

# Attitudes towards Foreign accents among adult multilingual language users<sup>1</sup>

**Jean-Marc Dewaele**

Birkbeck, University of London

**James McCloskey**

Birkbeck, University of London

Corresponding author:

Dr Jean-Marc Dewaele,

Birkbeck College, University of London,

26 Russell Square,

London WC1B 5DT

UK

E-mail address: [j.dewaele@bbk.ac.uk](mailto:j.dewaele@bbk.ac.uk)

Tel +44 207 631 6399

## Abstract

The present study investigates inter-individual variation (linked to personality traits, multilingualism and sociobiographical variables) in the attitudes that 2035 multilinguals have of their own and others' Foreign Accent (FA). Data were collected through an on-line questionnaire. We found that extraverted multilinguals, who were emotionally stable and tolerant of ambiguity were significantly less bothered by the FA of others. Only more neurotic multilinguals were bothered by their own FA. Unexpectedly, participants who knew more languages to a higher level were more negative about the FA of others and their own. However, participants who grew up in an ethnically diverse environment, who had lived abroad and who were working in an ethnically diverse environment were significantly more positive about FA. While sex had no effect on the attitudes towards the FA of others, women had a more negative attitude towards their own FA. Education level and age were also linked to attitudes towards FA. The findings thus show that how much multilinguals are bothered by FA falls partly outside their conscious control as it depends on their personality, their language learning history, their current linguistic practices and their sociobiographical background.

## Introduction

Moyer (2013) wonders rhetorically whether the argument that accent is relatively unimportant compared to other aspects of linguistic fluency, because applied linguists have moved beyond the 'standard' ideal is valid. She rejects the argument, pointing out that "the salience of accent is both immediate and real; it is the means by which we make ourselves understood, and the yardstick by which others judge us, whether we like it or not. This is particularly relevant where second language users have few linguistic resources at their disposal to adjust and accommodate to other speakers, phonologically" (p. 8).

The present study is an attempt to delve into this rich area of research, and to investigate inter-individual variation in attitudes towards the Foreign Accent (FA) of oneself and others, using self-reported data from 2035 adult multilinguals<sup>1</sup>. We define the terms multilingualism and multilingual "in a broad, inclusive sense" (Aronin & Singleton, 2012, p. 7). In other words, we assume that multilinguals may well have FAs in their various languages. We argue that while attitudes towards FAs are partly linked to people's prejudices over which they have a certain degree of control through critical self-reflection, attitudes towards FAs also fall partly **outside** people's conscious control and are affected by their personality profile, their linguistic background and general sociobiographical variables. The independent variables in the present study thus include personality traits (Extraversion, Neuroticism, Tolerance of Ambiguity), linguistic history, current language practices, and sociobiographical variables (age, sex and education level).

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In the following section we review the existing research on individual variation in perception of FA. We will introduce some personality traits which we hypothesise to have a *prima facie* link with perception of FA. We will then present our research instruments, the short version of the Eysenck Personality Questionnaire (EPQr) (Eysenck, Eysenck & Barrett, 1985); the adapted Tolerance for Ambiguity Scale (TAS) (Stevens, Bird, Mendenhall & Oddou, 2010); the design of our empirical study and our research questions and hypotheses. Subsequently, we will test five broad hypotheses using data collected from the online questionnaire. The findings, limitations and implications of our research will be discussed in the final section.

## Existing studies of perception of foreign accents

A foreign accent results from a “breakthrough of native language phonology” into a second language (L2) (Lippi Green, 1997, p. 43). The degree to which a FA is present depends on a number of factors including age at which L2 learning commences, length of residency in countries where that L2 is spoken as an L1, and aptitude for language learning (Piske, 2001). As Moyer (2013) points out: “accent is a fluid, contextualized expression of our personal and social identity as well as our communicative stance” (p. 10).

An attitude has been defined as “a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour” (Eagly & Chaiken, 1993, p.1). Attitudes towards accented speech depend, to some extent, upon the social hierarchies present within a particular community or geographical area. Just as some L1 varieties of accent may be regarded as signalling different levels of social status, for example British received pronunciation may signal greater prestige than Welsh or Birmingham accents (Giles, 1970), foreign-accented speech can also trigger stereotypical or prejudicial evaluations. According to Munro et al (2006, p. 71), “individuals with a foreign accent may be perceived negatively because of the stereotypes or prejudices that accent can evoke in a listener.” Research has suggested that native speakers of English may judge FA speech as less prestigious than native patterns (Kalin and Rayko, 1978; Lindemann, 2005). A meta-analysis of 20 studies by Fuertes et al (2011) indicated that ‘non-standard’ accents (defined by them as those spoken by minorities and considered foreign) had a very strong negative impact upon evaluations of status, solidarity and dynamism relative to ‘standard’ accents (defined as the accepted accent of the majority population). According to Lindemann (2003), such evaluations are not even necessarily dependent upon the listener correctly identifying the specific ethnicity of the accented speaker, but may simply result from a bias against FAs in general.

Research suggests that in certain contexts, such as education, health and law, FA may also be judged as less competent, less educated, less intelligent, and less trustworthy than L1 accents (Garrett, 2010; Gluszek & Dovidio, 2010; Lippi Green, 1997). Lev-Ari and Keysar (2010) showed that people perceive statements in a FA as less truthful when spoken by non-native speakers, possibly because listeners encounter difficulty when hearing a FA which reduces “processing fluency.” It is also not necessarily the case that such evaluations are directed exclusively by native speakers towards non-native speakers. Fayer and Krasinski (1987) found that non-native speakers of English exhibited a greater intolerance and annoyance towards foreign-accented speech than native English speakers.

However, speaking with a foreign accent *per se* need not result in ‘costs’ for the speaker. Foreign-accented speech may receive more positive evaluations than native varieties. For example, Giles (1970) found that French-accented English was rated far more favourably than Italian or German accents, and also as superior to English regional accents.

In terms of intelligibility, defined by Munroe (2006) as an objective measure of what a listener understands (often assessed through comprehension-type questions or gap-fill exercises), processing a FA can cause some difficulty (Bresnahan et al, 2002). This might be due to the segmental and prosodic norms of the accented speaker’s L1 intruding into their L2. Where there is a significant difference in phonology between the speaker and listener’s language groups, intelligibility levels are likely to be lowest (Deterding & Kirkpatrick, 2006). Intelligibility may be further compromised by a listener’s lack of exposure to a particular accent. With sufficient exposure, the speech perception process is flexible enough to allow adaptation to non-standard speech (Bradlow & Bent, 2008). Gass and Varonis (1984) found that exposure to a particular accent as well as exposure to a particular speaker improved intelligibility, as did familiarity with the subject matter conveyed. Kraut and Wulff (2013) similarly found that 78 native English listeners’ ratings of FA speech produced by 24 international students were linked to the listeners’ self-reported

familiarity with that particular accent, the L1 family of the speaker (Asian, Hispanic and Middle-Eastern), as well as the sex of the speaker and the speaker's proficiency level. Ratings of degree of accent were linked to an interaction of variables rather than being solely determined by a single factor alone.

Because of the range of both listener and speaker variables at play in the processing of a FA, rather than the view that accent is an objectively measurable trait, the term 'degree of perceived accent' is often preferred. However the range of perceived differences in accent is thought to be relatively small. Derwing & Munroe (2013) have shown there to be high levels of inter-rater reliability across the dimensions of accentedness, as well as those of fluency and comprehensibility, which is defined as an individual's perception of the difficulty they experience in understanding an accent. But such close agreement in ratings may not necessarily be a product of the inherent qualities of FA itself. According to Lippi-Green (1997), evaluations of language competence may be more a function of shared negative attitudes towards the ethnicity of the accented speaker rather than actual intelligibility. Similarly, Gluszek and Dovidio (2010) observe, "it remains unclear whether prejudice or perceived and actual problems in comprehension exert the most influence on the listener's behavior toward the speaker" (p. 229).

Perhaps partly to mitigate the risk of negative evaluations of FA speech, L2 speakers often aspire to native-standards of speech (Derwing, 2003; Sasayama, 2013). Many tried and failed, such as Teresa Desiderio who remembers her attempts at getting rid of her Italian accent in English when joining an American university: "I was sent to the Speech Clinic to correct my speech (...). I learnt about dental, palatal, sibilant, fricative and affricative sounds, but I never lost my foreign accent. (...) I never got rid of my Italian accent, but I cannot say that I did not try" (2004, p. 28). She was convinced that her FA was a barrier that would stop her from becoming fully American (p. 17). A minority of foreign-accented speakers prefer, however, to retain the L2 identity that their speech signals (Yu, 2010). Sasayama (2013) found that while her 44 Japanese college students preferred American-accented speech rather than Japanese-accented English, they still wanted the latter variant to be accepted internationally. Particularly in countries or regions with strong historical or institutional ties with the English language, greater numbers of foreign-accented speakers express a preference for retaining their variety of English. For example, Li (2009) showed that approximately 20% of Hong Kong speakers surveyed preferred to retain their HK-accented English and identity, so long as they remained intelligible to others, rather than trying to imitate native 'standards'. Researchers working in the area of lingua franca have argued that FA is not a problem as long as it does not impair communication (Jenkins, 2007; Seidlhofer, 2001).

To date, only a small number of studies have investigated the extent to which differences in psychological variables predict attitudes to accented speech. One such study identified ethnocentrism as an influential variable. Social identity theory (Tajfel et al., 1971) states that individuals in certain groups, for example those bound by ethnicity or first language, tend to exhibit favouritism towards other in-group members. Kalin and Ryoko's study (1978), in which participants matched foreign and standard-accented job applicants to either high or lower status vacancies, suggested that high degrees of ethnocentricity corresponded to greater discrimination. In terms of the "Big Five" personality traits (Costa & McCrae, 1992), research has linked extraversion and neuroticism to general cultural competence (Wilson, Ward & Fischer, 2013), and to code-switching (Dewaele & Li Wei, 2013b, 2014). However, no research has linked such variables specifically to attitudes towards FAs. There are some testimonials from multilinguals that suggest that attitudes towards FA could be linked to personality. Veronica Glab (2014), a Canadian-born Pole currently living in Madrid, describes how her "Polish and American accents came up like bile" when speaking Spanish, marking her out as "other" and causing a sense of failure which she links to her timidity and self-consciousness.

We hypothesise that certain personality traits may be linked to attitudes towards FA in interaction with particular social variables such as context and language background. We also feel that the relationship between variables that affect the judgment of one's own FA might be different from those linked to attitudes towards the FA of others. Indeed, Teresa Desiderio and Veronica Glab explain that they wished they could have erased their own FA, but they do not condemn the FA in the speech of others.

The present contribution is the first large-scale study, to the best of our knowledge, on the role of multiple personality and social variables on attitudes towards FAs using a quantitative design.

## **Personality traits**

Personality traits are hierarchically organized with five broad, independent dimensions at the summit and a larger number of more specific lower-order traits (Pervin & Cervone, 2010). Personality questionnaires allow researchers to establish profiles of participants. These questionnaires either use Likert scales to measure the level of dis/agreement with a particular statement or categorical choices (“yes/no”) feedback in response to a statement. A majority of participants have a score in the middle of a personality dimension. There are, for example, more “ambiverts” than either extraverts or introverts. We will focus on the first two dimensions out of the so-called “Big Five” which may be linked with attitudes towards FAs: Extraversion versus Introversion and Neuroticism versus Emotional Stability<sup>ii</sup>. We will also discuss one “lower-order” trait, namely Tolerance of Ambiguity.

## **Extraversion - Introversion**

Eysenck and Eysenck (1985) argue that variation on the Extraversion – Introversion dimension is linked to the amount of cortical arousal, which leads to different behaviour, including different communicative behaviour (Dewaele, 2012). While extraverts are under-aroused, introverts are over-aroused. Eysenck and Eysenck (1964, p. 8) described a typical extravert as someone who “... is sociable, likes parties, has many friends, needs to have many people to talk to ... craves excitement, takes chances, often sticks his neck out, acts on the spur of the moment, and is generally an impulsive individual.” On the other hand, they described a typical introvert as someone who “is a quiet, retiring sort of person, introspective, fond of books rather than people: he is reserved and distant except to intimate friends. He tends to plan ahead, ‘looks before he leaps,’ and distrusts the impulse of the moment. He does not like excitement ...” (Eysenck & Eysenck, 1964, p. 8). The extraverts’ inclination to take risks extends to their communicative behaviour (Dewaele, 2012). Extraverts’ greater engagement in social interactions and exposure to oral input could lead to greater appreciation of FAs. One could also argue that more introverted people may have less oral and more written input, and may be more reflective before judging a FA.

## **Neuroticism - Emotional stability**

High scorers on Neuroticism tend to suffer from “anxiety, phobia, depression and hypochondriasis” (Furnham & Heaven, 1998, p. 326). Those who score low on Neuroticism can be described as emotionally stable, calm, and contented. Eysenck and Eysenck (1985) have argued that neuroticism is linked to levels of arousal in the limbic system, with high N individuals having a more reactive sympathetic nervous system and being more responsive to threat or stress. Dewaele (2013) found that high N individuals (both English L1 users and English foreign language users) reported swearing significantly more in interactions with friends and strangers. It is possible that high N individuals may perceive FA as a source of stress in the interaction.

## **Tolerance of Ambiguity (TA)**

According to Furnham and Ribchester (1995, p. 179), “TA refers to the way an individual (or group) perceives and processes information about ambiguous situations when they are confronted by an array of unfamiliar, complex or incongruent cues (...) The person with low tolerance of ambiguity experiences stress, reacts prematurely, and avoids ambiguous stimuli. At the other extreme of the scale, however, a person with high tolerance of ambiguity perceived ambiguous situations/stimuli as desirable, challenging, and interesting and neither denies nor distorts their complexity of incongruity”.

Seravalle (2011) conducted an innovative applied linguistic study that included TA as a predictor variable in judgments of speech fragments for comprehensibility, accentedness, pleasantness, status and competence. Her argument is that “foreign accent, from a listener’s point of view, is in essence ambiguous” (pp. 227-228). She hypothesised that a FA could trigger discomfort and closure among individuals with low levels of TA, while individuals with higher levels of TA would display more flexibility and adaptability, leading on average to more favourable evaluations (p. 228). These hypotheses were confirmed in a study with 150 listener-judges who were university students. The lower the level of TA, the harsher the judgements across all categories (p. 231).

Dewaele and Li Wei (2013a), using the database on which the present study is based, found that monolinguals and bilinguals scored significantly lower on TA compared to multilinguals. Moreover,

participants with higher levels of multilingualism, i.e. those who had high levels of proficiency in multiple languages, also scored significantly higher on TA. A multilingual upbringing had no effect on TA but those who had lived abroad scored significantly higher on TA. The authors concluded that TA is partly determined by individuals' social-linguistic-cultural environment and especially by the experience of having to survive in a foreign cultural and linguistic environment. A prolonged stay in a new environment requires a sustained and conscious effort to acquire the new local rules governing communication and social interaction.

### Research questions and hypotheses

The present study will address the following questions:

- 1) Are multilinguals more bothered by their own FA than by the FA of others? We hypothesise that this may indeed be the case.
- 2) Are the personality traits of multilinguals linked to their levels of annoyance at FAs? We expect participants who score high on Extraversion, Tolerance of Ambiguity, and low on Neuroticism to be less bothered by FA.
- 3) Do multilinguals who know more languages and have higher levels of global proficiency have less negative attitudes towards FA? We expect this to be the case.
- 4) Are prior and current linguistic practices linked to the attitudes towards FAs? We expect participants who grew up in an ethnic diverse environment to have less negative attitudes towards FAs. We also expect participants who grew up with two or more languages before age 3, who lived abroad and who work in multi-ethnic environments to have less negative attitudes towards FAs.
- 5) Are sociobiographical variables linked to the attitudes towards FAs? Sex, age and education level could be linked to attitudes towards FA, but it is hard to predict the direction.

## Method

### Participants

A total of 2035 multilinguals (1515 females, 415 males<sup>iii</sup>) filled out the questionnaire. The mean age was 34.6 years ( $SD = 12.1$ ). Proportionally the group of teenagers was the smallest ( $n = 87$ ), the group of participants in their twenties was the largest ( $n = 766$ ), followed by those in their thirties ( $n = 555$ ), forties ( $n = 339$ ), fifties ( $n = 185$ ), and sixties or over ( $n = 91$ ). Participants are generally highly educated with 29 having a high school diploma, 621 a Bachelor's degree, 742 a Master's degree and 638 a Doctoral degree<sup>iv</sup>.

The participants reported 204 different nationalities, including many participants with double nationalities. The largest group came from the USA ( $n = 492$ ), followed by British ( $n = 302$ ), Dutch ( $n = 135$ ), Belgian ( $n = 84$ ), German ( $n = 83$ ), in decreasing order there were smaller groups of Canadians, Poles, French, Spaniards, Chinese, Croatians, Turks, Swiss, Portuguese, Swedes, Italians, Japanese (all more than 25 members), and 187 other nationalities.

English was the most frequent L1 ( $n = 841$ ), followed by Dutch ( $n = 188$ ), French ( $n = 148$ ), Spanish ( $n = 124$ ), German ( $n = 116$ ), in decreasing order there were smaller groups of native speakers of Polish, Chinese, Portuguese, Arabic, Croatian, Russian, Turkish, Italian, Japanese, Swedish (all more than 25 members), etc.

The most frequent L2 was English ( $n = 881$ ) followed by French ( $n = 456$ ), Spanish ( $n = 245$ ), German ( $n = 137$ ), etc. The pattern was different for the L3 with French coming first ( $n = 412$ ), followed by German ( $n = 314$ ), English ( $n = 249$ ) and Spanish ( $n = 215$ ), etc. The most frequent L4s were German ( $n = 198$ ), Spanish ( $n = 189$ ), French ( $n = 168$ ). The most frequent L5 was Spanish ( $n = 100$ ), Italian ( $n = 67$ ), and French ( $n = 44$ ).

Mean age of acquisition of the L2 was 10.0 years ( $SD = 5.3$ ), this increased to 15 years for the L3 ( $SD = 6.3$ ), 18.4 years for the L4 ( $SD = 7.8$ ) and 21.9 for the L5 ( $SD = 8.6$ ).

The sample consists of 376 bilinguals, 544 trilinguals, 540 quadrilinguals, 347 pentalinguals, 139 sextalinguals, 54 septalinguals, 20 octalinguals, 9 nonalinguals, 5 participants knew 10 languages, and 1 participant reported knowing 12 languages. A single category was created including all participants with six or more languages ( $n = 228$ ). A majority ( $n = 1752$ ) reported having one single L1, a small proportion reported growing up with two or three L1s ( $n = 283$ ).

Besides the variable “number of languages” which is relatively vague, we also calculated a “total proficiency score”, namely the sum of self-perceived proficiency scores collected on 5-point Likert scales for oral proficiency and written proficiency in up to 6 languages (including 2 L1s) (maximal possible score  $10 \times 6 = 60$ ) (Dewaele & Li Wei, 2013a, b, 2014). The average total proficiency score was 25.8 ( $SD = 7.7$ ). Three groups of participants were created: those with scores that were more than 1 standard deviation below the mean: ‘Low Proficiency’ ( $n = 244$ ); those with scores that were more than 1 SD above the mean: ‘High Proficiency’ ( $n = 278$ ); while those within 1 SD around the mean were categorised as ‘Medium Proficiency’ ( $n = 1510$ ).

Two questions dealt with ethnic diversity in the participants’ childhood and current work environment: “How ethnically diverse was the environment in which you grew up?” and “How ethnically diverse is your current school/university or workplace?” Likert scale responses included: 1 = zero, 2 = some, 3 = fair, 4 = high, 5 = very high. Mean score for ethnic and linguistic diversity during the participants’ childhood was rather low ( $M = 2.26$ ,  $SD = 1.23$ , on a 5-point Likert scale). However, the mean score for ethnic diversity in the participants’ workplace was higher ( $M = 3.48$ ,  $SD = 1.15$ , on a 5-point Likert scale).

This majority of highly-educated, female participants is typical in web-based language questionnaires (Wilson & Dewaele, 2010).

## Instruments

The questionnaire was an open-access survey, advertised through several listservs, targeted emails to multilingual colleagues and their students in academic institutions, and informal contacts around the world (Dewaele & Li Wei, 2013a, b). The introductory paragraph stated: “The aim of this research is to help us better understand the link between personality and linguistic behaviour of people knowing one or several languages”. It remained online between December 2010 and March 2011 and attracted 2158 valid responses from mono- and multilinguals across the world. Because participants left occasional questions blank, totals for specific variables can vary. We excluded the monolinguals for the present study.

The questionnaire started with a sociobiographical section with questions about sex, age, nationality, language history and present language use. The questionnaires were anonymous. The research design and questionnaires received ethical clearance from the appropriate School committee.

The questionnaire included a section on personality traits: items for Extraversion and Neuroticism extracted from the short version of the Eysenck Personality Questionnaire (EPQr) (Eysenck, Eysenck & Barrett, 1985). Participants filling out the EPQr are invited to tick either “yes” or “no” for 12 items for each dimension. One item for Extraversion is for example: “Are you a talkative person?”; and an item for Neuroticism is “Would you call yourself a nervous person?”

Barrett, Petrides, Eysenck and Eysenck (1998) demonstrated the factorial similarity of the dimensions in data collected from 34 countries, which suggests that the Eysenck factors are strongly replicable across the world. The short version of the Eysenck Personality Questionnaire (EPQr) is considered robust (Barrett, 1999). Mean scores on the dimensions were as follows: Extraversion:  $N = 1900$ ,  $M = 7.62$ ,  $SD = 3.4$ ; Neuroticism:  $N = 1899$ ,  $M = 5.08$ ,  $SD = 3.2$ . Internal consistency of the two dimensions, as measured by Cronbach alpha coefficient, was high for Extraversion (0.84) and for Neuroticism (0.81). We followed the procedure used for creating the “low”, “medium” and “high groups” of global proficiency to distinguish participants on the personality dimensions. As a result we have 407 Introverts, 1023 Ambiverts and 502 Extraverts. For Neuroticism, we have 485 Low-N, 1098 Medium-N and 348 High-N participants.

Herman, Stevens, Bird, Mendenhall and Oddou (2010) created the Tolerance for Ambiguity Scale (TAS), a 12-item questionnaire with 5-point Likert scales, contextualized to cross-cultural contexts (p. 60). According to the authors, it “can be used in cross-cultural research and practice to assess individual TA” (2010, p. 62). It consists of four distinct dimensions: (1) valuing diverse others; (2) change; (3) challenging perspectives; (4) unfamiliarity (2010, p. 62). Dewaele & Li Wei (2013a) used 11 items of out the original 12-item TAS scale and made some minor stylistic adaptations<sup>v</sup>. The items had to be rated on a 5-point

Likert scale anchored with 1 = “Strongly Disagree” to 5 = “Strongly Agree”. One item, for example, states: “I avoid settings where people don’t share my values”. A Cronbach alpha analysis revealed a low but still acceptable internal consistency reliability: 0.64<sup>vi</sup>. TA scores range between 4 and 44. Mean score for TA is 29,  $SD = 5.4$ <sup>vii</sup>. Here again we distinguished three groups of participants: low TA ( $n = 285$ ), medium TA ( $n = 1365$ ) and high TA ( $n = 283$ ), following the procedure set out earlier.

Data about participants’ attitudes towards FA of others and their own was elicited through the following closed question: “To what extent do you agree with the following statements about foreign accents?”

- 1) People’s foreign accents annoy me
- 2) It bothers me to have a foreign accent in a foreign language

Participants were asked to choose a response on a 5-point Likert scale (1 = not at all, 2 = not especially, 3 = so-so, 4 = quite a lot, 5 = very much).

The scores were reversed so that a higher score indicates a more positive attitude towards FA. Mean score was 4.49 ( $SD = .78$ ) for item 1 and 3.3 ( $SD = 1.2$ ) for item 2. A one-Sample Kolmogorov-Smirnov test revealed that the scores were not normally distributed for items 1 and 2 (Kolmogorov-Smirnov  $Z = 16.8$ ,  $p < .0001$  and  $7.7$ ,  $p < .0001$ ) as they were skewed towards the positive end of the scale. As a consequence, we have used non-parametric statistical techniques<sup>viii</sup>: Wilcoxon signed-rank tests instead of t-tests, Kruskal Wallis one-way analyses of variance by ranks instead of ANOVAs. Single-item Likert measures are perfectly acceptable in research (Alexandrov, 2010). He adds that the items should be positively worded (p. 10).

### The use of on-line questionnaires

On-line questionnaires are becoming increasingly popular in research. They allow the collection of large amounts of data automatically at a fraction of the cost and time of “pen and paper” equivalents (Buchanan, 2007). They also permit researchers to reach larger and more diverse samples from all over the world. Two potential problems have been raised in relation to web-based research, namely participant self-selection and increased heterogeneity in the sample (Dörnyei, 2007). Indeed, once the call for participation is sent out via direct email or social networks, snowball sampling is initiated over which the researcher has no control. The questionnaire is pulled from the web once a sufficient number of participants has been reached. This type of convenience sampling is not very different from non-web-based research. In fact, the advantages outweigh the disadvantages in terms of sampling web-based research (Gosling et al. 2004). While internet samples may not be representative of the general population, they are typically more diverse in terms of sex, age, race, socio-economic status and geographical location than the pen-and-paper samples, which are typically university students participating in the research to gain a course credit. Denissen, Neumann and van Zalk (2010) have found that the psychometric properties of measures are comparable in traditional questionnaires and online versions. Moreover, personality profiles and socializing patterns of participants in online questionnaires do not differ from that of pen-and-paper samples (Gosling et al., 2004).

Wilson and Dewaele (2010) have argued that in multilingualism research participants do not have to represent the “general population” as they need to meet specific linguistic criteria, and must be able and willing to engage with the questions on language preferences and use (2010, p. 108). Participants in this type of questionnaire need high levels of metalinguistic and metacognitive awareness and must be intrinsically motivated to fill out the questionnaire (Wilson & Dewaele, 2010). Internet-based questionnaires have also been shown to have a disinhibiting effect on participants, reducing social desirability which leads to increased levels of honesty (and therefore higher validity in the case of self-report) (Joinson, Paine, Buchanan & Reips, 2008). Finally, a sample of more than 2000 multilinguals from all over the world strengthens ecological validity, as the effects of local social, political and historical factors linked to particular languages or linguistic practices are strongly diluted (Wilson & Dewaele, 2010).

### Results

A Wilcoxon signed-rank test revealed that the scores for the attitudes towards the FA of others ( $Mean = 4.49$ ,  $SD = .78$ ) were significantly higher than those for the own FA ( $Mean = 3.30$ ,  $SD = 1.26$ ) ( $Z = -30.9$ ,  $p < .0001$ ). In other words, the FA of others bothered our participants much less than their own FA.

A series of Kruskal Wallis analyses showed different relationships between the three personality traits and, on the one hand, attitudes towards the FA of others (Table 1), and on the other hand attitudes

towards the FA of oneself (Table 2). Extraversion, Neuroticism and Tolerance of ambiguity had a significant effect on attitudes towards the FA of others, but only Neuroticism was linked to attitudes towards the FA of oneself. Participants scoring higher on Extraversion, Emotional Stability and Tolerance of ambiguity were significantly less bothered by the FA of others (see figure 1), but only those scoring high on Neuroticism were significantly more bothered by their own FA (see figure 2).

Table 1. *The effect of personality traits, linguistic history, current practice on the attitudes towards the FA of others (Kruskal Wallis  $\chi^2$ )*

	$\chi^2$
<i>Extraversion (df = 2)</i>	13.3**
<i>Neuroticism (df = 2)</i>	13.1**
<i>Tolerance of Ambiguity (df = 2)</i>	29.3***
<i>Ethnic / linguistic diversity during childhood (df = 4)</i>	25.8**
<i>Ethnic diversity in work environment (df = 4)</i>	10.5*
<i>Lived abroad (df = 2)</i>	5.0
<i>Number of languages known (df = 5)</i>	9.7*
<i>Global proficiency (df = 2)</i>	12.0*

\*  $p < .05$ , \*\*  $p < .001$ , \*\*\*  $p < .0001$

Figure 1: The effect of personality traits on the attitudes towards the FA of others

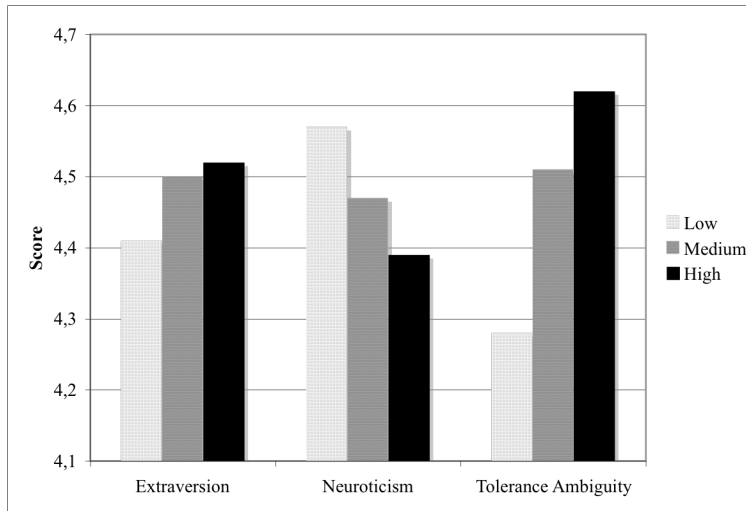
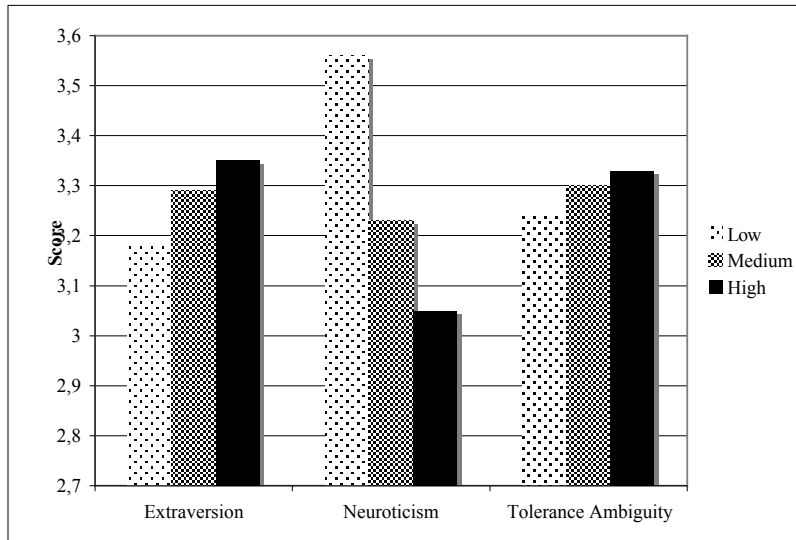




Figure 2: The effect of personality traits on the attitudes towards the FA of oneself



The next cluster of variables linked to participants' linguistic history and current practice showed the extent to which they are linked to attitudes towards the FA. Participants who grew up in an ethnically diverse environment and currently work in ethnically diverse environments were significantly less bothered by the FA of others and themselves (table 1, and figures 3 and 4).

Figure 3: The effect of ethnic diversity in childhood and in the current workplace on attitudes towards the FA of others

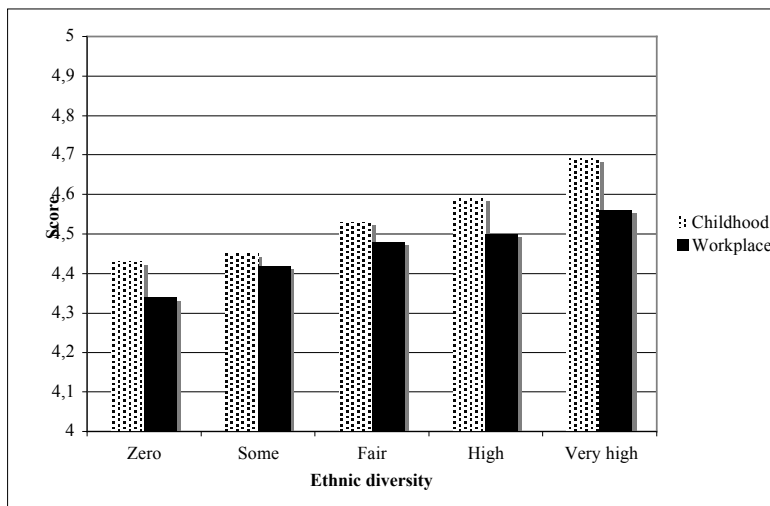
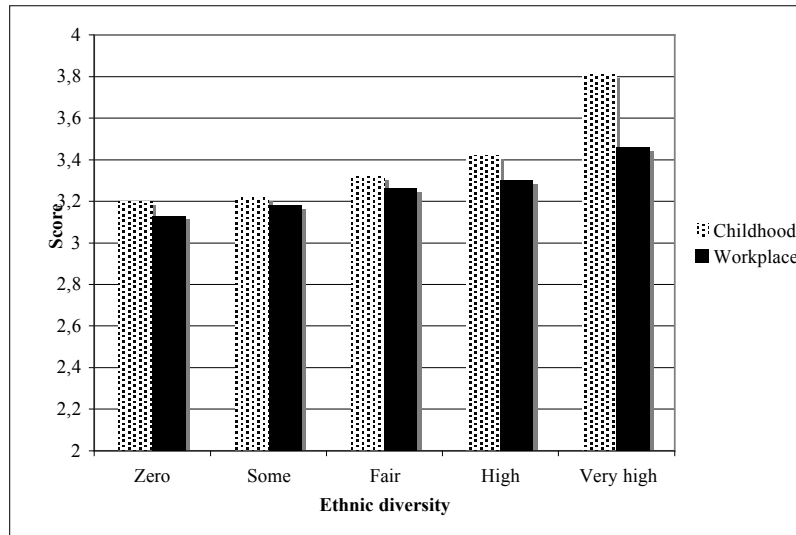


Figure 4: The effect of ethnic diversity in childhood and in the current workplace on attitudes towards the FA of oneself



Kruskal-Wallis analyses showed a highly significant effect of having lived abroad, number of languages known and global proficiency on one's own FA (table 2). Those who had lived abroad were significantly less bothered by their own FA. Surprisingly, participants who were more multilingual and more globally proficient were significantly more bothered by their own FA (see table 2 and figures 5, 6, 7). The same pattern, but generally weaker – and non-significant for living abroad-, emerged for attitudes towards the FA of others (table 1 and figures 5, 6, 7).

Table 2. *The effect of personality traits, linguistic history, current practice on the attitudes towards FA of oneself (Kruskal Wallis  $\chi^2$ )*

	$\chi^2$
<i>Extraversion (df = 2)</i>	4.7
<i>Neuroticism (df = 2)</i>	36.7***
<i>Tolerance of Ambiguity (df = 2)</i>	0.6
<i>Ethnic / linguistic diversity during childhood (df = 4)</i>	34.7***
<i>Ethnic diversity in work environment (df = 4)</i>	12.3*
<i>Lived abroad (df = 2)</i>	35.2***
<i>Number of languages known (df = 5)</i>	40.0***
<i>Global proficiency (df = 2)</i>	38.2***

$p < .05$ , \*\*  $p < .001$ , \*\*\*  $p < .0001$

Figure 5: The effect of having lived abroad on attitudes towards the FA of others and oneself

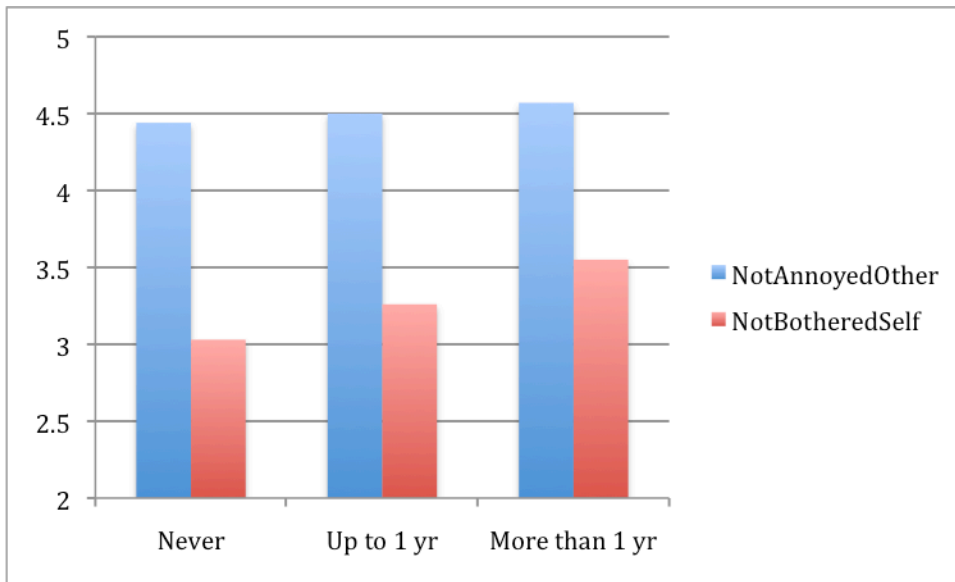


Figure 6: Effect of number of languages known on attitudes towards the FA of others and oneself

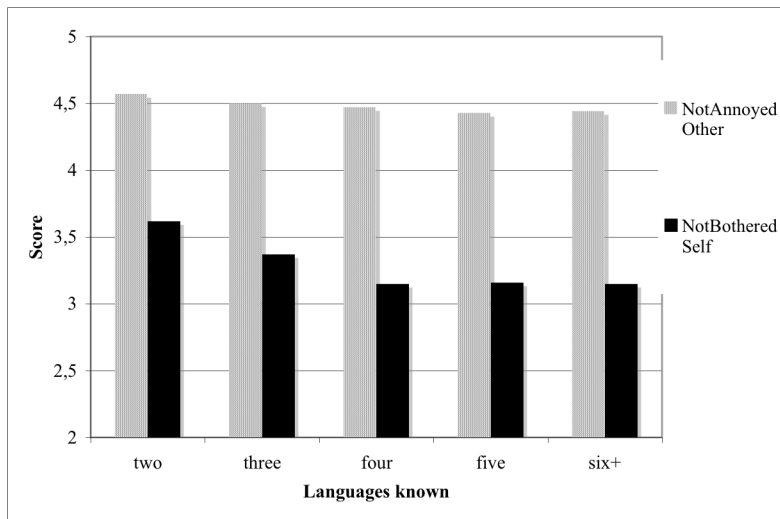
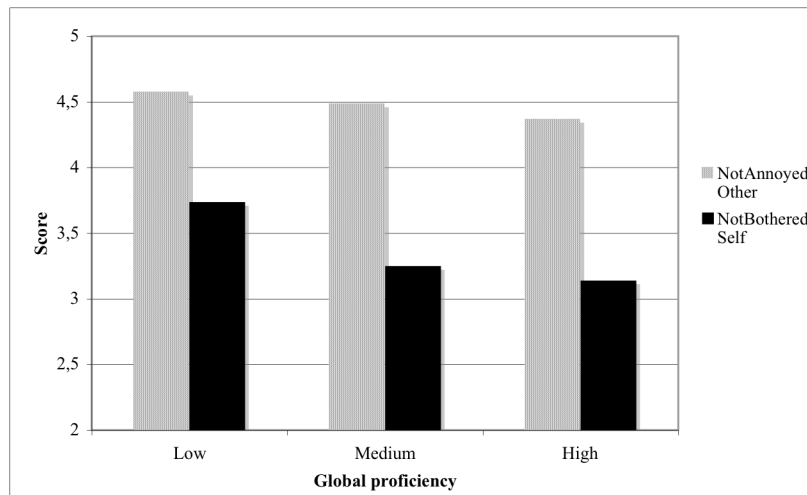


Figure 7: Effect of global proficiency on attitudes towards the FA of others and oneself



A Mann-Whitney U test showed non-significant differences between early and later bi- and multilinguals (Mann-Whitney  $Z = -1.32$ ,  $p = ns$  for attitudes towards the FA of others, and Mann-Whitney  $Z = -1.58$ ,  $p = ns$  for attitudes towards their own FA).

The last research question dealt with the effect of sociobiographical variables such as age, sex and education level. A Kruskal-Wallis analysis showed a highly significant effect of age group on attitudes towards the FA of others and the own FA (Kruskal-Wallis  $\chi^2 = 37.5$ ,  $df = 5$ ,  $p < .0001$  and Kruskal-Wallis  $\chi^2 = 84.6$ ,  $df = 5$ ,  $p < .0001$  respectively). Older age groups were significantly less bothered by FA of other and their own FA than younger age groups.

A Mann-Whitney test showed a non-significant difference in the attitudes towards the FA of others between the 415 male participants ( $Mean = 4.5$ ,  $SD = 0.8$ ) and the 1515 female participants ( $Mean = 4.5$ ,  $SD = 0.7$ ) (Mann-Whitney  $Z = -0.35$ ,  $p = ns$ ). However, a significant sex difference emerged in the attitudes towards the own FA, with men being significantly less bothered by it ( $Mean = 3.5$ ,  $SD = 1.2$ ) than women ( $Mean = 3.2$ ,  $SD = 1.2$ ) (Mann-Whitney  $Z = -3.7$ ,  $p < .0001$ ).

The Kruskal-Wallis analysis revealed a significant effect of education on the attitudes towards the FA of others ( $\chi^2 = 8.4$ ,  $p < .038$ ), but there was no effect on attitudes towards the own FA ( $\chi^2 = 5.8$ ,  $p = ns$ ). A curvilinear relationship appeared for the attitudes towards the FA of others: participants with lower levels of education were least bothered by FA of others ( $Mean = 4.7$ ,  $SD = 0.6$ ), holders of BAs and MAs slightly more so (both  $Mean = 4.5$ ,  $SD = 0.8$ ), but participants with PhDs buckled the trend ( $Mean = 4.6$ ,  $SD = 0.7$ ).

## Discussion

The first research question can be answered affirmatively: multilinguals are significantly more bothered by their own FA than by the FA of others. It shows an ambiguous attitude towards FAs. This could be linked to political correctness, namely a wish not to appear prejudiced against the FA of others, which does not apply to one's own FA. It could also reflect a wish to sound more like a native speaker and not stand out as "outsider" (Desiderio, 2004; Glab, 2014; Sasayama, 2013).

The most original finding of the present study is undoubtedly the confirmation of the second hypothesis, namely the variable effect of three personality traits on attitudes towards the FA of others and oneself. Extraverts and individuals who are emotionally stable and tolerant of ambiguity have less negative attitudes towards the FA of others. However, only those who score higher on neuroticism are more bothered by their own FA. It confirms that how certain aspects of language are viewed fall for a part outside our conscious control: indeed, we do not control our position on personality dimensions. A possible

reason is that emotionally stable people suffer less from worries or anxiety, and when they hear FAs – including their own, they are less likely to be thrown off balance or embarrassed. People closer to the neurotic end of the dimension are more likely to consider the FA of the interlocutor but also of their own FA as an additional source of worry in the interaction: they may fear that communication could break down, they might not understand their interlocutor or not be understood by the interlocutor, they might fear projecting the wrong image of themselves and they might anticipate mutual embarrassment and potential loss of face. As Glab (2014) noted, her FA in Spanish exacerbated her self-consciousness and timidity, before she finally embraced it: “I will always stand out. But I enjoy being a vessel of memories and adventures. I am the only one who owns them, and hopefully my accent isn’t too grating for anyone willing to listen”.

People who are very tolerant of ambiguity are less bothered by the FA of interlocutors, possibly because they do not mind tuning in to a new and unfamiliar accent. On the other hand, people with lower Tolerance of Ambiguity are more likely to be annoyed by this deviation from the standard accent and more inclined to feel that they should not be expected to adjust to understand the accented interlocutor. Dewaele & Li Wei (2013b) – using the same database as the present study – found similar patterns in attitudes towards code-switching: participants who scored high on Tolerance of Ambiguity and low on Neuroticism reported significantly more positive attitudes towards code-switching. However, these two variables were not linked with self-reported frequency of CS, but Extraversion was linked with higher self-reported CS (Dewaele & Li Wei, 2014).

Finally, we can speculate that because extraverts are by nature more gregarious, more sociable, more optimistic they may be less concerned about the FA of others being an obstacle to communication in a FL than more introverted people.

The most counter-intuitive finding in the present study is the rejection of our third hypothesis, namely that people with a high level of multilingualism (number of languages known, global proficiency) would be less bothered by the FA of others and by their own FA. One would expect that experienced multilinguals are used to communicate with people from various linguistic and cultural backgrounds, and are therefore familiar with FA in various languages, including perhaps their own. Why then are they more bothered by FA than less multilingual individuals? Do they expect that the person with the FA – especially themselves - should make a bigger effort to get rid of the undesired accent? It is clear that multilinguals can have ambiguous attitudes towards FAs (see Sasayama, 2013).

Our next hypothesis was confirmed: participants’ linguistic history and current practice were significantly linked to the attitudes towards FAs. Those who had grown up in highly multilingual and ethnically-diverse environments were less bothered by their own FA and the FA of others. It thus seems that the linguistic soundscape from childhood shapes a multilingual’s attitudes towards FAs for life. The finding of a link between the degree of ethnic diversity in the work environment and less negative attitudes towards FAs is not surprising either. Indeed, if FA is common in this particular community of practice, then it will sound familiar and not be considered as something negative (Kraut & Wulff, 2013). A similar explanation could account for the fact that people who have spent time abroad are less bothered by their own FA. A full immersion in a new linguistic environment boosts tolerance of ambiguity (Dewaele & Li Wei, 2013a), and will contribute to a realisation that one’s own accent might be viewed by others as a FA. Dewaele and Li Wei (2013b, 2014), again using the same database, found similar patterns in attitudes towards code-switching: those who had grown up in bilingual families and in an ethnically diverse environment, and currently worked in ethnically diverse environments had significantly more positive attitudes towards code-switching and reported more use of code-switching.

Our final hypothesis on the effect of sociobiographical variables on attitudes towards FAs was partially confirmed. The significant, curvilinear relationship between age and attitudes towards FAs was unexpected. Older participants were less bothered by the FA of others and by their own FA. This could be linked to the type of work environment of participants: a Pearson  $\chi^2$  analysis revealed a significant interaction between ethnic diversity in the workplace and age group, with those aged over 40 working in more diverse environments ( $N = 2013$ ,  $\chi^2 = 51.7$ ,  $df = 20$ ,  $p < .0001$ ). The daily exposure to FA could positively affect the attitudes towards FAs. No sex differences were found in attitudes towards the FA of others, but female participants were much more bothered by their own FA than their male peers.

Education level was found to have a significant effect, with less-educated participants being less bothered by FA. It is possible that university-educated participants feel that FA is a sign of incomplete acquisition of the target language. Dewaele and Li Wei (2013b) reported similar effects on attitudes toward code-switching for education and age, but not for sex: those with the lowest and highest levels of education

appreciated code-switching most, and younger participants appreciated code-switching less than older participants.

To conclude this discussion it is worth underlining that the research design has its limitations. The first is that we had only two items on FA which were not perfectly symmetrical, “People’s FAs annoy me” relates to pleasantness versus irritation, while “It bothers me to have a FA in a FL” could also include other reasons. A wider range of items would have allowed us to dig deeper, considering accents in home languages, in L2, L3 or other languages. Secondly, more detailed information on the type of multilinguals in the database would have been useful: were they first or second or third generation immigrants? Another limitation is the strong proportion of highly-educated female participants. These people are more likely to acknowledge the existence of FA and not necessarily view it as something to get rid off. Dewaele (2010) explained that these are typically the people who have the necessary meta-linguistic and meta-pragmatic awareness to answer these questionnaire and have more willingness to participate in this type of research. As is the case in all studies based on self-report, we cannot be entirely sure that nobody lied. We can only point out that most personality psychologists rely on this method to establish personality profiles, and that participants had nothing to gain from lying on an anonymous questionnaire.

Our design also has a major advantage: the large number of participants coming from all over the world with a wide variety of language combinations, is good for ecological validity (Wilson & Dewaele, 2010).

The major implication of our findings is that people’s attitudes towards FAs are not just linked to prejudice but are linked to their personality profile, their linguistic history and sociobiographical variables – variables over which they have no control.

## **Conclusion**

Attitudes towards FAs are ambiguous: our participants were significantly less bothered by the FA of others than by their own FA.

The present study is the first - to our knowledge - to have established the existence of a link between the attitudes towards the FA of others and oneself among a large group of multilinguals from all over the world and two higher-order personality traits (Extraversion, Neuroticism) and one lower-order trait personality trait (Tolerance of Ambiguity) (see however Seravalle, 2011). Extraverts, participants with high levels of Emotional Stability and Tolerance of Ambiguity were significantly less bothered by the FA of others, and only those with higher scores on Neuroticism were more bothered by their own FA. To our surprise, participants knowing more languages, and to a higher degree of proficiency, disliked FA significantly more, especially their own FA, possibly because of their own higher expectations. The degree of ethnic diversity in participants’ past and present was also linked to their attitudes towards FAs: those who grew up or worked in a environment with little diversity were much more bothered by the FA of others and their own FA. Sex only had an effect on the attitude towards the own FA, with female participants being more bothered by it. Older and less educated participants were less bothered by the FA of others, but education had no effect on the attitude towards the own FA.

It thus seems that multilinguals’ judgments of FAs are linked to a range of personality traits, sociobiographical variables, linguistic profile, current linguistic practices and exposure to interlocutors with FAs.

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<sup>i</sup> Data from the monolinguals were left out in the present study.

<sup>ii</sup> The other three are Conscientiousness, Agreeableness and Openness-to-Experience.



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<sup>iii</sup> 105 participants did not disclose their gender.

<sup>iv</sup> Five participants did not disclose this information.

<sup>v</sup> One item ('I can enjoy being with people whose values are very different from mine') dragged the overall alpha value down to below .60 in the pilot test, and was left out of the final version.

<sup>vii</sup> For a more detailed discussion of this instrument, see Dewaele & Li Wei (2013a).

<sup>viii</sup> Unfortunately there is no good non-parametric equivalent of multiple regression analysis, which would have allowed us to measure the relative impact of all independent variables together.