emotions, think critically about situations, events, and people, and does not have the openness of mind and flexibility to adopt alternative positions to what one is familiar and accustomed, it is difficult to develop ICC. If, however, one has these psychological attributes, then one has the psychological engine that will allow one to use knowledge and language in order to weather the storms of intercultural conflicts, rise above them, become a stronger, wiser, and more multicultural person.

The model we propose is similar to the concepts of assimilation and accommodation proposed by Piaget that explain how cognitive development occurs (Cowan 1978; Dasen 1976; Piaget and Campbell 1976; Piaget, Elkind and Flavell 1969; Piaget, Gruber and Vonèche 1977). Piaget suggested that infants and children attempt to adapt to their environments by first assimilating the environment into their existing cognitive schemas. When the environment do not match their schemas, infants and children accommodate, that is, alter their existing schemas or add to them, thereby increasing cognitive complexity. While Piaget's theory of cognitive development focused on the process of assimilation and accommodation, what fueled accommodation, that is cognitive growth, was the negative affect that occurred when infants attempted to assimilate the environment into their existing schemas and they did not fit; that is, negative affect fueled cognitive development (Cowan 1978; Piaget 1952). In the same vein we propose that negative emotional experiences fuel the need to adapt and readapt to the environment. Those who adapt in positive, constructive ways will experience positive adjustment outcomes while those who do not will experience negative outcomes.

These assumptions sit well with research in other areas of psychology. Marital satisfaction, for instance, which is not unlike intercultural communication, is correlated with the ability of the couple to deal with and resolve differences of opinions and conflicts, and not necessarily by the amount of positive experiences they have together (Carstensen, Gottman and Levenson 1995; Gottman and Levenson 1986, 1992, 1999, 2000; Levenson and Gottman 1983). Conflict resolution skills are one of the keys to a happy marriage, and we believe they are

a key to successful intercultural adjustment. Recent research has also demonstrated that there are gender and ethnic group differences on emotion regulation, that individual differences on it are related to regulation success, mood regulation, coping styles and strategies, inauthenticity, interpersonal functioning, and well being (Gross and John 2003).

The key, therefore, to achieving successful intercultural adjustment is the engagement of a personal growth process model where ways of thinking, person perception, and worldview are constantly being updated by the new and exciting cultural differences with which we engage in our everyday lives. The key to this engagement is the ability to regulate our emotional reactions and the other components of the psychological engine of adjustment. If we can do so, then the increasing cultural diversity of the world is an exciting research laboratory where we can constantly test our hypotheses, explore new hypotheses, throw out theories of the world that don't work, and create theories that do. In this framework the world is an exciting place to be and the challenge of cultural diversity and intercultural episodes and conflicts is a stage for forging new relationships, new ideas, and new people. It is the stage for intercultural success for those individuals who can engage in the processes outlined above. For these individuals, life is an enjoyable journey.

### **3. Empirical support for the growth model of intercultural adjustment: the intercultural adjustment potential scale (ICAPS)**

#### **3.1. Development and validation of the ICAPS**

For years the field has struggled with the creation of valid and reliable individual difference measures that will predict intercultural adjustment. The identification of several psychological variables as the keys to intercultural adjustment, however, opens the door to such development. Because there was no measure that could assess individual differences in the potential for intercultural adjustment based on the psychological skills outlined above, we created one, resulting in the development of the Intercultural Adjustment Potential Scale (ICAPS).

Our strategy was to embody the several factors previously suggested in a pool of items and then to empirically test which had the strongest ability to predict intercultural adjustment, rather than to decide on an a priori basis which items should be included. We thus examined item content from a number of valid and reliable personality inventories assessing psychological constructs related to emotion regulation, critical thinking, openness and flexibility; we also included other skills such as interpersonal security, emotional commitment to traditional ways of thinking, tolerance of ambiguity, and empathy. We created



items based on the ideas gleaned from our examination of many existing scales, and also constructed our own items. This resulted in the initial development of 193 items.

One issue that arose early in this work was whether this test would be developed for any sojourner of any cultural background, or for those from a single culture. We opted for the latter, assuming that it would be more beneficial to create and validate a measure that has as high a predictive validity as possible for one cultural group, rather than develop a general measure at the sacrifice of predictive validity. The development of a culture-general measure would require the testing of people from multiple home cultures in multiple host cultures, which would be practically infeasible. Moreover a culture-specific measure could serve as the platform for similar method development in other cultures. Thus, we focused on Japanese sojourners and immigrants, because of the literature in the area and our own expertise with this culture.

Because we were concerned about the cross-cultural equivalence of the 193 items, had to take into account that respondents might have different English language capabilities, and had to remove any colloquialism and difficulty of wording, two researchers created the items, reviewing and modifying all items in terms of language and style, rendering the wording appropriate for Japanese students who might possess a limited selection of English idioms commonly in use. Two Japanese research assistants then reviewed the items, ensuring that they were understandable to native Japanese. Items that depended for their utility on a cultural value in which Japanese and U.S. culture differed were excluded. In all cases, items were written to adapt the cultural meaning of an item in the United States to the same cultural context from a Japanese perspective.


To date many studies have demonstrated the internal, temporal, and parallel forms reliability, and convergent, predictive, and incremental validity of the ICAPS to predict intercultural adjustment (Matsumoto et al. 2001, 2003a, 2004). Early on we decreased the number of items from 193 to 55, based on each item's empirical ability to predict intercultural adjustment. Items having little or nothing to do with intercultural adjustment were eliminated, even if elsewhere they reliably measured an aspect of an underlying psychological skill (e.g. openness) that was theoretically related to adjustment. Also, some items predicted adjustment better than others; thus, only items that predicted adjustment the best, according to empirical criteria, were retained. Although the ICAPS was originally developed for use with the Japanese, our studies have also shown that it predicts adjustment in immigrants from all around the world, including India, Sweden, Central and South America, suggesting that it taps a pancultural set of psychological skills relevant to intercultural adjustment.

### 3.2. Identifying the psychological skills underlying the ICAPS: the importance of emotion regulation

Initial factor analyses using normative data (n approximately 2,300, half of whom were non-U.S. born and raised) suggested that four factors underlie the ICAPS – Emotion Regulation (ER), Openness (OP), Flexibility (FL) and Critical Thinking (CT) (Matsumoto et al. 2001). These findings provided support for our theoretical formulation in which the importance of ER, OP, CT and FL are the key psychological ingredients to intercultural adaptation. These skills were hypothesized as necessary in allowing immigrants and sojourners to cope with stress and conflict that are inevitable in intercultural sojourns, while at the same time allowing for personal growth in understanding, tolerance and acceptance of cultural differences.

To obtain further support for the validity of these four psychological skills to predict adjustment, we created scores for each of these scales and computed correlations between them and various adjustment variables across the studies conducted to determine which psychological constructs predicted adjustment. Individuals who scored high on the ICAPS scales, and especially ER, had less adjustment problems at work, home, during spare time, and in family domains; less somatic, cognitive, and behavioral anxiety; less depression; greater subjective well-being in their adjustment to the US or another country; greater subjective adjustment; higher dyadic adjustments in international marriages; higher life satisfaction; less psychopathology; less culture shock and homesickness; higher language scores; better grades; more tendency to work; higher income; and managerial skills useful in solving the complex problems of running a business. These correlations provided strong support for this conglomeration of skills to predict adjustment.

Conceptually we suggested that ER was a gatekeeper skill because it is necessary for people to manage inevitable intercultural conflict and that once emotions were regulated individuals could engage in critical thinking and assimilation of new cognitive schemas that aid in adjustment. Various outcomes across all studies supported this contention. Across studies, ER predicted most of the adjustment measures relative to the other ICAPS scales. In addition, hierarchical multiple regressions indicated that ER accounted for most of the variance in adjustment outcomes when entered first in the regression; the additional variance accounted for by OP, FL, and CT was always negligible (Matsumoto et al. 2003b). People who score high on ER have high positive social skills and abilities, more success in life, successful coping, achievement, ability, and psychological mindedness. They also have less Neuroticism, and less tendency to withdraw from active involvement with the social world.


Our most recent studies continue to highlight the importance of ER  intercultural adjustment. In one study (Yoo, Matsumoto and LeRoux 2005), international students attending San Francisco State University completed the ICAPS

and a variety of adjustment measures at the beginning and end of the academic year (September and May). ER was highly and significantly correlated with all adjustment variables. Individuals with higher ER scores had less anxiety, culture shock, depression, homesickness, and hopelessness, and more contentment and satisfaction with life. Moreover each of these relationships were observed when the ICAPS ER scale at time 1 was correlated with these adjustment variables at time 2, 9 months later, and when demographic variables were controlled. The correlations with time 2 adjustment variables also survived when the same variable's time 1 levels were controlled. Individual differences in ER, therefore, predicted adjustment concurrently, and considerably well into the future as well (Table 1).

Table 1. Correlations between ICAPS emotion regulation scale and adjustment variables in international students assessed at the beginning (time 1) and end (time 2) of school year

Adjustment variable	Correlations			
	Time 1	Sig	Time 2	Sig
Beck anxiety inventory	-0.39	**	-0.34	*
Contentment	0.31	*	0.41	*
Culture shock	-0.66	***	-0.71	***
Beck depression inventory	-0.40	**	-0.33	*
Homesickness	-0.24	*	-0.37	*
Beck hopelessness inventory	-0.45	***	-0.41	*
Satisfaction with life scale	0.40	**	0.41	*

\* $p < 0.05$  \*\* $p < 0.01$  \*\*\* $p < 0.001$

Many of the findings  have reported have been replicated by other laboratories (Savicki et al. in press). Thus we are very confident about the ability of ER to predict a variety of intercultural adjustment outcomes. Still there are many questions that remain. For instance, because ER is a skill, we believe that it can be improved with training. It is clear that typical teaching about culture that occurs in didactic classrooms does *not* affect ER (Matsumoto 2001, 2002). But it is also clear that training seminars that are based on experiential learning about culture can improve people's ER scores (Matsumoto et al. 2001, 2003a).

Because the ICAPS reliably and validly assesses individual differences in ER related to intercultural adjustment, there is great potential for the ICAPS to be used as a diagnostic tool. Training programs specially designed to improve ER can aid those with low ER scores in improving their potential for intercultural adjustment. At the same time, individuals with high ER skills can look to

other areas of improvement in terms of training needs. The ICAPS as a whole and ER scores in particular can be used as an aid in personnel selection for overseas assignments or work in multinational, intercultural teams.

At the same time, the relationship between ER and adjustment is not perfect. Some people who score very low on ER do adjust well, while some people who score high on ER adjust poorly. While ER is undoubtedly one of the most important psychological skills related to adjustment, it is definitely not the only psychological skill that contributes to adjustment. And psychological skills are only one factor of many that contributes to adjustment. Other factors include situational, environmental, and ecological variables, all of which affect adaptation and adjustment. ER is only one factor that contributes to adjustment outcomes, albeit an important one.

#### **4. Cultural differences in emotion regulation**

Clearly ER is one of the most important skills necessary for intra- and intercultural adjustment. Given that there are individual differences in ER (Gross 1999a, 2002; Gross and John 2003), one question that arises concerns whether or not there are cultural differences in ER. This is an interesting possibility that raises questions not only about intercultural encounters, but about the origins of such skills. And it also leads to the possibility that people of some cultures that are generally higher on ER would be better equipped to adjust well interculturally, while people of cultures typically lower on ER may be less suited for adjustment. These differences also implicate cross-cultural differences in intracultural indices of adjustment, such as subjective well-being or anxiety.

In fact there are a number of previous studies that suggest that there are substantial cultural differences in ER. The earliest systematic cross-cultural data that points in this direction is Hofstede's seminal study on work-related values. One of the cultural dimensions that Hofstede identified was Uncertainty Avoidance (Hofstede and Bond 1984; Hofstede 1980, 2001); this dimension is probably linked to ER. Uncertainty Avoidance (UA) is defined as the degree to which people feel threatened by the unknown or ambiguous situations, and have developed beliefs, institutions, or rituals to avoid them. Cultures high on UA are most likely characterized by low levels of ER, while cultures low on UA have high ER. Individuals high on ER would tend to feel less threatened by unknown or ambiguous situations, and would be able to deal with such situations more constructively than those with low ER, as discussed throughout this chapter. This suggests that people from countries high on UA would have more difficulty in intercultural adjustment, while people from countries low on UA would have relatively less difficulty. In Hofstede's study, the three countries highest on UA were Greece, Portugal and Guatemala; the three lowest were Denmark, Hong Kong and Sweden.

Another source of information concerning cultural differences in ER comes from McCrae's multinational study of the five factor model of personality (Allik and McCrae 2004; McCrae 2002; McCrae et al. 1998). In these studies McCrae and his colleagues have used their Revised NEO-Personality Inventory (NEO-PI-R; Costa and McCrae 1992), a 240 item questionnaire that measures the five personality traits considered to be universal: Extraversion, Openness, Agreeableness, Conscientiousness, and Neuroticism. To date McCrae has reported data on this measure from 36 samples in 32 countries involving both college students and adults (McCrae 2002). Although data are collected from individuals, means on the various facet scores were computed for each sample. The Five Factor Model replicates on the national level as well as the individual (McCrae 2001, 2002). Based on these results McCrae has computed country-level means for each of the five factors (and their facets) for each of the countries studied. Country scores on Neuroticism probably reflect mean levels of ER. Neuroticism is typically defined as emotional lability, and thus high scores on Neuroticism probably reflect low scores on emotion regulation, and vice versa. This suggests that people from countries high on Neuroticism would experience more difficulty in intercultural adjustment, and vice versa. In McCrae's study, the three countries that scored highest on Neuroticism were Portugal, Italy and Spain; the three lowest were Sweden, Denmark and Norway.

The notion that Hofstede's UA and McCrae's Neuroticism are related to each other received empirical support by Hofstede and McCrae (2004), who computed country-level correlations between their respective culture and personality scores. UA was correlated with Neuroticism 0.58 (and negatively with Agreeableness  $-0.55$ ), suggesting that these dimensions share a common denominator. We suggest that one common denominator is ER.

One of the limitations of using the Hofstede and McCrae data to estimate cultural differences on ER is that neither of them intended to measure ER directly. The ICAPS described earlier in this chapter, however, does, and our current normative database includes data from approximately 11,000 individuals around the world. We computed an exploratory factor analysis on these data, after doubly standardizing both within individuals and countries in order to eliminate positioning effects and to produce a pancultural solution (Leung and Bond 1989). As previously, the first factor to emerge in these analyses was ER. We then created scale scores on the raw data using the highest loading items on this factor (11 items), and computed means on this scale for each country represented in the data set. (Respondents rate each item on a 7-point scale; means therefore range from 1–7.) Like the Hofstede and McCrae data sets, these data (Table 2) also demonstrate considerable variability across cultures on ER. The three countries with the highest ICAPS ER scores were Sweden, Norway, and Finland; the three lowest were Japan, Malaysia, and China.

To examine whether the ICAPS ER scores were empirically related to Hof-

stede's UA and McCrae's Neuroticism, we computed country-level correlations between them. ICAPS ER was marginally negatively correlated with UA,  $r(47) = -0.20$ ,  $p < 0.10$ , indicating those countries with higher ER scores had lower UA scores, as expected. ICAPS ER was also negatively correlated with Neuroticism,  $r(29) = -0.49$ ,  $p < 0.01$ , indicating that countries with higher ER scores had lower Neuroticism scores, as expected.

Several other studies have measured ER or concepts related to it across cultures, and provide further hints as to its cultural variability. Matsumoto and his colleagues (2003b), for instance, reported two studies in which they administered the Emotion Regulation Questionnaire (Gross and John 2003), a ten-item scale that produces scores on two subscales, Reappraisal and Suppression. Americans had significantly higher scores than the Japanese on Reappraisal, while the Japanese had significantly higher scores on Suppression. In that same report, the Americans also had significantly higher scores than the Japanese on the ICAPS ER scale, while the Japanese had significantly higher scores on the Neuroticism scale of the NEO-PI-R. These findings converge with the country listing of ICAPS ER scores described above.

Finally a number of studies have documented cultural differences in display rules (Ekman and Friesen 1969). These are rules learned early in life that govern the modification of emotional displays as a function of social circumstance. Display rules are related to ER because they concern the management of the expressive component of emotion. The first study to document the existence of display rules was Ekman and Friesen's classic study involving American and Japanese participants viewing highly stressful films in two conditions while being videotaped (Ekman 1972; Friesen 1972). When viewing the stimuli alone, both American and Japanese observers showed the same emotions in their faces; when in the presence of a higher status experimenter, however, cultural differences emerged. While the Americans continued to show their facial signs of negative emotions, Japanese observers were more likely to mask their negative feelings with smiles.

Subsequent cross-cultural research has continued to document cultural differences in display rules. Elsewhere we (Biehl, Matsumoto and Kasri in press; Matsumoto 1990) demonstrated how Japanese, Hungarians and Poles tended to deamplify negative emotions to ingroup members but amplify positive ones relative to Americans; they also amplify negative emotions to outgroups and minimize positive ones. We have also documented display rule differences between the US, Russia, South Korea and Japan (Matsumoto et al. 1998), and among different ethnic groups in the US (Matsumoto 1993). In our latest research we have reported cultural differences among the US, Japan, and Russia on display rules (Matsumoto et al. 2005).

Presumably other rules or similar types of mechanisms exist for other emotion components. Hochschild (2001), for instance, has proposed the concept of feeling rules, which concern the regulation of the experiential component of

emotion. Gross suggests individuals can regulate their emotions by altering the antecedents that bring forth emotion (selecting or modifying situations, altering attention, or changing cognitions) and the behavioral and physiological responses related to emotion (Gross 1998, 1999a, 1999b, 2002; Gross and John 2003; Gross and Levenson 1993). Cross-cultural studies on these concepts are necessary to examine possible cultural differences on them as well.

Table 2. Country listing of emotion regulation scores from the ICAPS

Country	ICAPS Emotion Regulation score	Standardized Emotion Regulation score
Australia	4.58	0.21
Austria	4.76	0.89
Belgium	4.57	0.16
Botswana	4.43	-0.38
Brazil	4.63	0.39
Bulgaria	4.76	0.89
Canada	4.56	0.10
Chile	4.63	0.39
China	3.96	-2.23
Costa Rica	4.70	0.65
Croatia	4.76	0.89
Denmark	4.93	1.55
El Salvador	4.70	0.65
Estonia	3.36	.
Finland	4.93	1.55
France	4.57	0.16
Germany	4.57	0.16
Greece	4.47	-0.23
Guatemala	4.70	0.65
Hong Kong	4.15	-1.48
Hungary	4.76	0.89
India	4.64	0.42
Indonesia	3.75	.

Country	ICAPS Emotion Regulation score	Standardized Emotion Regulation score
Israel	4.11	-1.62
Italy	4.47	-0.23
Japan	3.87	-2.57
Lebanon	4.57	0.16
Malawi	4.43	-0.38
Malaysia	3.91	-2.41
Mexico	4.50	-0.11
Netherlands	4.57	0.16
Nigeria	4.36	-0.65
Norway	4.93	1.55
New Zealand	4.85	1.25
Peru	4.63	0.39
Philippines	4.33	-0.76
Poland	4.76	0.89
Portugal	4.47	-0.23
Russia	4.41	-0.45
South Africa	4.43	-0.38
South Korea	4.26	-1.04
Spain	4.47	-0.23
Sweden	4.93	1.55
Switzerland	4.76	0.89
Taiwan	4.09	-1.72
Thailand	4.22	-1.19
Turkey	4.67	0.53
USA	4.50	-0.13
Venezuela	4.63	0.39
Yugoslavia	4.76	0.89
Zambia	4.43	-0.38
Zimbabwe	4.43	-0.38



## 5. Conclusion

ER is probably one of the most important psychological skills in our lives vis-à-vis intercultural adjustment. With ER, the increasing cultural diversity of the world is an exciting research laboratory, where we can constantly test our hypotheses, explore new hypotheses, throw out theories that don't work, and create theories that do. Without ER, people reinforce and crystallize their pre-existing ethnocentric and stereotypic ways of dealing with the world. With ER, people voyage through life; without it, they vindicate their lives.

While we have focused in our work and in this chapter on the role of ER in interpersonal contexts, there is no reason to believe that the model we propose is not applicable also to intergroup contexts. In the world today there are many contexts in which people may begin an encounter with prejudice and an assumption that the other person will be 'difficult' to communicate or deal with. Although we have done no research on this directly, we would predict that emotion regulation is also important on the intergroup level, where prejudice and history may lead to pre-existing destructive emotions that are not conducive to successful intergroup relationships. Future research will need to delve into the possibility of using our model to explore these issues.

Our views on the role of emotion, critical thinking, and openness in effective intercultural communication fill a void in our understanding of the development of ICC and fostering positive intercultural adjustment outcomes, and provide the field with important new ways of conceptualizing intercultural training. Indeed, our work on ER suggests that one of the primary goals of intercultural communication competence and training programs should be in the improvement of ER skills in trainees. Tools such as the ICAPS can be used to assess individuals on their ER levels, providing important diagnostic information about strengths and weaknesses, as well as for documenting the efficacy of training. The emotional impact of typical training devices such as role plays, simulations, and the like can be analyzed for their emotional impact and the ways they foster the development (or not) of ER. Tools such as Description, Interpretation, and Evaluation (DIE) can be complemented by incorporating emotions and their evaluation (what we call the Description, Feeling, Interpretation, and Evaluation – DFIE – model). No matter how complex or advanced our cognitive understanding of culture and communication is, this understanding does no good if we cannot regulate emotions that inevitably occur in intercultural communication episodes.

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