# Bilingualism in the real world: How proficiency, emotion and personality in a second language impact communication in clinical and legal settings

## Abstract

The field of psycholinguistics has long documented how communicating in a second language (L2) can be more challenging than communicating in a first language (L1) because of factors such as low L2 proficiency, accent, and L1 vs. L2 differences in the appreciation of semantic or pragmatic nuance (e.g., the emotional connotations or words). Moreover, given that language performance is a primary medium through which people both express their personality and evaluate the personality characteristics of others, these differences in bilingual language processing have important consequences for real-world social interaction. Accordingly, when bilinguals interact with others in their L2, they stand the chance of being misunderstood or misjudged partly because of L1 vs. L2 communicative challenges, which can have high-stakes consequences depending on the particular social setting in question. In this paper, we selectively review the psycholinguistic literature pertaining to L2 proficiency, emotion, and personality, and apply this knowledge to how communicative effectiveness may be reduced in real-world medical and legal settings. We conclude that increased awareness of these phenomena, and the reasons behind them, can help professionals in the health and legal systems more effectively interact with non-native speakers. We hope that such increased awareness will lead to the provision of higher quality services to bilingual people.

**Keywords: bilingualism, emotion, personality, clinical and legal settings**

## Public significance statement

The significance of this paper to the general public is that it draws attention to several communication challenges that bilingual people face in real-world medical and legal settings. These challenges include low L2 proficiency, accent, and the appreciation of semantic or pragmatic nuance. Our ultimate goal is to increase awareness about these issues in a manner that will lead to the provision of higher quality medical and legal services to bilingual people.

Imagine the following scenario: You have recently moved to a new country; whose language you are still acquiring. One afternoon, you absent-mindedly speed through a red light, which causes an accident with another car. You are injured, and when both the police and ambulance arrive they ask you legal and medical questions in your somewhat shaky second language. How would you feel in this situation? How would others perceive you in this situation, and how would that in turn impact your ability to cope in the moment? Will conversations with the police and medical personnel be maximally effective in this scenario? Scenarios like this are difficult for all people, however, they may be especially difficult for bilinguals operating in their second language (L2), depending on how comfortable they are in using their L2, and also how others perceive them when doing so.

Here, we argue that the effectiveness of real world bilingual communication is jointly affected by proficiency, emotionality and personality in one's L2 -- three dominant areas of investigation within the bilingual language processing literature. Thus, our goal in this paper is to extend these three areas of investigation to two specific real-world contexts, medical and legal settings, to call more attention to the unique challenges faced by bilinguals in daily life. In doing so, we emphasize how individual differences in performance among these factors can lead to biased and misleading impressions of bilinguals, which can have a stigmatizing effect. We propose that educational programs and system level changes in medical and legal contexts have a high likelihood of improving communication for bilingual individuals in these areas by reducing such biases, and helping health and law practitioners facilitate communication with bilingual individuals. The effectiveness of such solutions warrants further careful study.

**Relevant domains of bilingualism research**

In this section, we survey three sources of variability among bilingual individuals that may contribute to erroneous impressions of bilingual people in real-life situations involving legal

or medical professionals. We focus on L2-related variability in proficiency, emotion and personality, specifically because of the potential importance of these three factors in generating impressions about people. We hope that a clearer understanding of how these factors may differ in L1 and L2 communication will lead to a clearer understanding of how interpersonal misperceptions may arise.

**L2 Proficiency.** Being bilingual is a fundamentally different experience from being monolingual, and moreover, no one bilingual is the same as another. For the purpose of this paper, we broadly define a bilingual as someone who knows and uses more than one language, encompassing the full spectrums of age of acquisition and degree of fluency (in the spirit of Grosjean's definition, 2010, p.4). We choose this broad definition because we believe in the utility of investigating the varied implications of being located along different points of the bilingual spectrum in terms of L2 proficiency.

In recent years, increasing attention has been given to individual differences among bilinguals. Bilinguals vary on dimensions like L2 proficiency, age of L2 acquisition (Baum & Titone, 2014; Bialystok, Craik, & Luk, 2008), degree of L2 proficiency and fluency (Francis, Tokowicz, & Kroll, 2014; Gollan, Starr, & Ferreira, 2014) and context of L2 learning (e.g., at home vs. via instruction in a class) (de Bruin, Bak, & Della Sala, 2015; D. W. Green, 2011). Bilinguals also vary with respect to the patterns with which they use their languages (Grosjean, 1985, 2012). For example, a bilingual individual may use both known languages across all spheres of life, one language at work and another at home, both languages with equal or unequal frequency, or mix the two languages frequently, or not at all, etc. In addition, socio-cultural factors, such as the social status of languages, could play a role in shaping the way bilinguals use their languages (see Baum & Titone, 2014). All of these factors can influence the daily communication of bilinguals in meaningful ways.

In addition, these interdependent sources of bilingual variability collectively give a global impression of language proficiency, that is, the degree to which a person knows a language. In principle, the higher the proficiency, the more likely the individual is to get by in their L2 and achieve successful communication. Even with high L2 proficiency, and therefore seemingly high communicative competence, certain real-world situations may prove challenging. For example, higher proficiency typically leads to a larger vocabulary in the target language (Hellman, 2011), nevertheless, it is still possible for a highly proficient L2 speaker to lack L2 vocabulary for a specific content area due to lack of experience using their L2 in that context. This would cause speakers to substitute description for unknown words or perhaps use gestures in order to aid discourse (Gregersen, 2009; Kasper & Kellerman, 2014). Accordingly, if the driver in our opening scenario is a scientist living in an English-speaking country (but is not a native English speaker), she may be highly proficient in English with respect to science vocabulary, but have limited experience with vocabulary pertaining to the areas of law and medicine.

Thus, high L2 proficiency can also be misleading in certain circumstances. That is, the police officer or medic interacting with the highly proficient L2 speaker in the accident scenario may expect the driver to fully understand everything that is said to her, and to be able to use the appropriate terms for the situation in L2. It may not occur to them that although she seems to know the language well, she may need further explanations of certain terms. In principle, for someone with low proficiency, the communication challenge is even greater. For a low proficiency L2 speaker in the accident scenario, important details are bound to be lost, which could have potentially serious legal and medical implications. On the one hand, there is some indication in the literature that perceived low proficiency can have a shielding effect against negative judgments by others. Specifically, non-native speakers displaying culturally inappropriate behaviour were judged more positively if they had low L2 fluency relative to those

with high L2 fluency (Molinsky, 2005; Molinsky & Perunovic, 2008). In the context of a job interview, this effect held for judgements related to inter-personal skills such as politeness but was reversed for judgements of professional skills (Molinsky, 2005). The shielding effect of low L2 fluency on negative judgments may or may not hold for interaction with health and law professionals. Regardless, the case remains that individuals with low proficiency are limited in their communication even if they are not judged as harshly in some ways.

Interestingly, the shielding effect may not preclude judgments based on cultural stereotypes that are cued by non-native speech. For example, Purnell et al. (1999) found that many listeners reported that they were able to determine someone's ethnicity after only hearing them say the word "hello" over a telephone based on their accent. This phenomenon, referred to as accent stereotyping, often leads to unfair treatment of L2 speakers in domains such as employment, housing or education. It seems then that L2 speakers, regardless of proficiency, are susceptible to misjudgements – they may be given leeway if they seem to struggle communicating in a second language, but they remain discriminated against on the basis of cultural considerations. Misperceptions of individuals with either low or high proficiency can also stem from emotionality and personality differences that may emerge when bilinguals function in their L1 or L2, a topic that is developed further in the next two sections.

**Emotionality.** Emotion is not necessarily processed the same way across all of a person's known languages (see a summary of recent studies in Table 1). Thus, in order to avoid biases about non-native speakers, and to better understand their perspective, we must also consider the ways in which emotion is processed in an L2. For example, in a large-scale introspective questionnaire study, a majority of bilingual participants judged the expression *I love you* as carrying the strongest emotional weight in their L1 (Dewaele, 2008). Emotional weight and emotional response to taboo and swear words, and childhood reprimands (e.g., "shame on

you!") were also found to be stronger in L1 compared to L2 in a study using a questionnaire (Dewaele, 2004), and also in a study using a more objective measure, namely, skin conductance response (Harris, Ayçiçeği, & Gleason, 2003). Brain imaging (ERPs and fMRI) similarly showed differing activation patterns in response to emotional words, compared to neutral ones, in L1 vs. L2 (P. Chen, Lin, Chen, Lu, & Guo, 2015). Collectively, these findings suggest that the L2 has a potentially weaker link to emotion than does L1.

However, a more complex picture of emotional impoverishment in an L2 emerges when factors such as L2 proficiency and age of L2 acquisition are considered. On the one hand, some studies have suggested that weaker emotionality is related to factors such as L2 proficiency and age of acquisition such that late L2 learners or those with lower L2 proficiency showed a weaker effect of emotion in L2 compared to L1 (Harris et al., 2003; Segalowitz, Trofimovich, Gatbonton, & Sokolovskaya, 2008). On the other hand, early L2 learners, or those with high L2 proficiency, showed comparable emotion processing in L1 and L2 in other studies (Conrad, Recio, & Jacobs, 2011; Eilola, Havelka, & Sharma, 2007; Ferré, García, Fraga, Sánchez-Casas, & Molero, 2010; Sutton, Altarriba, Gianico, & Basnight-Brown, 2007). One particularly interesting study of participants who had relatively higher L2 proficiency, used fMRI to test participants' brain activity while reading emotional and neutral passages from the *Harry Potter* book series. Brain activation patterns differed when reading all text passages in the L1 and L2, however, neural activity arising from text emotionality was similar across the L1 and L2 (Hsu, Jacobs, & Conrad, 2015). Thus, higher L2 proficiency and early age of L2 acquisition may lead to stronger emotional processing in the L2, in a manner that is comparable to the L1, although further research is warranted that directly assesses individuals across the proficiency (or age of acquisition) continuum. This is important because these constructs have a great deal of variability, thus making it difficult to compare across studies.

Studies that directly examine participants along the proficiency and age of acquisition continua point to the role of experience and L2 usage in shaping language emotionality (Degner, Doycheva, & Wentura, 2011; Dewaele, 2004, 2008, 2010; Harris, 2004; Räsänen & Pine, 2014). For example, Dewaele's questionnaire study had a large sample of participants who varied greatly across several dimensions. Language use and proficiency factors were more influential in judging the emotional weight of *I love you* than language learning history factors (Dewaele, 2008). Participants who judged *I love you* to be strongest in L2 were more likely to be frequent users of L2, and were also more likely to use the L2 in personal rather than formal settings. Bilinguals were also more likely to use L2 to express feelings if they learned L2 earlier in life, in a natural setting (e.g., at home), or if they had used their L2 frequently (Dewaele, 2010). Finally, participants rated the emotionality of swear words and taboo words in L2 as stronger if they had learned that language in a naturalistic setting (relative to an instructed setting) (Dewaele, 2004). Age of acquisition, self-rated proficiency, and frequency of language use were also predictive of the emotional strength of these words (Dewaele, 2004).

Studies that use more objective measures of emotionality support these findings, again, while directly comparing bilinguals who vary on proficiency, age of acquisition or use. For example, Degner et al. (2011) used an emotional priming task with French-German and German-French bilinguals living in Germany. They found that only the French-German bilinguals, who were completely immersed in L2, displayed an emotional priming effect in their L2 that was of the same magnitude as that found for L1. Moreover, skin conductance response data with Spanish-English bilinguals in the U.S. showed that early L2 learners reacted the same to taboo words and childhood reprimands in L1 and in L2. In contrast, late learners who began learning English in middle-late childhood, displayed larger skin conductance response to these expressions in L1 than in L2 (Harris, 2004). Similarly, Räsänen and Pine (2014) found that

emotionality had an effect on word memory in the L1 and L2 but not in the L3 for the same participants who had lower proficiency and frequency of use of L3 than L2.

**Table 1.** Studies that found different emotionality effects across speakers' languages, studies that found comparable emotionality effects across the language; and ambiguous results.

| Study | Method | Comments |
|---|---|---|
| Different emotional effect in L1 and Lx | | |
| Dewaele, 2004 | Web-based questionnaire (Dewaele & Pavlenko, 2001-2003) | The effect of a higher emotionality judgment score for emotional words in L1 compared to Lx was influenced by age of acquisition, proficiency, use and context of learning factors. |
| Dewaele, 2008 | Web-based questionnaire (Dewaele & Pavlenko, 2001-2003) | The effect of a higher emotionality judgment score for emotional words in L1 compared to Lx was influenced by language use and proficiency factors. |
| Dewaele, 2010 | Web-based questionnaire (Dewaele & Pavlenko, 2001-2003) | The effect of a higher emotionality judgment score for emotional words in L1 compared to Lx was influenced by age of acquisition, use and context of learning factors. |
| Harris et al. 2003 | Skin conductance | |
| Harris, 2004 | Skin conductance | The effect of a larger skin conductance response to emotional words in L1 compared to L2 was found in a group of late L2 learners (early L2 learners had a comparable response in L1 and L2). |
| Degnar et al. 2011 | Affective priming | The affective priming effect (facilitation) was found in L1 but not L2 in a group which was not immersed in L2. A group that was immersed in L2 showed the effect in both languages. |
| Räsänen & Pine, 2014 | Word recall | The effect of emotional words advantage was found in L1 and L2 but not L3 (which had lower proficiency and use). |
| Sheikh & Titone, 2016 | Eye-tracking | Reading times of L2 negative words were modulated by L2 proficiency; positive words were comparably read in the L1 and L2. |
| Chen et al. 2015 | ERP, fMRI | |
| Comparable emotional effect in L1 and Lx | | |
| Conrad et al. 2011 | ERP | |
| Eliola et al. 2007 | Emotional Stroop | |
| Ferre et al. 2010 | Word recall | |
| Sutton et al. 2007 | Emotional Stroop | |
| Ambiguous results | | |
| Hsu et al. 2015 | fMRI | |

Thus, factors such as L2 proficiency and age of acquisition seem to play a role in language emotionality, which may be tied to different patterns of language use across different emotionally-charged social contexts (Altarriba, 2003, 2008; Caldwell-Harris, 2015; Harris, Gleason, & Aycicegi, 2006). Accordingly, for a word to carry a strong affective sense, it may be necessary to have experienced this word during real-life, emotionally-charged situations (Segalowitz et al., 2008). This is further supported by the finding of an emotional processing advantage with positive but not negative words in L2, likely due to the different experiences people have with these word types in L2 (Sheikh & Titone, 2016)[1]. In sum, a bilingual's strong sense of emotionality in a non-native language may depend on particular experiences and not necessarily the learning or ability factors usually studied.

Critically for our purpose, which is to relate basic findings about bilingualism to real-world language and communicative effectiveness, individual differences in L2 emotionality mean that it is possible for two equally proficient L2 speakers to express and comprehend different degrees of emotionality in L2, depending on their individual experiences (Caldwell-Harris, 2015). Thus, in an example like the accident scenario presented at the outset of this paper, a bilingual individual may appear to others to be detached or to not understand the seriousness of the situation. They may also appear to have a muted reaction to supporting and comforting words. If such impressions are formed by law or health professionals intervening in an emergency, there could be consequences for communication over and above any other language barriers or cultural biases. This, in turn, may also contribute to an impression (either of oneself or of others) that

[1] The notion that emotional experiences play a crucial role in determining language emotionality is also evidenced by a stronger emotionality in L2 than L1 in bilinguals who have been completely immersed in L2 for a long time (Caldwell-Harris, Staroselsky, Smashnaya, & Vasilyeva, 2012; Dewaele, 2004). The increase in rich everyday experiences in L2, along with a decrease in such experiences in L1, are likely to tip the scale of emotional weight in favour of L2.

people have a different sense of self when using different languages (Pavlenko, 2006), a topic to which we now turn.

**Personality.** Bilinguals may seem different when they switch languages; personality researchers have long been interested in how language and its associated cultural cues may bring about such perceived changes in personality and whether these may be substantial changes in personality or the result of the speaker's familiarity with his interlocutor's cultural and linguistic expectations. Indeed, bilinguals often report feeling as though their self-image changes when speaking different languages, a phenomenon that led Pavlenko (2006) to investigate bilinguals' responses to open- ended questions about if, how and why they felt like different people when using different languages. Two main themes emerged from the responses. First, almost two-thirds of bilingual respondents indicated that they indeed experienced a change in self-image. Second, respondents reported feeling that the first language reflected ''real'' and ''natural'' aspects of their personality, whereas additional languages reflected ''fake'' and ''artificial'' aspects of their personality (Pavlenko, 2006). Similarly, Dewaele and Nakano (2013) also found a consistent shift in the way bilinguals perceived aspects of their own personality across their languages. Here, bilinguals perceived themselves as less logical, serious, and emotional and more inauthentic when using languages other than their L1.

While Pavlenko (2006) argued that bilinguals' personal accounts point towards an awareness of, and ability to frame their personalities based on a linguistic context, culture also undoubtedly plays an essential role in this phenomenon. Language is strongly tied to cultural norms and practices. Bilinguals' scores on psychological personality tests have been shown to differ according to the language in which the test was administered in a way that matched the respective culture (S. X. Chen & Bond, 2010; Ramírez-Esparza, Gosling, Benet-Martínez, Potter, & Pennebaker, 2006; Veltkamp, Recio, Jacobs, & Conrad, 2013).

Personality tests administered across different languages have also been used to investigate whether this tendency towards cultural conformity also applies to bilinguals' perception of others. For example, Chen and Bond (2010) found that Chinese-English bilinguals from Hong Kong perceived native speakers of English as higher on "typical" Western traits, such as extroversion, openness to experience, and assertiveness, but lower on the "typical" Eastern trait of restriction, as compared to native speakers of Chinese. Thus, bilingual experience altered the perspective of participants with regard to the same group of English speakers.

Thus, bilinguals experience shifts in personality expression and perspective as a result of learning and using a second language, and others may perceive them differently as well. However, such views may not mirror the self-perception of bilinguals but rather may be misperceptions of their personalities and abilities. This is particularly the case with low L2 proficiency individuals. Consider again the car accident scenario described earlier. If the driver has low L2 proficiency, making herself understood may require a lot of effort and compromise on choice of expression. Lower proficiency may also make it nearly impossible for her to pay attention to subtler cultural cues, let alone accurately presenting her personality. Researchers have identified a number of behaviours that often occur in low proficiency L2 speech. These include less talk overall and lower rate of speaking in response to questions, as well as a reduced ability to construct and sustain narratives (Young, 1995). Such attributes of the driver's speech may prompt the law and health professionals to form initial inaccurate impressions of the driver. Such misrepresentations may be worsened by cultural differences, such as norms on how to present oneself during a job interview. Molinsky (2005) had native speakers of English assess Russian speakers applying for jobs in the U.S. on a professional and personal dimension. Native speakers evaluated videos of a job interview where the interviewee had low or high proficiency in English and either acted culturally appropriately or committed many faux-pas. When an

interviewee was assessed on interpersonal dimensions, low fluency led the native speakers to have a less negative impression of culturally inappropriate behaviour. On the professional dimension, however, the effect was reversed. Native speakers judged low proficiency interviewees to be less competent and productive, despite knowing that the position they were interviewing for had no relation to language ability (Molinsky, 2005). These findings indicate that while limited proficiency may elicit sympathy, it may lead to damaging misjudgement of personality and ability.

Foreign accents, which are also associated with limited proficiency and present especially in late bilinguals, may lead to similar misconceptions. Oftentimes, accents are seen as indicators of language proficiency (Munro, 2003). As a result, many struggle with people making false conclusions about their personality, their abilities or their intellect based on their lack of fluency or heavy accent in an L2 (Munro, 2003). It has been found that accented speech can indeed take longer for a listener to process than native speech (Munro & Derwing, 1995), causing some listeners to be less patient with accented speakers. This can cause listeners to draw conclusions about the speaker based on the origin or the mere existence of an accent rather than the content of the utterance (Munro, 2003).

It appears then that using different languages is associated with different perceptions of the self, different culture-related behaviours and traits, as well as a different perception by and of others (summarized in Table 2). Such differences are bound to play a role in real life interactions and may lead to misunderstanding and misperceptions of non-native speakers. We now turn to look at how this may occur in clinical and legal settings.

**Table 2.** Studies that found differences in self-perception across languages, personality shifts when bilinguals were tested in different languages, bilinguals' personality as perceived by others, and how others are perceived by bilinguals.

| Study | Method |
|---|---|
| Different self-perception across languages | |
| Pavlenko, 2006 | Standardized questionnaire (open questions) (Dewaele & Pavlenko, 2001-2003) |
| Dewaele & Nakano 2013 | Questionnaire (non-standardized) |
| Bilinguals' personality shifts when tested in different languages | |
| Chen & Bond, 2010 | Big Five Inventory (standardized personality inventory) (John, 1990; John & Srivastava, 1999) |
| Ramirez-Esparza et al. 2006 | Big Five Inventory (standardized personality inventory) (John, 1990; John & Srivastava, 1999) |
| Veltkamp et al. 2013 | NEO–Five-Factor Personality Inventory (standardized) (Costa & McCrae, 1989, 1992) |
| Bilinguals' personality as perceived by others | |
| Molinsky, 2005 | Interview evaluation |
| Munro, 2003 | A review of real cases of discrimination based on accent |
| Perception of others by bilinguals | |
| Chen & Bond, 2010 | The Sino-American Person Perception Scale (standardized) (Yik & Bond, 1993) |

## The potential impact of bilingual variability in the real world

The way that bilinguals express themselves and experience life can differ greatly across their two languages. While linguistic challenges may complicate communication in L2 compared to L1, particularly in sensitive situations, communicative effectiveness can be potentially even more challenging due to impressions and judgments made by others. A bilingual individual in the accident scenario must interact with policemen and ambulance staff on the scene and potentially with hospital staff as well as lawyers and judges later on. To each of these interactions, a bilingual individual brings their unique communication abilities in L2. The way the communication manifests itself depends on the particular combination of language proficiency, degree of emotional distance and how the bilingual's personality is expressed and perceived. While there is no way to quantify the success of these interactions based on the fluid factors of

proficiency, emotionality and personality, it is possible to consider potential pitfalls and ways to address them in order to minimize miscommunication.

How may these factors come into play in various clinical and legal settings? In the next section, we explore research on bilinguals in clinical and legal settings and demonstrate how the proficiency, personality and emotion dimensions, and impressions they may give rise to, can meaningfully influence communication in these contexts.

**Clinical settings.** Considering the work reviewed above, it is clear that navigating a clinical scenario of any sort in one's non-native language can be challenging. First, even a highly proficient bilingual may lack specific vocabulary that is relevant to this setting and that alone compromises communication aimed at diagnosis and treatment. This is further complicated by the way a bilingual may be perceived due to proficiency, emotionality and personality in L2, in addition to potential cultural biases. Bilinguals stand the risk of missing out on emotional and cultural nuances communicated by a clinician and the chance of miscommunicating their concerns and questions. Most critically, they stand the risk of being misjudged, which can prove problematic for the resolution of health issues, as will be demonstrated below.

Unfortunately, very little work exists on language-related biases in health; however, the presence of cultural or racial biases in healthcare has been well documented (reviewed in Chapman, Kaatz, & Carnes, 2013). More importantly, in some cases, such biases have been linked to treatment patterns. For example, Green et al. (2007) found an implicit racial bias in physicians towards black patients with thrombosis, which correlated with a tendency to fail to treat their condition, compared to white patients. Hispanic and black patients were less likely to receive analgesia in emergency departments (Shah et al., 2015; Todd, Samaroo, & Hoffman, 1993). Interestingly, nurses were also found to have implicit race and class biases, although in this case such biases were not correlated with decision making (Haider et al., 2015).

While specifically language-based biases have not been studied directly in the health professions, multiple studies have shown adverse effects of language barriers on health outcomes in the general population (reviewed in Flores, 2005). For example, there is an interesting relationship between patient-experienced pain and patient-doctor interaction success. When patients estimated their physician's language skill as being high for their own preferred language, patients also reported experiencing less pain (Mustajoki, Forsén, & Kauppila, 2015). Similarly, Miner, Biros, Trainor, Hubbard and Beltram (2006) found that Native American individuals showed less of a pain decrease compared to other groups following an emergency department pain treatment. Interestingly, this was associated with the highest score of physicians' perception of symptom exaggeration, which may have stemmed from an erroneous personality judgement or a misunderstanding of emotions. It was also associated with a poor physician-patient interaction, as perceived by both patients and physicians. Though they did not assess language per se, the authors concluded that language discordance, among other factors, might hinder the patient-doctor communication in a way that leads to misperception of the patient's symptoms. It may reflect an underlying misunderstanding between the doctors and the patients related to emotional distance in L2. This study shows the potential for unsuccessful clinical interaction due to a language and culture mismatch, which may have led the patients to be viewed as less truthful. Considering the interpersonal communication challenges in L2 and the risk of biases, it is not surprising that patients perceive doctors' ability to communicate with them in their native language as a strong positive characteristic and have a preference for a doctor of the same ethnic origin (Perttula, Lowe, & Quon, 1999).

The challenge of communicating with patients in their non-native language(s) has also been studied from the perspective of health care providers. For example, physicians at a hospital in Toronto reported a high degree of apprehension when dealing with non-native speaker patients

in the context of emergency and internal medicine (Parsons, Baker, Smith-Gorvie, & Hudak, 2014). They were also concerned about their ability to perform ideal practice and regarding the way in which patient consent is achieved (Parsons et al., 2014). Similarly, in situations where doctors were the L2 speakers (and patients the L1 speakers), patients reported greater reluctance to follow the doctors' instructions, which was associated with higher pain and dissatisfaction with the service (Mustajoki et al., 2015). These findings suggest a difficulty in establishing a trusting and productive relationship between patients and doctors who do not share an L1.

Naturally, the expression of the self is even more central in mental health and psychotherapy (Martinovic & Altarriba, 2013), thus L1 vs. L2 differences in personality expression may be especially important. For example, a qualitative study by Bowker and Richards (2004) showed that psychotherapists working with proficient L2 clients were concerned about establishing a connection with, and feeling excessive distance when working with these clients. Some therapists reported anticipating difficulties developing rapport when clients spoke with foreign accents, and some were anxious about being able to communicate well with bilingual clients (Bowker & Richards, 2004). Such experiences may also be shared by other health practitioners (e.g., medical doctors) when encountering patients who are non-native speakers. Fortunately, the therapists included in the Bowker and Richards (2004) study were very aware of potential communication barriers, and made extra effort to be understood, which was likely to ultimately contribute to the establishment of good therapist-client rapport. Thus, clinicians' awareness of barriers and potential biases is part of the solution for communication challenges with non-native speakers in clinical settings. We return to this idea in the recommendation section below.

**Legal settings.** Similar to what has been found in health care settings, cultural and racial biases can also occur in legal settings, for example, involving police officers (Eberhardt, Purdie,

Goff, & Davies, 2004) and judges (Rachlinski, Johnson, Wistrich, & Guthrie, 2009). While language-based biases have not been studied directly in such settings, we know that bilinguals are disadvantaged in legal settings given the critical need to express specific ideas and nuances. Indeed, the real-world consequences of miscommunications or false judgements in legal situations, which can partially arise from reduced L2 proficiency or accented speech, may be hard to reverse given that legal testimony cannot be edited or clarified. Emotion can also be pivotal in legal settings, for example in the way it may signal (perhaps erroneously) a defendant's intentions. Thus, reduced L2 emotionality could lead to erroneous impressions within legal settings, a situation that may not be entirely remedied by the provision of translation services.

Initial communication barriers often happen during police interactions, as these are usually the first encounter with the justice system. Police cautions, known as Miranda warnings in the U.S., are an essential aspect of a fair trial. Therefore, the U.S. does not admit testimonies if the Miranda warning was given in English to a person who does not speak English well, as long as low L2 proficiency is obviously apparent to the court (Tiersma & Solan, 2005). Studies have used several measures of readability and comprehensibility to show that the typical wording of the U.S. Miranda Rights necessitates reading skills of an 8th grade student in order to achieve 50% comprehension, and of an 11th grade student to achieve 100% comprehension (Brière, 1978). Though the evaluation of reading level is meant to protect bilinguals, it requires that the legal system be capable of accurately assessing language abilities. As described above, even for individuals judged as proficient in the technical aspects of language, reduced emotionality and risk of producing false impressions from L2 communication still put bilinguals at a disadvantage. While translations of Miranda warnings have been offered, these are often delivered by police officers who claim to speak the relevant language. Thus, the potential for non-standardization in actual practice has given rise to many court appeals asserting that the translations used in

particular instances were biased or insufficient. The National Association of Judiciary Interpreters and Translators (NAJIT 2006) urges that the practice of having officers improvise to make themselves understood should be an exception, only "if the officer's foreign language skills were previously tested and documented, bilingual officers can conduct police business in a foreign language in emergency situations where no exchange of sensitive information is requested" (as cited in Berk-Seligson, 2009, p.13).

Translation is a common solution to language barriers in the legal system and is often used in courtroom testimony. However, ironically, this may result in a misrepresentation of individuals, similar to what happens when using an L2. That is, emotional nuances, cultural details and overall self-expression are being lost in the process of translating from one language to another. In the U.S., defendants with low English proficiency have the right to a free interpreter (*International covenant on civil and political rights, art. 14, para. 3f.*, 1966), where the act of translation is defined as a "process in which the interpreter acts as a mere conduit of words" (Morris, 1995, p.25). This also means that when interpreters are used in courtrooms, the official transcript records only the English utterances, so that the original utterances, in a language other than English, have no legal status and therefore are lost. As a result, personal factors such as prosodic tone of voice, body language, or choice of words, which are so crucial for high stakes communication, are potentially "lost in translation". For example, an analysis by Berk-Seligson (2009) suggests that the system often does not appreciate the crucial role an interpreter plays in controlling the flow of a testimony or other legal statements. Thus, global presentation style, known to play a significant role in legal rulings and to influence jurors and judges (Conley, O'Barr, Lind, & Erickson, 1978), is missing from transcripts of the mere linguistic content of speech during translation. For example, some reports suggest that when

translating witness testimonies, interpreters often leave out meaningful discourse markers, thus rendering the utterance less coherent (Hale, 2004).

The personality and emotions of a witness are not readily apparent through an interpreter, or in court transcripts. In U.S. courtroom interpreting, it is mandated that verbatim interpreting be used. This involves the interpreter speaking as if they were the non-native speaker, using the same personal pronouns used in the original statement (Haviland, 2003). The interpreter is unable to clarify potential cultural differences, which may lead to misrepresentation and confusion. Gumperz (2001) provides an example of a Native American defendant accused of having committed a violent crime, who remained silent in response to an accusation. Prosecutors interpreted his silence as consent, while among Native American communities it would be seen as a sign of disapproval. A court interpreter should be able to provide cultural interpretation in such cases in order to accurately reflect the personality and emotional state of a non-native speaker in a court, as these factors may be essential to a trial outcome. It would also help if law professionals knew more about the communication styles of the cultures they interact with in their work. The use of interpreters may be a necessity; however, the training they receive may be insufficient, and the role they are allowed to play may be too limited. Researchers have advocated for more professionalized and standardized court interpreting, involving an accreditation process and specialized training (Berk-Seligson, 2009; Hale, 2004).

Given the limitations of courtroom interpreting, using one's L2 as much as possible may seem like a valid alternative, but that too comes with its own set of challenges. While it has been suggested that it is beneficial for defendants and witnesses to use the same speech style as that of legal decision makers (Angermeyer, 2013), non-native speakers who try to do so may have a strong accent, leading to misunderstandings and accent stereotyping (O'Barr, 2014). Furthermore, reduced emotionality in L2 could result in a statement being less compelling to listeners. These

issues often arise when a narration is involved. Narratives are used to establish credibility and persuade legal decision makers and often involve emotional speech. L2 narratives are at risk of being perceived as less sincere or even unreliable, due to reduced emotionality and personality perception. Similarly, accent stereotyping, along with cultural stereotyping, may lead members of the court to have a predisposed view of the defendant's behavior (Armour, 1995). Miscommunication may also occur because of use of L1 cultural norms while speaking in L2. For example, an analysis of court testimony given by a Filipino doctor practicing in the U.S. revealed a number of such cultural misunderstandings. The doctor repeatedly used the pronoun "we" with general, non-specific reference; he also used unconventional intonation patterns. All of these patterns stem from the doctor's native language and culture, which may confuse listeners who are unfamiliar with it.

Thus, when using L1 with translation services, and when using an L2, non-native speakers face the risk of being misunderstood and misinterpreted in legal settings. Issues arising from translation in legal settings should certainly be addressed. In addition, as alluded to in the clinical section above, the role of bias awareness may be part of the solution. This is suggested by the finding that when attention is drawn to potential biases judges are able to avoid them (Rachlinski et al., 2009). We elaborate on such a possibility in the next section.

**Future research and recommendations**

Many aspects of the topics discussed in this review could benefit from more intensive study. To start, it would be beneficial to investigate L2 emotionality and personality as it directly relates to legal and clinical settings. Attention should also be given to the perspective of health or law professionals, as well as to that of the bilingual individuals interacting with these professionals. Research questions should address how health or law practitioners perceive non-native speakers' personalities. For example, do they feel that L2 speakers are detached, or that

they act strangely? In what ways do their self-expression and responses seem different compared to native speakers? From the bilinguals' perspective, we should better investigate their own self-assessments within specific health and law scenarios, regarding their ability to perceive and express emotion, as well as their ability to express their personality accurately, compared to the same scenarios in L1. It is also important that such studies make direct comparisons across the proficiency continuum.

Bilinguals interacting in their L2 are also often members of ethnic minority groups, such as immigrants or foreigners from diverse cultural backgrounds. Therefore, it is important for future research to investigate the extent to which language-based biases are separable from cultural and racial biases. Research in social psychology has uncovered a split between our attitudes as we deliberately state them, and more subconscious attitudes we hold. These attitudes, which are often referred to as the in-group biases, have been tested using an Implicit Association Test (IAT) (Greenwald, McGhee, & Schwartz, 1998). The IAT is a computer-based task, in which users rapidly categorize an attribute (such as "career") with one of two target concepts (e.g. "male" and "female") by pressing corresponding buttons. The test is based on the assumption that faster responses correspond to facilitate pairing and consequently indicate stronger memory association. Tasks of this type have been used to explore underlying biases of the linguistic, cultural and racial kind, among others. Typically in the IAT paradigm, people associate faces that look like themselves or like the dominant group with more positive concepts than faces of other ethnicities (Baron & Banaji, 2006; Dunham, Baron, & Banaji, 2006). Put simply, the IAT and the research it has facilitated indicates that as humans, we have a tendency to favour a certain dominant group, most often our own group.

The IAT has paved the way for studies that address issues pertaining to in-group biases, including studies showing such biases in health and law professions (Chapman et al., 2013;

Eberhardt et al., 2004; A. R. Green et al., 2007; Haider et al., 2015; Jost et al., 2009; Mathur, Richeson, Paice, Muzyka, & Chiao, 2014; Rachlinski et al., 2009). However, very little work has teased apart language-based biases from racial or cultural biases. Two studies attempted to test this dissociation with children. Using the IAT, children are given a simple task, which involves choosing which of two faces they would rather play with based on some information provided about the faces (Kinzler, Shutts, DeJesus, & Spelke, 2009; Souza, Byers-Heinlein, & Poulin-Dubois, 2013). The results showed that white children preferred white faces when no speech was associated with them. However, when a foreign accent was associated with the white face and a native accent was associated with the black face, white children preferred the black face. This effect persisted even when the black and white faces were replaced by visually distorted faces (Kinzler et al., 2009), suggesting that when it comes to in-group social preferences, children prioritize accents over racial information (Kinzler et al., 2009). This line of work provides evidence that we, put simply, prefer people who sound, look or behave either like the dominant group, or who are most like us. Nevertheless, it remains difficult to distinguish where one type of bias ends and another begins, and just like one human being can be part of many overlapping in-groups, we can have overlapping in-group biases. More work along these lines should be undertaken, particularly with adults. Moreover, the same distinction should be studied more carefully with health and law professionals. These professionals have been shown to display cultural and racial biases (Chapman et al., 2013; Eberhardt et al., 2004; A. R. Green et al., 2007; Haider et al., 2015; Jost et al., 2009; Mathur et al., 2014; Rachlinski et al., 2009), but the extent to which these biases overlap with language-based ones is unknown.

Because law or health professionals may interact with bilinguals who can differ dramatically in terms of proficiency, emotionality and personality as well as cultural background and social context, it is difficult to devise a set of recommendations that will apply in all cases.

Nonetheless, we believe that a combination of system-level adjustments and professional enrichment programs may help facilitate communication between bilingual individuals and law and health professionals.

At a system-level, it would be important to recruit health and legal professionals who themselves have more diverse linguistic and cultural profiles, such that there is a better chance to serve bilinguals in their L1 or using both languages. Ideally, for bilinguals with relatively high L2 proficiency, practitioners should be able to speak the same languages as patients or clients. Switching between languages as needed, during psychotherapy in particular, can increase patients' self-disclosure and emotional expression (Ramos-Sánchez, 2007; Santiago-Rivera, Altarriba, Poll, Gonzalez-Miller, & Cragun, 2009), facilitate the therapeutic alliance (Kapasi & Melluish, 2015) and be used deliberately to the benefit of the therapy (Martinovic & Altarriba, 2013). The utility of this approach may also extend from psychotherapy to communication with professionals in other sensitive professional situations (such as a legal trial or a medical procedure).

In the context of the U.S., Gilman (2008) proposed that bilinguals should be encouraged to promote their bilingualism when applying for health services delivery positions. Indeed, access to a bilingual health practitioner results in optimal communication, greater satisfaction, and better medical outcomes (reviewed in Flores, 2005). Kalist (2005) even supported the use of wage premiums to attract bilingual health professionals. Alternatively, professional interpreters can be used to communicate with individuals who have low L2 proficiency, which will also promote a high quality of care, good outcomes, communication and satisfaction, in a manner that is comparable to the presence of a bilingual clinician (Flores, 2005). However, it is important to note that the use of untrained interpreters is associated with inferior quality of care, and higher likelihood of interpreter errors that can have serious consequences (Flores, 2005). In the legal

system, as described earlier, the use of interpreters is even more complicated, and should be revisited to address issues related to social and cultural nuances that may not come across in a strictly linguistic translation.

At the practice and training level, it is important to include educational programs that address cultural and linguistic biases and provide opportunities for practitioners to interact with individuals of different backgrounds and linguistic abilities in order to practice facilitative communication strategies. This is particularly key given that the provision of bilingual or L1 services is not always feasible. Therefore, it is vital to educate practitioners about the pitfalls of L2 communication, and particularly regarding the increased chance of making biased judgements about non-native speakers, and about individuals whose cultures are different than one's own.

An example of such educational efforts comes from the University of Ottawa, Canada. In order to improve health care services to the Francophone minority in the province of Ontario, a French-language program was developed to train future physicians (Drouin & Rivet, 2003). The motivation for developing this program acknowledged that although Franco-Ontarians can largely communicate in English on day-to-day topics, their mother tongue plays an important role in stressful circumstances like health-related situations (Drouin & Rivet, 2003). The program included a communication laboratory in which medical students practiced clinical interviews in French. All the training scenarios used in the communication laboratory included realistic communication problems elicited from the target community and its physicians. While this program focused on providing L1 services to a linguistic minority, its model can be adapted to better train law and health professionals to work with L2 speakers and people from diverse cultural backgrounds. Hark and DeLisser (2009) present such a case-based approach, using hypothetical training scenarios, to train health professionals in cross-cultural communication.

Having the opportunity to pay special attention to their communication with non-native speakers will enable practitioners to prepare for such situations in the future and increase their awareness of the challenges involved in such scenarios.

Educational programs of this sort should address both linguistic and cultural aspects of communication. The role of knowledge and awareness of linguistic and cultural biases seems pivotal. Racher and Annis (2007) stress the importance of self-awareness of nurses' own cultural perspectives, beliefs and the stereotypes they hold, and how these influence their work as part of developing cultural competency. When one is mindful of one's own frame of cultural reference and potential biases during cross-cultural communication, one is likely to promote the feeling of being understood, supported and respected in one's interlocutors (Ting-Toomey, 1999). Awareness of biases has led judges and physicians to "correct" for these biases (A. R. Green et al., 2007; Rachlinski et al., 2009). Chapman et al. (2013) outline individuation and perspective-taking as types of awareness techniques that can be useful for bias reduction. In addition to self-awareness regarding biases, practitioners could benefit from knowledge of relevant research findings. For example, if law/health practitioners were aware of the findings outlined earlier regarding the potential for emotional distance in L2, it could help them understand why they may misjudge some bilingual individuals as detached.

In addition, training programs should equip practitioners with practical tools to facilitate communication. This can be done while taking into account the specific populations they come in contact with in their context. When adapting to a new culture (in a business context) it has been suggested that one should first learn the new cultural code and identify areas of difficulty in one's adjustment to it, followed by practice and self-evaluation (Molinsky, 2013). Cultures and languages fall into different categories of communication styles. For example, some cultures

typically encourage self-enhancement verbal style (i.e, emphasizing one's accomplishments and skills) while others employ a self-effacement style (deemphasizing one's accomplishments and skills) (Ting-Toomey, 1999). Similarly, cultures vary in their communication styles in terms of being direct or indirect, person-oriented vs. status-oriented, elaborate vs. succinct, and their use of silence in communication (Sadri & Flammia, 2011; Ting-Toomey, 1999). It is therefore helpful to know how direct/assertive/self-promoting etc. one is expected to be in order to adapt to the communication style (Molinsky, 2013) and understand its native users.

These kinds of educational programs can and should be included in ongoing professional education as well as the initial training of law and health professionals. Cognitive and social psychologists can help teach these areas in law and medical schools and in continuing education programs in their universities. This would be a productive step towards connecting areas of professional practice with the science and knowledge of cognitive and social psychology.

It is important that these programs are empirically tested, and refined based on such research results in accordance with the knowledge translation literature[2] which studies processes of transferring scientific knowledge to use. Program effectiveness should be evaluated in terms of satisfaction related to communication and other direct outcome measures that reflect successful interactions in each professional domain. This research should address questions such as: does self-awareness of cultural and linguistic biases change the attitudes and practices of health/law professionals? How does understanding the particular cultural communication style of a client population alter practitioner behaviour? Which aspects of the training regarding emotion and personality in L2 are found useful by practitioners and why? What are the effects of such training

[2] This literature studies processes of bringing research evidence into professional practice. For an overview see Graham et al., (2006).

programs on client satisfaction, pain management, or feelings of being understood and respected? Importantly, the adaptation of such programs should be specific to the social and professional context. Naturally, identical programs applied to a hospital in Florida and to police practices in Quebec will not be sufficient.

**Final Words**

To conclude, bilinguals vary in many ways, and their communication in the L2 may be different from that of the L1 even assuming equal proficiency in both. An important part of this difference, beyond mere proficiency, has to do with the way in which emotion and personality manifest in L2. This can give rise to false impressions of bilingual individuals, which may be linked to other biases of cultural and racial nature. As a consequence, bilinguals are potentially disadvantaged in many delicate and complicated real-world situations.

In this review, we addressed two main social spheres in which this may happen, namely, the clinical and legal spheres. In both of these spheres, miscommunications can have important implications. As a society, we should strive to offer better services in these areas, that are devoid of false impressions and stereotypes, for bilingual communities around the world. Health and law practitioners will hopefully provide better services to bilinguals worldwide if they are educated about bilingual variability and cultural diversity, and in particular, about the dimensions of personality and emotion that vary across L1 and L2 speech, which may also lead to biases. Our main goals should be to increase awareness, and to adjust attitudes within these professional spheres, such that practitioners will pay careful attention to their communication with bilingual clients. Armed with this knowledge, practitioners will become more sensitive to the many ways they may misperceive or misjudge bilingual individuals. Thus, additional emphases should be placed on developing targeted educational programs that address the needs of specific regional

communities, how practitioners may better service those communities, and evaluate in an ongoing manner the factors that lead to success of such interventions.

## References

Altarriba, J. (2003). Does cariño equal "liking"? A theoretical approach to conceptual nonequivalence between languages. *International Journal of Bilingualism, 7*, 305-322.

Altarriba, J. (2008). Expressions of emotion as mediated by context. *Bilingualism, 11*(2), 165-167. doi: 10.1017/S1366728908003295

Angermeyer, P. S. (2013). Multilingual speakers and language choice in the legal sphere. *Applied Linguistics Review, 4*, 105-126.

Armour, J. (1995). Stereotypes and prejudice: Helping legal decisionmakers break the prejudice habit. *California Law Review, 83*(3 ), 40. doi: 10.2307/3480864

Baron, A. S., & Banaji, M. R. (2006). The development of implicit attitudes evidence of race evaluations from ages 6 and 10 and adulthood. *Psychological science, 17*, 53-58.

Baum, S., & Titone, D. (2014). Moving toward a neuroplasticity view of bilingualism, executive control, and aging. [Article]. *Applied Psycholinguistics, 35*(5), 857-894. doi: 10.1017/S0142716414000174

Berk-Seligson, S. (2009). *Coerced Confessions: The Discourse of Bilingual Police Interrogations*.

Bialystok, E., Craik, F., & Luk, G. (2008). Cognitive control and lexical access in younger and older bilinguals. *Journal of Experimental Psychology: Learning Memory and Cognition, 34*(4), 859-873. doi: 10.1037/0278-7393.34.4.859

Bowker, P., & Richards, B. (2004). Speaking the same language? A qualitative study of therapists' experiences of working in english with proficient bilingual clients. [Article]. *Psychodynamic Practice, 10*(4), 459-478. doi: 10.1080/14753630412331313695

Brière, E. J. (1978). Limited english speakers and the miranda rights
*TESOL Quarterly*
*12*(3), 11. doi: 10.2307/3586051

Caldwell-Harris, C. L. (2015). Emotionality differences between a native and foreign language: Implications for everyday life. [Article]. *Current Directions in Psychological Science, 24*(3), 214-219. doi: 10.1177/0963721414566268

Caldwell-Harris, C. L., Staroselsky, M., Smashnaya, S., & Vasilyeva, N. (2012). *Dynamicity in emotion concepts*, 373-395.

Chapman, E. N., Kaatz, A., & Carnes, M. (2013). Physicians and implicit bias: How doctors may unwittingly perpetuate health care disparities. [Review]. *Journal of General Internal Medicine, 28*(11), 1504-1510. doi: 10.1007/s11606-013-2441-1

Chen, P., Lin, J., Chen, B., Lu, C., & Guo, T. (2015). Processing emotional words in two languages with one brain: Erp and fmri evidence from chinese-english bilinguals. [Article]. *Cortex, 71*, 34-48. doi: 10.1016/j.cortex.2015.06.002

Chen, S. X., & Bond, M. H. (2010). Two languages, two personalities? Examining language effects on the expression of personality in a bilingual context. *Personality and Social Psychology Bulletin, 36*(11), 1514-1528.

Conley, J. M., O'Barr, W., Lind, E., & Erickson, B. (1978). The power of language: A multi-disciplinary study of language in the courtroom. *Duke Law Journal, 6*, 25.

Conrad, M., Recio, G., & Jacobs, A. M. (2011). The time course of emotion effects in first and second language processing: A cross cultural erp study with german-spanish bilinguals. [Article]. *Frontiers in Psychology, 2*(DEC). doi: 10.3389/fpsyg.2011.00351

Costa, P. T., & McCrae, R. R. (1989). *The neo-pi/neo-ffi manual supplement*. Odessa, FL: Psychological Assessment Resources.

Costa, P. T., & McCrae, R. R. (1992). *Revised neo personality inventory (neo pi-r) and the neo five-factor inventory (neo-ffi) professional manual*. Odessa, FL: Psychological Assessment Resources.

de Bruin, A., Bak, T. H., & Della Sala, S. (2015). Examining the effects of active versus inactive bilingualism on executive control in a carefully matched non-immigrant sample. [Article]. *Journal of Memory and Language, 85*, 15-26. doi: 10.1016/j.jml.2015.07.001

Degner, J., Doycheva, C., & Wentura, D. (2011). It matters how much you talk: On the automaticity of affective connotations of first and second language words. *Bilingualism: Language and Cognition, 15*, 181-189.

Dewaele, J. M. (2004). The emotional force of swearwords and taboo words in the speech of multilinguals. [Article]. *Journal of Multilingual and Multicultural Development, 25*(2-3), 204-222. doi: 10.1080/01434630408666529

Dewaele, J. M. (2008). The emotional weight of i love you in multilinguals' languages. [Article]. *Journal of Pragmatics, 40*(10), 1753-1780. doi: 10.1016/j.pragma.2008.03.002

Dewaele, J. M. (2010). *Emotions in multiple languages*. Great Britain: CPI Antony Rowe, Chippenham and Eastbourne.

Dewaele, J. M., & Nakano, S. (2013). Multilinguals' perceptions of feeling different when switching languages. [Article]. *Journal of Multilingual and Multicultural Development, 34*(2), 107-120. doi: 10.1080/01434632.2012.712133

Dewaele, J. M., & Pavlenko, A. (2001-2003). *Web questionnaire bilingualism and emotions*.

Drouin, J., & Rivet, C. (2003). Training medical students to communicate with a linguistic minority group. [Review]. *Academic Medicine, 78*(6), 599-604.

Dunham, Y., Baron, A. S., & Banaji, M. R. (2006). From american city to japanese village: A cross‐cultural investigation of implicit race attitudes. *Child development, 77*, 1268-1281.

Eberhardt, J. L., Purdie, V. J., Goff, P. A., & Davies, P. G. (2004). Seeing black: Race, crime, and visual processing. [Article]. *Journal of Personality and Social Psychology, 87*(6), 876-893. doi: 10.1037/0022-3514.87.6.876

Eilola, T. M., Havelka, J., & Sharma, D. (2007). Emotional activation in the first and second language. [Article]. *Cognition and Emotion, 21*(5), 1064-1076. doi: 10.1080/02699930601054109

Ferré, P., García, T., Fraga, I., Sánchez-Casas, R., & Molero, M. (2010). Memory for emotional words in bilinguals: Do words have the same emotional intensity in the first and in the second language? *Cognition and Emotion, 24*(5), 760-785. doi: 10.1080/02699930902985779

Flores, G. (2005). The impact of medical interpreter services on the quality of health care: A systematic review. [Review]. *Medical Care Research and Review, 62*(3), 255-299. doi: 10.1177/1077558705275416

Francis, W. S., Tokowicz, N., & Kroll, J. F. (2014). The consequences of language proficiency and difficulty of lexical access for translation performance and priming. [Article]. *Memory and Cognition, 42*(1), 27-40. doi: 10.3758/s13421-013-0338-1

Gilman, S. L. (2008). Bilingualism in the world of health and illness. [Article]. *Journal of Medical Humanities, 29*(3), 137-146. doi: 10.1007/s10912-008-9058-0

Gollan, T. H., Starr, J., & Ferreira, V. S. (2014). More than use it or lose it: The number-of-speakers effect on heritage language proficiency. [Article]. *Psychonomic Bulletin and Review, 22*(1), 147-155. doi: 10.3758/s13423-014-0649-7

Graham, I. D., Logan, J., Harrison, M. B., Straus, S., Tetroe, J., Caswell, W., & Robinson, N. (2006). Lost in knowledge translation: Time for a map? *The Journal of Continuing Education in the Health Professions, 26*, 13-24.

Green, A. R., Carney, D. R., Pallin, D. J., Ngo, L. H., Raymond, K. L., Iezzoni, L. I., & Banaji, M. R. (2007). Implicit bias among physicians and its prediction of thrombolysis decisions for black and white patients. [Article]. *Journal of General Internal Medicine, 22*(9), 1231-1238. doi: 10.1007/s11606-007-0258-5

Green, D. W. (2011). Language control in different contexts: The behavioral ecology of bilingual speakers. [Article]. *Frontiers in Psychology, 2*(MAY). doi: 10.3389/fpsyg.2011.00103

Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. (1998). Measuring individual differences in implicit cognition: The implicit association test. *Journal of personality and social psychology, 74*, 1464.

Grosjean, F. (1985). The bilingual as a competent but specific speaker-hearer. [Article]. *Journal of Multilingual and Multicultural Development, 6*(6), 467-477. doi: 10.1080/01434632.1985.9994221

Grosjean, F. (2012). Bilingual and monolingual language modes. *The Encyclopedia of Applied Linguistics*.

Gumperz, J. J. (2001). Contextualization and ideology in intercultural communication *Culture in communication: Analyses of intercultural situations* (pp. 35-54). Amsterdam/ Philadelphia: John Benjamins Publishing.

Haider, A. H., Schneider, E. B., Sriram, N., Scott, V. K., Swoboda, S. M., Zogg, C. K., . . . Cooper, L. A. (2015). Unconscious race and class biases among registered nurses: Vignette-based study using implicit association testing. [Article]. *Journal of the American College of Surgeons, 220*(6), 1077-1086.e1073. doi: 10.1016/j.jamcollsurg.2015.01.065

Hale, S. (2004). *The discourse of court interpreting: Discourse practices of the law, the witness and the interpreter*. Amsterdam & Philadephia: Benjamins.

Hark, L., & DeLisser, H. (2009). *Achieving cultural competency: A case-baed approach to training health professionals*. Oxford, UK: Wiley-Blackwell.

Harris, C. L. (2004). Bilingual speakers in the lab: Psychophysiological measures of emotional reactivity. [Article]. *Journal of Multilingual and Multicultural Development, 25*(2-3), 223-247. doi: 10.1080/01434630408666530

Harris, C. L., Ayçiçeği, A., & Gleason, J. B. (2003). Taboo words and reprimands elicit greater autonomic reactivity in a first language than in a second language. *Applied Psycholinguistics, 24*(4), 561-579. doi: 10.1017/S0142716403000286

Harris, C. L., Gleason, J. B., & Aycicegi, A. (2006). When is a first language more emotional? Psychophysiological evidence from bilingual speakers. *Bilingual Minds: Emotional Experience, Expression, and Representation*, 257-283.

Haviland, J. B. (2003). Ideologies of language: Some reflections on language and us law. *American Anthropologist, 105*(4), 764-774.

Hellman, A. B. (2011). Vocabulary size and depth of word knowledge in adult-onset second language acquisition. [Article]. *International Journal of Applied Linguistics, 21*(2), 162-182. doi: 10.1111/j.1473-4192.2010.00265.x

Hsu, C. T., Jacobs, A. M., & Conrad, M. (2015). Can harry potter still put a spell on us in a second language? An fmri study on reading emotion-laden literature in late bilinguals. [Article]. *Cortex, 63*, 282-295. doi: 10.1016/j.cortex.2014.09.002

. *International covenant on civil and political rights, art. 14, para. 3f.* (1966).

John, O. P. (1990). The "big five" factor taxonomy: Dimensions of personality in the natural language and in questionnaires. In L. A. Pervin (Ed.), *Handbook of personality: Theory and research* (pp. 66–100). New York: Guilford Press.

John, O. P., & Srivastava, S. (1999). The big five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin (Ed.), *Handbook of personality: Theory and research (2nd ed)* (pp. 102-138). New York: Guilford Press.

Jost, J. T., Rudman, L. A., Blair, I. V., Carney, D. R., Dasgupta, N., Glaser, J., & Hardin, C. D. (2009). The existence of implicit bias is beyond reasonable doubt: A refutation of ideological and methodological objections and executive summary of ten studies that no manager should ignore. [Review]. *Research in Organizational Behavior, 29*, 39-69. doi: 10.1016/j.riob.2009.10.001

Kalist, D. E. (2005). Registered nurses and the value of bilingualism. *Industrial and labor relations review, 59*, 101-118.

Kapasi, Z., & Melluish, S. (2015). Language switching by bilingual therapists and its impact on the therapeutic alliance within psychological therapy with bilingual clients: A systematic review. [Review]. *International Journal of Culture and Mental Health, 8*(4), 458-477. doi: 10.1080/17542863.2015.1041994

Kinzler, K. D., Shutts, K., DeJesus, J., & Spelke, E. S. (2009). Accent trumps race in guiding children's social preferences. *Social cognition, 27*, 623.

Martinovic, I., & Altarriba, J. (2013). Bilingualism and emotion: Implications for mental health *The handbook of bilingualism and multilingualism: Second edition* (pp. 292-320).

Mathur, V. A., Richeson, J. A., Paice, J. A., Muzyka, M., & Chiao, J. Y. (2014). Racial bias in pain perception and response: Experimental examination of automatic and deliberate processes. [Article]. *Journal of Pain, 15*(5), 476-484. doi: 10.1016/j.jpain.2014.01.488

Miner, J., Biros, M. H., Trainor, A., Hubbard, D., & Beltram, M. (2006). Patient and physician perceptions as risk factors for oligoanalgesia: A prospective observational study of the relief of pain in the emergency department. [Article]. *Academic Emergency Medicine, 13*(2), 140-146. doi: 10.1197/j.aem.2005.08.008

Molinsky, A. (2005). Language fluency and the evaluation of cultural faux pas: Russians interviewing for jobs in the united states. *Social Psychology Quarterly, 68*, 103-120.

Molinsky, A. (2013). *Global dexterity*. Boston, Massachusetts: Harvard Business Review Press.

Molinsky, A., & Perunovic, W. Q. E. (2008). Training wheels for cultural learning: Poor language fluency and its shielding effect on the evaluation of culturally inappropriate behavior. *Journal of Language and Social Psychology, 27*, 284-289.

Morris, R. (1995). The moral dilemmas of court interpreting. *The Translator, 1*, 25-46.

Munro, M. J. (2003). A primer on accent discrimination in the canadian context. *TESL Canada Journal, 20*(2), 38-51.

Munro, M. J., & Derwing, T. M. (1995). Processing time, accent, and comprehensibility in the perception of native and foreign-accented speech. *Language and speech, 38*(3), 289-306.

Mustajoki, M., Forsén, T., & Kauppila, T. (2015). The association between patient-reported pain and doctors' language proficiency in clinical practice. [Article]. *Pain Research and Treatment, 2015*. doi: 10.1155/2015/263904

O'Barr, W. M. (2014). Speech styles in the courtroom. In W. M. O'Barr (Ed.), *Linguistic evidence: Language, power, and strategy in the courtroom* (pp. 61-93). San Diego: Academic Press.

Parsons, J. A., Baker, N. A., Smith-Gorvie, T., & Hudak, P. L. (2014). To 'get by' or 'get help'? A qualitative study of physicians' challenges and dilemmas when patients have limited english proficiency. [Article]. *BMJ Open, 4*(6). doi: 10.1136/bmjopen-2013-004613

Pavlenko, A. (2006). Bilingual selvs. In A. Pavlenko (Ed.), *Bilingual minds: Emotional experience, expression, and representation* (Vol. 56, pp. 1-33): Multilingual Matters.

Perttula, W., Lowe, D., & Quon, N. S. (1999). Asian american health care attitudes. [Article]. *Health marketing quarterly, 16*(2), 39-53.

Purnell, T., Idsardi, W., & Baugh, J. (1999). Perceptual and phonetic experiments on american english dialect identification. *Journal of Language and Social Psychology, 18*(1), 10-30.

Racher, F. E., & Annis, R. C. (2007). Respecting culture and honoring diversity in community practice. *Research and Theory for Nursing Practice: An international Journal 21*, 255-270.

Rachlinski, J. J., Johnson, S. L., Wistrich, A. J., & Guthrie, C. (2009). Does unconscious racial bias affect trial judges? [Article]. *Notre Dame Law Review, 84*(3), 1195-1246.

Ramírez-Esparza, N., Gosling, S. D., Benet-Martínez, V., Potter, J. P., & Pennebaker, J. W. (2006). Do bilinguals have two personalities? A special case of cultural frame switching. [Review]. *Journal of Research in Personality, 40*(2), 99-120. doi: 10.1016/j.jrp.2004.09.001

Ramos-Sánchez, L. (2007). Language switching and mexican americans' emotional expression. [Article]. *Journal of Multicultural Counseling and Development, 35*(3), 154-168.

Räsänen, S. H. M., & Pine, J. M. (2014). Emotional force of languages in multilingual speakers in finland. *Applied Psycholinguistics, 35*(3), 443-471. doi: 10.1017/S0142716412000471

Sadri, H. A., & Flammia, M. (2011). *Intercultural communication*. New York: The Continuum International Publishing Group.

Santiago-Rivera, A. L., Altarriba, J., Poll, N., Gonzalez-Miller, N., & Cragun, C. (2009). Therapists' views on working with bilingual spanish-english speaking clients: A qualitative investigation. [Article]. *Professional Psychology: Research and Practice, 40*(5), 436-443. doi: 10.1037/a0015933

Segalowitz, N., Trofimovich, P., Gatbonton, E., & Sokolovskaya, A. (2008). Feeling affect in a second language: The role of word recognition automaticity. *The Mental Lexicon, 3*(1), 47-71.

Shah, A. A., Zogg, C. K., Zafar, S. N., Schneider, E. B., Cooper, L. A., Chapital, A. B., . . . Haider, A. H. (2015). Analgesic access for acute abdominal pain in the emergency department among racial/ethnic minority patients a nationwide examination. [Article]. *Medical Care, 53*(12), 1000-1009. doi: 10.1097/MLR.0000000000000444

Sheikh, N. A., & Titone, D. (2016). The embodiment of emotional words in a second language: An eye-movement study. *Cognition and Emotion, 30*(3), 488-500. doi: 10.1080/02699931.2015.1018144

Souza, A. L., Byers-Heinlein, K., & Poulin-Dubois, D. (2013). Bilingual and monolingual children prefer native-accented speakers. *Frontiers in psychology, 4*, 953.

Sutton, T. M., Altarriba, J., Gianico, J. L., & Basnight-Brown, D. M. (2007). The automatic access of emotion: Emotional stroop effects in spanish-english bilingual speakers. [Article]. *Cognition and Emotion, 21*(5), 1077-1090. doi: 10.1080/02699930601054133

Tiersma, P., & Solan, L. M. (2005). Speaking of crime: The language of criminal justice. *Cambridge University Press, 2005; Loyola-LA Legal Studies Research* (2005-13).

Ting-Toomey, S. (1999). *Communicating accross cultures*. New York: The Guilford Press.

Todd, K. H., Samaroo, N., & Hoffman, J. R. (1993). Ethnicity as a risk factor for inadequate emergency department analgesia. [Article]. *JAMA: The Journal of the American Medical Association, 269*(12), 1537-1539. doi: 10.1001/jama.1993.03500120075029

Veltkamp, G. M., Recio, G., Jacobs, A. M., & Conrad, M. (2013). Is personality modulated by language? [Article]. *International Journal of Bilingualism, 17*(4), 496-504. doi: 10.1177/1367006912438894

Yik, M. S. M., & Bond, M. H. (1993). Exploring the dimensions of chinese person perception with indigenous and imported constructs: Creating a culturally balanced scale. *International Journal of Psychology, 28*, 75-95.

Young, R. (1995). Conversational styles in language proficiency interviews. *Language Learning, 45*, 3-42.