Cultural exposure, emotional intelligence, and cultural intelligence: An exploratory study

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Abstract
This study examines the influence of cultural exposure on emotional intelligence and cultural intelligence. Because of the importance of international experience in organizations, and the ease of travel, understanding the impact of exposure to other cultures is critical. In this study, cultural exposure is examined in a variety of ways, such as a binary measure, breadth measure, and depth measure, as well as the interaction between breadth and depth. The sample included 485 participants from a large university in the northeast part of the United States. Regression analysis was conducted and findings indicated that cultural exposure in all forms had an impact on cultural intelligence, while it did not have an impact on emotional intelligence.

Keywords
Cultural exposure, cultural intelligence, emotional intelligence, international experience

Introduction
Many individuals are exposed to other cultures because of the ease of travel to foreign locations. Additionally, organizations often initiate expatriation, which is when an individual lives and works outside his or her country of citizenship (Carpenter et al., 2001; Inkson et al., 1997; Reuber and Fischer, 1997; Sambharya, 1996; Takeuchi et al., 2005); thus expatriation is a particular type of in-depth exposure to another culture. These assignments are considered valuable for many reasons including knowledge sharing (Makela, 2007; Manev and Stevenson, 2001) and it is believed they can create a competitive advantage for a firm (Carpenter et al., 2000, 2001), but there may be other benefits that have not been explored. Since expatriate assignments are a cost concern for organizations (Black and Gregersen, 1999; Krell, 2005; McNulty and Tharenou, 2004; Peak, 1997;...
Solomon, 2000; Welch, 2003) and the costs of failure are notably high (Forster, 1997; Johnson et al., 2006), finding additional benefits to these experiences is critical for organizations. Additionally, many of these assignments often fail (Johnson et al., 2006; Tung, 1982) and some report that failure rates are as high as 83% (McFarland, 2006), so determining more effective methods to select employees who will have a lower chance of failure is critical.

Both emotional intelligence and cultural intelligence have been popular topics for researchers. Many organizations have undertaken programs to train individuals in emotional intelligence (Byron Stock & Associates, 2008; Hays, 1999; Pilkington et al., 2012; Zijlmans et al., 2011) or participated in studies related to training emotional intelligence (Gignac et al., 2012; Slaski and Cartwright, 2003). Training aspects of cultural intelligence has also occurred in organizations (Bean, 2006; MacNab et al., 2012; Young, 2007). Still, the research on their relationship to cultural exposure is limited. In the emotional intelligence literature researches have called for more studies on how it is developed (Wong et al., 2007) and research on cultural intelligence is still relatively new, thus there is a need for a better understanding of it. Since there are potentially many benefits to having individuals with higher levels of emotional intelligence and cultural intelligence and many organizations expatriate employees, this is an exploratory study of the impact of cultural exposure on each form of intelligence in order to expand each research field and to provide some practical implications of the study. The goal is to answer the following research questions:

Research Question 1: Does cultural exposure have a significant impact on emotional intelligence and/or cultural intelligence?

Research Question 2: Does breadth of exposure to other cultures increase one’s emotional intelligence and/or cultural intelligence?

Research Questions 3: Does depth of exposure to other cultures increase one’s emotional intelligence and/or cultural intelligence?

Research Question 4: Is there an interaction effect among these variables?

Theoretical development

Emotional and cultural intelligences

Seminal research on emotional intelligence defined it as an ability which focuses on the perception and expression of emotion accurately and adaptively; along with the ability to understand emotional knowledge, use feelings to facilitate thought, and to regulate emotions, in not only oneself, but also others (Salovey et al., 2003). It has been linked to various positive outcomes such as leadership (Alon and Higgins, 2005; Prati et al., 2003), moderating workplace stress (Ashkanasy et al., 2003), positive work attitudes (Carmeli, 2003), team cohesiveness (Rapisarda, 2002), performance (Slaski and Cartwright, 2002; Wong and Law, 2002), and work outcomes (Akerjordet and Severinsson, 2008; Carmeli and Josman, 2006). Some believe it contributes to cultural adjustment in global assignments (Dolan and Cerdin, 2005) and some think that it should be incorporated in the training for international experiences (Ornstein and Nelson, 2006).

Cultural intelligence, defined as a ‘multifaceted competency consisting of cultural knowledge, the practice of mindfulness, and the repertoire of behavioral skills’ (Thomas and Inkson, 2004: 182–3), is considered a capability that allows individuals to understand and act appropriately across a wide range of cultures (Thomas, 2006). Components of cultural intelligence have been found to predict cultural judgment, decision-making, cultural adaptation, and task performance (Ang et al., 2007). Cross-cultural motivation, a component of cultural intelligence, has been found to affect
expatriate work adjustment (Chen et al., 2010) and performance of expatriates (Rose et al., 2010). Moreover facets of cultural intelligence have been found to be related to general interaction and work adjustment of foreign workers (Dagher, 2010).

Emotional intelligence and social intelligence are both thought to be associated with global leadership success (Alon and Higgins, 2005) and development of a global mindset (Lovvorn and Chen, 2011). While the research on culture exposure cultural intelligence is increasing, it is still in its infancy. Recently scholars have theoretically linked exposure and cultural intelligence (Kwanghyun et al., 2006). Some empirical studies have looked at types of exposure (Crowne, 2008), work and travel experiences (Shannon and Begley, 2008), and number of times and length of time abroad (Tarique and Takeuchi, 2008; Tay et al., 2008). Some research found evidence for multicultural experiences influencing aspects of cultural intelligence (Tay et al., 2008). One examined the moderating effects of international experiences (Lee and Sukoco, 2010). However, the research is limited in this area and varied definitions of cultural exposure exist. Furthermore, none of the previous research looks at depth of experience by examining activities undertaken by the individual, for instance visiting local eateries, and none looked at exposure and cultural intelligence and emotional intelligence. Therefore, more research needs to be conducted; in particular because researchers have acknowledged a relationship between these intelligences (Crowne, 2009; Crowne et al., 2009; Kumar et al., 2008; Moon, 2010; Thomas and Inkson, 2004); thus an examination of the impact of cultural exposure on both should provide additional insight.

Impact of national cultural exposure on emotional intelligence and cultural intelligence

National culture was defined by Hostede (1994: 1) as ‘the collective programming of the mind which distinguishes the members of one category of people from another’. It creates the social context that allows these behaviors to be understood (Trompenaars and Hampden-Turner, 1998), and it is essential in shaping individual thoughts (O’Grady and Lane, 1996) and behavior (O’Grady and Lane, 1996; Shim and Paprock, 2002). There are visible and invisible layers of culture; the visible includes symbols such as food and buildings and the invisible includes values and beliefs (Hofstede, 1994; Hofstede et al., 2010; Trompenaars and Hampden-Turner, 1998). It is shared, at least in part, by individuals who live within the same social environment and it is learned, not innate (Hofstede et al., 2010). Thus, national culture exposure is defined here as experiences related to a region that aid in developing a familiarity or understanding of the norms, values, and beliefs of that region.

It seems highly plausible that being exposed to other cultures through experiences abroad enhances cultural and emotional learning and in turn impacts both emotional intelligence and cultural intelligence. Some research indicates that one can learn about appropriate behavior by observing and experiencing situations (Phillion, 2002). It is also thought that exposure to other cultures allows an individual to select and use the appropriate tools when interacting in the culture and modify their behavior when necessary (Johnson et al., 2006). Cultural exposure should allow one to both learn and experience emotional and cultural behavior.

Similarly, social learning theory posits that individuals learn from witnessing how successes and failures of others are rewarded or punished (Bandura, 1977; Trevino, 1992). Based on Bandura (1977), Thomas stated that social learning involves ‘attention to the situation, retention of the knowledge gained from the situation, reproduction of the behavioral skills observed, and finally, receiving feedback (reinforcement) about the effectiveness of the adapted behaviour’ (2006: 19). Additionally, it is thought that culture is learned (Hofstede et al., 2010). Thus, individuals who are exposed to foreign cultures may likely learn what is emotionally and culturally accepted in that culture.
Additionally, adaptability is a key aspect of both cultural intelligence and emotional intelligence and skills that are enhanced from the exposure will likely increase these intelligences. Some scholars have discovered that living and working in other cultures enhances understanding one’s own and others’ mood, emotion and personality, which are some of the components of emotional intelligence (Yamazaki and Kayes, 2004). Furthermore, during adaptation to another culture better communications skills are thought to be developed (Bennett, 1993), thus this would likely indicate an increase in both emotional and cultural intelligence skills, as one would need to understand the emotions of an individual to effectively communicate and some cultural understanding would also be required. Moreover, the ability to empathize with the target culture is also associated with adaptation which has been previously associated with emotional intelligence by many (Camuffo et al., 2012; Ciarrochi et al., 2000; Dolan and Cerdin, 2005; Fredáková and Jelenová, 2004; Goleman, 1997; Rahim et al., 2002; Rapisarda, 2002; Schutte et al., 2001).

Scholars have stated that, during long-term foreign stays, such as an organization-initiated expatriate work assignment (Inkson et al., 1997), one should gain a fairly complex cultural understanding because of the multiple cues provided by observing others and their reactions to oneself (Earley and Peterson, 2004). Additionally, researchers have found that individuals who had been abroad for work or education had higher levels of cultural intelligence than those who had been abroad for other purposes (Crowne, 2008), that executives who participated in foreign service learning programs increased their cultural intelligence (Pless et al., 2011), and that the number of trips and length of time contributed to higher levels of cultural intelligence (Tarique and Takeuchi, 2008). This likely occurred because intercultural encounters differ from normal experiences and because they challenge one’s assumptions and thinking (Earley and Peterson, 2004). By interacting in a culture, an individual is influenced by that culture; subsequently, this will influence a person’s level of knowledge and understanding about the culture and how it differs from his or her own. For example, consider a foreign business office that includes several expatriate managers. Each manager oversees teams of host country nationals, and one manager successfully motivates his or her team by displaying anger. Other expatriates may surmise that this motivation technique is effective and appropriate; therefore they may choose to use it to motivate their workers. Similarly, other scholars found that expatriates learn best from reflective action, or the process of making decisions based on insights gained from contemplation (Shim and Paprock, 2002). This type of contemplation occurs when one is exposed to other cultures. Consequently, as an individual sees what is appropriate and reflects upon it, cultural learning takes place.

Being in another culture allows one to witness the actions of the individuals of that culture, and in turn see what actions have positive and negative effects. For instance, some cultures are thought to be more emotional expressive (Trompenaars and Hampden-Turner, 1998; Trompenaars, 1996) and less restrained (Hofstede, 2012; Hofstede et al., 2010); when visiting a society that is more expressive emotionally, a worker may witness a variety of appropriate emotional behaviors occurring during a business negotiation. Thus he may determine that it is acceptable to be angry and yell in business meeting and may modify his behavior to mimic the locals. Additionally, an individual in line at a market may see someone negotiating the price of a purse. This individual may determine from seeing this scene that not only is it appropriate to negotiate prices, but also very accepted, if not expected. Thus, he has learned a cultural norm in the society. Therefore the witnessing of others’ behaviors may allow an individual to become more emotionally intelligent, because the experience will likely increase one’s ability to recognize cultural cues and understand which emotional behaviors are appropriate. Moreover, exposure to other cultures will increase cultural intelligence, because exposure to other cultures will allow one to recognize cultural differences more readily.
particularly, if the individual is interested in learning new behaviors and changing behaviors (Earley and Peterson, 2004); and since it is thought that long duration of study, observation and practice are key elements to increasing one’s cultural intelligence (Sawhney, 2008). This may not happen for all since some may not be interested in learning about other cultures (Berry, 1997). Others may go through this process in stages (Bennett, 1993), thus they may not experience learning during the first encounters. Moreover, it is thought that some people who recognize what behaviors are appropriate may not act on them since they contrast with their personal values (Earley and Peterson, 2004). Yet, some do choose to develop an understanding of other cultures (Berry, 1997).

Evidence of the impact of cultural exposure can be seen in individuals who are considered ‘multiculturals’. These are individuals who possess high amounts of cultural empathy, open-mindedness, social initiative, emotional stability, and flexibility (Van der Zee and Brinkmann, 2004). These individuals are likely high on cultural intelligence because of their cultural empathy, open-mindedness, social initiative, and flexibility and they are also likely high on emotional intelligence because of their emotional stability and flexibility. Thus, it seems that a ‘multicultural’ person would likely be high on both intelligences.

Therefore it is anticipated that:

Hypothesis 1a: Individuals exposed to other cultures will have higher levels of emotional intelligence than those who have not been exposed.
Hypothesis 1b: Individuals exposed to other cultures will have higher levels of cultural intelligence than those who have not been exposed.

Figure 1 displays the model which will be tested based on the relationships posited in this article.
**Breadth of exposure**

Due to the complexity of cultural exposure it is not only important to understand if a person is exposed to other cultures or not, but also to understand the breadth of exposure, which is defined here as the number of locations visited abroad. An individual who has been abroad to one country will likely not have had the same level of exposure as someone who has been to ten countries. Some research has found evidence that the number of times abroad for international non-work experiences does contribute to cultural intelligence (Tarique and Takeuchi, 2008). An individual who has been to multiple countries, which is a similar but different experience to taking multiple trips, will likely have compared his experiences and developed a deeper understanding of cultural variations in emotions and cultural behaviors, which will likely increase his emotional and cultural intelligences.

Research has shown that when individuals interact with people from diverse backgrounds, they learn to better identify their own emotions (Fatt and Howe, 2003). Therefore, witnessing multiple cultural differences will allow one to increase one’s emotional intelligence. This may result from observing the contrasts between cultures, which may also increase cultural intelligence because one becomes more aware of cultural differences. Other scholars have found that tacit knowledge increases with experience (Sternberg and Grigorenko, 2006), so the more experiences one has in other cultures, the more tacit knowledge about emotional and cultural norms is likely to be gained.

Emotional work and self-improvement are thought to take time (Mayer, 2001), thus the more often one visits other cultures, the more likely it is that emotional intelligence will increase. Moreover, knowledge of what is culturally appropriate should increase with multiple visits to other cultures. Therefore, the more often one is exposed to other cultures, the greater impact the exposure should have on cultural intelligence and emotional intelligence.

Evidence of this can be seen in those considered a part of the transnational class. These are individuals who have extensive international travel, work, and living experiences. This elite group of jet-setters is comprised of the economically and politically influential, revered for their ability to act comfortably within and display an understanding of many cultures, making them worthy of true global citizenship (Embong, 2000; Sklair, 2002). Thus they clearly are individuals with high cultural intelligence. Moreover they likely have high emotional intelligence because one would have to have a keen understanding of one’s emotions and how to handle others emotions in order to be influential. While not necessarily as economically or politically influential, well-traveled individuals such as students may also be considered part of this group if they can easily adjust to different cultures. Thus it is expected that:

- **Hypothesis 2a:** For individuals who have been abroad, greater breadth of exposure to other cultures will lead to higher levels of emotional intelligence.
- **Hypothesis 2b:** For individuals who have been abroad, greater breadth of exposure to other cultures will lead to higher levels of cultural intelligence.

**Depth of exposure**

An individual’s experiences when exposed to another culture will influence their culture exposure. When in a foreign location, if one avoids exposing oneself to the local culture, then it is likely that the impact of the cultural experience will be minimal. So here the depth of exposure is defined as the types of experiences abroad, which include whether one participates in cultural experiences, such as interacting with the local culture. So this is essentially examining the amount of exposure to the
culture. For instance, an individual who often buys lunch at a local café or visits with locals will likely develop a deeper understanding of the local culture than someone who does not. Scholars have found some evidence of this by applying experimental learning theory and found support that the most effective method of learning about a new culture is by having a ‘concrete experience’, which involves being immersed in an experience and employing feeling and understanding (Yamazaki and Kayes, 2004). Thus, an individual who immerses themselves in a culture by visiting local shops and restaurants and interacting with the locals will likely learn more from their cultural exposure than someone who does not. Scholars have stated that experiential learning is necessary for the formation of the behavioral patterns essential for cultural intelligence (Alon and Higgins, 2005).

Additionally, more successful learning is thought to occur when a multi-instructional approach is utilized (Weller, 1999). Multiple triggers should be generated from visits to local establishments and thus cultural and emotional learning should occur. When interacting with locals, one would see the emotional norms that are acceptable and also which cultural norms are acceptable and would likely model this behavior. This is less likely to occur if one is not frequently exposed to locals.

More frequent interaction with locals will likely also lead to cultural adaptation, the process one undergoes to adjust to a new environment (Chen and Isa, 2003). When individuals adapt to a culture, they learn more about the acceptable cultural and emotional norms of that culture, therefore increasing both cultural and emotional intelligence.

Furthermore, to effectively interact with locals one will need to develop communication skills because one component of cross-cultural learning involves not only individuals’ emotion and skill development (Mainemelis et al., 2002; Yamazaki and Kayes, 2004), but also the generation of intercultural communication skills (Gilleard and Gilleard, 2002; Olson and Kroeger, 2001). This improvement in communication skills will allow one to increase cultural intelligence because of the ability to effectively communicate with those in other cultures, and increase emotional intelligence because it will likely improve the ability to express one’s own emotions and understand others’ emotional communications.

Additionally, emotional development occurs from learning the connections between feelings and the verbal labels that represent these feelings (Zeidner et al., 2003), both of which can result from experiences with locals.

Moreover, researchers have developed a concept called cross-cultural social intelligence which builds on both social and emotional intelligences, as well as cross-cultural communication. It is thought likely to increase with cross-cultural experiences (Ascalon et al., 2008).

Some research has examined how expatriates adjust to working and living abroad (Mendenhall and Oddou, 1985), and how first-, second-, and third-generation immigrants adapt to a host culture (Abouguendia and Noels, 2001; Liem et al., 2000; Oh et al., 2002). The influence of these local interactions can be seen in research that has discussed acculturation, which is the process of cultural change that occurs from contact between groups with distinctive cultures (Berry, 1997; Oh et al., 2002). Researchers have acknowledged that intercultural contact can result in psychological changes in individual’s daily behaviors (Sam and Berry, 2010). Individuals experience these changes to varying degrees (Berry, 1991) and may be influenced by the cultures in contact, the individual’s background, and other personal characteristics (Kwak and Berry, 2001). Berry refers to four different acculturation strategies: assimilation, used when individuals do not wish to maintain their cultural identity; separation, used by individuals who place a high value on their original culture; integration, used by those who maintain their original culture but have daily interactions with other groups; and marginalization which is the lack of interest in having cultural maintenance or relations.
with others (Berry, 1991, 1997, 2008; Berry and Sabatier, 2010, 2011; Dona and Berry, 1994; Kwak and Berry, 2001; Sam and Berry, 2010). It is likely that those who integrate will increase their emotional and cultural intelligences and those who choose to have a more in-depth exposure to another culture, such as choosing to go to local markets or eat the local cuisine, are likely those utilizing an integration strategy.

Moreover, important aspects of successful acculturation have included culinary adaptation and social adaptations, such as learning to enjoy sports to which one was not previously exposed (Mendenhall and Oddou, 1985). Culinary adaptation and social adaptations would likely increase emotional and cultural intelligences because one would become aware of the culturally appropriate emotions to express and acceptable behaviors during social interactions with locals. While it has been acknowledged that individuals acculturate differently (Berry, 1991, 1997, 2008; Berry and Sabatier, 2010, 2011; Dona and Berry, 1994; Kwak and Berry, 2001; Sam and Berry, 2010) and that this may occur in stages (Bennett, 1993), these actions indicate that the individual is using the integration strategy of acculturation and this will likely increase both their emotional and cultural intelligences because the individual is actively engaging in the other culture and picking up its cues.

Furthermore, some researchers cited anecdotal evidence that may suggest that bicultural individuals are more likely to be high on cultural intelligence (Moore, 2005). Additionally, scholars have found evidence that minority members of a culture learn more about majority members’ cultural norms as their exposure increases (Elfenbein and Ambady, 2003). Therefore it is anticipated that:

Hypothesis 3a: For individuals who have been abroad, greater depth of exposure to other cultures will lead to higher levels of emotional intelligence.

Hypothesis 3b: For individuals who have been abroad, greater depth of exposure to other cultures will lead to higher levels of cultural intelligence.

**Interaction effects of exposure variables**

Based on such arguments, it would seem that among individuals who have been exposed to other cultures, those who have a greater breadth *and* depth of cultural exposure would likely have higher levels of emotional and cultural intelligence. Thus it is expected that:

Hypothesis 4a: For individuals who have been abroad, greater breadth and depth of exposure will interact to generate higher levels of emotional intelligence.

Hypothesis 4b: For individuals who have been abroad, greater breadth and depth of exposure will interact to generate higher levels of cultural intelligence.

Moreover, it is logical to assume, based on the previous arguments, among all individuals, those exposed to other cultures *and* who have greater breadth and depth of exposure are likely to be higher on emotional intelligence and cultural intelligence. That is, that there will be an interaction effect that results from exposure, breadth of exposure, and depth of exposure. Therefore it is posited that:

Hypothesis 5a: Among all individuals, cultural exposure along with greater depth and breadth of exposure will interact to generate higher levels of emotional intelligence.

Hypothesis 5b: Among all individuals, cultural exposure along with greater depth and breadth of exposure will interact to generate higher levels of cultural intelligence.
Methodology

Procedure

Instructors notified students in several business classes about the opportunity to participate in a study for a chance to win a $100 gift certificate and some instructors also provided extra credit for participation. One student asked to pass on the survey to another individual not currently enrolled as a student. Permission for this was granted. Of those who were offered extra credit to complete the survey, 341 out of a possible 455 responded (74.9%). Of those who did not receive extra credit, 77 of the possible 426 responded (18%). In the latter group 35% were male, the average age was 21, and slightly over 10% were non-US citizens. While the response rate was lower for those who were not given extra credit, they were included in the study because they were demographically similar to those who received extra credit. The remaining participants indicated that they were not asked to participate in the survey as part of a course.

Sample

Students from a large, northeastern United States university were contacted to participate. Of the surveys administered, 485 usable surveys were returned. The respondents were approximately 45% male and 55% female. The age range of the respondents was from 17 to 53, and 91.5% were 30 years old or less. Two respondents did not indicate their age. Most of the sample was composed of US citizens (89.5%), and no other individual country in the sample represented more than 2%. Interestingly, though, 8.8% of respondents indicated that they were dual citizens, and 11.1% were currently residing outside their country of citizenship. To increase generalizability, non-US citizens as well as dual citizens were included in the analysis. The majority of the sample were students (99.6%), and all of the participants had completed at least high school, with 17.2% completing at least an associate degree, 15% completing a bachelors degree, 4.1% completing a masters degree, and 0.4% completing a doctorate.

Measures

To assess emotional intelligence for this study the Wong and Law Emotional Intelligence Scale (WLEIS) was used. This 16-item assessment was selected because the items were generated based on the definition of emotional intelligence selected for this study (Wong and Law, 2002). The measure assesses emotional intelligence on four subscales: self-emotional appraisal, others’ emotional appraisal, use of emotion, and regulation of emotion. Participants were asked to respond to the statements on a seven-point Likert scale ranging from strongly disagree to strongly agree.

A previously developed measure of cultural intelligence was used (Ang et al., 2004) that in a later study showed validity (Ang et al., 2006). It consists of 20 items that measure four subscales: meta-cognition, cognition, motivation and behavior. Participants were asked to respond to the statements on a seven-point Likert scale ranging from strongly disagree to strongly agree.

From a review of the literature, it does not appear that any past studies assess cultural exposure in any great detail. Measurement of international exposure has varied from study to study and is often simplistic; so items were developed by the author for this study to gather information on the multifaceted nature of cultural exposure. First, cultural exposure was measured in binary form, if individuals had traveled abroad or not. Next, participants were asked to indicate the countries they had visited from a list of 195 countries. Finally, participants categorized why they were abroad (work, education, vacation/recreation, missionary work, or other) and using a five-point Likert-type
scale (never, rarely, sometimes, very often, and always) they were asked to indicate how often they
visited local shops, local food markets, local restaurants, and local residents. Since responses where
categorized by reason for going abroad and not all participants were abroad for each reason – i.e.
some individuals were only abroad for work, while some may have been abroad for vacation, work,
and education – Cronbach’s alpha was calculated for each grouping to test internal consistency.
Each category of foreign travel had an acceptable level of reliability (> .70) and Table 1 shows the
results.

Then to capture the complexity of the variable, the total of the five categories were combined to
create depth of exposure. This was done because individuals who have been abroad for multiple
categories would likely have a wider variety of experiences, thus contributing to a greater depth of
their experiences.

Various control measures were assessed, including demographic information such as age, gender,
education level, US Citizenship, and social desirability. Social desirability was included because of
self-report nature of the survey, in order to minimize the influence of a ‘faking’ response. It was
assessed using a modified version of a previously used measure and found to have good reliability
(Metzler, 2005).

**Results**

Table 2 contains the means, standard deviations and correlations for the variables. Missing values
were deleted listwise. Due to the high correlation with social desirability indicated in the correlation
matrix, it was included in the subsequent analysis as a control in order to minimize the faking
response.

To test Hypotheses 1a and b regression was run and age, gender, US citizenship, education level,
social desirability, and binary cultural exposure were entered as independent variables and emo-
tional intelligence was entered as the dependent variable. The analysis showed no significant
relationship between binary cultural exposure and emotional intelligence. When cultural intelli-
genence was entered as the dependent variable, a significant relationship was found between cultural
exposure in binary form and cultural intelligence ($p = .001$ and standardize $\beta = .151$). Thus,
Hypothesis 1a was not supported and Hypothesis 1b was supported.

To test Hypotheses 2a and b, only those who had been exposed to other cultures were included
($N = 371$ of participants) and the same control variables were used. Regression was again run with
breadth of exposure entered as an independent variable and emotional intelligence entered as the
dependent variable. No significant relationship was found between breadth of exposure and emo-
tional intelligence. When the same analysis was conducted with cultural intelligence as the
dependent variable, a significant relationship was found ($p < .000$ and standardize $\beta = .324$).
Therefore, Hypothesis 2a was not supported and Hypothesis 2b was supported.

### Table 1. Cronbach’s alpha statistic for foreign travel categories.

<table>
<thead>
<tr>
<th>Reasons For Foreign Travel</th>
<th>N</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Abroad</td>
<td>56</td>
<td>.754</td>
</tr>
<tr>
<td>Education Abroad</td>
<td>70</td>
<td>.705</td>
</tr>
<tr>
<td>Vacationing/Recreation Abroad</td>
<td>344</td>
<td>.724</td>
</tr>
<tr>
<td>Missionary Work Abroad</td>
<td>16</td>
<td>.876</td>
</tr>
<tr>
<td>Other Abroad</td>
<td>33</td>
<td>.835</td>
</tr>
</tbody>
</table>


|          | Means  | Standard Deviation | Age | Gender (Male) | US Citizen | Education Level | Social Desirability | Binary Exposure | Exposure Breadth | Exposure Depth | Emotional Intelligence | Cultural Intelligence |
|----------|--------|--------------------|-----|---------------|------------|----------------|--------------------|---------------------|-----------------|-----------------|----------------|------------------------|----------------------|
| Age      | 23.29  | 6.138              | 1   | .007          | -.037      | .615**         | .082               | .181**             | .254**          | .287**          | .066           | .051                   |
| Gender (Male) | .45   | .498               | .879| .410          | .000       | .070           | .000               | .000               | .146            | .262           |             |                       |
| US Citizen | .90   | .307               | .037| .024          | -1.079     | -.164**        | -.159**            | -.131**            | -.300**         | .083           | -.125**                 |
| Education Level | 2.61 | .914               | .615**| -.032      | -.079      | 1              | .098*              | .204              | .341**          | .306**         | .061                     | .077                   |
| Social Desirability | 28.76 | 10.867             | .082| -.039        | -.164**    | .098*          | 1                  | .044               | .047            | .071           | .204**                   | .331**                 |
| Binary Exposure | .76  | .425               | .181**| -.036      | -.159**    | .204**         | .044               | 1                  | .451**          | .662**         | -.023                    | .175**                 |
| Exposure Breadth | 2.93 | 3.619              | .254**| -.051      | -.131**    | .341**         | .047               | .451**             | 1               | .622**         | .015                    | .325**                 |
| Exposure Depth | 15.08 | 12.694             | .287**| -.070      | -.300**    | .306**         | .071               | .662**             | .622**          | 1              | .013                    | .362**                 |
| Emotional Intelligence | 90.56 | 11.160             | .066| .005          | .083       | .061           | .204**             | -.023              | .015            | .013           | .306**                   |                       |
| Cultural Intelligence | 94.96 | 19.309             | .146| .915          | .068       | .179           | .000               | .607               | .737            | .781           | .000                     |                       |

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
To test Hypotheses 3a and b, again only those exposed to other cultures were included and the same control variables were entered. For this analysis, depth of exposure was entered as independent variable and emotional intelligence was entered as the dependent variable. Again, no significant relationship was found between depth of exposure and emotional intelligence. When running the analysis using cultural intelligence as the dependent variable, a significant relationship was found ($p < .000$ and standardize $\beta = .393$). Thus, Hypothesis 3a was not supported and Hypothesis 3b was supported.

To test Hypotheses 4a and b, again only those exposed to other cultures were included and the same control variables were used, but now both breadth of exposure and depth of exposure were entered as independent variables. The first analysis used emotional intelligence as the dependent variable and no significant relationship was found. In the second analysis, where cultural intelligence was the dependent variable, a significant relationship was found with both breadth ($p < .000$ and standardize $\beta = .193$) and depth of exposure ($p < .000$ and standardize $\beta = .305$). Thus, Hypothesis 4a was not supported and Hypothesis 4b was supported.

Finally, to test Hypotheses 5a and b, all participants were once again included and the same control variables were used. Now binary exposure, breadth of exposure, and depth of exposure were entered as independent variables. As with the previous analysis, emotional intelligence was entered first as the dependent variable and still no significant relationship was found. For the second analysis, cultural intelligence was the dependent variable. This resulted in a moderately significant relationship between binary cultural exposure ($p = .011$ and standardize $\beta = -.134$), but this relationship was in the opposite direction than anticipated. Although significant relationships between both breadth ($p < .000$ and standardize $\beta = .193$) and depth of exposure ($p < .000$ and standardize $\beta = .357$), still existed. Thus, Hypothesis 5a was not supported and Hypothesis 5b was not supported, because while the overall model was still significant ($p < .000$), the key variable of binary exposure was opposite than posited.

**Discussion**

This study provides a detailed examination of how different cultural exposures influence emotional intelligence and cultural intelligence. Returning to the initial research questions posed, cultural exposure does not influence emotional intelligence even when examining depth and breadth of exposures. Cultural exposure in various forms does have a significant influence on cultural intelligence.

This research builds on the field of cultural exposure because past studies did not examine the complex nature of exposure. Past studies measured cultural exposure in a variety of ways, such as whether one worked abroad or not (Reuber and Fischer, 1997), the number of experiences (Takeuchi et al., 2005; Tarique and Takeuchi, 2008; Tay et al., 2008), or length of time (Carpenter et al., 2001; Tarique and Takeuchi, 2008; Tay et al., 2008). Yet, individually these measures do not capture the construct’s intricacies. Since this study examines cultural exposure breadth, as well as depth, it expands the field. Specifically because it examines the locations visited and types of experiences one has while abroad, this study is unique. Also, it is evident from this analysis that it is not simply whether one has been abroad or not, but also the number of countries to which one has been exposed and the type of experiences one has had which will have an impact.

One of the most interesting findings of this study is that when binary exposure is examined with breadth and depth of exposure, it is moderately significant in the opposite direction and yet the model was still significant. This provides valuable insight because breadth and depth of exposure
have a greater impact on cultural intelligence, which would not have been evident if these variables had been examined in isolation. Thus, this study highlights the importance of obtaining a variety of experiences when abroad.

**Practical implications**

This study provides important findings for organizations which are expatriating employees because they will be able to develop a deeper understanding of how experiences abroad influence their workers. As previously noted, expatriate assignments are expensive (Black and Gregersen, 1999; Johnson et al., 2006; Krell, 2005; McNulty and Tharenou, 2004; Peak, 1997; Solomon, 2000; Welch, 2003) and while being abroad may not have an influence on one’s emotional intelligence, it has a strong influence on cultural intelligence. Additionally, while breadth and depth of exposure both impacted cultural intelligence individually, they also had an impact when examined together. So organizations would be wise to encourage expatriates to not only take many trips abroad, but also to interact with the locals while traveling.

Furthermore, this study may aid managers in selecting individuals who would be successful expatriates. If they look at the number of locations a potential expatriate has been abroad and whether they interact with locals when traveling, this may indicate a higher level of cultural intelligence. Some have suggested that higher levels of cultural intelligence can lead to less culture shock (Tan, 2004) and since failure rates of expatriates are notably high (Forster, 1997; McFarland, 2006; Tung, 1982) and costly (Black and Gregersen, 1999; Johnson et al., 2006; Krell, 2005; McNulty and Tharenou, 2004; Peak, 1997; Solomon, 2000; Welch, 2003), minimizing culture shock may contribute to reducing failure rates.

**Limitations and future research**

This study is limited because the measures used were self-report, which have been criticized for reflecting some non-ability traits, and it has also suggested that individuals may overestimate their emotional intelligence in self-report measures (Goldenberg et al., 2006). Nevertheless, in the social sciences self-report surveys have been reported as the most common form of data collection (Malhotra et al., 2006) and self-report measures have been used in various studies of intelligences (Ang et al., 2004, 2006; Fredáková and Jelenová, 2004; Friborg et al., 2005; Gini, 2006; Law et al., 2004; Schutte et al., 1998, 2001). Furthermore, the use of social desirability to control for the impact of a ‘faking’ response should minimize this limitation. Still, future studies should consider other measures and one recent notable study made such an effort by using a narrative approach (Gertsen and Søderberg, 2011), but more work needs to be conducted using a variety of research methods.

This research is also limited because the sample was comprised of mostly students who were US citizens; therefore, it may not be generalizable to other populations. Nonetheless, the sample size was fairly large, and there was some diversity in age, education level, and citizenship.

Another limitation is the cross-sectional nature of the study, so results should be interpreted with caution since direction of causality cannot be determined. It is possible that those high on cultural intelligence seek out more exposure to other cultures, but it seems unlikely that never having been exposed to other cultures one would have a high level of cultural intelligence. Thus, since the binary examination of cultural exposure showed a significant impact on cultural intelligence, it is highly probably that the exposure contributed to this.

Also, some may see the low correlation between emotional intelligence and cultural intelligence as a limit since others have found them to be correlated (Moon, 2010; Ward et al., 2009). However,
the previously noted studies used different measures of emotional intelligence and many have also addressed how these intelligences, while similar, are considered distinct (Crowne, 2009; Earley and Peterson, 2004; Earley et al., 2006; Moon, 2010), so the low correlation is not unexpected.

Future research is necessary to remedy these shortcomings and build on the findings of the present research. Studies should be conducted with working individuals and should examine the differences that may exist across countries.

References


