



# Antecedents of dynamic cross-cultural competence in adult third culture kids (ATCKs)

Competence  
in ATCKs

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## Abstract

**Purpose** – The “adult third culture kid” (ATCK) is an individual who has spent significant periods of childhood living outside his or her parents’ culture(s). Research is needed to identify specific experiential variables responsible for the development of components of cross-cultural competencies (CC) in ATCKs. The goal of this study is to gain insight into these relationships and provide a foundation for continuing investigation by examining how early international experience and personality variables impact CC in ATCKs. Specifically, the study examines how four components of early international experience and two characteristics of stable CC impact three dynamic characteristics of CC.

**Design/methodology/approach** – Study participants (159) had spent their childhood years living in one or more foreign countries. In all, 54 percent of the sample was women, and the average age was 22 (SD = 1.52). None of the subjects had any international work experience, allowing us to look at the impact of non-work experience without the confounding effect found in other research of this type. Data were collected at the beginning and end of a three-week period.

**Findings** – There are five important predictors of CC in ATCKs: variety of early international experience (number of different countries lived in), language diversity (the number of languages they speak), family diversity (the number of different ethnicities in their family’s background), and the personality trait of openness to experience.

**Research limitations/implications** – The generalizability of study findings is limited by the nature and size of the sample. In addition, the single source sample of this study is also a limitation, as single source samples are subject to common method bias. We reduced this potential bias by using a time lag (Podsakoff *et al.*, 2003) to create a temporal separation between the measurement of the predictors and the dependent variables, a procedural remedy suggested by Podsakoff *et al.* (2003).

**Practical implications** – The practical uses for the findings of this study by human resource management (HRM) professionals are in the areas of hiring and assignment of expatriate managers. Study findings provide HRM professionals with an initial set of criteria to assist in the process of identification and training of expatriate managers. Global organizations have traditionally used training to increase the pool of effective global managers. This study provides initial evidence that identification of individuals with early international experiences should prove a useful addition to the process of selecting candidates for foreign assignment.

**Social implications** – The practical uses for the findings of this study by HRM professionals are in the areas of hiring and assignment of expatriate managers. Study findings provide HRM professionals with an initial set of criteria to assist in the process of identification and training of expatriate managers. Global organizations have traditionally used training to increase the pool of effective global managers. This study provides initial evidence that identification of individuals with early international experiences should prove a useful addition to the process of selecting candidates for foreign assignment.

**Originality/value** – To the best of our knowledge this is one of the first studies to empirically examine ATCKs and provides a starting point for future researchers in this area. Obtaining a sample of ATCKs is extremely challenging.

**Keywords** Adult third culture kid, Cross-cultural competencies, Cultural novelty, Early career individuals, Expatriate development, Family diversity, Global leadership development, Global talent management, International experience, Language diversity

**Paper type** Research paper



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Concomitant with the increasing globalization of business is a rise in theoretical and empirical attention to criteria that can predict success in managing expatriate assignments (Collings *et al.*, 2009; Avril and Magnini, 2007; Ramalu *et al.*, 2010). The high cost of preparing employees for the challenges of working across cultural, political, and national boundaries creates a need for data that can assist international human resource management (IHRM) professionals in identifying specific characteristics of successful expatriates. One promising area of study is international experience (Chang *et al.*, 2012; Selmer, 2002; Moon *et al.*, 2012; Takeuchi *et al.*, 2005). Research suggests that international experience increases the likelihood of successful adaptation to living and working in foreign countries (Takeuchi *et al.*, 2005; Daily *et al.*, 2000). The link between international experience and success in expatriate assignments is dynamic cross-cultural competence (CC), i.e. the knowledge, skills, abilities, and attitudes that allow individuals to think, act, and behave in ways that are appropriate in the host country (Shaffer *et al.*, 2006; Harvey *et al.*, 2012; Caligiuri and Tarique, 2012).

### **Adult third culture kids (ATCKs)**

One type of international experience is that of living outside the country of one's citizenship as a child (Caligiuri and Tarique, 2006). This type of international experience is fundamental to "third culture kids" (TCK) (Russell, 2011; Bonebright, 2010; Pollock and Van Reken, 2009; Selmer and Lam, 2004; Useem and Downie, 1976). TCKs include children of corporate employees, individuals in the military, government employees, and missionaries. As Pollock and Van Reken (2009) note:

TCKs are raised in a neither/nor world. It is neither fully the world of their parents' culture (or cultures) nor fully the world of the other culture (or cultures) in which they were raised. Contrary to popular misconception, however, this neither/nor world is not merely a personal amalgamation of the various cultures they have known. [...] in the process of first living in one dominant culture and then moving to another (and maybe even two or three more and often back and forth between them all), TCKs develop their own life patterns different from those who are basically born and bred in one place (p. 4).

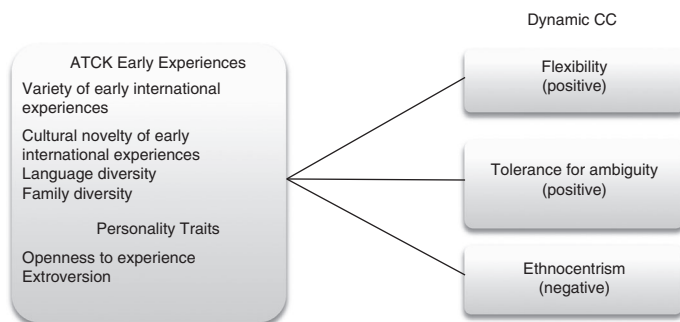
TCKs' rich international experience and exposure to diversity in childhood produce in them a high level of CC that contributes to their success in expatriate assignments as adults (Selmer and Lam, 2004; Caligiuri *et al.*, 2009). Identification of the characteristics that make adult TCKs (ATCKs) successful expatriate employees thus has the potential to contribute to IHRM practice and research alike. Since the experience of ATCKs is multifaceted, it is necessary to identify specific experiential variables responsible for the development of dynamic CC. The importance of this question is evident in the expatriate management literature, where differences in the operationalization of the international experience construct results in different findings concerning dynamic CC and cross-cultural adjustment (Takeuchi *et al.*, 2005). The question is, which specific early international experiences are related to the development of dynamic CC?

While experience is key in the ability of IHRM professionals to develop expatriates, it is necessary to include personality traits in any study of the development of CC. Research by Caligiuri and Tarique (2009) has shown that the personality traits of openness to experience and extroversion predispose people to behave in ways that prepare them for cross-cultural interactions and facilitate the learning of appropriate cross-national behaviors situations. In sum then, this paper analyzes the impact of four experiential and two personality traits on the development of three components of dynamic CC that allow successful adaptation to foreign environments (Shaffer *et al.*, 2006). The study variables and posited relationships are presented in Figure 1.

Research on TCKs and ATCKs is multidisciplinary. Scholars and practitioners from the fields of cross-cultural psychology, counseling, education, and IHRM have examined issues and problems related to TCKs as they grow up in multi-cultural environments. These include uncertain cultural identity (Gillies, 1998; Fail *et al.*, 2004); grief, loss, change and the emotional and social disturbances associated with moving (Cockburn, 2002; Gilbert, 2008); sense of belonging (Fail *et al.*, 2004; Nette and Hayden, 2007; Greenholtz and Kim, 2009); health risks (Ann Mclachlan, 2005), and adjustment to college life (Firmin *et al.*, 2006). Other studies have examined ATCKs in specific countries such as Japan (Fry, 2007), gender-related issues of female TCKs (Walters and Auton-Cuff, 2009), experience with the repatriation process and reentry stress (Peterson and Plamondon, 2009) and training that can facilitate the adaptation or adjustment process (Lee *et al.*, 2007). Considerable research has identified characteristics associated with TCKs and ATCKs, such as open-mindedness, cultural empathy, and creativity (Greenholtz and Kim, 2009; Dewaele and Van Oudenhoven, 2009; Young Ju *et al.*, 2007; Cockburn, 2002; Gerner *et al.*, 1992).

An emerging view in the relatively new focus on TCKs in the IHRM literature is that TCKs are a promising source of expatriate talent (Bonebright, 2010; Caligiuri *et al.*, 2009; Selmer and Lam, 2004). Lam and Selmer (2004) used data from TCKs and their adolescent peers to examine whether TCKs have more characteristics useful for future expatriates than do their peers. Their findings showed TCKs to have greater enjoyment of travel to foreign countries, knowledge of foreign languages, acceptance of differences among cultures, and interest in international careers. Other studies have found TCKs to be adaptable and to relate well to people of different races, ethnicities, religions, and nationalities in a variety of settings (Eidse and Sichel, 2004; Bonebright, 2010; Useem and Downie, 1976; Lam and Selmer, 2004).

Recently Bonebright (2010) reviewed the research on ATCKs from a human resource development perspective, with the goal of identifying implications for human resource teaching, research, and practice. Bonebright's work provided further support to Lam and Selmer's (2004) findings and reported that research on human resource development implications of ATCKs in the workforce is scarce. As business becomes increasingly global and companies seek to expand their international workforces, research on the extent to which ATCKs make successful business expatriates has the potential to contribute to both theory and practice. Toward that end, more work needs to be done on ATCKs from a human resource development perspective. The present study builds on the prior work of Bonebright (2010) and Lam and Selmer (2004) by attempting to answer the question: if ATCKs' rich international experience and exposure to diversity in



**Figure 1.**  
The expected relationship  
between ATCK  
international experiences  
and dynamic  
CC characteristics

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childhood produce in them a high level of dynamic CC, can organizations utilize them for expatriate positions or for developmental purposes?

### **Dynamic CC**

Dynamic CC includes knowledge, skills, and attributes that are acquired through learning experiences such as training and international travel and are malleable over time (Leiba-O'sullivan, 1999; Shaffer *et al.*, 2006; Johnson *et al.*, 2006; Caligiuri and Tarique, 2012). Several studies have examined dynamic CC in the context of human resource development. Shaffer *et al.* (2006) found that dynamic CC is related to expatriate effectiveness. In a recent study, Caligiuri and Tarique (2012) showed cross-cultural experiences (organization-initiated cross-cultural work experiences and non-work cross-cultural experiences) predicted dynamic CC, which in turn predicted effectiveness among global leaders. Three characteristics of dynamic CC are associated with expatriate effectiveness (Shaffer *et al.*, 2006): cultural flexibility, tolerance for ambiguity, and ethnocentrism. These three facets of dynamic CC have generally been used as dependent variables (e.g. Shaffer *et al.*, 2006; Caligiuri and Tarique, 2012), and are used as the dependent variables for the current study.

Cultural flexibility is an individual's ability to substitute activities enjoyed in one's home country with different and distinctive activities available in the host country (Black, 1990). The inaccessibility of activities enjoyed in one's native culture may result in feelings of loneliness, isolation, and frustration, inhibiting adjustment and assimilation (Church, 1982) and individuals with a high level of cultural flexibility are better able than others to avoid those feelings (Chwo-Mingyu *et al.*, 2005). Studies have shown cultural flexibility to be positively related to cross-cultural adjustment (Shaffer *et al.*, 2006), self-esteem and self-confidence (Mendenhall and Oddou, 1985), adaptation to the foreign environments (Black, 1990), and success in foreign assignments (Arthur and Bennett, 1995).

Tolerance for ambiguity refers to the way an individual perceives and processes information about ambiguous situations or stimuli when confronted by an array of unfamiliar, complex, or incongruent clues (Furnham and Ribchester, 1995). Individuals with a high tolerance for ambiguity react to new, different, and unpredictable situations with little visible discomfort (Marquardt and Engel, 1993). Researchers have argued that people with high tolerance for ambiguity are more likely to effectively manage the stress imposed by rapidly changing, uncertain environments, and to be more adaptable and receptive to change (Judge *et al.*, 1999).

Ethnocentrism is the tendency to view one's own culture as correct and other cultures and cultural behaviors as incorrect. Ethnocentric individuals evaluate behavior according to their own home culture and do not modify their behavior in keeping with host country values (Black, 1990). Indeed, they cope poorly with unfamiliar social norms (Church, 1982). Ethnocentrism is negatively related to interaction adjustment (e.g. comfort level with people outside work in a foreign country) and contextual performance (e.g. volunteer work, helping coworkers), and positively related to withdrawal cognitions (e.g. decisions by expatriates to prematurely quit their foreign assignments) (Shaffer *et al.*, 2006). In addition ethnocentric attitudes are particularly damaging to the development and maintenance of cross-cultural interpersonal interactions (Thomas, 1996).

### **Social learning theory: the link between early international experience and dynamic CC in ATCKs**

Early international experience provides individuals with opportunities to learn skills and behaviors necessary for living and working successfully in different cultural

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environments. As such, we argue that early international experience in ATCKs contributes to the development of dynamic CC. The theoretical logic behind this argument can be found in social learning theory (Bandura, 1977). Social learning theory proposes that individuals develop through learning from their surroundings, either from interacting with people or observing their behavior. Events and consequences in the environment are cognitively processed prior to being learned and influencing behavior.

According to social learning theory, the learning process includes three components: attention, retention, and reproduction. Attention is the process of observing new behaviors in another or observing the results of one's own behavior in a new context. Retention occurs which the modeled behavior becomes encoded as a memory. Finally, reproduction is the action of changing behavior in response to attention and retention. Reproduction allows the individual to experience the consequences of using the new skills and behaviors, and thereby learn which behaviors and skills to execute or suppress in given situations. The individual is more likely to adopt a particular skill or behavior if it results in positive outcome. Behaviors so reinforced are stored in long-term memory for use in similar situations. Reproduction of appropriate behavior also solidifies the retention process.

The social learning process can explain how ATCKs develop dynamic CC through experiencing multiple cultural environments during their formative years. Living in multiple countries, ATCKs learn the behaviors, customs, and norms of those cultures through experience or observation (Bandura, 1977). For them, the attention, retention, and reproduction processes are repeated across a variety of cultural settings, resulting in exposure to a diversity of behaviors. Some of those behaviors are and some are not appropriate across different cultures. Early international experiences allow ATCKs to learn skills and behaviors that are the essence of dynamic CC.

#### *Variety of early international experience and dynamic CC*

Variety of early international experience refers to number of different countries lived from ages 1 to 18. It is in contrast to the widely used measurement "number of travels" which refers to the number of times a person travels abroad (Tarique and Schuler, 2008). Drawing from social learning theory, we posit that early experiences living in multiple countries will increase both culture general and culture-specific skills and behaviors. That is, such experience will attune individuals to cultural differences in general and will also facilitate adaptation to specific culture environments (Johnson *et al.*, 2006; Tarique and Schuler, 2008).

Thus, we would expect greater variety of early international experiences during early development to contribute to the development of dynamic CC:

- H1a.* Variety of early international experience will be a significant positive predictor of cultural flexibility.
- H1b.* Variety of early international experience will be a significant positive predictor of tolerance for ambiguity.
- H1c.* Variety of early international experience will be a significant negative predictor of ethnocentrism.

#### *Cultural novelty of early international experience and dynamic CC*

Cultural novelty is the degree of dissimilarity between the country where an individual has spent the most time as a child and other countries lived in for greater than one year.

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The greater the cultural novelty, the greater the dissimilarity between the individual's ideas of appropriate behavior and behavior in the new culture (Torbiörn, 1982). While it may seem intuitive that high cultural novelty would result in difficulty in adaptation, the adult training, and development literature has shown that in a mismatch between individual and environment, i.e. in a circumstance where appropriate behaviors are unclear and skill requirements lacking, the individual will respond by engaging in learning to improve fit (Simmering *et al.*, 2003). Such behavior is an attempt to decrease discomfort. Hence, we would expect the discomfort of cultural novelty experienced many times by TCKs to contribute to the development of their CC:

- H2a.* Cultural novelty of early international experience will be a significant positive predictor of cultural flexibility.
- H2b.* Cultural novelty of early international experience will be a significant positive predictor of tolerance for ambiguity.
- H2c.* Cultural novelty of early international experience will be a significant negative predictor of ethnocentrism.

#### *Language diversity and dynamic CC*

Language diversity refers to the number of different languages the TCK can fluently speak and write (Lauring and Selmer, 2012). The ability to speak the native language in a foreign country obviously facilitates communication and fluency in reading and writing the language of the host country enhances learning in written exchanges. It has been shown that expatriate proficiency in the local language reduces the potential for misunderstanding and misinterpretation, shortens the period of adjustment to living and working conditions, and improves effectiveness and negotiating ability (Ko and Yang, 2011).

In the timing of language acquisition, exposure to language diversity has been shown to be most beneficial during the developmental years (Tokuhama-Espinosa, 2008), as early acquisition results in the confidence to verbally communicate, thus facilitating socialization and, in the work setting, team building processes (Henderson, 2005).

The ability to communicate in multiple languages and adaptation to multiple cultures are clearly connected. Thus, we expect that in the TCK population language proficiency will contribute to dynamic CC:

- H3a.* Language diversity will be a significant positive predictor of cultural flexibility.
- H3b.* Language diversity will be a significant positive predictor of tolerance for ambiguity.
- H3c.* Language diversity will be a significant negative predictor of ethnocentrism.

#### *Family diversity and dynamic CC*

Family diversity refers to the number of nationalities in the nuclear family, determined by each family member's country of birth. The greatest diversity occurs when each

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member of the family has a different nationality. Being a member of a multicultural or diverse household provides exposure to multiple cultural perspectives including beliefs, customs, foods, languages, traditions, and points of view. In a recent study on global leadership development, family diversity among senior managers and executives was positively related to leadership effectiveness (Caligiuri and Tarique, 2009). According to Caligiuri and Tarique (2009), intercultural experiences that prepare people to be effective future global leaders occur not only in the workplace, but also in childhood or young adulthood as a result of membership in a multicultural family, where nuances of behavior are instilled. Individuals with greater family diversity are more likely to retain and reproduce appropriate cross-cultural skills and behaviors (Caligiuri and Tarique, 2009). Thus, we expect that greater family diversity will contribute to the development of dynamic CC:

*H4a.* Family diversity will be a significant positive predictor of cultural flexibility.

*H4b.* Family diversity will be a significant positive predictor of tolerance for ambiguity.

*H4c.* Family diversity will be a significant negative predictor of ethnocentrism.

### **Personality traits and dynamic CC in ATCKs**

Several scholars have examined how personality attributes relate to competencies (Shaffer *et al.*, 2006). Personality is generally described in terms of traits that are person specific and predispose people to behave in certain ways (Caligiuri, 2000a; Buss, 1989; Costa and McCrae, 1992). In the context of learning and development, prior research suggests that personality characteristics can predict in part whether individuals will succeed on a variety of learning and performance measures (Barrick and Mount, 1991).

The widely used “five-factor model of personality” provides a useful typology for classifying personality traits (McCrae and Costa, 1987; Costa and McCrae, 1992). The five factors include neuroticism, extroversion, openness, agreeableness, and conscientiousness (Barrick and Mount, 1991; Hurtz and Donovan, 2000; Mount *et al.*, 1994). Using this model, several scholars have examined how personality attributes relate to dynamic CC (Shaffer *et al.*, 2006). Specifically, the traits of openness to experience and extroversion have been used as independent variables and shown to predict CC among expatriates and international executives (Caligiuri and Tarique, 2012; Caligiuri, 2006). Based on this research, we include openness to experience and extroversion as antecedents to CC in ATCKs.

#### *Openness to experience and dynamic CC*

Openness to experience describes the extent to which individuals are original, innovative, and willing to take risks (Costa and McCrae, 1992). Openness to experience tends to increase an individual’s curiosity about one’s environment and a willingness to explore new experiences (Herold *et al.*, 2002). Individuals who are open to experience engage in new settings with high level of curiosity and a willingness to adapt to new and novel situations (Caligiuri, 2000b). They have an interest in foreign cultures, a non-judgmental approach in evaluating people from different cultures, a curiosity about their environment, and most importantly, few negative predisposing attitudes that would impede relationships with people from different

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cultures (Le Pine *et al.*, 2000). Hence, we expect openness to experience to contribute to dynamic CC as follows:

*H5a.* Openness to experience will be a significant positive predictor of cultural flexibility.

*H5b.* Openness to experience will be a significant positive predictor of tolerance for ambiguity.

*H5c.* Openness to experience will be a significant negative predictor of ethnocentrism.

*H6.* Extroversion and dynamic CC.

Extroversion is a personality trait marked by sociability. Extroverted individuals seek social activities and interpersonal relationships (Caligiuri, 2000b). Caligiuri (2000a) argues that extroverts are successful at navigating the hierarchy of their social environment because they are able to identify others with influence that can contribute to their achievement of personal success. Caligiuri additionally asserts that extroverts are better able than introverts to establish relationships with people from different cultures and to effectively learn about and adapt to the social culture of the environment. Consistent with Caligiuri, a study of Australian expatriates and Chinese Singaporeans in Singapore showed extroversion to be related to psychological and sociocultural adaptation (Ward *et al.*, 2004). Since the extroverted individual seeks out and participates in interpersonal interactions, we would expect extroversion to be related to dynamic CC as follows:

*H6a.* Extroversion will be a significant positive predictor of cultural flexibility.

*H6b.* Extroversion will be a significant positive predictor of tolerance for ambiguity.

*H6c.* Extroversion will be a significant negative predictor of ethnocentrism.

## **Methodology**

### *Data collection*

Data for this study came from a larger project on international experience. Study participants were enrolled in management courses at a medium-sized university in New York City with a student population representing more than 50 countries. The sample consisted of 159 students who had spent their childhood years living in one or more foreign countries. In all, 54 percent of the sample was women, and the average age was 22 (SD = 1.52). None of the subjects had any international work experience, allowing us to look at the impact of non-work experience without the confounding effect found in other research of this type.

Data were collected at the beginning and end of a three-week period. At Time 1 the participants completed a questionnaire that included demographic information, control variables, prior international experience, and personality variables. At Time 2 participants completed a questionnaire that assessed dependent variables. In the larger project on international experience, common method bias was a potential concern. This type of bias occurs when both the criteria and predictors are from



self-reports (Podsakoff *et al.*, 2012). As recommended by Podsakoff *et al.* (2003), we reduced the potential for common method bias by creating a temporal separation (e.g. time-lag) between the measurement of the predictor and criterion variables.

### Measures

Table I contains the descriptive statistics and reliabilities for all variables in this study and Table II contains correlations for all variables in this study.

*International experience variables.* Participants' biographic histories were used to determine early international experience variables.

*Variety of international experience:* this measured number of different countries participants had lived or resided in before the age of 18. The mean of this scale was 1.97 and SD was 0.78.

*Cultural novelty of early international experience:* based on prior research (Black and Stephens, 1989; Torbiörn, 1982), the cultural novelty of a country was measured by a single item on a scale ranging from 1 (the country lived in was extremely similar to the country of birth) to 7 (the country lived in was extremely different from the country of birth). A higher score signified greater cultural novelty. For participants who resided in more than one country, scores were averaged to create an overall cultural distance score, where a high score denoted greater cultural novelty. This measure was self-reported. The mean for this scale was 3.08 (SD = 2.47).

*Language diversity:* number of foreign languages the participant reported to have spoken fluently as a child. The mean for this scale was 1.37 (SD = 0.70).

*Family diversity:* based on Caligiuri and Tarique (2009), country of birth as measured on a four-point scale: (a) born in the same country in which both parents were born; (b) born in the same country in which father was born, but not mother; (c) born in the same country in which mother was born, but not father; and (d) born in a country in which neither parent was born. Family diversity was coded 1 if a

	<i>M</i>	<i>SD</i>	<i>Cronbach <math>\alpha</math>'s</i>
<i>Control variables</i>			
Age	22.24	1.52	
Gender	0.54	0.50	
Nationality	2.86	2.19	
International business courses	2.52	2.44	
Recent foreign visits	0.67	0.47	
<i>Independent variables</i>			
Variety of early international experience	1.82	0.78	
Cultural novelty of early international experience	3.08	2.47	
Language diversity	1.37	0.70	
Family diversity	0.314	0.46	
Openness to experience	4.78	0.99	0.77
Extroversion	4.79	1.28	0.88
<i>Dependent variables</i>			
Cultural flexibility	5.43	1.01	0.82
Tolerance for ambiguity	4.33	1.58	0.71
Ethnocentrism	3.13	1.51	0.81

**Note:**  $n = 158$

**Table I.**  
Means, standard  
deviations, reliabilities

**Table II.**  
Intercorrelations

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
<i>Control variables</i>														
1. Age	1													
2. Gender	0.11	1												
3. Nationality	-0.03	0.05	1											
4. International business courses	-0.04	0.03	0.04	1										
5. Recent foreign visits	0.16*	0.24**	0.32**	0.25**	1									
<i>Independent variables</i>														
6. Variety of early international experience	-0.04	0.01	-0.04	0.12	0.18*	1								
7. Cultural novelty of early international experience	0.13	0.20**	0.16*	0.22**	0.54**	0.13	1							
8. Language diversity	0.16*	0.11	0.12	0.13	0.16*	0.21**	0.09	1						
9. Family diversity	0.05	0.08	0.07	-0.01	-0.04	0.01	0.12	0.19*	1					
10. Openness to experience	0.05	0.08	-0.10	0.05	-0.06	0.02	-0.04	0.04	-0.02	1				
11. Extroversion	-0.01	0.01	0.12	0.14	0.39**	0.36**	0.17*	0.12	0.02	-0.10	1			
<i>Dependent variables</i>														
12. Cultural flexibility	0.07	0.13	-0.01	0.14	0.09	0.34**	0.20**	0.35**	0.23**	0.17*	0.21**	1		
13. Tolerance for ambiguity	-0.17*	-0.11	0.24**	0.01	0.06	0.21**	0.11	0.21**	0.11	-0.14	0.12	0.26**	1	
14. Ethnocentrism	0.06	-0.06	-0.15	-0.09	-0.12	-0.19*	-0.23	-0.21**	-0.26**	0.15	-0.20**	-0.29**	-0.45**	1

Notes: n = 158. \*p < 0.05; \*\*p < 0.01 (two-tailed tests)

participant indicated choice (b), (c), or (d) and was coded 0 if the participant indicated choice (a). The mean was 0.314 (SD = 0.46).

*Personality variables.* The personality variables were measured using Saucier's (1994) mini-markers. The scale includes eight adjectives that reflect the trait. Participants rated how accurately each adjective described them using a nine-point scale ranging from 1 = extremely inaccurate to 9 = extremely accurate.

*Openness to experience:* examples of adjectives include "creative" and "philosophical." The mean of this scale was 4.78, SD was 0.99, and Cronbach's  $\alpha$  was 0.77.

*Extroversion:* examples of adjectives include bashful and talkative. The mean of this scale was 4.79, SD was 1.28, and Cronbach's  $\alpha$  was 0.88.

*Dynamic CC variables.* Based on the work of Gupta and Govindarajan (1984) and Shaffer *et al.* (2006), three facets of dynamic CC were measured: cultural flexibility, tolerance for ambiguity, and ethnocentrism.

*Cultural flexibility:* was measured using six items adapted from Shaffer *et al.* (2006) in a seven-point Likert scale ranging from strongly disagree (1) to strongly agree (7). A sample item is, "Foreign countries have interesting and fun activities that are not common in my native country." The mean of this scale was 5.43, SD was 1.01, and Cronbach's  $\alpha$  was 0.82. Items were averaged and a higher score denoted greater amount of cultural flexibility.

*Tolerance for ambiguity:* was measured using 4 four-item statements adapted from Gupta and Govindarajan (1984) in a seven-point Likert scale ranging from strongly disagree (1) to strongly agree (7). A sample item is, "The most interesting life is to live under rapidly changing conditions." The mean of this scale was 4.33, SD was 1.58, and Cronbach's alpha was 0.71. Items were averaged so that a higher score denoted greater tolerance for ambiguity.

*Ethnocentrism:* was measured using six items adapted from Shaffer *et al.* (2006) in a seven-point Likert scale ranging from strongly disagree (1) to strongly agree (7). A sample item is, "I like to meet foreigners and become friends" (reverse scored). The mean of this scale was 3.13, SD was 1.51, and coefficient alpha was 0.81. The items were averaged so that a higher score denoted greater ethnocentrism.

*Control variables.* Age, gender, nationality, international business courses, and recent foreign visits were considered to have the potential to affect dynamic cultural competence and were therefore included as control variables in the analysis.

*Age:* the participant's age in years. The mean was 22.24 and SD was 1.52.

*Gender:* coded 0 for male and 1 for female.

*Nationality:* the participant's country of birth.

*International business courses:* the number of international courses (e.g. international business, cross-cultural management, IHRM) that the participant had completed. The mean was 2.52, and SD was 2.44.

*Foreign visits:* coded 1 if a participant had visited at least one foreign country during the prior year and 0 if the participant had not visited a foreign counter during the prior year. The mean was 0.67 and SD was 0.47.

## Results

A power analysis (Cohen, 1992; Cohen *et al.*, 2003) at the commencement of the study indicated that a minimum of 122 subjects was needed to detect medium effects size of 0.05, power of 0.80, and a probability level of 0.05, and a minimum of 165 subjects was needed to detect medium effects size of 0.05, power of 0.80, and a probability level of 0.01. Regression diagnostics were conducted to check the assumptions in regression analysis. The data met the assumptions of linear regression.

Table I presents the descriptive statistics and correlations for all variables in this study. As hypothesized, variety of early international experience was positively related to cultural flexibility ( $r=0.34, p<0.01$ ), positively related to tolerance for ambiguity ( $r=0.21, p<0.01$ ), and negatively related to ethnocentrism ( $r=-0.19, p<0.05$ ). Cultural novelty of early international experience was positively related to cultural flexibility ( $r=0.23, p<0.01$ ) and negatively related to ethnocentrism ( $r=-0.19, p<0.05$ ). Language diversity was positively related to cultural flexibility ( $r=-0.35, p<0.01$ ), positively related to tolerance for ambiguity ( $r=0.21, p<0.01$ ), and negatively related to ethnocentrism ( $r=-0.21, p<0.01$ ). Family diversity was positively related to cultural flexibility ( $r=-0.23, p<0.01$ ) and negatively related to ethnocentrism ( $r=-0.26, p<0.01$ ). Openness to experience was positively related to cultural flexibility ( $r=0.17, p<0.05$ ). Extroversion was positively related to cultural flexibility ( $r=0.21, p<0.01$ ) and negatively related to ethnocentrism ( $r=-0.20, p<0.01$ ).

To test each set of hypotheses, three hierarchical regression analyses were conducted for a total of 12 separate regression analyses. Tables III-V report results of the hierarchical regression analysis for the three facets of dynamic CC. In each regression analysis, predictors were entered in four steps. Step 1 included the control variables, Step 2 included variety of early international experience and cultural novelty of early international experience, Step 3 included the family diversity and language diversity variables, and Step 4 included the personality traits of openness to experience and extroversion.

The first set of hypotheses on the relationship of variety of early international experience to dynamic CC predicted that the variety of early international experience would positively predict cultural flexibility, and tolerance for ambiguity, and negatively predict ethnocentrism. The results show that variety of early international

Variables	Model 1	Model 2	Model 3	Model 4
<i>Step 1</i>				
Age	0.05	0.07	0.02	0.02
Gender	0.12	0.11	0.08	0.07
Nationality	-0.02	0.02	-0.03	-0.02
International business courses	0.14	0.10	0.07	0.06
Recent foreign visits	0.03	-0.13	-0.10	-0.14
<i>Step 2</i>				
Variety of early international experience		0.33**	0.27**	0.23**
Cultural novelty of early international experience		0.17	0.15	0.16
<i>Step 3</i>				
Language diversity			0.25**	0.24**
Family diversity			0.15*	0.15*
<i>Step 4</i>				
Openness to experience				0.16*
Extroversion				0.13
Overall <i>F</i>	1.44	4.51**	5.90**	5.64**
<i>R</i> <sup>2</sup>	0.04	0.17	0.26	0.29
Change in <i>F</i>	1.44	11.70**	9.08**	3.57*
Change in <i>R</i> <sup>2</sup>	0.04	0.13	0.09	0.03

**Notes:**  $n = 158$ . Values are standardized estimates. \* $p < 0.05$ ; \*\* $p < 0.01$  (two-tailed)

**Table III.**  
Results of hierarchical  
multiple regression  
analysis dependent  
variable: cultural  
flexibility

Variable	Model 1	Model 2	Model 3	Model 4
<i>Step 1</i>				
Age	-0.16*	-0.14*	-0.18*	-0.17*
Gender	-0.12	-0.12	-0.14	-0.13
Nationality	0.22*	0.26*	0.22*	0.21*
International business courses	-0.01	-0.03	-0.05	-0.04
Recent foreign visits	0.05	-0.06	-0.05	-0.07
<i>Step 2</i>				
Variety of early international experience		0.22*	0.18*	0.18*
Cultural novelty of early international experience		0.13	0.24	0.12
<i>Step 3</i>				
Language diversity			0.19*	0.20*
Family diversity			0.06	0.05
<i>Step 4</i>				
Openness to experience				-0.12
Extroversion				0.01
Overall <i>F</i>	3.42*	4.14**	4.17**	3.65**
<i>R</i> <sup>2</sup>	0.10	0.16	0.20	0.21
Change in <i>F</i>	3.42**	4.68**	3.89*	1.43
Change in <i>R</i> <sup>2</sup>	0.10	0.06	0.40	0.01

Notes: *n* = 158. \**p* < 0.05; \*\**p* < 0.01 (two-tailed)

**Table IV.**  
Results of hierarchical  
multiple regression  
analysis dependent  
variable: tolerance for  
ambiguity

Variables	Model 1	Model 2	Model 3	Model 4
<i>Step 1</i>				
Age	0.07	0.07	0.10	0.09
Gender	-0.05	-0.04	-0.01	-0.04
Nationality	-0.12	-0.15	-0.10	-0.09
International business courses	-0.07	-0.04	-0.02	-0.03
Recent foreign visits	-0.06	0.08	0.03	0.10
<i>Step 2</i>				
Variety of early international experience		-0.18*	-0.14	-0.11
Cultural novelty of early international experience		-0.22*	-0.18*	-0.19*
<i>Step 3</i>				
Language diversity			-0.13	-0.13
Family diversity			-0.21**	-0.19**
<i>Step 4</i>				
Openness to experience				0.14
Extroversion				-0.12
Overall <i>F</i>	1.36	2.63*	3.47**	3.46**
<i>R</i> <sup>2</sup>	0.04	0.10	0.17	0.20
Change in <i>F</i>	1.36	4.28*	6.11**	3.76*
Change in <i>R</i> <sup>2</sup>	0.04	0.06	0.06	0.03

Notes: *n* = 158. \**p* < 0.05; \*\**p* < 0.01 (two-tailed)

**Table V.**  
Results of hierarchical  
multiple regression  
analysis dependent  
variable: ethnocentrism

experience was significant in predicting cultural flexibility (Table III, Models 2-4), and was significant in predicting tolerance for ambiguity (Table IV, Models 2-4). Variety of international experience, however, was not significant in predicting ethnocentrism. These results provide support to *H1a* and *H1b*.

The second set of hypotheses on the relationship between cultural novelty of early international experience and dynamic CC suggested that cultural novelty of early international experience would positively predict cultural flexibility, and tolerance for ambiguity, and negatively predict ethnocentrism. As indicated by the analysis, cultural novelty of early international experience was not significant in predicting cultural flexibility (Table III) or in predicting tolerance for ambiguity (Table IV). However, there was a negative significant relationship between cultural novelty of early international experience and ethnocentrism (Table V, model 4). Thus, *H2c* was supported.

The third set of hypotheses concentrated on the relationship between language diversity and dynamic CC. More specifically, these hypotheses predicted that language diversity would positively predict cultural flexibility, and tolerance for ambiguity, and negatively predict ethnocentrism. The results indicate that language diversity significantly predicted cultural flexibility (Table III, model 3) and significantly predicted tolerance for ambiguity (Table IV, model 3). However, language diversity was not significant in predicting ethnocentrism (Table V). The results indicate that *H3a* and *H3b* were supported.

The fourth set of hypotheses posited that family diversity would positively predict cultural flexibility and tolerance for ambiguity, and negatively predict ethnocentrism. The results show family diversity to be significant with respect to cultural flexibility (Table III) and ethnocentrism (Table V). However, family diversity was not a significant predictor of tolerance for ambiguity (Table IV). Thus *H4a* and *H4c* were supported.

The fifth set of hypotheses examined the relationship between openness to experience and dynamic CC. Openness to experience would positively predict cultural flexibility and tolerance for ambiguity, and negatively predict ethnocentrism. The results show that openness to experience significantly predicted cultural flexibility (Table III, model 4) but was not significant in terms of its relationship with tolerance for ambiguity and ethnocentrism. Thus *H5a* was supported.

Finally, the sixth set of hypotheses examined the relationship between extroversion and dynamic CC. It was predicted that extroversion would positively predict cultural flexibility, positively predict tolerance for ambiguity, and negatively predict ethnocentrism. The results show that extroversion was not significant in any of the models. Thus *H6a-c* were not supported.

### Discussion

This study examined the relationship of experiential and personality variables to dynamic CC in a sample of ATCKs from 13 countries. Using social learning theory as a foundation to explain CC, the study suggested five important predictors of dynamic CC in TCKs: variety of early international experience, language diversity, the number of foreign languages spoken as a child, family diversity, and the personality trait of openness to experience. Results provided support for eight hypotheses. Variety of early international experience positively predicted cultural flexibility and tolerance for ambiguity. Cultural novelty of early international experience negatively predicted ethnocentrism. Language diversity positively predicted cultural flexibility and tolerance for ambiguity. Family diversity positively predicted cultural flexibility and negatively predicted ethnocentrism. Openness to experience significantly predicted cultural flexibility.

This research supports Bonebright (2010) and Lam and Selmer (2004) assertion that ATCKs have the potential to become future expatriates. In this case, these results suggest ATCKs' rich international experience and exposure to diversity in childhood produce in them a high level of dynamic CC, which organizations can utilize for

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developmental purposes. In the context of the social learning theory ATCKs who have greater variety of early international experience, language diversity, the number of foreign languages spoken as a child, family diversity, and the personality trait of openness to experience may have a greater interest in learning about new cultures and interaction with people from multiple cultural environments during their formative years. This is consistent with past research on TCKs which suggested that experiencing international travel during childhood can provide competencies today's employers seek. In addition, the findings from this study suggest that it is important to pay attention to the type of early international experience and not treat early international experience in generic terms.

### **Study limitations and suggestions for future research**

As with all studies, there are limitations to this study. The generalizability of study findings is limited by the nature and size of the sample, i.e. a student sample of 159 individuals who had lived in one or more foreign countries during their formative years. We chose this sample in order to assure a sufficient number of individuals with such a background. However, the student sample raises a concern about generalizability. It would be desirable to repeat the study on a sample from different sojourn populations.

The single source sample of this study is also a limitation, as single source samples are subject to common method bias. We reduced this potential bias by using a time lag (Podsakoff *et al.*, 2003) to create a temporal separation between the measurement of the predictors and the dependent variables, a procedural remedy suggested by Podsakoff *et al.* (2003). Moreover, most of the independent variables were bio-data items, and common method variance is typically an issue with attitudinal variables. Future research, however, should gather data from multiple sources.

Another limitation is the use of a self-reported measure of cultural novelty, as it cannot be independently verified and is therefore subjective in interpretation. Future research should gather data from multiple sources or use objective measure such Hofstede's country scores (Hofstede, 2001). The dichotomization of the family diversity variable is also a concern. It is possible that choice (d) (born in a country in which neither of your parents was born) would suggest greater family diversity than would choices (b) and (c). Research is needed to further refine this measurement.

Small sample size is another limitation, as it may have prevented weak effects from demonstrating significant results. The smaller the sample size, the greater the treatment effect must be in order to achieve statistical significance. Therefore, it is possible that the sample size may have contributed to the lack of statistically significant results with respect to openness to experience and extroversion. Future studies should conduct similar research using a larger sample size.

A surprising finding was that, with the exception of the relationship between openness to experience and cultural flexibility, the hypotheses regarding personality traits of openness to experience and extroversion were not fully supported. One possible explanation for this is the limitation of the measure rather than the absence of a main effect. Future research would benefit by using a different form of measurement such as the NEO Personality Inventory (NEO – FFI) (Costa and McCrae, 1992).

### **Theoretical implications**

#### *Implications for ATCK literature*

This study examined several components of TCK experience as they relate to the development of components of dynamic CC. Examining the components of both

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constructs as separate variables enabled us to identify variables that provide a foundation for examining the mechanisms through which early international experiences influence development. Because prior research provided little guidance on how to position these variables, future studies should revisit the influence of control variables and independent variables. It is possible that what we used as control variables could be considered independent variables, and that there are other variables that mediate the relationship between early international experience and the dependent variables. Moreover, the IHRM literature suggests that the impact of early international experience on dynamic CC may be influenced by other stable competencies such as self-efficacy (Varma *et al.*, 2011) and learning goal orientation (Tillery and Jourdan, 2012). These and other personality traits would further extend our understanding of the unique development of TCKs.

Another area for future research is the examination of the mechanism or the process by which learning occurs from early international experience. We posited but did not test the role of social learning, i.e. attention, retention, and reproduction, as the mediators between early international experience and facets of dynamic CC. One way is to view is incorporating the transfer of learning perspective (Eddie and Danny, 2001; Baldwin and Ford, 1988) should facilitate in understanding this aspect. Retention can be conceptualized in terms of maintenance of learning, which the transfer of learning literature describes as the process of continuing to use newly acquired abilities over time. Reproduction can be conceptualized in terms of generalization of learning, which the transfer of learning literature describes as application of learned capabilities (e.g. cross-cultural skills/behaviors) to on-the-job work problems and situations (Baldwin and Ford, 1988). Transfer of learning literature has several reliable and valid measures of maintenance of learning and generalization of learning. These measures can provide a solid foundation for examining the two possible mediators.

#### *Implications for international experience literature*

Following Takeuchi *et al.* (2005), study results demonstrate the different ways that the international experience construct can be operationalized and show the importance of including multiple facets of experience, advancing the international experience literature in several ways. First, the findings provide support to prior research on international experience that suggests that non-work international experiences, like work-related international experiences, are important for gaining a global perspective. Second, prior literature on international experiences has simultaneously examined work and travel experiences, potentially confounding research findings. This study addressed this concern by using a sample with no international work experience. Third, this study considered family diversity and language diversity in the formation of characteristics of CC. These, too, should be considered in future research.

#### *Implications for CC literature*

This study assessed the impact of early international experiences on three aspects of dynamic CC: cultural flexibility, tolerance for ambiguity, and ethnocentrism. These were appropriate given this study's focus on the experiential and personality characteristics leading to the development of CC and study findings contribute to the CC literature, particularly given the variety of ways CC is defined and operationalized. Including additional components of CC in future research would help focus the CC construct and make it more useful for research and practice in the development of



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CC in expatriate managers as well as the primacy of early experience vs training in identifying such individuals.

### **Practical implications**

The general consensus among HR practitioners, consulting firms, and professional associations such as the Boston Consulting Group, McKinsey and Company, Hay Group, Watson Wyatt Worldwide, and the Economist Intelligence Unit is that organizations face intense competition for talent in the USA and worldwide and confront major challenges in attracting, retaining, and developing people they need in many positions (Tarique and Schuler, 2010) Indeed, a recent study on talent shortages by Manpower Group (2011) notes that:

Despite the slow and uneven recovery from the global economic downturn and lingering high levels of unemployment in many markets, organizations around the world still report that they cannot find the talent they need when they need it [...] (p. 2).

Expatriate managers are a specific and important subset of skilled talent. Our research suggests two approaches to the challenge of finding and retaining employees who can navigate the complexity of unaccustomed cultural environments. One is to hire and develop ATCKs and the other is to develop employees with the characteristics of TCKs shown to be most closely related to CC.

#### *Attracting and developing ATCKs*

This study provides initial evidence of the benefits of seeking individuals with early international experiences in the process of selecting candidates for foreign assignments. We already know that ATCKs are more likely to seek out international assignments (Selmer and Lam, 2004). This study adds to that by demonstrating specific early experiences and personality traits to look for when filling expatriate positions. In addition to their usual networking processes, recruiters can develop relationships with foreign schools and universities to locate and identify ATCKs who have lived in multiple countries, speak multiple languages, come from diverse or multicultural families, and are high on the personality trait of openness to experience.

The talent development literature argues that to maximize learning the organization should identify individuals with the requisite individual characteristics and then offer appropriate learning experiences (Caligiuri *et al.*, 2009). Consistent with this thinking, the design of development programs for ATCKs should differ from typical development of expatriate managers, taking into consideration their existing CC in tailoring leadership development programs and cross-cultural training. For example, Global Leadership Programs for ATCKs should focus on technical competencies as opposed to CC.

#### *Developing employee CC characteristics*

The “workforce differentiation approach” (Becker *et al.*, 2009) to managing employees suggests that employees who add significant value to the organization should be placed in positions with commensurate impact on the organization’s business, with a concomitant investment of resources. Certainly, the investment of resources in training future expatriate employees falls into this category.

Social learning theory posits that reproduction is the stage where the individual recognizes that behavior should fit with observed norms. In the context of cross-cultural experience, this is the point when a person becomes aware that the cultural norms and behaviors of one’s home country are different from the norms within a

different cultural context. Whether or not this learning can be reproduced in adults – and how – is not addressed in this study. However, as a practical matter, IHRM professionals use a variety of methods in CC training, including cognitive (e.g. lecture), affective (e.g. sensitivity training), experiential (e.g. simulation or field training), and language training. This study provides direction concerning the types of training likely to provide the greatest benefit. One of these is language training. Given the benefit of fluency in language discussed earlier, this training should provide a maximum outcome for the training dollar. The other findings of our research, i.e. the benefit of a variety of early international experiences, diverse ethnicity in family background, and the personality trait of openness to experience are more difficult to achieve. The first is most likely to be gained through field training and the second by sensitivity training. The latter is a personality trait, enduring by definition, and therefore not likely to be changed by training. This is a topic more appropriately addressed by the psychology literature. However, we would suggest that involving ATCKs in training or mentoring employees preparing for future expatriate assignments be examined as one possible way to encourage a greater openness to experience.

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