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# The effect of immigration, acculturation and multicompetence on personality profiles of Israeli multilinguals

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## Abstract

The present study investigates the link between immigration, multilingualism, acculturation and personality profiles (as measured by the Multicultural Personality Questionnaire) of 193 residents in Israel. Participants born in Israel tended to score higher on Emotional Stability than those born abroad. Participants with one immigrant parent (but not two) scored higher on Cultural Empathy, Open-mindedness and Social Initiative. Participants who had become dominant in Hebrew as a foreign language scored lower on Emotional Stability than Hebrew L1-dominant participants. The number of languages known by participants was not linked to their personality profile. A high level of use of various languages was linked to significantly higher scores on Cultural Empathy and Open-mindedness. Gender and age were also linked to personality profiles. Advanced knowledge of more languages and frequent use of more languages were linked to higher levels of Social Initiative and Open-mindedness, while advanced knowledge of more languages was also linked to higher levels of Cultural Empathy. These findings confirm that some personality traits are shaped by individuals' linguistic history, degree of multilingualism and a combination of social and biographical factors.

## Introduction

Advances in technology and geopolitical and economic changes in this century have fuelled global mobility, resulting in globalized cultural and linguistic changes. This globalization has had a major impact on issues of identity at national, community and individual levels, which at times create

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internal conflicts and fissures and at other times pose a unique opportunity to expand and develop new identities.

Models of ethnic identity and acculturation patterns have been part of the research in recent decades (Ben-Ezer, 1999; Berry, 1990; Berry, Poortinga, Segall, & Dasen, 1992; Horenczyk, 2000; Liebkind, 1993), and some studies have specifically looked at the role of language in the construction of these identities and integration among immigrants (Ben Rafael, Olshtain, & Geijst, 1997; Cooper & Fishman, 1977; Olshtain & Kotik, 2000; Olshtain, Stavans, & Kotik, 2003; Stavans, Olshtain, & Goldzweig, 2009). These immigrants may experience a culture shock when they realize that they not only need to acquire a new language quickly but also need to navigate in an unfamiliar culture, in order to find a house, a job, health care, insurance and a driver's licence. The immigrants thus need to absorb a lot of information through less than optimal proficiency in the local language(s). When people migrate, they cross not only geographical borders but also cultural and linguistic ones. These borders are less tangible and people also seem to take longer to cross the individual inner self-borders. Horenczyk (2000), in a comprehensive description of social and psychological processes of migration, quotes Maines (1978) 'identities migrate every bit as much as bodies' (p. 242). Migrations of 'selves' (or identities) usually follow different timetables than those of their corresponding 'bodies'. Often, immigrants begin to inquire about the customs, values and norms of their target society during the pre-migration stage of their cultural transition (p. 14). Ward, Bochner, and Furnham (2008) point out that early use of the term 'culture shock' referred to the buzzing confusion and the negative reactions of people in an unfamiliar cultural environment (p. 270). Recent research focuses more on the way people deal actively with change, how they 'feel, behave, think and perceive when exposed to second-culture influences' (p. 270).

Immigration and the subsequent acculturation to a new culture represent a profound social change, which is likely to shape an individual's personality. Indeed, a person's personality is determined by the interplay of internal physiological factors and external social factors (Furnham & Heaven, 1999; Jang, Livesley, & Vemon, 1996; McCrae et al., 2000). The present study thus answers the call from Chen, Benet-Martinez, and Bond (2008, p. 832): 'we need process-oriented studies that acknowledge the complex interplay among identity, language, personality, and contextual variables'.

In the following section, we will look at the research linking immigration, multilingualism and psychological variables. We will then briefly discuss the issue of immigration in Israel. Next, we will present our research instrument, the Multicultural Personality Questionnaire (MPQ), our research questions and the design of our empirical study. Subsequently, we will test six specific hypotheses using the data of 193 Israelis. The findings will be discussed in the subsequent section. Finally, we will draw some tentative conclusions.

## Literature review: immigration, multilingualism and psychology

Research on immigration, multilingualism and psychology is situated within a large – and often interdisciplinary – field ranging from applied linguistics, cross-cultural psychology, personality psychology, intercultural communication and immigration studies. The present literature review will thus attempt to highlight a number of studies that are relevant.

Recent applied linguistic work has focused on the link between multilingualism and foreign language anxiety (FLA), one of the most popular psychological variables to be considered in the field (Horwitz, 2010). Participants knowing more languages report significantly lower levels of

FLA in all their languages, including their L1 (Dewaele, 2007a, 2007b, 2010a, 2010b; Dewaele, Petrides, & Furnham, 2008). One possible explanation is that the knowledge of more languages makes foreign language users more confident in their ability to overcome communicative difficulties (Dewaele et al., 2008). Multilinguals faced with a sudden gap (lexical or grammatical) in the knowledge of their target language are able to resort to their knowledge of other languages, especially if these are typologically related to the target language. This specific knowledge, combined with more experience in intercultural communication, might explain higher levels of self-perceived competence and lower levels of FLA (Dewaele, 2010b). FLA seems to have the power to nip the desire to learn foreign languages in the bud. Young London teenagers with higher levels of FLA were more likely to abandon further foreign language instruction compared to pupils with lower levels of FLA (typically also multilinguals) (Dewaele & Thirtle, 2009).

A lot of research has been carried out on the effects of culture shock (Ward et al., 2008). The authors observe that early research in this field contained 'much anecdotal evidence and armchair theorising about adaptive personality qualities and acculturative experience' (p. 83). Researchers who engaged in empirical research have typically focused on the negative effects of immigration.

Sandhu and Asrabi (1994), for example, investigated acculturative stress among international students in the United States who had no previous experience of living abroad. They revealed that participants experienced alienation and perceived discrimination, homesickness, hatred, fear related to unfamiliar surroundings and stress as a result of culture shock and guilt. Devens (2005) also looked at the effect of cross-cultural experiences on affective mood states of immigrant teenagers in an international school. While 80% of the immigrant teenagers scored within the average range (i.e. compared to non-immigrant teenagers), 20% of immigrant teenagers scored higher on depression, especially females. Fail, Thompson, and Walker (2004) focused on the relationships between identity, sense of belonging and the nature of relationships of immigrant children through a multiple case study. Their participants were former international school students who all attended an international school between 20 and 50 years ago. A qualitative analysis revealed that several participants had no sense of belonging in the communities in which they were living. While some participants reported ambiguous feelings toward the host community, others perceived their marginality in a positive light. All participants reported enjoying the ability to feel at home in different places and to be part of an expatriate community.

Chen et al. (2008) looked at the effects of personality traits, bicultural identity, bilingualism and social context on the psychological adjustment of three groups of immigrants in Hong Kong: Mainland Chinese immigrants, Filipino immigrants and Mainland Chinese college students. A series of regression analyses revealed that Neuroticism was the strongest predictor of psychological adjustment for the three groups. After controlling for the effects of self-efficacy, Neuroticism and measures of language and identification, the researchers found that bilingual competence and the perception of integration of cultural identities were important antecedents of beneficial psychological outcomes. Acculturative stress 'emerged as a negative predictor of well-being, even after controlling for dispositional Neuroticism and self-efficacy' (p. 831). In an earlier study, Benet-Martinez and Haritatos (2005) found that bicultural individuals who perceived their dual cultural identities as overlapping and in harmony (reflected through their score on the Bicultural Identity Integration scale) also scored higher on Openness to experience and lower on Neuroticism.

Some researchers have focused on the personality variables that are linked to successful cross-cultural adaptation, based on the premise that the psychological profile of immigrants plays an important part in their cross-cultural adaptation. Ward et al. (2008), considering the pre-2001 empirical research, conclude that personality is not a good predictor of cross-cultural adaptation, but note that 'many observers believe that it is premature to dismiss its influence on the adjustment

process' (p. 85). A break-through seems to have occurred with the development of personality questionnaires designed specifically for multicultural individuals (Van Oudenhoven & Van Der Zee, 2002). Some general traits had already been positively linked to cross-cultural adaptation such as preparedness for change and adaptive personality (Kim, 2001). The most important personality traits in successful cross-cultural adaptation are Openness, strength and positivity (2001, p. 85). Individuals who score high on Openness minimize their resistance to the new environment and are more willing to attend to new and changed circumstances (p. 84). They are also less likely to make ethnocentric judgments when experiencing and interpreting various events and situations (p. 84). Kim defines personality strength as the 'internal capacity to absorb shocks from the environment and to bounce back with being seriously damaged by them' (p. 85). It is also linked to positivity and optimism, including the 'capacity to defy negative prediction' (p. 85).

Immigrants go through a process of deculturation and acculturation (Kim, 2001), which can generate stress and pain but can also offer hope in a better future: 'Every crisis presents both an opportunity for psychological growth and a danger of psychological deterioration' (Moos & Tsu, 1976, p. 13).

A change in perspective seems to have occurred around 2000 in studies on cross-cultural adaptation. Many researchers shifted away from the deficit view towards a more positive outlook on the phenomenon. It is probably not a coincidence that the personality dimensions in the MPQ (Mol, Van Oudenhoven, & Van Der Zee, 2001; Van Der Zee & Van Oudenhoven, 2000) are positively oriented, rather than negatively (i.e. Emotional Stability rather than Neuroticism). Leong (2007) used the MPQ to look at the relationship between personality traits and sociopsychological adaptation of Singaporean undergraduate students in an international exchange program and a control group of domestic students. He found that before departure, the students who had opted for the exchange program reported significantly higher levels of intercultural competencies in four of the five MPQ dimensions (Open-mindedness, Social Initiative, Flexibility and Emotional Stability) but not in Cultural Empathy (p. 553). Increased Social Initiative was found to predict a reduction in both sociocultural and psychological difficulties, while high scores on Flexibility correlated with depression. The total MPQ scores explained between 0.21 and 0.15 of the variance in sociocultural and psychological adjustment, respectively. These were statistically significant and comparable to previous studies (p. 556).

Peltokorpi and Froese (2011) investigated the link between personality traits (as measured with the MPQ) of mainly American and European expatriates and their adjustment in Japan. Positive relationships emerged between Open-mindedness and interaction adjustment, Emotional Stability, Cultural Empathy and general adjustment and Social Initiative and work adjustment.

Dewaele and Van Oudenhoven (2009) used the MPQ to look whether the personality profiles of young London teenagers were linked to their multilingualism and multiculturalism. Immigrant teenagers scored significantly higher than locally born teenagers on the dimensions of Open-mindedness and – marginally – on Cultural Empathy, and they scored significantly lower on Emotional Stability. Participants' language dominance also had a significant effect on some personality dimensions. Participants who reported to be dominant in two languages obtained significantly higher scores on the dimensions of Open-mindedness, marginally higher scores on Cultural Empathy and significantly lower scores on Emotional Stability compared to participants who were dominant in a single language. Multilinguals scored significantly higher on the dimensions of Cultural Empathy and Open-mindedness, and scored significantly lower on the dimension of Emotional Stability compared to mere incipient bilinguals, that is, classroom learners of a second language.

Korzilius, Van Hooft, Planken, and Hendrix (2011) referred to the Dewaele and Van Oudenhoven (2009) study as a starting point for their own investigation into the link between foreign language mastery and the MPQ's multicultural personality dimensions among non-international and international employees of a Dutch multinational company, as well as their business contacts across the world. The researchers found that the number of foreign languages known by participants correlated significantly with Open-mindedness and Emotional Stability. A lower but significant positive correlation was also found between self-assessed knowledge of foreign languages and Cultural Empathy (p. 546). The international employees (who spoke one more foreign language than the other groups) scored higher on Open-mindedness and Flexibility than the non-international employee group (p. 549). Non-international employees reported being more emotionally stable than the business contacts, a finding that the authors explain by the fact that the latter have to function in an 'uncertain and rapidly changing business context', on a crossroads between the Dutch company and the buyers from their respective countries (p. 550). Table 1 offers a short overview of the research linking multilingualism, immigration and the Big Five personality traits.

Herfst et al's. (2008) study into intercultural effectiveness training reported – in passing – that 'speaking a foreign language showed a relation with intercultural effectiveness ($r = 0.14$; $p < 0.05$)' (p. 74). However, the knowledge of more than one foreign language was not linked to intercultural effectiveness (p. 74). It is unclear, however, whether the intercultural effectiveness was some composite score of the MPQ.

Finally, Dewaele and Wei (2011) used the feedback, obtained through an online questionnaire in English, from 2158 multilinguals from around the world (204 different nationalities, 82 different L1s), to investigate the link between multilingualism, a high level of global proficiency, frequent use of various languages and the measure of Tolerance of Ambiguity (TA), a lower-order personality trait (Herman, Stevens, Bird, Mendenhall, & Oddou, 2010). A significant positive link emerged between the number of languages known to participants and their TA scores. While growing up bi- or trilingually from birth had no effect on TA, the experience of having lived abroad had a positive impact. TA thus appears to be influenced by an individual's social–linguistic–cultural environment and by that individual's conscious effort to learn new languages and having to fit in a new linguistic and cultural environment.

Gender and age are usually included as control variables in the previously mentioned studies. In their literature review, Peltokorpi and Froese (2011) report that female expatriates tend to adjust more easily to foreign countries and develop wider social networks with local people because of superior interpersonal skills (p. 6). Men have been reported to score higher on Emotional Stability, while women have been found to score higher on Cultural Empathy (p. 6). Age can also play a role because younger expatriates have more social interactions with local people (p. 6). Older participants have been found to score higher than younger participants on Emotional Stability (Van Der Zee & Brinkmann, 2004). However, Korzilius et al. (2011) found no link between age and MPQ dimensions. Dewaele and Wei (2011) found that older participants scored significantly higher on TA, but there was no gender effect.

In sum, research on personality dimensions as predictor variables of successful cross-cultural adaptation among expatriates is expanding, and researchers have started including language knowledge and self-perceived proficiency in foreign languages as variables in their research designs. Moreover, personality dimensions start to be included as dependent variables, in order to investigate the effects of linguistic and social changes in the individuals' life. One of the most popular psychological instruments in this area of research is the MPQ (Van Oudenhoven & Van Der Zee, 2002), which will be described in more detail in the following section.

**Table 1.** Overview of research on multilingualism, immigration and the Big Five personality traits

| | Dewaele and Van Oudenhoven (2009) | Leong (2007) | Peltokorpi and Froese (2011) | Korzilius, Van Hooft, Planken, and Hendrix (2011) | Benet-Martinez and Haritatos (2005) | Chen, Benet-Martínez, and Bond (2008) |
|---|---|---|---|---|---|---|
| Cultural Empathy | Marginally higher for immigrants and functional bi-/ multilinguals | – | Positively linked to general adjustment | Higher among more proficient LX users | – | – |
| Open-mindedness | Higher for immigrants and functional bi-/ multilinguals | Higher among exchange students | Positively linked to interaction adjustment | Higher among international employees and multilinguals | Higher among high scorers on Bicultural Identity Integration | – |
| Social Initiative | – | Higher among exchange students and positively linked to adjustment | Positively linked to work adjustment | – | – | – |
| Emotional Stability | Lower for immigrants and functional bi-/ multilinguals LX-dominance | Higher among exchange students | Positively linked to general adjustment | Higher among multilinguals and non-international employees | Higher among high scorers on Bicultural Identity Integration | Positively linked to psychological adjustment |
| Flexibility | – | Higher among exchange students and linked to depression | – | Higher among international employees | – | – |

## MPQ

Van Oudenhoven and Van Der Zee (2002) developed the MPQ in order to measure multicultural effectiveness. It contains 91 items with 5-point Likert scales. The MPQ is a type of 'Big Five' personality inventory (cf. McCrae et al., 2000), but its scales are tailored to making predictions regarding multicultural success.

These are the five dimensions used in the MPQ:

1. Cultural Empathy: this measures the ability to empathize with the feelings, thoughts and of individuals from a different cultural background. Items include 'Tries to understand other people's behavior' and 'Pays attention to the emotions of others'.

2.   Open-mindedness: this refers to an open and unprejudiced attitude towards outgroup mem-
      bers and towards different cultural norms and values. Items include 'Finds other religions
      interesting' and 'Has a feeling for what is appropriate in another culture'.
3.   Social Initiative: this is defined as a tendency to approach social situations in an active way
      and to take initiative. Items include 'Takes initiative' and 'Takes the lead'.
4.   Emotional Stability: this dimension refers to a tendency to remain calm in stressful situa-
      tions versus a tendency to show strong emotional reactions under stressful circumstances.
      Items include 'Is self-confident' and 'Gets upset easily'.
5.   Flexibility: the fifth dimension is described as the ability to learn from experiences.
      Elements of flexibility, such as the ability to learn from mistakes and adjustment of behav-
      iour, whenever it is required, are associated with the ability to learn from new experiences
      in particular (Dewaele & Van Oudenhoven, 2009, pp. 7–8). Items include 'seeks chal-
      lenges' and 'enjoys unfamiliar experiences'.

The MPQ questions typically refer to behaviour in multicultural situations. Even the MPQ
dimensions that are quite close to Big Five scales focus more specifically on aspects that are rele-
vant to multicultural success (Van Oudenhoven & Van Der Zee, 2002). Leone, Van Der Zee, Van
Oudenhoven, Perugini, and Ercolani (2005, p. 1457) correlated the MPQ dimensions with the tra-
ditional Big Five dimensions and found that Cultural Empathy was positively linked to Extraversion,
Agreeableness, Neuroticism and Openness to Experience. Open-mindedness was significantly
related to Extraversion, Openness to Experience and linked (negatively) to Conscientiousness.
Social Initiative was linked (negatively) to Neuroticism. Emotional Stability was positively linked
to Extraversion, Agreeableness, Openness to Experience and Conscientiousness and negatively
linked to Neuroticism. Flexibility was positively linked to Extraversion and Openness to
Experience, and negatively linked to Conscientiousness (p. 1457).

The scales of the MPQ have proved to be reliable and to show consistent patterns of correla-
tions with related variables. The English version of the MPQ has been widely used and proven to
be a reliable instrument with an average Cronbach's $\alpha$ of 0.80 (Leone et al., 2005). Van
Oudenhoven, Timmerman, and Van Der Zee (2007) showed that the MPQ has cross-cultural
equivalence of the scales: a satisfactory level of scale equivalence emerged for the Dutch and
Italian versions of the MPQ and between the Dutch, German and Australian versions. Similar
satisfactory results were found with an American–English version of the MPQ (Ponterotto, Utsey,
& Pederson, 2006).

The present study adopts a different approach in that we use the five MPQ dimensions exclu-
sively as dependent variables rather than as predictor variables. Our aim is to find whether the
linguistic/cultural background of Israeli participants is linked to their scores on the various dimen-
sions. With the exception of Dewaele and Van Oudenhoven (2009) and Korzilius et al. (2011), no
research has yet systematically examined the effect of multiple cultural and linguistic experiences
on personality profiles.

We believe it will bring new insights into our understanding of multilingualism–multicultural-
ism and personality profiles. Before moving to methodology and findings, we need to briefly
sketch the sociohistorical and linguistic environment of our participants.

## Immigration in Israel

Israel is an immigration puzzle. It is a young nation with numerous and very heterogeneous popu-
lation issues from immigration. With a population of slightly more than seven million people,

Israel today has at least five or six decades of immigration waves from different continents and countries. In the early 1990s, the population of Israel grew by close to 20% with two waves of immigration – one from the former Soviet Union and the other from Ethiopia. Israel has two official languages – Hebrew and Arabic – and several ethnic and minority languages represented and used by different immigrant speech communities. The Russian-speaking community in Israel of 2008 is heterogeneous on all possible counts typical of any other community. At the same time, it is one of the largest linguistic minorities in Israel (nearly 20% of the population), with an interesting historical background. The Soviet immigrants kept close ties with their fellow immigrants. They were secular, non-Zionist, highly educated and professional immigrants. Their attitude towards Hebrew acquisition was that it was necessary but not obligatory, in that it had to be sufficient for employment and survival but not more than that. The Ethiopian immigration, contemporary to the Russian immigration, consisted of nearly 80,000 immigrants. Unlike other immigration groups, the Ethiopians suffered severe culture shock on arrival and had to adjust to a new life in a modern, technologically advanced society. Stavans and Goldzweig (2008) looked at the tension between language use, attitudes towards language and purposes of language use of the Russian and Ethiopian immigrants. The authors found that the immigrants from the former Soviet Union are instrumentally motivated when embracing Hebrew and Israeli culture, while the immigrants from Ethiopia are more integrationally motivated. It is therefore important to keep in mind that although people issued from immigration can be labelled as immigrants, this label is relatively superficial and does not imply any homogeneity within that group. Of course, in the Israeli context, immigrants were all Jews, hence sharing a specific cultural heritage, which is therefore an important common denominator.

## Research questions

The present study will address the following questions:

1.  Will the personality profile of locally born participants differ from that of foreign-born participants?
2.  Will the personality profile of participants with at least one immigrant parent differ from that of participants with locally born parents?
3.  Is an individual's specific language dominance linked to that individual's personality profile?
4.  Is an individual's knowledge of multiple languages linked to that individual's personality profile?
5.  Is an individual's total proficiency across languages linked to that individual's personality profile?
6.  Is an individual's total use of different languages linked to that individual's personality profile?
7.  Do gender and age have an effect on an individual's personality profile?

## Method

### Participants

One part of our sample ($n = 77$) was recruited through contacts in Israeli secondary schools. Students were invited to participate using a hard copy of the research instruments. The second part

of the sample (*n* = 116) was recruited through the internet, with participants filling out an online version of the same research instruments.

Our 193 participants (126 females and 67 males, aged between 13 and 72 years, *M* = 31, *SD* = 17.5) lived in Israel. A majority of participants were born in Israel (*n* = 124) and others were born in the United States (*n* = 15), Russia (*n* = 13), the Ukraine (*n* = 12), Argentina (*n* = 9) and Ethiopia (*n* = 5). There were smaller groups of Jews born in Uruguay, Mexico, Brazil, Japan, Morocco, Iran, Belgium, the United Kingdom, France and Germany. A majority of participants had Hebrew as a first language (L1) (*n* = 110). Others had various first languages: Russian (*n* = 25), English (*n* = 23), Spanish (*n* = 11), Amharic (*n* = 8) and Arabic (*n* = 5). There were also native speakers of Dutch, Farsi, French, Georgian, Iraqi Arabic, Japanese, Portuguese, Rumanian and Yiddish. The most frequent second languages (L2) were English (*n* = 94), Hebrew (*n* = 56), Amharic (*n* = 11) as well as Arabic, Caucasian, Russian, Spanish and Yiddish. The most frequent third language (L3) was English (*n* = 58). Other L3s included Amharic, Arabic, Buhara, French, Hebrew, Hungarian, Japanese, Russian, Spanish and Yiddish. The most frequent fourth language (L4) was Spanish and French (both *n* = 14). Other L4s included Amharic, Arabic, English, Hebrew, Farsi, German, Japanese, Ladino, Ukrainian and Yiddish. The most frequent L5 was Arabic (*n* = 6), followed by Amharic, Caucasian, Greek, Portuguese, Spanish, Turkish and Yemenite. Hundred and thirty-seven participants had two immigrant parents, 20 participants had either their mother or father from foreign origin and 36 participants had parents who were locally born. Forty-seven participants were bilingual, 69 were trilingual, 63 were quadrilingual and 14 were pentalingual. One hundred and three participants were dominant in their L1; 66 were 'multidominant', that is, dominant in one or more other languages and Hebrew and 24 with various L1s had become dominant in Hebrew (which was either their L2 or L3 – hence the use of 'LX').

## Instrument

The instructions specified that the questionnaires were aimed at residents in Israel. All instruments were in Hebrew. A professional translator translated the MPQ into Hebrew, which was checked for terminology and accuracy by the second author.

The participants filled out the 91-item Hebrew version of the MPQ consisting of the following five subscales: Cultural Empathy (18 items), Open-mindedness (18 items), Emotional Stability (20 items), Social Initiative (17 items) and Flexibility (18 items). For each scale, internal consistency was calculated in terms of Cronbach's *α* (Table 2).

The dimensions showed satisfactory internal consistencies, the only exception being Flexibility that showed a more modest Cronbach's *α* coefficient. The correlations between the five dimensions are quite similar to the ones reported in Korzilius et al. (2011). A series of one-sample Kolmogorov–Smirnov analyses revealed that the scores on the five dimensions are normally distributed.

Our participants also filled out a sociobiographical questionnaire with questions about sex, age, country of birth, nationality of the participant's mother and father, ethnicity and order of language acquisition and language dominance. The question on the latter was formulated as follows: 'Which do you consider to be your dominant language(s)?' The responses were categorized as being either (a) the L1, (b) a combination of the L1 and another language or (c) a language that is not the L1.

This is obviously a relatively crude measure, given the fact that language dominance can vary according to the mode (oral or written language), the topic and the interlocutor, but it allows us to get a general idea about the effect of this variable.

Two final questions dealt with frequency of use of the participant's different languages and of his or her level of self-perceived proficiency in these languages (using a 7-point Likert scale). We

**Table 2.** Descriptive statistics and correlations of the Multicultural Personality Questionnaire scales

| Variable | N | Range | M | SD | Cronbach's $\alpha$ | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|
| 1. Cultural Empathy | 193 | 1.82–5.0 | 3.84 | 0.61 | 0.89 | | | | |
| 2. Open-mindedness | 193 | 1.88–4.61 | 3.49 | 0.52 | 0.81 | 0.74*** | | | |
| 3. Emotional Stability | 193 | 2.01–4.35 | 3.30 | 0.44 | 0.75 | 0.17* | 0.12 | | |
| 4. Social Initiative | 193 | 2.25–4.88 | 3.51 | 0.51 | 0.78 | 0.57*** | 0.57*** | 0.31*** | |
| 5. Flexibility | 193 | 2.23–4.44 | 3.24 | 0.43 | 0.69 | 0.13 | 0.29*** | 0.24** | 0.30*** |

*$p < 0.05$, **$p < 0.001$, ***$p < 0.0001$.

also developed a more global multilingualism measure. This is based on Cook's (2002) multicompetence idea, namely, that the mind of L2 users differs from monolingual speakers not only by the presence of a second language but by the emergence of a unique multicompetence: 'Acquiring another language alters the L2 user's mind in ways that go beyond the actual knowledge of language itself' (p. 7). Our multilingualism index, or 'total proficiency score', is the sum of self-perceived competence scores in up to four languages. This measure gives us a more fine-grained image of an individual's knowledge in various languages. We could distinguish between those claiming to know several languages, even at low levels of proficiency from those claiming knowledge of fewer languages but at a higher level. Indeed, somebody reporting limited knowledge in four foreign languages would be classified as a quadrilingual (which would look like the following on a 5-point Likert scale: L1: 5, L2: 2, L3: 1, L4: 1, L5: 1 = total score of 10), yet that person is quite different from a trilingual with maximal proficiency in three languages (which would look like the following on a 5-point Likert scale: L1: 5, L2: 5, L3: 5 = total score of 15). In other words, rather than just counting languages as discrete entities, we look at the user's accumulated language knowledge across languages. In other words, we look at the sum, rather than the constituent parts.

The total proficiency score is the sum of the proficiency scores on 5-point Likert scales for up to four languages (maximal possible score 5 × 4 = 20). Total proficiency scores varied between 5 and 20 with a mean of 12 (*SD* = 3.0).

The same principle was applied for language use. Someone who rarely uses his or her foreign languages can be distinguished from the person who uses them more frequently. This is a measure of intercultural communicative activity. The total language-use score is the sum of frequency of use scores on 5-point Likert scales for up to four languages (maximal possible score 5 × 4 = 20). Total language-use scores varied between 4 and 20 with a mean of 10.2 (*SD* = 3.7).

## Results

### Locally born versus foreign born

A first independent samples *t*-test shows very few differences between the 123 participants born in Israel and the 70 foreign-born participants living in Israel. The former scored marginally higher on Emotional Stability (see Table 3). No other difference was remotely significant.

### Immigrant parent(s) versus locally born parent(s)

A multivariate analysis of variance (MANOVA) was conducted to examine the effect of having locally born or immigrant parent(s) on the five personality dimensions. This indicated a significant effect: Wilks' lambda = 0.91, $F(10, 372) = 1.88$, $p < 0.046$, $\eta^2 = 0.048$. Tests of between-subject

**Table 3.** The differences between participants born in Israel and those born abroad

| Dimension | Israel born | | Foreign born | | | |
|---|---|---|---|---|---|---|
| | *M* | *SD* | *M* | *SD* | *t* | *p* |
| Cultural Empathy | 3.83 | 0.65 | 3.87 | 0.51 | −0.43 | 0.67 |
| Open-mindedness | 3.47 | 0.54 | 3.51 | 0.48 | −0.49 | 0.62 |
| Social Initiative | 3.52 | 0.53 | 3.49 | 0.46 | 0.51 | 0.61 |
| Emotional Stability | 3.34 | 0.43 | 3.22 | 0.45 | 1.83 | 0.07 |
| Flexibility | 3.25 | 0.41 | 3.21 | 0.48 | 0.65 | 0.51 |

effects revealed significant effects on three dimensions: Cultural Empathy, Open-mindedness and Social Initiative (see Table 4).

A look at the means shows that participants with one immigrant parent scored higher on the three dimensions than those with two immigrant parents and those with locally born parents (see Figure 1).

A post hoc Tukey's Honestly Significant Difference tests showed that participants with one immigrant parent scored significantly higher than those with two immigrant parents on Cultural Empathy ($p < 0.005$). The same difference emerged for Open-mindedness ($p < 0.009$). A significant difference also existed between participants without immigrant parents and those with two immigrant parents ($p < 0.048$) on Open-mindedness. Finally, participants with one immigrant parent scored significantly higher than those with two immigrant parents on Social Initiative ($p < 0.017$).

### Language dominance

A MANOVA was conducted to examine the effect of language dominance on the five personality dimensions. This indicated a globally non-significant effect: Wilks' lambda = 0.98, $F(5, 186)$ = 2.04, $p = 0.075$, $\eta^2 = 0.05$. However, further univariate ANOVAs indicated a significant between-subjects effect of language dominance on Emotional Stability ($F(2, 190) = 3.6$, $p < 0.028$, $\eta^2 = 0.037$) with the 107 L1-dominant and the 66 multidominant participants scoring higher than the 24 LX-dominant participants. There was no effect on the other dimensions. A post hoc Tukey's Honestly Significant Difference tests showed significant differences between the L1-dominant and the LX-dominant participants for Emotional Stability ($p < 0.021$) (see Figure 2).

### Knowledge of multiple languages

A MANOVA was used to examine the effect of number of languages known (two, three, four or five) on the five personality dimensions. This indicated a total absence of effect: Wilks' lambda =

**Table 4.** The effect of locally born or immigrant parent(s) on the personality dimensions

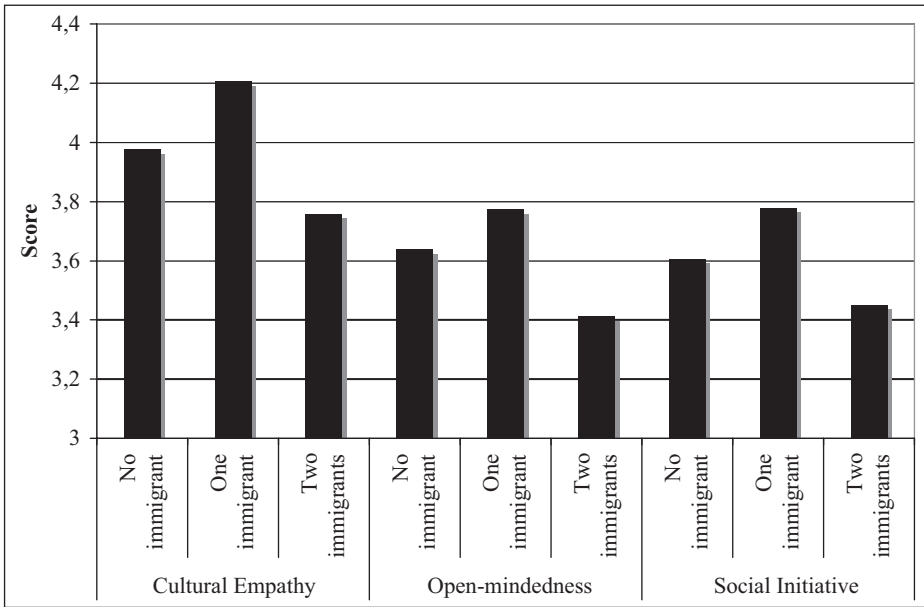| Variable | *F* | *p* | $\eta^2$ |
|---|---|---|---|
| Cultural Empathy | 6.14 | 0.003 | 0.061 |
| Open-mindedness | 6.26 | 0.002 | 0.062 |
| Social Initiative | 4.58 | 0.011 | 0.046 |

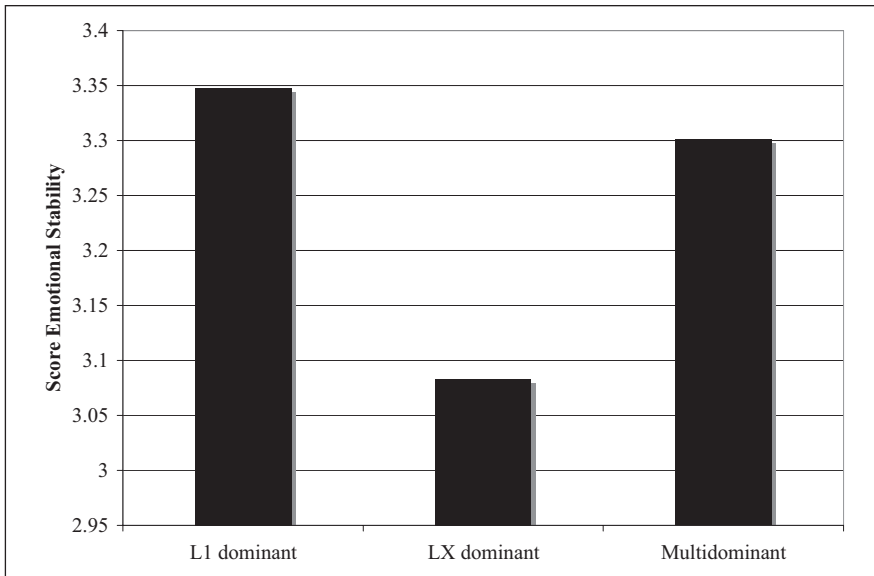**Figure 1.** The effect of parents' origin on three dimensions.



**Figure 2.** The effect of language dominance on Emotional Stability.

0.94, $F(5, 185) = 0.76$, $p = ns$. Further ANOVAs showed no between-subjects effects of knowledge of multiple languages on personality dimensions.

## Total proficiency and total use scores

A Pearson correlation analysis revealed links between total language proficiency scores and Cultural Empathy ($r = 0.15$, $p < 0.04$) and Open-mindedness ($r = 0.20$, $p < 0.005$).

**Table 5.** Results of a linear stepwise regression analysis on Open-mindedness

| Factor | $r^2$ | F | P |
|---|---|---|---|
| Total proficiency | 0.040 | 8.0 | 0.005 |
| Total proficiency and total use | 0.063 | 6.4 | 0.002 |

**Table 6.** Results of a linear stepwise regression analysis on Social Initiative

| Factor | $r^2$ | F | P |
|---|---|---|---|
| Total proficiency | 0.030 | 5.8 | 0.017 |
| Total proficiency and total use | 0.050 | 4.9 | 0.008 |

**Table 7.** Results of a linear stepwise regression analysis on cultural empathy

| Factor | $r^2$ | F | $p$ |
|---|---|---|---|
| Total proficiency | 0.023 | 4.5 | 0.035 |

Total language-use scores correlated negatively with Social Initiative ($r = -0.17$, $p < 0.02$). As total language proficiency is correlated with total language use ($r = 0.55$, $p < 0.0001$), we decided to use multiple regression analyses in order to find out how much unique variance on the personality dimensions can be explained by total language proficiency and total language use.

We ran a series of linear stepwise multiple regression analyses, with the dependent variable being the scores on Cultural Empathy, Open-mindedness and Social Initiative. The predictor variables were total language proficiency score and total language-use score. The two predictor variables have a significant, but small, effect, explaining between 5% and 6% of the variance in Open-mindedness and Social Initiative (Tables 5 and 6). Total language proficiency was the only predictor of Cultural Empathy, explaining 2.3% of the variance (Table 7).

These results suggest that advanced proficiency and frequent use of multiple languages have a small but significant effect on some personality dimensions.

## Gender and age

Gender had a significant effect on three personality dimensions. The female participants scored higher than their male counterparts on Cultural Empathy, Open-mindedness and Social Initiative (see Table 8). A quick follow-up independent *t*-test showed that female participants did not score significantly higher on total proficiency nor on total use ($t = -1.52$, $p = ns$ and $t = 0.48$, $p = ns$, respectively), which therefore excludes these variables as potential causes.

Age was found to be significantly correlated with scores on three dimensions: Cultural Empathy ($r = 0.21$, $p < 0.003$), Open-mindedness ($r = 0.26$, $p < 0.0001$) and Social Initiative ($r = 0.21$, $p < 0.003$). In other words, older participants were likely to score higher on these three dimensions.

**Table 8.** The effect of gender on the five personality dimensions

| Dimension | Male | | Female | | | |
|---|---|---|---|---|---|---|
| | M | SD | M | SD | t | p |
| Cultural Empathy | 3.48 | 0.64 | 4.04 | 0.48 | −6.26 | 0.000 |
| Open-mindedness | 3.28 | 0.57 | 3.60 | 0.46 | −4.29 | 0.000 |
| Social Initiative | 3.34 | 0.49 | 3.61 | 0.49 | −3.62 | 0.000 |
| Emotional Stability | 3.36 | 0.42 | 3.26 | 0.45 | 1.52 | 0.13 |
| Flexibility | 3.18 | 0.42 | 3.27 | 0.44 | −1.30 | 0.19 |

## Discussion

The effect of being of born abroad was much weaker and more diffuse in the present study than what we expected following the study by Dewaele and Van Oudenhoven (2009) on Third Culture Kids, and the existing literature on the effects of immigration on personality profiles. No differences emerged on Cultural Empathy nor on Open-mindedness between those having been born inside or outside Israel. We did find the expected pattern on Emotional Stability, with locally born participants scoring marginally higher than those who had been born abroad. One possible reason for the weakness of this relationship is that some immigrants may have arrived in Israel several decennia ago and had had the time to settle in and adjust. While other immigrants could have been much more recent arrivals in some state of culture shock, as was the case of the teenage participants in Dewaele and Van Oudenhoven (2009). The slightly higher scores on Emotional Stability for the locally born participants reflects the finding in Korzilius et al. (2011) who found that the Dutch non-international employees scored highest on this dimension.

One immigration-related variable that was not considered in Dewaele and Van Oudenhoven (2009) turned out to have a significant effect in the present study, namely, the origin of the participant's parents. The personality profile of participants with one immigrant parent differed from that of participants with both locally born parents or two parents born outside Israel. Participants with one immigrant parent scored highest on Cultural Empathy, Open-mindedness and Social Initiative. Counter-intuitively, we found that participants with two immigrant parents scored lower on Open-mindedness compared to participants without immigrant parents. These results suggest that, in the present context, growing up in a linguistically and culturally homogeneous family (be they local or of immigrant origin) limits Cultural Empathy, Open-mindedness and Social Initiative. On the other hand, growing up in a family with mixed linguistic and cultural background seems to enhance openness, awareness and tolerance of differences. These are obvious psychological benefits to growing up in a multilingual and multicultural family.

The language dominance measure gives an indication of the cultural and linguistic change that participants had undergone or might still be undergoing. More than half of the participants reported dominance in the L1. This group consists of L1 Hebrew speakers who did not have to adapt to a new linguistic and sociocultural environment and L1 speakers of other languages for whom Hebrew had not (yet) become the dominant language. The group of 'multidominant' participants who reported a different L1 and Hebrew as jointly dominant languages occupy an intermediate position, they describe themselves as balanced bilinguals (and probably biculturals), having acculturated into Israeli society while retaining their L1 roots. At the transformative end of the continuum are those participants whose dominant language is no longer their L1 but an LX (Hebrew). These participants have completely acculturated into Israeli society and may have experienced a

certain amount of deculturation and possibly attrition in the L1 language and culture (Kim, 2001). Language dominance turned out to only have a significant effect on Emotional Stability, with the L1-dominant participants scoring significantly higher than the LX-dominant participants on Emotional Stability, as was the case in Dewaele and Van Oudenhoven (2009). This could be an indication that the acculturation process into Hebrew and Israeli culture does leave participants less secure and stable than those who did not undergo this transformation. Kim (2001, p. 228) pointed out that immigrants' capacity to absorb stress and instability is not limitless, and they may retain some ill effects from their experience.

Participants knowing more languages did not differ in their personality profiles compared to those with fewer languages. This is a surprising difference with the Dewaele and Van Oudenhoven (2009) study, where the group of participants with two or more languages differed from the group of monolinguals learning a foreign language (i.e. incipient bilinguals) on three dimensions, and the study by Herfst et al. (2008) who reported a positive correlation between knowledge of languages and intercultural effectiveness. One possible explanation is that our sample is much more multilingual than the London sample and that the effect is most apparent when comparing monolinguals or incipient bilinguals with functional bi- or multilinguals, rather than functional bilinguals with functional multilinguals. Herfst et al. (2008) also reported that the effect of foreign language knowledge disappeared beyond one foreign language. Another explanation is that in the present study, foreign/other languages coexist all around in Israel and are part of the language education policy (Spolsky, 2004; Spolsky & Shohamy, 1999) since very early schooling. Our participants have been acquiring not only Hebrew but also English and perhaps another language in addition to the home (one or more) language. It is also possible that being an immigrant in Europe, the United States or Canada may be a very different experience from that of being an immigrant in Israel and may have different social and psychological consequences.

Total proficiency across languages was found to have a small but significant effect on Cultural Empathy, with participants with higher levels of total proficiency scoring higher on this dimension. This result confirmed recent findings by Korzilius et al. (2011). Total proficiency had a slightly stronger positive effect on Open-mindedness and Social Initiative. Total use of different languages had no significant effect on Cultural Empathy, but it was a significant predictor of Open-mindedness and Social Initiative. We are not aware of other studies having included this independent variable in the research design.

The findings suggest that higher levels of multilingualism nudge individuals towards more empathy with the feelings, thoughts and behaviours of individuals from different cultural backgrounds. Moreover, multilingual individuals who used their different languages regularly were less likely to have rigid prejudiced attitudes towards individuals from different cultural backgrounds and towards their cultural norms and values. They were also more likely to actively approach social situations and to build social networks quite easily.

One could also wonder whether personality shapes individual multilingualism and multiculturalism – do open-minded, curious, culturally empathic teenagers who travel and explore (as most Israelis are known to be) become more daring linguistically and culturally? The finding by Leong (2007) that exchange students scored higher on Open-mindedness compared to a control group before departure offers support for this argument.

Gender turned out to have a very strong effect on our participants' personality profiles. The female participants scored significantly higher on three out of five dimensions, namely, Cultural Empathy, Open-mindedness and Social Initiative. Possible causes for this phenomenon lie outside the scope of the present article. Age was found to be positively correlated with Cultural Empathy, Open-mindedness and Social Initiative. This is markedly different from the Korzilius et al. (2011)

study where no such relationship emerged. One possible explanation is that our sample contained many more young teenagers and that they may score differently on these dimensions.

## Conclusion

The present findings confirm that some personality dimensions are shaped by a variety of social, linguistic and biographical factors. The effect of immigration on personality profiles was much weaker than expected: foreign-born Israeli participants tended to score lower on Emotional Stability but did not score significantly higher on Cultural Empathy and Open-mindedness. Parental origin turned out to have a significant effect on Cultural Empathy, Open-mindedness and Social Initiative. Participants who had one local and one immigrant parent scored higher on these dimensions than those with locally born parents or both parents of immigrant origin.

Acculturation and the shift from dominance in the L1 to dominance in Hebrew (an LX) resulted in lower levels of Emotional Stability, confirming earlier research (Dewaele & Van Oudenhoven, 2009). The difference in the composition of the sample might explain why we did not find an effect for number of languages known as was reported in previous work (Dewaele & Van Oudenhoven, 2009). All participants in the present study were fluent in at least two languages, and many were functional trilinguals or quadrilinguals. It thus seems that the effects of number of languages on personality profiles level off beyond two languages. Our attempt to quantify aspects of multilingualism has allowed us to carry out a more fine-grained analysis of the effect of having some knowledge of various languages versus having a more advanced knowledge and using various languages more frequently in everyday life.

One of the most striking patterns to emerge from this study was the fact that participants who reported knowing various languages well and using them regularly scored significantly higher on Open-mindedness and Social Initiative. The advanced knowledge of several languages was also linked to higher levels of Cultural Empathy. It thus seems that active multilingualism does have a small but significant positive effect on some multicultural personality dimensions, which could be interpreted as evidence of multicompetence (Cook, 2002).

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