Foreign Language Anxiety in Professional Contexts

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ORIGINAL ARTICLE

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A Short Scale and Evidence of Personality and Gender Differences

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Abstract While increasing globalization of the business world and rising numbers of people working in foreign language contexts are undoubted facts of modern work life, there are surprisingly few studies on individuals' emotional reactions to working in a foreign language. Facilitating further research, we introduce a short scale for foreign language anxiety that is applicable in business and other professional contexts. Additionally, we investigate its relationship with gender and general per-

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sonality traits. Our analysis of survey data from 320 adult bilinguals with Dutch as their mother tongue and English as foreign language demonstrates the reliability of the short scale. Furthermore, we find that females experience higher levels of FLA, but that this association is mediated by differences in personality. Our study contributes to the emerging literature on individuals' (emotional) responses to using foreign languages in business contexts.

Keywords International management · Foreign language anxiety · Gender · Personality · Survey

JEL Classification M00 · M16 · Z190

1 Introduction

Already in the 1990s, over 50 per cent of the world's population was estimated to speak a foreign language (De Houwer 1998). Over the past decades, globalization and changing life styles have, for large numbers of people, further increased the importance of using foreign languages and – as a consequence – of dealing with possible anxiety in the process of speaking and listening to a foreign language. MacIntyre (1999, 27) characterized foreign language anxiety (FLA) as "the worry and negative emotional reaction aroused when learning or using a second language." Since FLA can cause negative behavioral and psychodynamic effects, including burn-out, withdrawal, humiliation, avoidance of interpersonal communication, and dropping foreign language learning (e. g., Horwitz, Horwitz and Cope 1986; Neeley 2013; Guntzviller et al. 2011), and arguably affects vast numbers of people, it is critical to better understand individuals' foreign language anxiety.

FLA is important both when individuals *learn* a foreign language – where such anxiety can hinder learning performance –, and when they actually *use* a foreign language outside the language learning setting – where FLA can hamper performance of non-linguistic tasks, such as those related to one's job. However, to date, FLA has mostly been studied within the language learning context (e. g., Horwitz et al. 1986, 1991; Scovel 1978; MacIntyre 1995). Horwitz and co-authors (1986) developed a psychometric scale for FLA in the foreign language classroom context, which has become very well established in the linguistics literature. However, related scales for the use of a foreign language in non-classroom settings such as business contexts are rare, or absent altogether. Nevertheless, FLA is relevant in contexts outside of the classroom, and may impact behavior and related outcomes in settings other than language learning such as medical (e. g., Guntzviller et al. 2011) and business contexts (Neely 2013; Tenzer and Pudelko 2015).

For example, Guntzviller et al. (2011) found that Americans of Latin descent with Spanish as native language felt heightened stress in a doctor's office where they were required to speak English (instead of Spanish). As a result of their FLA and the associated adverse effects, such as feelings of self-consciousness and shame, they would be at higher risk to receive inadequate medical care. Also in business contexts, and as demonstrated in qualitative studies such as those by Neely

(2013) and Tenzer and Pudelko 2015), anxiety to speak up in a foreign language can trigger disadvantageous group dynamics, from both the perspective of individuals and organizations. In order to further advance such research and in order to facilitate related quantitative field studies, there is a need for a scale that measures FLA outside the foreign language classroom context. As field surveys often pose restrictions in terms of survey length, such a scale would have to be short.

We contribute to business research by introducing a short scale for measuring FLA outside the foreign language classroom. By building on Horwitz and co-authors' (1986) foreign language classroom anxiety scale, by adapting items to professional contexts, and by shortening the scale, we facilitate further quantitative research on the emotional responses to foreign language use in business and other formal contexts. We complement our introduction and initial validation of this short scale, first, by demonstrating its relationships to general personality traits, such as the Big Five personality traits (Costa and McCrae 1992) and the related HEXACO framework (Ashton and Lee 2001). The HEXACO personality framework is a recently suggested extension of the Big Five framework. Within this framework, we demonstrate that emotionality and conscientiousness are positively and extraversion is negatively related to FLA. Furthermore, it has been suggested that FLA might be related to gender. Given that FLA could be an antecedent of self-selection into international working contexts, where gender asymmetries might not be desirable, we also explore the relationship between gender and FLA. Gender differences in general personality traits may give rise to differences in specific types of anxiety, particularly FLA.

The paper continues in Section 2 by first defining FLA and theorizing on its relationship to general personality traits. We also discuss in detail ways in which gender could influence individuals' FLA. Section 3 introduces our empirical approach, and describes the sample, the newly introduced scale, and the other variables involved in our study. Section 4 reports our results, which are then discussed in-depth in Section 5.

2 Foreign Language Anxiety

2.1 Definition and Measurement

Two seminal conceptions define FLA as "the feeling of tension and apprehension specifically associated with second language contexts, including speaking, listening, and learning" (MacIntyre and Gardner 1994, 284) and as "the worry and negative emotional reaction aroused when learning or using a second language" (MacIntyre 1999, 27). Both definitions depict a general phenomenon that is relevant in a broad range of contexts in which individuals learn or communicate, through different modes, in a foreign language. However, prior research has mostly investigated FLA in the foreign language learning classroom, possibly owing to the origins of the concept in linguistics and its particular importance in educational settings (related to language learning achievements; see, e. g., Gardner, Tremblay, and Masgoret 1997).

As to the origins of research into FLA, Scovel (1978) distinguished between facilitating and debilitating anxiety in foreign language learning. He argued that a certain amount of anxiety would stimulate effective language learning by motivating the individual "to 'fight' the new learning task" (Scovel 1978, 139) – that is, to engage in approach behavior geared at mastering the task. However, an excessive amount of anxiety, triggered, for example, by the perceived level of difficulty of the task, would hinder learning by inducing "the learner to 'flee' the new learning task" (Scovel 1978, 139) – that is, to opt for withdrawal behavior geared at avoiding the task. As a result, learning performance would suffer. Horwitz et al. (1986, 1991) later defined FLA and – more precisely, *Foreign Language Classroom Anxiety* (FLCA) – as a "distinct complex of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process" (Horwitz et al. 1991, 31). FLA can trigger a vicious circle from which the learner finds it difficult to escape: "aptitude can influence anxiety, anxiety can influence performance, and performance can influence anxiety" (MacIntyre 1995, 95). Hence, the bulk of research on FLA relates to classroom contexts, ultimately with the aim of developing a better understanding of the construct in order to find ways to reduce FLA and, thereby, to increase foreign language learning performance (Horwitz 2001, 2010).

Horwitz and colleagues (1986) developed what has become a standard measurement of FLCA: that is, the FLCAS, a self-report instrument that measures the debilitating effect of FLA in a language learning classroom. FLCAS acknowledges that FLA is embedded within a broader framework of social anxiety (MacIntyre 1995). Social anxiety in a language learning context mainly derives from the social and communicative aspects of language learning. Thus, FLA relates to, for instance, worrying about making mistakes, perceived stress concerning one's own competency, fear of being negatively evaluated by others, and anxiety about misunderstanding others and being misunderstood by others. FLCAS reflects these aspects of FLA (Horwitz et al. 1986).

Given that the concept of FLA extends beyond the classroom to "second language contexts, including speaking, listening, and learning" (MacIntyre and Gardner 1994, 284), researchers have recently begun to become interested in its potential prevalence and effects in settings outside the foreign language learning classroom. Focusing on a *business context*, Neeley (2013), for example, investigates the effects of forced communication in a foreign language in a qualitative study of a large French multinational company that had introduced English as the common corporate language. Although Neeley (2013) does not report administering a formal scale to assess foreign language anxiety, from her analysis of the qualitative interviews and additional informal observations emerges that language performance anxiety had become a pervasive element of nonnative English-speaking employees' experience in their day-to-day work, with potentially profound implications for workplace behavior (e. g., withdrawal from discussions) and performance.

Similarly, Neeley, Hinds, and Cramton (2012, 237) report that "nonnative employees near universally expressed apprehension at the thought of interacting in English. Common in these accounts is an emphasis on heightened anxiety due to the mandate." Their qualitative study of several global companies from France, Ger-

many, Japan and the US focuses on the "emotional and psychological impact of working under a mandated language, both for nonnative and native lingua franca speakers" (Neeley et al. 2012, 237). Another illustrative example is Tenzer and Pudelko (2015), focusing on emotional reactions to the use of a foreign language in a business context. In their qualitative interview study of 15 multinational and multilingual teams in three major German automotive firms, comprising team members from 19 nationalities with 14 different native languages, they largely corroborate the findings by Neeley et al. (2012) and Neeley (2013). In particular, they identify two broad types of responses, which they refer to as self-directed anxiety (e. g., feelings of embarrassment and insecurity) and other-directed resentment (e. g., resentment towards other team members).

Another example for considering FLA outside the foreign language learning setting is provided by Guntzviller et al. (2011), which involves a *medical office* context. Guntzviller and co-authors report that Americans of Latin descent felt heightened stress in a doctor's office when they were required to speak English instead of their native language Spanish. As a result of their FLA and associated adverse emotional effects, such as feelings of self-consciousness and shame, Guntzviller and co-authors argue that such patients would be at a higher risk to receive inadequate medical care. In order to foster future research in this important non-educational context, Guntzviller and co-authors take the FLCAS as their steppingstone to adapt a subset of the FLCAS' original items in a way specifically tailored to the medical office context. After a reliability and validity exercise, they suggest an 8-item *Foreign Language Anxiety for the Medical Office Scale* (FLAMOS).

Our study focuses on FLA outside the foreign language learning context, especially in formal, professional contexts such as business settings. Paraphrasing the definition by (MacIntyre 1999, 27), we define FLA in formal contexts (FLA-F) as the worry and negative emotional reaction aroused when *using* a second language in professional, *formal* contexts. As does FLA, also FLA-F relates to worrying about making mistakes, perceived stress concerning one's own competency, fear of being negatively evaluated by others, and anxiety about misunderstanding others and being misunderstood by others. FLA-F is, thus, a special case of FLA, which covers specific anxiety in situations of both *learning* and *using* a nonnative language. Separating the measurement of FLA in the context of foreign language learning from an assessment of FLA in the context of using a foreign language bears methodological advantages: As discussed above, in a learning context, FLA might influence future language proficiency and resulting performance. Simultaneously, FLA is also affected by the current language proficiency and current performance. However, in situations in which the actual use of the foreign language is central – which is the case outside educational settings in, for example, business contexts – such reciprocal relationships and associated reverse causality concerns become substantially less relevant, eventually simplifying theoretical frameworks and empirical analyses.

2.2 Personality and FLA

Although personality is, by definition, relatively time-invariant and, therefore, cannot explain intrapersonal variations in FLA *over time* (MacIntyre 2007), several traits

have been identified as important predictors of *interpersonal* differences in FLA in the classroom. Most of the studies relating acquisition and use of a foreign language to personality have drawn on either one of three major psychological frameworks (Ghapanchi, Khajavy, and Asadpour 2011): the *Myers Briggs Type Indicator* (MBTI) (Myers and Briggs 1976), the *Eysenck Personality Questionnaire* (EPQ) (Eysenck and Eysenck 1975), and the *Five-Factor Model* (FFM), also known as the *Big Five* (e. g., Costa and McCrae 1992). The FFM developed by Costa and McCrae (1992) consists of the personality traits *extraversion, neuroticism* (versus *emotional stability* as the corresponding low pole), *agreeableness, conscientiousness*, and *openness to experience*. Recently, the FFM has been developed further into the HEXACO model, which refines the traits of agreeableness and neuroticism (versus emotional stability), and which adds a sixth trait – "honesty-humility" (Ashton and Lee 2001).

To the best of our knowledge, there are no studies focusing on the relationship between personality and FLA in contexts that do not focus on foreign language *learning*. However, as FLA in educational settings ("the language learning class-room") frequently includes aspects of applying and using the foreign language as part of the learning process (e. g., MacIntyre and Gardner 1994; MacIntyre 1999), we extrapolate from studies conducted in and for foreign language *learning* settings to a context that zooms in on using the foreign language in a non-educational setting. From among the personality traits covered by the above-mentioned frameworks, particularly three have attracted the attention of researchers interested in understanding the antecedents and effects of classroom FLA: extraversion, emotional stability (versus neuroticism), and conscientiousness. As to the remaining two traits of the FFM, agreeableness and openness to experience, and HEXACO's additional sixth trait of honesty-humility, we are not aware of any prior study that explicitly investigates their links with FLA. Given this paucity of research, we refrain from hypothesizing about these latter three traits. Instead, we inductively explore their relationships with FLA and, in this way, comprehensively assess the relationship between the full HEXACO personality model and FLA.

First, *neuroticism* describes individuals who are prone to anxiety and nervousness, being inversely related to emotional stability (Digman 1990; Lee and Ashton 2005). Referring to McCrae and John (1992), Müller and Schwieren (2012) state that neuroticism "represents the tendency to be anxious, insecure and emotionally unstable in general, and to be susceptible to be stressed or depressed" (Müller and Schwieren 2012, 457). In the HEXACO model, the related but refined trait is referred to as *emotionality*. It shares many features with FFM's neuroticism, such as a general tendency towards experiencing anxiety. Persons who score high on emotionality experience pronounced anxiety in response to life's stressors, whereas individuals who score low on emotionality feel little worry even in stressful contexts. Yet, HEXACO's emotionality refines the trait referred to as neuroticism in the FFM by integrating sentimentality-related traits, such as vulnerability, sensitivity and sentimentality, which in FFM have been mainly associated with the positive pole of agreeableness (de Vries, Lee, and Ashton 2008).

Regarding the link between neuroticism/emotionality with FLA, Dewaele (2013) reports a significant link between neuroticism and levels of FLCA in the foreign languages of two groups of adult language learners enrolled at two major universities

in Spain and in the United Kingdom. He concludes that "more emotionally stable participants suffer less from FLCA, whereas high-Neuroticism participants report significantly higher levels of FLCA" (Dewaele 2013, 678). Furthermore, Dewaele (2002) reports that Flemish secondary school students (with Dutch as native language and English as second foreign language) who score low on neuroticism experience lower communicative anxiety in English. Contrary to these results, however, MacIntyre and Charos (1996) fail to find a significant relationship between neuroticism (versus emotional stability) and French language anxiety among Anglophone adult students learning French as foreign language; they argue that this result underscores the nature of FLA as a situation-specific construct. As the definition of emotionality in the HEXACO personality model explicitly refers to experiencing anxiety in response to life's stresses, we nevertheless hypothesize that:

Hypothesis 1 (H1):   Emotionality is positively related to FLA.

Second, "*conscientiousness*" is a trait that captures an individual's tendency toward organizing her time and physical surroundings, striving for accuracy and perfection, diligence, and engaging in deliberate and careful reflection before taking decisions. Gregersen and Horwitz (2002) report that perfectionism is related to higher levels of classroom FLA in their qualitative study of second-year English language students at a Chilean university. Specifically, perfectionist students, who were not easily satisfied with own performance at an interview in a foreign language, also experience higher FLCA and are more stressed about errors they make in the foreign language. Moreover, anxious learners set higher personal performance standards, are more afraid of evaluation, and tend to procrastinate. As FLA also refers to individuals' responses to errors when speaking a foreign language, and because conscientiousness relates to individuals' general tendencies to avoid difficult tasks and negative responses to work that contains some errors, we hypothesize that:

Hypothesis 2 (H2):   Conscientiousness is positively related to FLA.

Third, "*extraversion*" has been linked to classroom FLA (MacIntyre and Charos 1996). Individuals who score high on extraversion tend to feel positive about themselves and social interactions, whereas introverts tend to experience feelings of awkwardness or indifference in social interaction, tending to be reserved rather than cheerful. MacIntyre and Charos (1996), in their study of Anglophone adult students learning French, report that higher levels of extraversion are associated with lower FLA. This result is consistent with studies that show that extraverts are, in general, less likely to experience feelings of anxiety, because they tend to feel more comfortable in communication-oriented contexts (Brown, Robson, and Rosenkjar 2001). Yet, Dewaele (2013) finds an only moderately significant relationship between extraversion and FLCA, and only in one sub-group of his two groups of adult language learners enrolled at two major universities in Spain and in the U.K. As a lack of extraversion is related to feeling awkward when being at the center of social attention, and because FLA refers to such situations, we expect that:

Hypothesis 3 (H3):   Extraversion is negatively related to FLA.

2.3 Gender Differences in FLA

On the one hand, gender-related FLA research outside the classroom is scarce. A rare example is Dewaele, Perides, and Furnham's (2008) study of 464 multilingual adults, with an average age of about 37 years, speaking a total of 43 different native languages. These authors do not find significant gender differences in FLA in general. However, they do observe that women experience more FLA in public speech in the foreign language. On the other hand, empirical studies into gender differences in FLA in foreign language learning settings do not provide conclusive findings.

Some studies report women to experience less FLA than men. For example, Mejías et al. (1991) reveal, among students at a university in Texas, higher classroom anxiety amongst Hispanic males compared to Hispanic females. However, other scholars have reported women to experience higher levels of FLA when learning a foreign language. For instance, in the context of Arabic language classes at ten US universities, Elkhafaifi (2005) finds females to experience greater FLA than males. Similarly, Machida (2001) reports higher levels of FLA for women compared to men in a Japanese language class setting. Arnaiz and Guillén (2012) show that Spanish women experience higher FLA than Spanish men when considering English as the second language, referred to as L2 in the linguistics literature: Especially women are more anxious in terms of communication apprehension and evaluation anxiety. Finally, another stream of studies fails to find significant gender differences in FLA in the classroom. For example, Dewaele and Ip (2013) reveal a non-significant gender difference in their study among secondary school English learners in Hong Kong. Matsuda and Gobel (2004) report absence of a gender effect on FLA in the classroom among English language students at a Japanese university. In an earlier study, Onwuegbuzie, Bailey, and Dailey (1999) conclude that gender is not significantly related to classroom FLA for their sample of students at a US university.[1]

In sum, empirical studies on the link between gender and FLA outside the language learning setting is scarce, and research on the link between gender and FLA in language learning settings provides inconclusive results.

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[1] Note that some of the ambiguities found in prior research regarding gender differences in FLA might potentially be due to contextual factors of the corresponding studies, such as, in particular, culture and, especially, differences in gender roles across cultures. For example, in some cultures, women may not be seen as equal to men, which might lead them to show a general insecurity about using foreign languages. Also, different cultures may induce to different degrees of reporting differences in FLA between men and women stemming from "differences in the willingness to admit to anxiety" (Arnaiz and Guillén 2012, 18). Due to socialization processes, differences in willingness to admit to anxiety might be related to differences in national culture and to corresponding differences in equality in gender roles. However, potential cultural influences are not the focus of this current study. Therefore, we employ a culturally homogenous sample, which represents a fairly conservative testbed for our research question, given that the Netherlands, where we conducted our study, is a country that is characterized by comparatively equal gender roles (e. g., Roggeband and Verloo 2007; Inglehart, Norris, and Welzel 2002).

2.4 Personality Mediating the Gender-FLA Relationship

In order to shed more light on the role of gender for FLA outside the language learning classroom, we look beyond simple correlations between gender and FLA. Instead, we build on research in personality psychology that has documented significant and robust gender differences for a variety of personality traits (e. g., Costa, Terracciano, and McCrae 2001; Lynn and Martin 1997; Schmitt et al. 2008). Combining gender differences in personality traits with the above discussion of the relationship between personality and FLA implies that we should expect personality to mediate the relationship between gender and FLA.

Prior research in social and personality psychology has uncovered gender differences in terms of average scores for a number of personality traits, including emotionality/neuroticism, extraversion, and conscientiousness. These differences are significant and quite consistent, even across cultures. In a study with participants from 37 countries, Lynn and Martin (1997) find that mean neuroticism is higher for females in all 37 countries, whereas men's mean scores for psychoticism and extraversion are higher in 34 and 30 countries, respectively. In a cross-cultural study of 26 cultures, Costa, Terracciano, and McCrae (2001) report that, although gender differences are small compared to individual variation within genders, they are replicated across cultures and for college age as well as for adult samples. Women score, on average, higher on neuroticism and agreeableness, while men score higher on assertiveness, which is related to extraversion (DeYoung, Quilty, and Peterson 2007). Furthermore, Feingold (1994) reports higher levels of average anxiety, a sub-dimension of neuroticism, for females. Schmitt et al. (2008) analyze gender differences in personality in 55 countries, with women relative to men reporting higher levels of neuroticism, conscientiousness, and – in contrast with Lynn and Martin (1997) – extraversion. Müller and Schwieren (2012), in a lab study of gender differences in preferences for competition, observe higher average levels of neuroticism, conscientiousness, extraversion, openness, and agreeableness for women.

The "average female" personality appears to differ significantly from her average male counterpart. This also holds true for those personality traits that were hypothesized to be related to FLA – i. e., emotionality/neuroticism, conscientiousness, and extraversion. Hence, we hypothesize that:

Hypothesis 4 (H4):   Females score higher on emotionality.
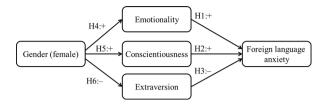
Hypothesis 5 (H5):   Females score higher on conscientiousness.

Hypothesis 6 (H6):   Females score lower on extraversion.

In view of the association of these personality traits with FLA, related gender differences can be expected to give rise to gender differences in FLA. Therefore, we suggest that these personality traits *mediate* the relationship between gender and FLA. Furthermore, given the paucity of related prior research, we additionally investigate the role of the remaining personality dimensions – honesty/humility,

Fig. 1 Theoretical Model

agreeableness, and openness to experience – in a more exploratory manner, rather than formulating explicit hypotheses. Figure 1 summarizes our hypotheses.

3 Method

3.1 Sample

The data stems from a web-based survey administered at a major Dutch university in September 2011 among students who were enrolled in a compulsory introductory course on organization studies.[2] Students who participated in tutorials accompanying this course were asked – but not obliged – to complete the survey. Human subject guidelines were followed throughout the process, and none of the participants was pressured to participate. During the first week of the semester, they received email invitations for the survey. The survey remained online for two weeks. It was announced that subjects remained anonymous, and that all information was confidential. The purpose of the study was not revealed; it was announced that the results of the survey would be explained and discussed later on during the course. The third author gave a plenary lecture at the end of the course, explaining how the survey related to the course content. After excluding incomplete responses, our sample comprises 320 bilingual adults (106 females; 214 males) for whom Dutch is the native language and English is a foreign language. All participants were enrolled in a university Business program (BSc). The average age in the sample is 18.8 years.

3.2 Foreign Language Anxiety in Formal Contexts Scale (FLA-FS)

In order to ensure high validity and reliability, we decided to base our novel FLA-FS measurement instrument on Horwitz and colleagues' (1986) well-established 33-item foreign language classroom anxiety (FLCA) scale, and to make three adaptations.

First, for employing the scale as part of a larger survey, we needed to have a *short scale*. Thus, we decided to use only a subset out of the original 33 items. The practice of developing shorter scales is common practice in disciplines such as business, economics, and management in order to stimulate research by providing easy-to-

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[2] The survey was part of a larger experimental project on foreign languages and cooperative behavior conducted under the leadership of the third author in the autumn of 2011.

administer measurement instruments that are often either part of a much larger battery of measurement instruments, or are targeting potential respondents with limited time (e. g., managers). Short scales based on Horwitz and colleagues' FLCA scale have been demonstrated to feature sufficient reliability and validity (e. g., Guntzviller et al. 2011). We opted for a short 10-item version of the original scale. The selected ten items still cover the five components[3] of FLA as identified in the literature (e. g., Guntzviller et al. 2011), with two items for each component: (a) degree of anxiety; (b) extent of understanding; (c) fear of making mistakes; (d) feeling of competence; and (e) divergence from general communication apprehension.

Second, we refer to a *specific foreign language* (here, English) instead of referring to foreign languages in general. Individuals could be very familiar with one foreign language and slightly or even not familiar at all with other foreign languages, and FLA can differ between these foreign languages; these differences might even be partially independent of one's proficiency in these languages. Asking for a general FLA, therefore, requires subjective generalizations across different foreign languages, which – especially when studying a specific foreign language context – is likely to add substantial noise to the measurement instrument. Focusing on a single language avoids such problems.

Third, we adapted the items to remove the reference to the language learning context. To keep high content validity despite these adaptations, we followed two strategies. We considered Guntzviller and colleagues' (2011) 8-item adaptation of FLACS that was designed for measuring FLA without reference to language learning, but in the context of medical offices – a scale they refer to as the foreign language anxiety in medical office scale (FLAMOS). For our FLA-FS, we selected those items from FLCAS that were used in the FLAMOS, which suggests that these items translate well between different contexts and, thus, are good candidates to be employed in a different setting. Next, we excluded one of these eight items that contains the word "self-conscious". The reason is that we aim at administering, for comparative purposes, an *English* (instead of a native language) version of the FLA-FS to Dutch native speakers in future studies (again, assessing English as the foreign language). Since the word "self-conscious" is a false friend that is likely to be misunderstood by Dutch people (and possibly many people with a Germanic native language, generally) as self-confident, we excluded the one item that contains this word. In order to equally cover the aforementioned five components of FLA, we added to these seven items three additional items from the FLCAS that, too, we considered as reasonably well suited for a rather general context.

We employed a minimal set of well-defined rules to make the FLCAS items more general: To delete the reference to language classes, we replaced references to

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[3] As FLA is a one-dimensional construct, these five components do not reflect sub-dimensions. Indeed, as we will explain below, our new FLA-FS scale is unidimensional, too. However, for the FLCAS, Horwitz et al. (1986) emphasize that "[t]he items presented are reflective of communication apprehension, test-anxiety, and fear of negative evaluation in the foreign language classroom." Furthermore, Guntzviller et al. (2011) summarize that the "FLCA scale items address five components of foreign language anxiety in the classroom: (a) degree of anxiety, (b) extent of understanding, (c) fear of making mistakes, (d) feeling of competence, and (e) divergence from general communication apprehension." We hence follow the lead of these researchers in interpreting the FLCAS as covering five components.

"in language class" by "when I interact in English", "in a meeting in English", or a variant of this – all framed with reference to a formal meeting of high importance (see above). Whenever there is a reference to "language teacher", which is superior to a student, we reframed this as "powerful others", "people above me", or a variant of this. So, we did not remove the reference to superior people, but only to the specific role of the teacher. Whenever there is a reference to "other students", it is reframed as "other people"; references to "the other students" are reframed as "many other people" (referring to "the other people" would be too inclusive).[4] When asking for FLA outside the classroom setting, participants may imagine a large variety of contexts – for example, formal meetings in job contexts or communications with friends. As this might decrease comparability of measurements, we included a specific classroom-independent type of setting: i. e., the *formal context* of an important meeting or public discussion where speaking English is mandatory. This is a context of high relevance for business practice: "To answer the following questions, imagine you are participating in an important meeting/public discussion which is done in English. To communicate with the rest of the participants, you have to use a foreign language. Now, complete the questions."

The full set of items and the initial framing are provided in the Appendix. We refer to this new scale as *FLA-FS*, an abbreviation of *Foreign Language Anxiety in Formal Settings Scale*. It should be easy to adjust this scale to other languages by replacing English with the needed language. All items were assessed on a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). We chose a Likert scale with a larger number of categories than the original FLCAS in order to reduce biased answers due to individual response styles (for a detailed discussion, see Harzing 2006). The overall score is calculated by averaging the appropriately reverse-coded responses to single items resulting in average scores between 1 and 7. The scale used in this study factored into a unidimensional construct with high reliability ($\alpha = 0.89$).

3.3 Personality and Gender

Personality was assessed through the HEXACO Personality Inventory-Revised 60-item version (HEXACO-PI-R; Lee and Ashton 2004). The HEXACO-PI-R distinguishes six personality traits: emotionality, conscientiousness, extraversion, agreeableness, openness to experience, and honesty/humility. We opted for this personality instrument in particular because of its refinement of the factor of emotionality, which captures more comprehensively, for example, sentiments of vulnerability, closely related to the FLA construct (Ashton, Lee, and de Vries 2014). The ten items for each personality dimension are assessed on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly disagree). The HEXACO scale used

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[4] For instance, the FLCAS-item "I get nervous and confused when I am speaking in my language class", which Guntzviller et al. (2011) adjusted to "I get nervous and confused when I speak in the doctor's office", was changed to "I get nervous and confused when I have to speak in English". Examples of other items are: "I get nervous when I don't understand every word persons who have power on me say to me in English", and "I keep thinking that many other people are better in English than I am".

in this study factored into a six-dimensional construct, fully in line with the theory, with good reliabilities for each dimension (Honesty-humility: $\alpha = 0.75$; Emotionality: $\alpha = 0.79$; Extraversion: $\alpha = 0.79$; Agreeableness: $\alpha = 0.71$; Conscientiousness: $\alpha = 0.81$; Openness to experience: $\alpha = 0.74$). To simplify a comparison of strengths of effects between the different personality dimensions, we standardized the scores of the personality variables.

Gender was measured by asking participants to indicate their gender in the online questionnaire. The response forms a dummy variable coding female as equal to one and male as equal to zero.

3.4 Other Control Variables

As our focus is on a possible association of gender and personality with FLA unrelated to foreign language learning, we included related socio-biographical variables as statistical controls: i. e., age of acquisition, self-rated foreign language proficiency, and reading frequency (e. g., Dewaele and Ip 2013; Dewaele et al. 2008; Sparks et al. 2009). Without statistically controlling for these variables, a gender effect outside the foreign language classroom could primarily be based on the gender effect in the foreign language learning classroom. That is, anxiety in the classroom might imply that language proficiency could suffer, leading to anxiety outside the classroom simply based on the classroom-based differences in proficiency resulting from FLA impeding foreign language learning.

Age is a core variable in socio-psychological research (Dewaele 2007). It has been linked to FLA, with younger learners reporting lower FLA (Dewaele 2007). Age ranges from 17 to 26 years (with the exception of one respondent aged 34).

Information about *age of onset of acquisition (AOA)* – the starting age for acquiring the foreign language – is an important but distinct correlate of language proficiency, which is often studied in relationship to language proficiency (Hernandez and Li 2007). We collected data on AOA through the following question: "At which age did you start learning English?" Subjects were grouped into four categories of AOA: (1) those who learned English from birth up until 5 years of age; (2) those who started from 6 to 10; (3) those who started from 11 to 16; and (4) those who started learning English after the age of 17. The majority was in categories 3 (44 %) and 4 (53 %).

Prior research suggests that *self-reported proficiency* (even more so than objective proficiency) constitutes an important correlate of FLA (e. g., Dewaele and Ip 2013) and language-related behavioral responses (e. g., Neeley 2013). We assessed language proficiency in English through subjects' responses to the question "How would you describe your own ability to understand written English?", based on a scale with seven categories ranging from "very poor" to "excellent". On average, 66 % of men and 46 % of women stated that their level was very good or excellent.

Reading frequency in the foreign language (L2) was assessed based on the response to the question "How often do you read in English (e. g., text books, newspapers, magazines and/or the internet)?" with four response categories (Daily/Several times a week/Once a week/Once a month or less). Women read more frequently in

the foreign language, with 69 % reading once a week or more often (which is 51 % for men).

4 Results

Table 1 and 2, respectively, report the descriptive statistics and bivariate correlations. Variance inflation factors for all regression models were below the threshold value of 10, all being less than 2, such that these analyses do not suffer from issues of multicollinearity. As a first step in our analysis, we tested the reliability and validity of the newly introduced scale – FLA-FS.

4.1 Reliability and Validity of the FLA-FS

We employed multiple tests of the scale's reliability and validity. An exploratory factor analysis with the eigenvalue-larger-than-one criterion and Horn's parallel analysis (Hayton, Allen, and Scarpello 2004) as well as a confirmatory factor analysis yielding sufficiently high fit indices (CFI = 0.96, SRMR = 0.037, and RMSEA = 0.071 with [0.054, 0.089] as the 90 % confidence interval) all suggest that the items form a single factor. Cronbach's alpha is 0.89 and all item-rest correlations are above 0.5, which suggests sufficiently high internal reliability.

To test for divergent and discriminant validity, we used the 10-item measure of emotionality from the HEXACO personality inventory (Ashton and Lee 2001), which also includes two items on trait anxiety and three items on fearfulness. Exploratory factor analyses with PROMAX rotation of the FLA-FS scale and the emotionality dimension of the HEXACO personality inventory indicate that FLA-FS and the emotionality items form clearly distinct factors: both the eigenvalue-larger-than-one criterion and Horn's parallel analysis indicate two factors; all items load above 0.5 on their respective factor; and cross-loadings are all below 0.1. Thus, FLA-FS is distinct from measures of trait emotionality, trait anxiety, and trait fearfulness.

Table 1 Descriptive Statistics

Variable	Obs	Mean	S.D.	Min	Max
FLA	320	3.59	1.20	1	6.7
Gender (female)	320	0.33	0.47	0	1
Age	320	18.80	1.37	17	34
Self-reported fluency	320	4.39	1.01	1	7
Reading frequency	320	3.15	0.89	1	4
AOA	320	3.5	0.57	1	4
Emotionality	320	2.91	0.63	1.3	4.9
Conscientiousness	320	3.34	0.63	1.7	4.8
Extraversion	320	3.46	0.56	1.8	4.7
Agreeableness	320	3.03	0.52	1.5	4.4
Honesty/humility	320	3.04	0.58	1.1	4.5
Openness to experience	320	2.77	0.61	1.4	4.5

Table 2 Bivariate Correlations

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. FLA	(0.89)											
2. Gender (female)	0.29****	–										
3. Age	-0.10*	-0.12**	–									
4. Self-reported fluency	-0.54****	-0.19****	0.05	–								
5. Reading frequency	-0.34****	-0.19****	0.02	0.41****	–							
6. AOA	0.31****	0.11*	-0.09	-0.42****	0.34****	–						
7. Emotionality	0.34****	0.50****	-0.10*	-0.19****	-0.17***	0.09	(0.79)					
8. Conscientiousness	0.20****	0.27****	-0.20****	-0.08	0.03	0.10*	0.19****	(0.81)				
9. Extraversion	-0.15***	-0.11*	-0.09	0.01	-0.04	-0.02	-0.27****	-0.02	(0.79)			
10. Agreeableness	-0.01	-0.03	-0.08	-0.02	-0.04	-0.02	-0.06	-0.05	-0.09	(0.71)		
11. Honesty-humility	0.13**	0.30****	-0.05	-0.12**	-0.15**	0.14**	0.24****	0.25****	-0.02	0.26****	(0.75)	
12. Openness to experience	-0.19****	-0.07	0.22****	0.20****	0.16***	-0.19****	-0.01	-0.00	0.02	-0.15***	-0.09*	(0.74)

$N = 320$. Where appropriate, Cronbach's alpha is reported in the diagonal

Significance levels: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, and **** $p < 0.001$

To test for predictive validity, and, thereby, to justify that foreign language anxiety (FLA) is meaningfully related to individuals' actual behavior and that this relationship is not merely a reflection of individuals' reported foreign language proficiencies, we analyzed the relationship between FLA-FS and people's self-reported frequency of reading English. Spearman's rank correlation coefficient is –0.35 ($p < 0.001$) and Pearson's linear correlation coefficient is –0.34 ($p < 0.001$). When controlling for self-reported English proficiency, the partial correlation is –0.15 ($p \leq 0.010$). Hence, FLA-FS is meaningfully associated with reading frequency even when controlling for related variations in self-reported language proficiency.

Based on data from a further study using a comparable sample (same university and same course, but one year later; see Urbig et al. 2015), we could estimate the scale's reliability based on a test-retest correlation. We have data on 161 students who responded twice to our FLA items. The first response stems from an online survey at the beginning of the semester ($\alpha = 0.91$); the second response comes from a pen-and-paper survey two months later ($\alpha = 0.92$) (this second survey accompanied a classroom experiment; i. e., a public goods game). The test-retest correlation is $r = 0.80$, indicating a sufficiently high test-retest reliability.

In sum, we find that our FLA-FS has good psychometric properties and, thus, provides a reliable measure of foreign language anxiety in business and other formal contexts.

4.2 Control Variables and FLA

We first investigate the relationship between FLA-FS and the socio-biographical control variables: i. e., age, reading frequency, AOA, and self-reported proficiency (Table 3, Model 1). Prior research has shown that higher frequency of foreign language use and greater socialization in the foreign language give users the opportunity to practice, in turn being associated with lower levels of FLA (e. g., Baker and MacIntyre 2000; Dewaele et al. 2008). We find that frequency of reading in English also has a statistically significant negative association with FLA in the new context where we measure FLA ($p < 0.05$). In the same vein, research into foreign language learning indicates that language proficiency is negatively related to FLA (e. g., Dewaele and Ip 2013; Chen and Chang 2009; MacIntyre and Gardner 1991); we find that self-reported proficiency in English is also negatively associated with FLA-FS ($p < 0.001$). Once reading frequency and language proficiency are statistically controlled for, age and AOA are not significantly associated with FLA-FS (Table 3, Model 1). Thus, while, overall, there is relationship between age respectively AOA and FLA-FS (see the correlations in Table 2), these relationships are explained through the link of FLA-FS to reading frequency and self-reported proficiency.

4.3 Gender and FLA

We now turn our attention to the relationship between gender, personality, and FLA. With an average score of 4.09, women display higher FLA-FS than men, who score 3.35, on average. The difference of 0.74 is statistically significant (two-sample

Table 3 Regression Analysis of FLA on Control Variables, Gender, and Personality

Model	1	2	3
Dependent variable	FLA-FS[a]	FLA-FS[a]	FLA-FS[a]
Constant	0.00 (0.05)	–0.12 (0.06)[**]	–0.05 (0.06)
Age[a]	–0.07 (0.05)	–0.05 (0.05)	–0.02 (0.05)
Self-reported proficiency (SRP)[a]	–0.46 (0.05)[****]	–0.43 (0.05)[****]	–0.41 (0.05)[****]
Reading frequency[a]	–0.13 (0.05)[**]	–0.10 (0.05)[**]	–0.11 (0.05)[**]
AOA[a]	0.07 (0.05)	0.07 (0.05)	0.05 (0.05)
Gender (female)		0.38 (0.10)[****]	0.14 (0.11)
Emotionality[a]			0.16 (0.05)[***]
Conscientiousness[a]			0.13 (0.05)[***]
Extraversion[a]			–0.10 (0.05)[**]
Agreeableness[a]			–0.02 (0.05)
Honesty-humility[a]			–0.04 (0.05)
Openness to experience[a]			–0.07 (0.05)
R-squared	0.31	0.34	0.40

$N = 320$. Standard errors in parentheses; [a]standardized variable
Significance levels: [*]$p < 0.10$, [**]$p < 0.05$, [***]$p < 0.01$, and [****]$p < 0.001$

t-test with unequal variances: t = –5.07, $p < 0.001$). Cohen's d as a well-accepted measure of effect size (Cohen et al. 2003) indicates a medium-sized effect: i. e., 0.61, which is above the value of 0.5 that is considered as a lower threshold for medium-sized effects. Thus, the effect we are investigating is not only consistent with prior research, but also *practically meaningful*.

To examine whether, independent of language proficiency and frequency of reading in L2, the two gender groups differ significantly in FLA-FS, we employ regression analyses. Specifically, we additionally enter gender into a regression model that already includes all control variables (Table 3, Models 1 and 2). Gender (a dummy for female) is statistically significantly associated with FLA-FS. Thus, when statistically controlling for language-related socio-biographical control variables, women still report higher levels of FLA-FS, with the difference being 0.45 points (compared to an overall difference in FLA-FS score across men and women of 0.74 points). Cohen's d as measure of effect size reduces from 0.61 to 0.41 after partialling out these statistical controls. Thus, these socio-biographical control variables, and especially language proficiency, explain some gender difference in FLA in formal contexts. There is, however, a substantial part of the gender difference – with 0.45 points being more than 60 % of the original difference of 0.74 points – that cannot be explained by these control variables and, in particular, by gender differences in foreign language proficiency. Hence, there is a gender difference outside the classroom that cannot be explained by gender-specific effects in foreign language learning.

4.4 Personality and FLA

As a next step, we simultaneously entered the six personality dimensions (Table 3, Model 3). In support of *H1*, emotionality is significantly and positively associated with FLA in formal contexts ($p < 0.01$). Highly emotional individuals report higher FLA for such settings: A difference of one standard deviation in emotionality (0.63 points) is associated with a difference of 0.19 points in FLA-FS. In support of *H2*, conscientiousness is significantly positively associated with FLA-FS ($p < 0.01$). Highly conscientious individuals report higher FLA-FS: A difference of one standard deviation in conscientiousness (0.63 points) is associated with a difference of 0.15 points in FLA-FS. In support of *H3*, extraversion is significantly and negatively related with FLA-FS ($p < 0.05$) with extraverts being less prone to FLA-FS. A difference of one standard deviation in extraversion (0.56 points) is associated with a difference of –0.12 points in FLA-FS.

Given paucity of research and lack of theory, we explore possible associations of the three personality traits of openness, agreeableness, and honesty-humility with FLA-FS without having priors. In support of earlier research that has not emphasized these dimensions in relation to FLA, none is significantly related to FLA-FS. Note that honesty/humility and openness to experience are positively and negatively respectively, correlated with FLA in terms of bivariate correlations (see Table 2). These relationships, however, disappear once we control for the other personality dimensions. These significant bivariate correlations, therefore, are most likely to result from correlations of these personality dimensions with the other personality dimensions. In sum, personality is related to FLA-FS in the hypothesized ways.

4.5 Personality Mediating the Personality-FLA Relationship

After controlling for personality, there is no significant difference between males and females: the gender coefficient is statistically not significant. Also, after partialling out personality (in addition to partialling out the socio-demographical control variables), Cohen's d as measure of effect size is 0.12 for gender differences. According to Cohen's criteria, this is not even considered a small effect, and hence should not receive any attention. When only partialling out the effects of personality variables but not the other statistical control variables, Cohen's d decreases to a negligible size of 0.18, too. These results indicate that personality possibly fully mediates the relationship between gender and FLA-FS: Almost all of the gender difference in FLA-FS can be explained by gender-related differences in personality variables.

To statistically test for the multiple indirect effects of gender through personality on FLA-FS, we employ established tests of multiple mediation effects (Preacher and Hayes 2008). First, we regress personality on gender to establish that gender makes a difference with respect to personality (see Table 4). In support of *H4, H5* and *H6*, females are significantly more emotional ($p < 0.001$), more conscientious ($p < 0.001$), and less extravert ($p < 0.05$). As to the other HEXACO dimensions, females score higher on honesty-humility ($p < 0.001$). Next, we calculate and bootstrap the indirect relationship of gender through each of the three focal personality traits

Table 4 Regression Analysis of Personality on Gender

Model	1	2	3	4	5	6
Dependent variable	Emotionality[a]	Conscientiousness[a]	Extraversion[a]	Agreeableness[a]	Honesty/Humility[a]	Openness to experience[a]
Constant	−0.35 (0.06)[****]	−0.17 (0.06)[***]	0.08 (0.07)	0.03 (0.07)	−0.21 (0.07)[***]	0.03 (0.07)
Age [a]	−0.04 (0.05)	−0.17 (0.05)[***]	−0.10 (0.06)[*]	−0.08 (0.06)	−0.02 (0.05)	0.21 (0.05)[****]
Gender (female)	1.06 (0.10)[****]	0.52 (0.11)[****]	−0.26 (0.12)[**]	−0.10 (0.12)	0.63 (0.11)[****]	−0.09 (0.12)
R-squared	0.26	0.10	0.02	0.01	0.09	0.05

$N = 320$. Standard errors in parentheses; [a]standardized variable
Significance levels: [*]$p < 0.10$, [**]$p < 0.05$, [***]$p < 0.01$, [****]$p < 0.001$

(bootstrapping is based on 4,000 repetitions; we report bias-corrected and accelerated bootstrapped 95 % confidence intervals). Analyses reveal that these indirect effects are statistically significant for emotionality (indirect effect = 0.20 with $CI_{95\%}$ = [0.07, 0.36]), conscientiousness (indirect effect = 0.08 with $CI_{95\%}$ = [0.02, 0.16]), and extraversion (indirect effect = 0.03 with $CI_{95\%}$ = [0.00, 0.10]). Thus, a gender gap of 0.2 points in FLA-FS can be attributed to the fact that females differ from males in the level of emotionality. A difference of 0.08 points is due to corresponding gender differences in conscientiousness, and a small difference of 0.03 is due to gender differences in extraversion. Conjointly, all six personality traits explain a gender difference in FLA-FS of 0.29 points (total indirect effect = 0.29 with $CI_{95\%}$ = [0.13, 0.48]). Considering that the gender gap is 0.45 points after controlling for self-reported proficiency differences, personality significantly explains about two thirds of the gender effect, and this mostly through emotionality and – to some smaller extent – by conscientiousness and extraversion. The remaining gender effect is statistically not significant.

5 Discussion

5.1 Summary and Contributions

While previous research, especially empirical studies, focused on FLA in foreign language learning settings, we investigate FLA of users of a non-native tongue outside the foreign language learning/classroom setting. To facilitate such research and in order to address a formal setting outside the classroom – a setting that is compatible with many business-related contexts – we adapted and shortened a well-established psychometric scale measuring FLA in the classroom (FLCAS by Horwitz et al. 1986). We also provide reliability and validity tests of the resulting scale, which we refer to as *Foreign Language Anxiety in Formal Contexts Scale* (FLA-FS). In order to be able to embed this new scale into its relationship with general personality traits and gender, a variable that has received specific attention by FLA researchers (e. g., Wang 2010; Elkhafaifi 2005), we investigated the relationship of

FLA-FS with the HEXACO personality framework and with gender. Acknowledging robust gender differences in personality dimensions, we extend prior research on gender differences in FLA by suggesting that personality mediates the relationship between gender and FLA.

Our empirical study suggests that the adapted scale is reliable and valid. Furthermore, hypothesized relationships of FLA with emotionality, extraversion, and conscientiousness were supported. The remaining three dimensions of honesty/humility, agreeableness, and openness to experience were not found to be statistically significantly related to FLA. The three personality traits that were associated with FLA were found to almost completely mediate the relationship between gender and FLA. The findings of this study have implications for research and – given that we measured FLA outside of the classroom – have practical implications for formal contexts where English is used as foreign language.

In terms of research, this study makes two main contributions to the literature regarding emotional responses to using a non-native tongue. First, it makes a methodological contribution by introducing a reliable and validated short scale that can facilitate further (especially quantitative) research on emotional reactions to using a foreign language in professional, formal contexts. Using this scale, we reveal that not only language-learning students suffer from FLA, but also nonnative speakers in formal settings, thereby broadening the scope of application of FLA as a construct, and of the FLCAS/FLA-FS as a measurement instrument. Scholars in fields such as, for example, international business and human resource management may find it instructive to consider FLA in the contexts that they typically study. Our analysis also embeds the FLA-FS into its network with the general personality traits. The most important personality trait seems to be emotionality. This does not come as a surprise as emotionality includes trait anxiety, which one would expect to be related to FLA. Note, however, that as part of our tests of discriminant validity we were able to show that – consistent with previous research on foreign language classroom anxiety (e. g., Horwitz et al. 1986; Horwitz 2001; MacIntyre and Gardner 1991) – this trait anxiety is psychometrically distinct from FLA. As a second personality dimensions substantially but much less related to FLA, we identify conscientiousness. The underlying intuition is that conscientiousness is related to more negative and more emotional responses to errors. These errors are more likely when speaking a foreign language. Consistent with the intuition that extraverted people are less likely to feel threatened by being exposed within a group, we also find that extraversion is significantly negatively related to FLA. Interestingly, however, the effect of extraversion is the smallest among the three statistically significant effects.

Note that the FLA-FS scale proposed in this study is a general measure for a specific type of context (a formal, public setting), but independent of the particular (type of) audience: For example, an individual may develop a different level of FLA depending on whether an audience consists primarily of native speakers or other non-native speakers of the foreign language. Here, we explicitly decided against specifying the type of interlocutors in terms of their language competency because in many formal and business settings for which we propose this short scale, the audience/group of interlocutors is likely to consist of a mix of native and non-native-speakers of the foreign language, the latter with varying levels of proficiency.

Moreover, the directionality of the influence may not always be clear. For example, an audience of native interlocutors or listeners may, on the one hand, spot the nonnative speaker's mistakes more easily, but may also, on the other hand, be more forgiving of these mistakes. In contrast, a group a fellow nonnative speakers may evaluate a public speech in the foreign language particularly harshly, giving rise to even higher levels of FLA. Our approach allowed us to keep the scale fairly general in terms of scope of application. Of course, it implies that we cannot derive results on how FLA depends on the audience. Future research that addresses a dependency of FLA on the audience could, therefore, use our scale as point of departure and adjust it accordingly in the framing text that precedes the items to be assessed.

Second, this study adds to prior research on emotional responses to using a nonnative language by analyzing the relationship between gender and FLA and, especially, FLA outside the foreign language classroom (e. g., Dewaele et al. 2008; Guntzviller et al. 2011; Neeley 2013; Neeley et al. 2012; Tenzer and Pudelko 2015). While prior research has consistently documented gender differences in language use (for a review, see, e. g., Mulac, Bradac, and Gibbons 2001; but see also Reid, Keerie, and Palomares 2003), research into the relationship between gender and FLA has yielded inconclusive results. Some studies find women to experience less FLA than men (Campbell and Shaw 1994), others document the opposite (Arnaiz and Guillén 2012; Elkhafaifi 2005; Machida 2001), and yet others report that no significant gender differences in FLA could be traced (Matsuda and Gobel 2004). We contribute to this research by focusing on FLA outside the foreign language learning setting, thereby addressing different anxiety-provoking situations,[5] and by combining gender- and personality-oriented perspectives on FLA to propose a mediation of the gender-FLA relationship by personality. In investigating gender differences in FLA-FS, we statistically control for gender differences that might stem purely from sex differences that derive from the language classroom (and affect FLA through their effects on foreign language proficiency).When controlling for foreign language proficiency, the gender difference in FLA reduces, but still remains significant.

The gender difference in FLA (females experiencing higher FLA-FS; see also, e. g., Machida 2001) disappears (in those formal contexts studied here) when personality, in general, and the personality traits of emotionality, conscientiousness, and extraversion, in particular, are taken into account. These personality dimensions almost completely *mediate* the relationship between gender and FLA – highly emotional and conscientious persons and introverts show higher levels of FLA (related, see, e. g., Dewaele 2013; Gregersen and Horwitz 2002), and females' higher emotionality and conscientiousness, and lower extraversion explain their higher FLA-FS. Thus, in our data, almost all gender difference in FLA can be explained by gender differences in basic personality traits. In terms of effect sizes, we find that the majority of the explanation of the gender effect is based on gender differences in emotionality and, to a smaller extent, in conscientiousness. The indirect effect of gender on FLA through extraversion is statistically significant, but given its very

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[5] Our scale does not capture anxiety arousal in informal contexts (e. g., chatting on the internet with a nonnative friend), but addresses situations where a person is asked to talk/listen in a foreign language where important issues are at stake.

small effect size, i. e. being about 15 percent of the size of the effect through emotionality, this last indirect effect is likely to be practically less relevant.

In practical terms, increasing numbers of top managers as well as mid-level managers and employees without managerial responsibilities are required to use languages other than their mother tongue in their day-to-day work. In large multinational corporations, this is frequently due to a company-wide common corporate language mandate – mostly imposing English. Qualitative and anecdotal evidence (e. g., Neeley 2013) shows that the introduction of a common corporate language often causes a whole range of adverse side effects associated with nonnative speakers' *emotional* reactions. These reactions include, generally, negative social comparisons, adverse psychophysiological symptoms, and avoidance behaviors (e. g., Machida 2001). In a business context, this may be reflected in a heightened anxiety to express one's opinion or ask questions, for example in meetings, in the foreign language, for fear of making mistakes, being perceived as less competent, or being negatively evaluated in general, physical or mental withdrawal from discussions, perceived loss of status, and so on. Such negative emotional responses may also give rise to or aggravate potential conflicts in multinational organizations and multilingual teams, and obstruct effective leadership, both on the part of nonnative speaking leaders as well as on that of their followers in organizations and teams (e. g., Tenzer and Pudelko 2015). Overall, subjectively perceived anxiety resulting from the (mandated) use of a foreign language in business settings – FLA, as captured by the short scale we suggest – appears to potentially impact organizational members' behavior and decision-making in multinational corporations in many, partly subtle, and often adverse ways.

Our study offers novel insights into what types of persons (in terms of gender and personality) may be most susceptible to experiencing these negative effects (given the same objective levels of language proficiency). In so doing, our results, primarily, allow for a more targeted approach in HRM to identify those individuals who are most prone to develop FLA and suffer from its adverse side effects. The so identified persons may benefit from specific support to address and reduce their FLA – beyond simply improving their language proficiency, as language skills (or a lack thereof) only constitute a (small) part of the issue. In terms of identifying these individuals, our findings imply that team leaders, superiors and others involved in supporting and evaluating foreign language users' communication in organizations need to resist the temptation to regard gender as a simple proxy for gauging a person's susceptibility to FLA. Such an approach might lead to male nonnative speakers with certain personality traits receiving too little attention in their efforts to overcome FLA. In addition, addressing FLA in women may be more effective if the focus was not so much on gender as such, but on the specific personality traits that are associated with higher levels of FLA. In terms of personality traits, this study's findings show that, in particular, individuals who are highly perfectionist, emotional, and introvert are susceptible to FLA, and should receive tailor-made training in this respect.

In providing such support, what measures might firms as well as organizations involved in business education and professional trainings offer in order to reduce FLA of highly affected individuals? Our findings show (in line with prior research; see, e. g., Casado and Dereshiwsky 2001) that attempting to reduce FLA (and its

potential adverse side effects) by raising *objective* foreign language proficiency is likely to be insufficient. What needs to be raised is nonnative speakers' *self-perceived* competence in the foreign language and their *self-confidence* (e. g., Dewaele et al. 2008).[6] Therefore, HRM departments may support high-FLA members by offering immersion and intervention programs in order to increase confidence issues (including, for example, multilingual role plays) in order to reduce FLA.

Regarding the efforts of line managers, based on our findings, we strongly support the recommendations suggested by Tenzer and Pudelko (2015) on business leaders' strategies to actively address language-induced anxieties. Specifically, such an approach should include awareness on the part of line managers of the issue of FLA, and acknowledgment that even high proficiency speakers may be adversely affected. Supervisors, colleagues, HR personnel, teachers and trainers should put themselves regularly in the position of individuals who may be prone to FLA – even though they may not voice these emotions directly – and from this perspective offer support and appreciation for the efforts undertaken. Concrete measures may further include deliberate allocation of speaking time to these individual (e. g., in team meetings or language trainings), extra communication to facilitate understanding on their part, and the use of humor and joking in order to redirect attention to more positive, less anxiety-related emotions (see, e. g., Tenzer and Pudelko 2015).

We would suggest that these considerations are particularly relevant in the following organizational areas. The most obvious domain may be expatriate management and training, given that FLA likely constitutes an antecedent to (self-) selection into international working contexts such as expatriate assignments. Employees prone to FLA are presumably less likely to apply for or accept such assignments. This may also weaken their career prospects, an issue that we elaborate upon below. The specific personality traits that are positively related to FLA – i. e., emotionality, conscientiousness, and introversion – should hence receive particular attention in language training programs within organizations when they prepare employees and managers for their assignments abroad. However, given increasing globalization, and the need for ever larger numbers of organizational members to communicate across country and language barriers, "regular" employees may be affected as well (for example, in multilingual teams).

Generally, to the extent that performance in a foreign language (e. g., English as common corporate language – whether as an expat or as a regular employee) affects career development, negative effects of FLA may particularly hamper promotion opportunities and career prospects of highly emotional, conscientious, and introvert individuals. These are traits on which women tend to score particularly high, implying for example, that firms' equal opportunity efforts may be thwarted. Their comparatively high FLA may induce individuals with these personality traits to succumb to withdrawal, isolation, self-degradation or even resignation from any efforts to be promoted. The resulting behavior (e. g., withdrawal in team discussions; e. g., Neeley 2013) is likely to damage their worthiness for promotion in the eyes of

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[6] Interestingly, prior foreign language learning experience with other languages is not necessarily helpful either (e. g., Machida 2001) and a person's FLA (experienced in various foreign languages) appears to be highly correlated across various languages (e. g., Dewaele 2007).

colleagues and supervisors, who, in turn, are less likely to offer such prospects of promotion to them. In addition, from an organizational viewpoint, it appears that in particular those types of individuals (e. g., highly conscientious) that the organization might wish to encourage to contribute to teamwork, to accept expat assignments and so on, are most likely to be hampered by FLA in their work activities – to the detriment of organizational processes and outcomes.

5.2 Limitations

This study uses cross-sectional self-reported data. We believe that subjective self-reported perceptions of language proficiency and related anxiety rather than objective or third-party judgments of language proficiency and anxiety are relevant for individuals' responses to foreign language contexts (e. g., Neeley 2013; Tenzer and Pudelko 2015). Using such self-reported data, therefore, seems appropriate. Furthermore, as an experimental approach related to gender and personality – that is, manipulating these variables – is by these variables' very nature impossible, we are bound to rely on correlational data. Any causal interpretation of observed correlations can, if at all causally interpreted, only rest on theoretical considerations (Cohen et al. 2003). Based on observing gender as a clearly exogenous variable and given that personality is widely being viewed as fairly consistent (although not immutable) across time and age, especially adult lifespan (e. g., McCrae and Costa 1999; Roberts and DelVeccio 2000), we further believe that concerns regarding reverse causality are at best minor for this study.

More salient than reverse causality are concerns regarding possible biases due to common-method variance (Podsakoff et al. 2003). The threat of common-method variance would be especially salient for the relationship between personality and FLA, because both are measured based on Likert scales. While this could inflate the observed correlation between personality measures and FLA, it should inflate to a lesser degree the relationship between (observable) gender and FLA, and the degree to which personality mediates this relationship. Furthermore, by statistically controlling for self-reported proficiency, we partial out relationships that are possibly created through person-specific tendencies to either gravitate towards conservative or excessively positive or negative self-reporting – for example, males consistently exaggerating their proficiency, and understating their emotionality and anxiety.

Another limitation is the focus on English as foreign language, and the use of a sample of Dutch respondents. While we consider this a plausible and relevant choice, given that English is widely used across the globe and in view of ample evidence that English as foreign language is useful for numerous contexts, future research could explore whether or not similar results prevail for foreign languages other than English, as well as for speakers of a native tongues other than Dutch. Differences may result, for instance, from gender roles differing across cultures and societies. In Arabic cultures, for example, women are often not seen as equal to men. Consequently, they might show a general insecurity about communicating, and might hence be more hesitant to express themselves in formal settings in general, and in a foreign language in particular. In societies in which gender roles are viewed as

more similar, such factors are likely to play less of a role. Overall, these differences, unrelated to FLA as such, may influence findings on gender differences in FLA.

Furthermore, the subject pool consisted of young adults who were enrolled as first-year students in a Business BSc study program. The most important difference between students and working adults is the scope of their experience (Bono and McNamara 2011). For our research setting, work and life experience is not a factor required for our theory to hold; in contrast, such experiences could even introduce problems of reverse causality (see Bönte, Procher, and Urbig 2016, for a discussion of the potentially confounding effects of prior (work) experience in another research context). For this reason, and given that one aim of this study was to extend the scope of application of a scale similar to the original FLCAS beyond the language learning classroom, using students and framing a context that extends beyond foreign language learning (and even beyond educational settings), our research design implies an appropriate choice. Future research should probe samples and contexts that are even further removed from the classic test-bed of the FLCAS. In addition, future follow-up studies could investigate the identified gender-personality-FLA nexus in other types of settings. The generality of our scale should facilitate this sort of future research.

Appendix

Adapted Measure of Foreign Language Anxiety When Using a Foreign Language (FLA-FS) – English Version

To answer the following questions, imagine you are participating in an important meeting/public discussion that takes place in English. To communicate with the rest of the participants, you have to use a foreign language. Now, please evaluate the following items on a scale from 1 = I strongly disagree to 7 = I fully agree:

1. I feel overwhelmed by the number of rules you have to learn to speak English.
2. I can feel my heart pounding when I'm going to be called on in a meeting in English.
3. I am afraid that many people will laugh at me when I speak English.
4. I get nervous and confused when I am speaking English.
5. I get nervous when I don't understand every word persons who have power on me say to me in English.
6. I get nervous when persons who have power on me ask questions in English which I haven't prepared in advance.

7. When interacting in English, I can get so nervous I forget things I know.
8. I am afraid that people above me are ready to correct every mistake I make when speaking English.
9. I don't worry about making mistakes when I interact in English.
10. I keep thinking that many other people are better in English than I am.

References

Arnaiz, Patricia, and Félix Guillén. 2012. Foreign language anxiety in a Spanish university setting: interpersonal differences. *Revista de Psicodidáctica* 17(1):5–26.

Ashton, Michael C., and Lee Kibeom. 2001. A theoretical basis for the major dimensions of personality. *European Journal of Personality* 15(5):327–353.

Ashton, Michael C., Lee Kibeom, and Reinout E. de Vries. 2014. The HEXACO honesty-humility, agreeableness, and emotionality factors: a review of research and theory. *Personality and Social Psychology Review* 18(2):139–152.

Baker, Susan C., and Peter D. MacIntyre. 2000. The role of gender and immersion in communication and second language orientations. *Language Learning* 50(2):311–341.

Bönte, Werner, Vivien D. Procher, and Diemo Urbig. 2016. Biology and selection into entrepreneurship: the relevance of prenatal testosterone exposure. *Entrepreneurship, Theory & Practice.*. doi:10.1111/etap.12165.

Bono, Joyce E., and Gerry McNamara. 2011. Publishing in AMJ – part 2: research designs. *Academy of Management Journal* 54(4):657–660.

Brown, James D., Gordon Robson, and Patrick R. Rosenkjar. 2001. Personality, motivation, anxiety, strategies, and language proficiency of Japanese students. In *Motivation and second language acquisition*, ed. Zoltán Dornyei, Richard W. Schmidt, 361–398. Honolulu: University of Hawaii.

Campbell, Christine M., and Victor M. Shaw. 1994. Language anxiety and gender differences in adult second language learners: exploring the relationship. In *Faces in a crowd: the individual learner in multi-section courses*, ed. Carol A. Klee, 47–80. Boston: Heinle and Heinle.

Casado, Matt A., and Mary I. Dereshiwsky. 2001. Foreign language anxiety of university students. *College Student Journal* 35(4):539–549.

Chen, I.-J., and Chi-Cheng Chang. 2009. Cognitive load theory: an empirical study of anxiety and task performance in language learning. *Electronic Journal of Research in Educational Psychology* 7:729–746.

Cohen, Jacob, Patricia Cohen, Stephan G. West, and Leona S. Aiken. 2003. *Applied multiple regression/correlation analysis for the behavioral sciences*, 3rd edn., Mahwah: Lawrence Erlbaum Associates.

Costa, Paul T. Jr., and Robert R. McCrae. 1992. *Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI) professional manual*. Odessa: Psychological Assessment Resources.

Costa Jr., Paul T., Antonio Terracciano, and Robert R. McCrae. 2001. Gender differences in personality traits across cultures: robust and surprising findings. *Journal of Personality and Social Psychology* 81(2):322–331.

Houwer, Annick de. 1998. Taalontwikkeling bij meertalige kinderen. In *Handboek Stem-, Spraak-, en Taalpathologie*, ed. Herrman F.M. Peters, Roelien Bastiaanse, John van Borsel, Philippe H.O. Dejonckere, Kino Jansonius-Schultheiss, Sjoeke van der Meulen, Ben J.E. Mondelaers. Houten: Bohn Stafleu Van Loghum.

Dewaele, Jean-Marc. 2002. Psychological and sociodemographic correlates of communicative anxiety in L2 and L3 production. *International Journal of Bilingualism* 6:23–39.

Dewaele, Jean-Marc. 2007. The effect of multilingualism and socio-situational factors on communicative anxiety and foreign language anxiety of mature language learners. *International Journal of Bilingualism* 11(4):391–410.

Dewaele, Jean-Marc. 2013. The link between foreign language classroom anxiety and psychoticism, extraversion, and neuroticism among adult bi- and multilinguals. *Modern Language Journal* 97(3):670–684.

Dewaele, Jean-Marc, and Tsui S. Ip. 2013. The link between foreign language classroom anxiety, second language tolerance of ambiguity and self-rated english proficiency among Chinese learners. *Studies in Second Language Learning and Teaching* 3(1):47–66.

Dewaele, Jean-Marie, Konstantin V. Petrides, and Adrian Furnham. 2008. The effects of trait emotional intelligence and sociobiographical variables on communicative anxiety and foreign language anxiety among adult multilinguals. *Language Learning* 58(4):911–960.

DeYoung, Colin G., Lena C. Quilty, and Jordan B. Peterson. 2007. Between facets and domains: 10 aspects of the big five. *Journal of Personality and Social Psychology* 93(5):880–896.

Digman, John M. 1990. Personality structure: emergence of the five-factor model. *Annual Review Psychology* 41:417–440.

Elkhafaifi, Hussein. 2005. Listening comprehension and anxiety in the Arabic language classroom. *Modern Language Journal* 89:206–220.

Eysenck, Hans J., and Sybil B.G. Eysenck. 1975. *Manual of the Eysenck personality questionnaire*. London: Hodder and Stoughton.

Feingold, Alan 1994. Gender differences in personality: a meta-analysis. *Psychological Bulletin* 116(3):429–456.

Gardner, Robert C., Paul F. Tremblay, and Anne-Marie Masgoret. 1997. Towards a full model of second language learning: an empirical investigation. *Modern Language Journal* 81:344–362.

Ghapanchi, Zargham, Gholam H. Khajavy, and Seyyedeh F. Asadpour. 2011. L2 motivation and personality as predictors of the second language proficiency: role of the big five traits and L2 motivational self-system. *Canadian Social Science* 7(6):148–155.

Gregersen, Tammy, and Elaine K. Horwitz. 2002. Language learning and perfectionism: anxious and non-anxious language learners' reactions to their own oral performance. *Modern Language Journal* 86:562–570.

Guntzviller, Lisa M., Jakob D. Jensen, Andy J. King, and La.Shara.A. Davis. 2011. The foreign language anxiety in a medical office scale: developing and validating a measurement tool for Spanish-speaking individual. *Journal of Health Communication* 16(8):849–869.

Harzing, Anne-Wil. 2006. Response styles in cross-national mail survey research: a 26-country study. *International Journal of Cross Cultural Management* 6(2):243–266.

Hayton, James C., David G. Allen, and Vida Scarpello. 2004. Factor retention decisions in exploratory factor analysis: a tutorial on parallel analysis. *Organizational Research Methods* 7:191–205.

Hernandez, Arturo E., and Ping Li. 2007. Age of acquisition: Its neural and computational mechanisms. *Psychological Bulletin* 133(4):638–650.

Horwitz, Elaine K. 2001. Language anxiety and achievement. *Annual Review of Applied Linguistics* 21:112–126.

Horwitz, Elaine K. 2010. Foreign and second language anxiety. *Language Teaching* 43(2):154–167.

Horwitz, Elaine K., Michael B. Horwitz, and Joann Cope. 1986. Foreign language classroom anxiety. *Modern Language Journal* 70:125–132.

Horwitz, Elaine K., Michael B. Horwitz, and Joann Cope. 1991. Foreign language classroom anxiety. In *Language anxiety: from theory and research to classroom implications*, ed. Elaine K. Horwitz, Dolly J. Young, 27–39. Englewood Cliffs: Prentice Hall.

Inglehart, Ronald, Norris Pippa, and Christian Welzel. 2002. Gender equality and democracy. *Comparative Sociology* 1(3):321–345.

Lee, Kibeom, and Michael C. Ashton. 2004. Psychometric properties of the HEXACO personality inventory. *Multivariate Behavioral Research* 39:329–358.

Lee, Kibeom, and Michael C. Ashton. 2005. Psychopathy, machiavellianism, and narcissism in the five-factor model and the HEXACO model of personality structure. *Personality and Individual Differences* 38:1571–1582.

Lynn, Richard, and Terence Martin. 1997. Gender differences in extraversion, neuroticism, and psychoticism in 37 nations. *Journal of Social Psychology* 137(3):369–373.

Machida, Sayuki. 2001. Anxiety in Japanese-language class oral examinations. *Sekai no Nihongo Kyoiku* 11:115–138.

MacIntyre, P.D. 1995. How does anxiety affect second language learning? A reply to Sparks and Ganschow. *Modern Language Journal* 79:90–99.

MacIntyre, Peter D. 1999. Language anxiety: a review of the research for language teachers. In *Affect in foreign language and second language learning*, ed. Dolly J. Young, 24–45. Boston: McGraw-Hill.

MacIntyre, Peter D. 2007. Willingness to communicate in the second language: understanding the decision to speak as a volitional process. *Modern Language Journal* 9(4):564–576.

MacIntyre, Peter D., Susan C. Baker, Richard Clément, and Leslie A. Donovan. 2002. Sex and age effects on willingness to communicate, anxiety, perceived competence, and L2 motivation among junior high school French immersion students. *Language Learning* 52(3):537–564.

MacIntyre, Peter D., and Catherine Charos. 1996. Personality, attitudes and affect as predictors of second language communication. *Journal of Language and Social Psychology* 15:3–26.

MacIntyre, Peter D., and Robert C. Gardner. 1994. The subtle effects of language anxiety on cognitive processing in the second language. *Language Learning* 44:283–305.

MacIntyre, Peter D., and Robert C. Gardner. 1991. Methods and results in the study of anxiety and language learning: a review of the literature. *Language Learning* 41:85–117.

Matsuda, Sae, and Peter Gobel. 2004. Anxiety and predictors of performance in the foreign language class-room, system: an international journal of educational technology and. *Applied Linguistics* 32:21–36.

McCrae, R.R., and Paul T. Costa Jr. 1999. A five-factor theory of personality. In *Handbook of personality: theory and research*, 2nd edn., ed. Lawrence A. Pervin, Oliver P. John, 139–153. New York: Guilford Press.

McCrae, Robert R., and Oliver P. John. 1992. An introduction to the five-factor model and its applications. *Journal of Personality* 60(2):175–215.

Mejías, Hugo, Ronald L. Applebaum, Susan J. Applebaum, and Robert T. Trotter. 1991. Oral communication apprehension and hispanics: an exploration of oral communication apprehension among Mexican American students in Texas. In *Language anxiety: from theory and research to classroom implications*, ed. Elaine K. Horwitz, Dolly J. Young, 87–97. Englewood Cliffs: Prentice Hall.

Mulac, Anthony, James J. Bradac, and Pamela Gibbons. 2001. Empirical support for the gender-as-culture hypothesis: an intercultural analysis of male/female language differences. *Human Communication Research* 27:121–152.

Müller, Julia, and Christiane Schwieren. 2012. Can personality explain what is underlying women's unwillingness to compete? *Journal of Economic Psychology* 33:448–460.

Myers, Isabel B., and Katherine Briggs. 1976. *The Myers-Briggs type indicator-form, G*. Palo Alto: Consulting Psychologists Press.

Neeley, Tsedal B. 2013. Language matters: status loss and achieved status distinctions in global organizations. *Organization Science* 24(2):476–497.

Neeley, Tsedal B., Pamela J. Hinds, and Catherine D. Cramton. 2012. The (un) hidden turmoil of language in global collaboration. *Organizational Dynamics* 41(3):236–244.

Onwuegbuzie, Anthony J., Phillip Bailey, and Christine E. Daley. 1999. Factors associated with foreign language anxiety. *Applied Psycholinguistics* 20:217–239.

Podsakoff, Philip M., Scott B. MacKenzie, Lee Jeong-Yeon, and Nathan P. Podsakoff. 2003. Common method bias in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology* 88:879–903.

Preacher, Kristopher J., and Andrew F. Hayes. 2008. Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavioral Research Methods* 40:879–891.

Reid, Scott A., Natasha Keerie, and Nicholas A. Palomares. 2003. Language, gender salience, and social influence. *Journal of Language and Social Psychology* 22(2):210–233.

Roberts, Brent W., and Wendy F. DelVecchio. 2000. The rank-order consistency of personality from childhood to old age: a quantitative review of longitudinal studies. *Psychological Bulletin* 126:3–25.

Roggeband, Conny, and Mieke Verloo. 2007. Dutch women are liberated, migrant women are a problem: the evolution of policy frames on gender and migration in the Netherlands, 1995–2005. *Social Policy & Administration,* 41(3):271–288.

Scovel, Thomas. 1978. The effect of affect on foreign language learning: a review of the anxiety research. *Language Learning* 28(1):129–142.

Schmitt, David P., Anu Realo, Martin Voracek, and Jüri Allik. 2008. Why can't a man be more like a woman?, Sex differences in big five personality traits across 55 cultures. *Journal of Personality and Social Psychology* 94(1):168–182.

Sparks, Richard L., Jon Patton, Leonore Ganschow, and Nancy Humbach. 2009. Long-term relationships among early first language skills, second language aptitude, second language affect, and later second language proficiency. *Applied Psycholinguistics* 30:725–755.

Tenzer, Helene, and Markus Pudelko. 2015. Leading across language barriers: managing language-induced emotions in multilingual teams. *The Leadership Quarterly* 26(4):606–625. doi:10.1016/j.leaqua.2015.05.006.

Urbig, Diemo, Siri Terjesen, Vivien Procher, Katrin Muehlfeld, and Arjen van Witteloostuijn. 2015. Come on and take a free ride: Contributing to public goods in native and foreign language settings. *Academy of Management Learning & Education.* doi:10.5465/amle.2014.0338.

Vries, Reinout E. de, Kibeom Lee, and Michael C. Ashton. 2008. The Dutch HEXACO personality inventory: Psychometric properties, self–other agreement, and relations with psychopathy among low and high acquaintanceship dyads. Journal of Personality Assessment 90(2):142–151.

Wang, Tianjian. 2010. Speaking anxiety: more of a function of personality than language achievement. *Chinese Journal of Applied Linguistics* 33(5):95–109.