Chapter 19 Multi-competence and personality[1]

Jean-Marc Dewaele, Birkbeck, University of London

INTRODUCTION

In a recent contribution on the origin of the term 'multi-competence', Cook (2012) reminds the reader of the Chomskyan influence in the original definition: 'the compound state of a mind with two grammars' (Cook 1991); where "grammar" was used 'in the sense of the total knowledge of language in the mind (the I-language)' (Cook 2012, p.3768). Cook's current working definition is 'the overall system of a mind or a community that uses more than one language' (chapter 1, this volume, p.000). Cook's innovation in the world of applied linguistics was that the second language (L2) user was considered as a whole person with knowledge of two languages – and the level of proficiency in the L2 was largely irrelevant. In this respect he further explored the wholistic view of bilingualism that Grosjean (1989) had put forward, namely that since bilinguals are not the sum of two monolinguals, they cannot be studied like any monolingual. Indeed, bilinguals have 'a unique and specific linguistic configuration' (p.3).

Cook's wholistic view of bilingualism and his definition of multi-competence are cognitive. Indeed, Cook (2012) explains that it is 'neither particularly a psychological concept, as some have claimed (...), nor particularly sociological' (p.3768). Instead it focuses on the **mind**: 'Multi-competence therefore involves the whole mind of the speaker, not simply their first language (L1) or their second' (p.3768). However, Cook has never restricted multi-competence to the linguistic realm, agreeing that the acquisition of an L2 can have non-linguistic consequences: 'Acquiring another language alters the L2 user's mind in ways that go beyond the actual knowledge of language itself' (Cook 2002, p.7). Cook insisted that multi-competence is not 'a model nor a theory so much as an overall perspective or framework' (2002, p.1). While this is a strength, it is also a limitation since it hard to falsify a perspective or framework, and impossible to quantify 'multi-competence'. At best the concept can be invoked to explain the effect of a certain degree of multilingualism on dependent variables. Few researchers would currently reject Cook's bilingual 'wholistic' interpretation of bilingualism. Indeed the monolingual 'fractional'

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interpretation of bilingualism, in Grosjean's (1989; 2008) terms has been largely relegated to the past.

It is slightly surprising that the concept of multi-competence, which has become really popular in applied linguistics, has remained untouched by psychologists[i](Endnote 2) (as argued in Chapter 4 of this volume). The lack of interest among psychologists could be linked to their general lack of interest in applied linguistics and multilingualism[ii]. (Endnote 2)

Also, the fact that Cook never presented a clearly operationalisable definition of multi-competence has probably also hindered its uptake among psychologists. Of course, one could argue that a paradigm shift is not operationalisable or indeed testable in the same way as a model; it simply means that everything has to be reconsidered from a different perspective.

We have argued that the growth of individual multilingualism, and the resulting multi-competence, affects not just an individual's cognition but also that individual's personality (Dewaele and Li Wei 2012; 2013a). This is again a perspective that has been absent among personality psychologists for whom personality is more the result of the workings of nature than of nurture (McCrae *et al.* 2000; Pervin and Cervone 2010). Although personality psychologists agree that long-term social and environmental factors can contribute in shaping an individual's personality traits, there is surprisingly little research on this. One possible explanation for this lack is the widely shared assumption among personality psychologists that their participants are monolingual and monocultural, and that the presence of other languages can be safely ignored. Pavlenko (2005) notes that this 'monolingual' view is not just widely shared among psychologists, but is also prevalent among linguists and anthropologists (2005, p.3).

Applied linguists feel that individuals' multilingualism and multiculturalism can shape their personality. Regular exposure to different languages, values, rituals, and practices makes the multilingual a born traveller, and as Mark Twain pointed out in *The Innocents Abroad*: 'Travel is fatal to prejudice, bigotry, and narrow-mindedness (...)' (1869 p.650).

The following section will consider the tricky issues of definition and operationalisation of multilingualism. The following sections will present research that combined psychology and multilingualism research. A brief section will be devoted to the research of cross-cultural psychologists who used personality traits to predict behaviour of multilinguals. After that the focus will shift to the studies where psychological variables were the dependent variables, with multilingualism as the independent variables. Some of these dependent variables are proper personality traits, others are psychological concepts (divergent thinking, creativity, language aptitude) or affective states (communicative and foreign language anxiety, foreign language enjoyment).

MEASURING AND OPERATIONALISING MULTILINGUALISM

Wang (2008) points to the tricky terminological problems concerning the measurement and the labelling of multilinguals' languages. Multilinguals' languages are usually numbered chronologically (L1, L2, L3...), according to the first exposure to the languages (Hammarberg 2009). This is fine when individuals grew up as monolinguals and acquired foreign languages consecutively. It becomes more complicated for children growing up with two, three, or four languages simultaneously. How to define the first 'foreign' language learnt at school for child with three 'first' languages, L1a, L1b, L1c – is it their 'L2', or 'L4'? Another problem is that of intermittent or alternating acquisition (Hammarberg 2009, p.4) when a first relatively short period of exposure might have been interrupted for a while, with renewed exposure much later. Hammarberg (2009) also raises the question of limited knowledge of a language and the point at which multilinguals can include it in their repertoire. Opinions typically differ on the amount of proficiency one should have before claiming to master a language. It is equally unclear whether dead languages should be included in the total language count. The knowledge of such languages (Latin, ancient Greek, Sanskrit) could have implications for the acquisition of modern languages – I personally remember the delight of recognising Latin conjugations when studying Spanish.

The labels L1, L2, L3, L4, L5 and the total language counts differ according to researchers' research orientation. The 'L1' is typically defined as the language(s) that was (were) established up to a certain level before the age of three. For some researchers the label 'L2' refers to any language acquired after that. It then becomes an umbrella term for all 'foreign' languages (Mitchell and Myles 1998, p.2). Cook (2002) also used the word 'second'[iii] as an umbrella term while insisting that the proficiency of L2 users in their different languages may vary widely: 'Some of them use the second language as skilfully as a monolingual native speaker, like Nabokov writing whole novels in a second language; some of them can barely ask for a coffee in a restaurant' (Cook 2002, p.3).

Cook felt he did not need a finer-grained distinction between the languages acquired after the L1(s), and thus labels them all L2s. As he would typically not establish a total language count for a multilingual, this mattered little.

Researchers who have focused on the acquisition of a new foreign language after the second language have argued that this acquisition may be qualitatively different from the acquisition of the L2 and that a different term such as 'L3' was in order (Hammarberg 2009). Many researchers in trilingualism thus use the term 'third' as an umbrella term referring to 'third or additional languages' (De Angelis 2007).

My own interest in adult individuals who have learnt second, third, fourth, fifth and more languages at various times during their life meant that I

have avoided umbrella terms. However, establishing a total number of languages for an individual is fraught with problems. Even widely-used terms such as 'bilingual' might be perceived differently by laypeople and linguists. We were struck by the range of interpretations of the concept of bilingualism when promoting our 'bilingualism and emotion' online web questionnaire (Dewaele and Pavlenko 2001-2003). Many non-linguist bi- and multilingual friends and colleagues whom we invited to fill out the questionnaire declined, saying they did not consider themselves to be bilinguals, or multilingual enough, even though we felt they qualified. It could of course have been an excuse to escape a relatively time-consuming exercise in metapragmatic awareness, but it could also have been the illustration of the gap between linguists' current understanding of the concept of bi- and multilingualism and the laypersons' view (including many linguists and psychologists).

Dewaele, Housen and Wei (2003) have argued, like Grosjean and Cook, in favour of a broad definition of bilingualism that includes: 'not only the "perfect" bilingual (who probably does not exist) or the "balanced" ambilingual (who is probably rare) but also various "imperfect" and "unstable" forms of bilingualism, in which one language takes over from the other(s) on at least some occasions and for some instances of language use' (2003, p.1).

Thompson (2013) has argued that is very difficult to operationalise the concepts of bilingualism and multilingualism because of the interplay of interrelated factors, including proficiency in the various languages, language choices in everyday life, the relationship between the L1 or other languages studied, and the context of language acquisition. Researchers also face a practical problem when using stringent criteria: 'the pool of potential participants inevitably decreases, especially when dealing with a classroom setting for recruiting purposes' (p.697).

Any calculation of 'total number of languages known' should therefore include partly mastered languages. However, such a label might be general to the point of being less useful for research. In order to obtain a little bit more granularity, Dewaele and Stavans (2014) developed measures including information on proficiency and frequency of use of the various languages. A first multilingualism index based on language knowledge, or a 'total proficiency score', which is the sum of self-perceived competence scores (in answer to the question: 'How proficient are you in your L1/L2/L3/L4/L5/L6?') collected on 5-point Likert scales (ranging from 1: minimal proficiency, to 5: maximal proficiency) in up to 6 languages. Such a measure is potentially useful to distinguish self-professed pentalinguals with minimal competence in three languages from a trilingual with maximal proficiency in 3 languages. The latter might know fewer languages, but knowing them to higher level undoubtedly make the individual more strongly multilingual. In other words, rather than sticking to the imprecise labels 'bilingual, trilingual, quadrilingual etc',

considering every language as a discrete entity, despite the fact that competence can be near zero, we consider the multilingual user's accumulated language knowledge across languages. The total proficiency score is the sum of the proficiency scores on 5-point Likert scales for oral proficiency (maximum score 5) and written proficiency (maximum score 5) for up to 6 languages (including 2 L1s) (maximal possible score 10 X 6 = 60).

The same principle can be applied for the use of various languages. Multilinguals who rarely use their foreign languages can be distinguished from those who use them more frequently. This is a measure of general intercultural communicative activity. The total language use score is the sum of frequency of use scores on 5-point Likert scales for up to 6 languages (maximal possible score 5 X 6 = 30). The measures were used in Dewaele and Li Wei (2013b, 2014).

PERSONALITY AND MULTILINGUALISM

Personality traits 'refer to consistent patterns in the way individuals behave, feel and think' (Pervin and Cervone 2010, p.228). They thus 'summarize a person's typical behaviour' (2010, p.229). There seems to be consensus among psychologists about the taxonomy of personality traits: five broad, bipolar dimensions, the so-called Big Five (openness, conscientiousness, extraversion, agreeableness, and neuroticism) (2010, p.228). The Big Five are situated at the summit of the hierarchy; there are a large number of narrower facets, 'lower-order' personality traits, that are often correlated with Big Five traits but also explain unique variance. Trait Emotional Intelligence, for example, is formally defined as a constellation of emotional self-perceptions located at the lower levels of personality hierarchies (Petrides, Pita and Kokkinaki 2007). It is positively linked to Extraversion and negatively to Neuroticism but has incremental validity over the Big Five dimensions in predicting criteria such as depression, life satisfaction, coping styles and the recognition of emotional expressions (Davey 2005).

Kihlstrom (2013) explains that personality psychologists measure individuals' scores on personality dimensions using questionnaires and then correlate these with some criterion behavior in some specific situation. They generally construe the effects of the environment as 'noise' (Kihlstrom 2013). In other words, personality psychologists are more interested in the physiological sources of personality and much less so in social factors (McCrae, Costa, Ostendorf, Angleitner, Hrebícková, Avia, Sanz, Sánchez-Bernardos, Kusdil, Woodfield, Saunders and Smith 2000). However, social psychologists, by contrast, have construed behavior as a function of differences in the physical and (especially) social environment (Kihlstrom 2013). A compromise position emerged with Interactionists for whom personal and environmental determinants of behaviour interacted with each other in a variety of ways (Magnusson and Endler 1977). This paradigm is perfectly suited for applied

linguists who are keen to find out whether multi-competence reshapes personality profiles.

The effect of personality on adjustment and language use

Cross-cultural psychologists[iv] (Endnote 4) have focused on the personality traits associated with positive outcomes of immigration and psychological adaptation in the host country (Kim 2001; Chen, Benet-Martínez and Harris Bond 2008). While these researchers are more interested in the predictive value of personality, they note that this could be a chicken and egg situation. Indeed, those who decide to move abroad or go on exchange programs typically already score higher on a number of personality traits (Openmindedness, Social Initiative, Flexibility, Emotional Stability, ethnorelativism, international concern, interpersonal communication skills, and self-efficacy) compared to control groups of domestic students (Leong 2007; Yashima 2010). Environmental sources of these differences are typically not investigated. However, while controlling for pre-existing differences, researchers typically find significant increases in the scores of the volunteers on the various dimensions at the end of the stay abroad.

Immigrants with specific personality profiles may also be more inclined to engage in interactions with native speakers in their host country. Ozanska-Ponikwia and Dewaele (2012) found that Polish immigrants living in English-speaking countries who scored high on Openness and Self-esteem reported more use of English L2 and that Openness was a strong predictor of self-perceived English L2 proficiency. In other words, these personality traits boosted the development of the L2 and increased the speed of L2 socialisation

The effect of multilingualism on personality traits

Contrary to cross-psychological research where personality is the predictor variable, Dewaele and Van Oudenhoven (2009) looked at how multilingualism and multiculturalism were linked to personality traits – measured with the Multicultural Personality Questionnaire. This questionnaire was developed specifically to measure five personality dimensions that are relevant to multicultural effectiveness (Cultural Empathy, Open-Mindedness, Social Initiative, Emotional Stability, and Flexibility) (Van Oudenhoven, Timmerman and Van der Zee 2007). Participants were ninth grade pupils at a Roman Catholic School in Maida Vale, London. Forty-one young immigrant teenagers[v] (Endnote 5) scored significantly higher than 38 locally-born teenagers[vi] (Endnote 6) on the dimensions of Openmindedness and – marginally – on Cultural Empathy, but they scored significantly lower on Emotional Stability. Teenagers who reported to be dominant in two languages scored higher on Openmindedness, marginally higher on Cultural Empathy, and significantly lower on Emotional Stability compared to participants who were dominant in one language. Functional multilinguals (i.e. users of at least two languages) scored significantly higher on Cultural Empathy and Openmindedness, and

scored significantly lower on Emotional Stability compared to monolinguals who were starting to learn a foreign language at school.

Dewaele and Stavans (2014) replicated part of the Dewaele and Van Oudenhoven study in an Israeli context. The main difference was that the Israeli participants were proficient and frequent users of at least two languages. The effect of knowing more languages (3-6) had no effect on scores of the personality dimensions. Israeli-born participants scored marginally higher on Emotional Stability compared to those born abroad. Participants with one immigrant parent (but not two) scored higher on Cultural Empathy, Openmindedness, and Social Initiative. Participants whose language dominance had shifted from their L1 to Hebrew (either L2, L3 or L4) scored lower than Hebrew L1-dominant participants on Emotional Stability. Advanced proficiency and frequent use of various languages were linked to significantly higher scores on Cultural Empathy and Openmindedness.

Korzilius, Van Hooft, Planken and Hendrix (2011) investigated the link between language knowledge and personality profile. They considered the adjustment of international employees of a Dutch multinational company and used a control group of non-international employees. Those knowing more foreign languages scored significantly higher on Openmindedness and Emotional Stability (p.546). Self-assessed knowledge of foreign languages was positively linked to Cultural Empathy (p.546). The more multilingual international employees scored higher on Openmindedness and Flexibility than the less multilingual Dutch employees working in The Netherlands (p.547) who scored highest on Emotional Stability (p.549).

Dewaele and Li Wei (2012) investigated the relationship between multilingualism and Cognitive Empathy (Baron-Cohen and Wheelwright 2004) among 2158 mono-, bi- and multilinguals from around the world. The authors collected feedback through an on-line questionnaire, using Likert scale items. Statistical analysis revealed that the knowledge of more languages, a bilingual upbringing and the experience of having lived abroad were, against expectations, not linked to higher levels of Cognitive Empathy. However, a small but significant positive link emerged between multilingualism (operationalised as high levels of proficiency in several foreign languages and frequent use of these languages) and Cognitive Empathy. A follow-up analysis showed that frequent use of multiple languages had a stronger effect on cognitive empathy than mere proficiency in multiple languages. In other words, highly multilingual participants who use their languages frequently become more skilful in conversations as they have learned to see the world from their interlocutor's point of view. We interpreted this relationship as evidence of multi-competence.

In a follow-up study based on the same database, Dewaele and Li Wei (2013a) considered the link between multilingualism and Tolerance of Ambiguity (TA), a lower-order personality trait (Herman *et al.* 2010). A

significant positive link emerged between the number of languages known to participants and their TA scores. The monolinguals had the lowest scores, with the bilinguals in an intermediate position and those with three or more languages scoring higher. However, the scores of the trilinguals, quadrilinguals, pentalinguals and sextalinguals were no longer significantly different. This suggested that the effect of knowing more than three languages no longer affects the level of TA. A high level of global proficiency in various languages was also linked to higher TA scores. While growing up bi- or trilingually from birth had no effect on TA, the experience of having lived abroad had a strong positive impact although the effect levelled off after more than 1 year abroad. Tolerance of Ambiguity thus appears to be influenced by an individual's social-linguistic-cultural environment and that by that individual's conscious effort to learn new languages and having to fit in a new linguistic and cultural environment. When survival in a foreign environment is at stake, people are forced to attune to local differences. This brings with it an awareness that their own long-held values, beliefs and communicative practices are not necessarily shared by their interlocutors. Moreover, the values, beliefs and communicative practices of the interlocutors may seem baffling, incomplete or contradictory to the L2 user. Participants who had lived abroad would have had to 'stretch' themselves, manage conflicting cultural, political and ideological perspectives and solve the paradox of 'seemingly irreconcilable realities' (Herman et al. 2010, 63). Dewaele and Li Wei (2013a) showed that a high level of multilingualism makes individuals more at ease in dealing with ambiguity. However, the causal pathway could be bidirectional, as it is possible that a higher level of TA early on in life could strengthen an individual's inclination to become multilingual. We argued that the effect of the independent variables on TA constitute an indication of multi-competence as the presence of various languages in one mind has effects 'that go beyond the actual knowledge of language itself' (Cook 2002, p.7).

The effect of multilingualism on lower-order psychological and affective variables
Research has been carried out linking multilingualism with communicative anxiety (including Foreign Language Anxiety (FLA). This is not a personality trait per se, but rather a lower-order psychological concept, or an 'affective variable'. Results show that participants knowing more languages typically report lower levels of communicative anxiety in their various languages, including in their L1 and all the other languages they know (Dewaele 2007; 2010; Dewaele, Petrides and Furnham 2008).

The effect of multilingualism has been found to be particularly strong in several large-scale studies on FLA. Dewaele (2013) found that in the BEQ database of 1579 multilinguals, collected through a web-based questionnaire (Dewaele and Pavlenko 2001–2003), the bilinguals reported consistently higher levels of FLA in their L2 in various situations (speaking with friends, colleagues,

strangers, on the phone and in public) while pentalinguals reported the lowest levels of FLA in their L2 (p.184). This reduced FLA has been linked to the fact that multilinguals have more and wider experience in communication with a wide range of interlocutors which has strengthened their ability to avoid or overcome linguistic icebergs (Dewaele 2013; Dewaele et al. 2008).

Dewaele (2010) has considered the effect of multilingualism on scores of self-perceived communicative competence and communicative anxiety in the French of 953 participants who had French as an L1, L2, L3 or L4 extracted from the BEQ. Results showed that knowledge of more languages in general, and the knowledge of other Romance languages in particular, are linked to higher self-perceived communicative competence in French and lead to less communicative anxiety using that language. Participants knowing more languages reported higher levels of self-perceived competence in speaking, understanding, writing and reading in French L2, L3 and L4. They also tended to feel less anxious in speaking with friends, colleagues, strangers, on the phone and in public in their various languages. Participants who knew more Romance languages reported feeling more competent in speaking, understanding, writing and reading in French L2 and L3 and feeling generally less anxious in speaking with friends, colleagues, strangers, on the phone and in public in their various languages.

Dewaele and MacIntyre (2014) found that the number of languages that 1746 current foreign language learners from around the world knew was linked not only to significantly lower levels of FLA but also to significantly higher levels of Foreign Language Enjoyment. In other words, multilingualism lowers negative affect and boosts positive affect in the foreign language class. Levels of Foreign Language Enjoyment were significantly higher than those of FLA, a pattern that was more striking among more advanced and more multilingual learners and those who felt their proficiency was above average in their foreign language group.

Finally, three studies focused on the relationship between multilingualism and FLA in homogenous samples in terms of nationality. Thompson and Lee (2013) confirmed that the degree of multilingualism of their 123 South Korean college English Foreign Language learners was inversely linked to their FLA in English. The authors argue that multilingualism in and of itself has an effect on all language learning experiences. Having reached a certain level of proficiency in multiple languages has an effect on FLA levels in different languages: 'If a learner has multiple experiences in a language learning environment, it is logical that performing in subsequent language learning environments would be less anxiety inducing' (p.17). In a second study on a similar population, Thompson and Lee (2014) found that very low levels of proficiency in another language did not have a significant beneficial effect on FLA in the target language. Confirming the finding in Dewaele and Li Wei

(2013), they also found that participants with more language learning experiences had greater tolerance for ambiguity. They explained that having communicated successfully in foreign language settings, a learner/user understands that not every single lexical item in a sentence is crucial for overall comprehension (p.17). Finally, Thompson (2013) investigated the interface of language aptitude and multilingualism using a sample of 79 Brazilian language learners of English. She found that previous language experience had a positive effect on language aptitude scores, confirming earlier research on the benefits of bilingualism on L3 acquisition (Sanz 2000). Even participants with a small amount of previous language learning experience that occurred post-adolescence, outperformed those with no language learning experience other than English. Also, multilinguals scored significantly higher on language aptitude than the bilingual participants. Thompson therefore claims that the concept of language aptitude is dynamic. Although she does not refer to the work of Cook, her findings of increased language aptitude scores could easily be interpreted as evidence of multi-competence: even small bits of knowledge of various languages gathered by language learners boost their general cognitive development.

Psychological research has established that increase in certain cognitive functioning may result in greater creative performance (Kharkurin 2012; this volume). As bilingualism has been linked to increased cognitive functioning, it is not surprising that studies with bilingual children (Landry 1974; Ricciardelli 1992) and college students (Kharkhurin 2008, 2009) showed that these seem to have an edge in divergent thinking, one of the major components of creativity. These studies also showed greater divergent thinking performance of participants with high proficiency in both languages as compared to peers with low proficiency in one language. Kharkhurin (2012) suggests that individuals' multilingual practice, or 'enriched experience' as Landry put it (1974, p.10), is linked to the performance of their language mediated concept activation, which may facilitate generative capacity, in other words, simultaneous activation of a multitude of (un)related concepts. This is facilitated by the multiple links in the multilingual conceptual system. Kharkhurin (2012) thinks that language proficiency determines the strength of the connections between the lexical and conceptual systems in their memory: greater language proficiency means stronger and more elaborate links to the conceptual system and more cognitive flexibility. In line with the concept of multi-competence – which he does not mention – Kharkhurin (2012) argues that the multilingual's conceptual system is not merely a combination of two monolingual ones, and may therefore embed new conceptual representations in a qualitatively different manner than in a monolingual memory. Since the conceptual system is shared across both languages, L2 users would have access to the expanded conceptual representation. The qualitatively modified conceptual system could promote the

integration of different, and possibly contradictory concepts, which may increase cognitive flexibility (Kharkhurin 2012).

The benefits of bilingualism for creativity are not always clear-cut. Kharkhurin (2010) looked at the effect of bilingualism on verbal and nonverbal criterion-referenced creativity among college students (see also Kharkhurin, Chapter, this volume). Russian-English bilinguals with comparable levels of linguistic proficiency and with similar patterns of language dominance were found to perform better on nonverbal creativity, whereas monolinguals scored higher on verbal creativity. The bilinguals scored higher than their monolingual peers on resistance to premature closure, an important indicator of creativity. In other words, the bilinguals were less likely to jump to conclusions prematurely. Kharkhurin (2012) argues that for multilinguals ambiguity is inherent to their linguistic practice, because the same basic idea may have different nuances in different languages: 'This tolerance of ambiguity in turn may facilitate their ability to keep a pool of possible solutions open long enough to generate a creative idea' (p.118). The greater divergent thinking performance of multilinguals could be linked to the fact that they perceive the world through the amalgam of two different conceptual prisms and view events with a wider range of enriched experiences (Kharkhurin 2012).

Maddux, Adam and Galinsky (2010) investigated the effect of living in and adapting to foreign cultures on creativity. They found that recalling a multicultural learning experience facilitated idea flexibility, increased awareness of underlying connections and associations, and helped overcome functional fixedness (p.731). They demonstrated experimentally that 'functional learning in a multicultural context (...) is particularly important for facilitating creativity' (p.731). Interestingly, creativity was found to be enhanced 'only when participants recalled a functional multicultural learning experience and only when participants had previously lived abroad' (p.731).

Tadmor, Galinsky and Maddux (2012) took this line of investigation one step further, by looking beyond the effect of mere exposure to new cultures on creativity and professional success. The authors wondered why all individuals who had lived abroad for several years did not perform at the same rate. They argued that while most previous research focused on shifts in cognitive content as result of exposure to new cultures, it is important to look also at changes in more general cognitive processes (p.521). They found that bicultural individuals outperformed those who identified more with a single culture. The authors conclude that it is 'the simultaneous juxtaposition and synthesis of two cultural perspectives' that leads to cognitive transformation (p.537). In other words, 'although the living abroad matters, it is how one approaches that experience which adds critical explanatory value' (p.537). The strength of the identification with both cultures is also crucial: only biculturals with a high level of identification with both cultures showed greater cognitive and behavioural

benefits (p.537). Although these researchers do not mention multi-competence, it would be appropriate to evoke the concept, as the fact of having learnt foreign languages and having lived abroad was more than the addition of an extra tool for communication and an interesting set of experiences that could be considered separate, or separable from the person before the foreign language learning and the stay abroad. What the results show is that this learning and these experiences changed them in a fundamental way, not just in their foreign language but also in their L1: they had become more creative, in other words, they had experienced general cognitive and behavioural benefits.

A WORD OF CAUTION

A cautionary note needs to be struck at this point. While significant links have been reported between multilingualism and psychological variables, it is important to point out that the effect sizes were always small. In other words, multilingualism – and the resulting multi-competence, is only one among many physiological and environmental variables that helps shape our personality.

Another point is that the directionality of the relationship between multilingualism and psychological variables can never be completely established. Schrauf (2013) considered the link between bilingual proficiency, and both psychological and social factors. He concluded that the causal pathway is in fact bidirectional. Indeed, proficiency can be both a cause and an effect. Certain personality traits and affective dispositions can strengthen a person's curiosity and interest in foreign languages. The resulting action, the learning of a foreign language, or the decision to live abroad, could then reinforce an initial inclination.

CONCLUSION

A growing number of studies have shown that the effect of multilingualism extends beyond the purely cognitive level. Indeed, multilingualism has been linked to stronger creative behavior and divergent thinking (Kharkurin 2012). A relationship has also been uncovered between multilingualism and personality traits, with frequent and proficient users of several languages typically scoring higher on Openmindedness, Cultural Empathy, Social Initiative (Dewaele and Stavans 2014; Dewaele and Van Oudenhoven 2009; Korzilius et al. 2011), on Tolerance of Ambiguity (Dewaele and Li Wei 2013a; Thompson and Lee 2013), on Cognitive Empathy (Dewaele and Li Wei 2012). Moreover, multilinguals seem to suffer less from FLA (Dewaele 2010a; 2010b; Thompson and Lee 2013; 2014), have more fun in Foreign Language classes (Dewaele and MacIntyre 2014) and have a better general language aptitude (Thompson 2013).

We argue that all these relationships between multilingualism and psychological concepts are illustrations of multi-competence, in the sense that the acquisition of a foreign language 'alters the L2 user's mind in ways that go beyond the actual knowledge of language itself' (Cook 2002, p.7). In short, it seems that learning a foreign language tends to make you a better person, more

creative, more openminded, more empathic, more emotionally stable, more sociable, more likely to enjoy foreign language classes, better equipped to learn new languages and less anxious in communication.

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ENDNOTES

[i] A search in the PsycInfo database reveals only 14 hits for 'multi-competence', and all of these refer to the work of applied linguists (accessed on 22/01/2014).

[ii] Vivian Cook pointed out (personal communication) that 'it was an SLA article in a linguistics-influenced journal'. It might thus be unfair to blame psychologists for not having noticed it.

[iii] Cook (2010) pointed out that: 'The use of 'second' should not be taken too literally. Many sources maintain that it subsumes later languages; Doughty and Long (2003, p.3) enumerate how SLA includes 'second (third, etc) languages and

dialects'; Lightbown and Spada (2006, p.204) say a 'second language: … may actually refer to the third or fourth language'.

[iv] Ho and Wu (2001) defined Cross-cultural psychology as the study of 'human behaviour and mental processes, including both their variability and invariance, under diverse cultural conditions' (p.3). See also Chapter One (this volume).

[v] They were of African, Arabic, Caucasian and Asian origin, were born outside the UK, and moved to London. Countries of origin included Brazil, Italy, Colombia, Congo, The Netherlands, Egypt, Fiji, The Philippines, Ghana, India, Iran, Iraq, Ireland, Jamaica, Lebanon, Nigeria, Poland and Portugal.

[vi] They were of Caucasian and Asian origin but born in the UK.