EXPERIENCING EMOTION ACROSS LANGUAGES: A PILOT STUDY OF

SPANISH-ENGLISH BILINGUALS' RESPONSES TO EMOTION-LADEN

VIGNETTES

A Thesis

by

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ABSTRACT

Emotion-laden words elicit varying degrees of emotionality in bilinguals, with a stronger reaction typically occurring in the first language. Less known is how emotion-laden situations presented in one language or the other may be experienced by bilinguals, or whether these situations may be experienced differently in bilinguals with varying language proficiency or informal translation (brokering) experience. This was examined in the present study. A total of 110 adult Spanish-English bilinguals classified in terms of frequency of brokering (high vs. low) and in degree of bilingualism (Spanish-dominant, English-dominant, or balanced bilinguals) rated emotions depicted in 16 vignettes (6 positive, 6 negative, and 4 neutral) presented in Spanish or English. Across languages and groups, ratings of how well the vignettes conveyed a designated emotion were significantly higher for the emotion-laden vignettes (positive or negative) than for neutral ones. Perceived valence of each vignette type showed no effect of language dominance or vignette language. However, an interaction of brokering experience and vignette language was found for positive vignettes. The interaction revealed that for bilinguals with high brokering experience positive vignettes were perceived as more positive in Spanish than in English. Furthermore, low-brokering participants rated English positive vignettes as more positive than high-brokering bilinguals. The findings suggest that frequency of brokering experience may enhance bilinguals' sensitivity to emotional experiences in Spanish for high brokers as portrayed through the Spanish vignettes. Alternatively, low frequency of brokering is associated with greater sensitivity to emotional experiences in English. More broadly, this research points to the relevance of including language brokering as a dimension in studies of bilingualism and emotion.

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DEDICATION

This thesis is dedicated to both my parents, who continue to support me and all my dreams.

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CONTRIBUTORS AND FUNDING SOURCES

NOMENCLATURE

L1   First Language Acquired

L2   Second Language Acquired

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1. INTRODUCTION

The ability to function in two or more languages characterizes many individuals who are immigrants. The immigrant experience brings with it a variety of challenges – personal, social, political, and economic. Many of these challenges are rooted in linguistic and cultural differences and can be detrimental to an individual's emotional health and ability to adjust to and thrive in a new environment. Memoirs by bilingual writers such as Eva Hoffman describe a sense of uprootedness and alienation that often accompanies the experience of exile and displacement and how this experience plays out in language use (Hoffman, 1989).

How do individuals who have to navigate between different languages and cultures make sense of their life experiences, and do they interpret their experiences differently depending on the language in which they engage with the experience? This was the central question motivating this project. An additional objective was to explore potential sources of variability among bilingual language users in the influence of the language in which the emotion is depicted on the perception of that emotion. To address these issues, the project explores how Spanish-English users in the United States respond to emotion-laden events depicted in each language. Specifically, the study asks if the degree of emotion experienced by bilinguals in response to positive or negative emotion-laden vignettes will be influenced by the language in which the vignette is presented, by the bilinguals' relative dominance in the language, and/or by their frequency of prior informal translation experience (language brokering).

Before describing the study, I identify broader conceptual, empirical, and methodological issues of relevance, drawing on previous studies on the role of emotion in bilingual language users.

1.1. Broader Implications of Studying Role of Language in Emotion

Understanding how emotion processing in users of multiple languages is mediated by language and/or by language usage characteristics is clearly important in clinical settings where emotionally charged topics may be discussed in the context of therapy. In such settings, the ability of bilingual individuals to access the emotion behind their words is of importance for accurate assessment and evaluation of symptomatology, which is crucial for proper treatment.

Currently, there are a variety of measures that aim to evaluate the prevalence of clinical symptoms. However, many have been normed with groups of individuals who may not be representative of the client filling out an assessment (Leany, 2020). This is important to consider, as inaccurate evaluation of symptoms can lead to inappropriate treatment. As Leany (2020) suggests, it is important for clinicians to consider the psychometric properties of the measures they use and how culture at various levels may moderate the clinical presentation of a client.

Language is, arguably, an important aspect of culture and, thus, important to consider in how a client presents. To the extent that bilinguals may associate a particular language with a particular significant life experience, they may have different affective responses to the choice of language used in therapy, or, if the therapist is also bilingual and encourages this, may opt to switch between languages at different stages of therapy.

Venta et al. (2017) argue that internal working models of attachment are linguistically bound and emotionally laden. Specifically, they suggest that attachment structures developed in childhood may affect the way individuals relate to others, and, in particular, how they may use language to create emotional distance. Therefore, when assessing a client's attachment in a clinical context, it is suggested that we evaluate how their emotional experience may differ between their primary and non-primary languages. This is particularly important as some

research has shown that individuals express less emotionality or can be dismissive when speaking about emotionally laden situations, such as trauma, in their non-primary, typically second, language (Bailey et al., 2020).

1.2. Language as a Distancing Device

The inability to emotionally connect to what is being said in therapy may hinder progress in a therapeutic context, as being able to skillfully deal with the emotions that arise while speaking about difficult situations is part of learning to effectively regulate emotions. As such, a number of studies have explored the impact of the choice of language used by a client in therapy. In particular, it has been noted that moving from one language to another in therapy may signal distancing oneself from a particular affectively-charged experience (Santiago-Rivera, 1995).

As an example, in one of the earliest observations of language choice in bilinguals, psychoanalyst Edith Buxbaum (1949) described a client who used the English language as a way to control and monitor her emotions as well as create a new sense of identity associated with living in the United States. The individual used language to distance herself from negative affect: she refused to speak her first language, German, while in the U.S. because of a negative romantic experience with a boyfriend she had while she lived in Germany. Using English allowed the woman to distance herself from the emotions associated with the event and create a new sense of self. However, over time, as she opened up, German was the language she used to access these emotions in therapy.

The phenomenon of using language to distance oneself from particular emotions has also been noted in empirical studies of bilinguals in non-clinical contexts. Bond and Lai (1986) presented Chinese female undergraduates with two non-embarrassing and two embarrassing topics to discuss in their choice of language - Chinese and English. The non-embarrassing topics

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were the pegging of the Hong Kong dollar to the United States dollar and the differences in educational system between two flagship universities in Hong Kong. The embarrassing topics were sexual attitudes of Chinese and Westerners and a personally embarrassing event an interviewee recently experienced. Bond and Lai (1986) found that, when interviewed about embarrassing topics, participants discussed these much more in their second language than in their first, presumably as a way to reduce anxiety when speaking about the topic. A similar phenomenon is observed in music where words in L2 are utilized to address subjects that may be taboo or considered inappropriate when addressed in the L1. Bentahila and Davies (2002) explain that code switching in Rai music, which is predominantly sung in Arabic, is used to allow the songwriters to free themselves of the constraints of propriety in Arabic, French in this circumstance serves as a liberating device. This phenomenon can be seen across cultures. Lee (2004) describes that in K-Pop artists use English to express sentiments that may be considered provocative to Korean culture, such as suggestive language that is explicitly sexual in nature and at times even provocative for those whose L1 is English.

Other researchers have noted that, regardless of the topic, the use of a particular language to convey any emotion may be anxiety-inducing if that language is one that the individual is not as proficient in (De Leersnyder et al., 2011). Bilinguals who are not as comfortable with English as they are with Spanish, for example, may be so focused on speaking properly in English that their speech may not accurately communicate to others their affective state, leading to misinterpretation of that state by others (Edgerton & Karno, 1971). Increasingly, researchers are recognizing the importance of addressing the affective dimension of language use in the context of language learning (Swain, 2013).

The experience of learning another language can run the gamut of being both fraught with anxiety and very pleasurable. The fiction writer Jhumpa Lahiri, in her memoir, *In Other Words*, vividly describes her love affair with the Italian language, a language that she began learning as an adult and one in which she began to write fiction after a successful career of writing fiction in English (Lahiri, 2016). Despite the exaltation of learning to express herself as a writer in Italian, she observes that something is still missing from her text: her written Italian is like a piece of unsalted bread, correct but lacking in flavor.

Learning how to use a language in all its fullness, including how to communicate range of emotions in all their nuances, is a form of sociopragmatic competence. Exploring the development of this competence in bilinguals can further our understanding of the role and centrality of emotion in human behavior.

1.3. Influence of Culture on Affective Experience

Bilinguals anecdotally report that they feel like they express different facets of their personality or even different personalities in their different languages, at times even behaving differently depending on the language they are speaking or the cultural context they are in. In social psychological research, a term used to describe this occurrence is 'cultural frame switching' (Ramírez-Esparza et al., 2006). This refers to the phenomenon whereby bicultural or multicultural individuals appear to shift their cultural values to align with those of the host culture.

Cultural frame-switching has especially been studied in the context of personality, to assess whether an individual's personality changes based upon the culture they are functioning in as triggered by linguistic cues (Ramírez-Esparza et al., 2006). For example, individuals given personality inventories to assess for traits have been found to endorse different personality traits

based on the language in which they were responding to questions (Ramírez-Esparza et al., 2006). Similarly, cultural frame switching has also been examined in how bilinguals change their emotional displays as they take on the cultural value structure of emotions of either their heritage or host culture, depending on contextual cues (Ramírez-Esparza et al., 2006)).

De Leersnyder et al. (2011) examined the phenomenon of *emotional acculturation*. They defined this as the degree to which an individual's emotional patterns are in concordance with those of the majority culture. Their study aimed to better understand the degree and circumstances that led immigrants to take on the emotional patterns of the majority culture. Through an implicit measurement of patterns of emotional experience, the researchers evaluated the degree to which first-generation and second-generation immigrants demonstrated emotional patterns endorsed by members of the majority culture. The groups studied were Korean immigrants in the United States and Turkish immigrants in Belgium. Findings suggested that the degree to which emotional acculturation occurs is associated with the proportion of time lived in the host country. Additionally, the younger the age of immigration, the greater the degree of emotional concordance with the majority culture. Thus, through exposure and social interaction, individuals are better able to adopt the emotional patterns of the majority culture.

Although not noted in De Leersnyder et al. (2011), emotional acculturation could also be impacted by the type of community an immigrant settles in, as one might expect that living in a cultural enclave, for example, would delay emotional acculturation. However, to the extent that the community is more porous, with greater interaction between members across cultural boundaries, affective patterns of immigrant members may come to resemble those of the majority culture. Over time these affective patterns may become automated for the immigrant due to exposure.

Affective judgments of emotion-laden words may be influenced by cultural values which affect what topics are considered appropriate to talk about and what are considered taboo (Vaid, 2006). Taboo subjects generally include topics relating to "sex, death, illness, excretion, bodily functions, religious matters, the supernatural" (Gao, 2013), but there are variations across cultures. In a series of studies investigating electrodermal responses to highly charged expressions (e.g., reprimands or insults), Harris and colleagues reported a stronger skin conductance response to expressions in the first-acquired language among late bilinguals, or in the more proficient language (Harris et al., 2006).

Even within a language, there are regional variations in how a given topic is talked about. For example, there are 20 countries for which Spanish is the official language; there are words that may seem harmless in one variety of the language but are highly offensive or simply take a different meaning in another (Sorenson, 2021). For example, the word *concha* in certain areas of South America refers to a female's genitalia, while in other areas of Latin America it means shell, or it is used to refer to a Mexican sweet bread typically called *concha*. One can only imagine the confusion when a South American hears someone from Mexico stating they bought a *concha*. Regional differences in dialect need to be taken into consideration when understanding the emotional valence and arousal produced by words. To date, few if any laboratory-based studies have addressed such sources of variation.

Taken together, the studies reviewed above suggest that language, region and culture all play a role in the affective expression of an individual who is bilingual and may interact with the local culture to create a sense of identity and belonging.

Other studies of language and emotion in users of more than one language have focused on properties of the words themselves in each language, and whether affective meaning has equivalence across languages. We turn to these next.

1.4. Translation Equivalence of Affect-Laden Words

There is often not a one-to-one correspondence between the words of two different languages. Instead, a given word in one language may require multiple words in translation (Basnight-Brown & Altarriba, 2018). Studies show that words that have simpler, unambiguous meanings generate faster and more accurate translations (Basnight-Brown & Altarriba, 2018).

An additional factor is that certain concepts may be culture-specific (Santiago-Rivera & Altarriba, 2002). As such, they may not be easily translatable (Degani & Tokowicz, 2010). Emotional words and emotionally-laden texts are particularly affected by this translation ambiguity. For example, Altarriba (2003) points out how the word *cariño* in Spanish does not have an English equivalent but falls somewhere between liking and affection, making it difficult to convey the depth of a sentiment in translation.

Similarly, the phrase *I love you* in English could be translated into two different phrases in Spanish, *Te quiero* or *Te amo*, each signifying a different type of love: *te quiero* refers to a sense of love and affection that is appropriate to say to loved ones and close friends; *te amo*, however, refers to a deeper kind of love, usually reserved for serious relationships and immediate family members. Yet in English, this distinction is erased as there is only the same word (*love*) for both senses. These differences across languages are indicative of the challenges of finding direct translations.

The perceived intensity of expressions such as *I love you* has been shown to be related to a variety of factors, so that it is felt more strongly in the heritage language than in a subsequently

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acquired language. These factors include self-perceived language dominance, context of language acquisition, degree of socialization, and age of onset of a second language (Dewaele, 2008). Thus, in considering the way language and emotions are interconnected, we need to consider how readily emotional concepts and words are translatable across languages. If in fact an emotional concept does not exist in the language of the host culture, how does one then convey emotional states and feelings that do not exist in the culture in which one lives but is expected to navigate on a daily basis? Perhaps understanding how emotions and language interact in individuals who are bilingual/bicultural would give us better insight into understanding their emotional processing.

1.5. Impact of Language Dominance on Affective Judgments

Bilinguals often report that they experience greater affect in response to an emotionally laden text when it is presented in their primary language (L1) than when it is present in a second language (L2). This may be understandable if the L1 is acquired (and/or used) at home and is thus associated with a breadth of emotional experiences occurring during early childhood. By contrast, to the extent that the L2 is the working language of the outside world, usually associated with school and work, it may be associated with emotional control, autonomy, and achievement (Bond & Lai, 1986; Dewaele & Pavlenko, 2002).

In one of the earliest experimental studies of language differences in emotion, Anooshian and Hertel (1994) looked at free recall of emotion-laden vs. neutral words presented in each language to Spanish L1-English L2 and English L1-Spanish L2 late bilinguals (i.e., bilinguals who had acquired their second language after the age of eight). They found that significantly more emotional than neutral words were recalled in the bilinguals' L1 than in the L2. Given that

all participants had received elementary school education exclusively in L1, the findings hint at the role of age of acquisition and formal education in the bilingual affective experience.

However, a greater emotional response to emotionally charged text in L1 instead of L2 has not been consistently found. Ferré et al. (2010) looked at memory for emotional language via encoding and free recall tasks and found that emotionality between words presented in L1 and L2 was the same among Catalan-Spanish bilinguals. Their findings suggest that variables such as language dominance, similarity between languages, and age of acquisition of L2 do not affect recall for emotional words in L2. However, studying a pair of languages that are not linguistically similar – Finnish and English - Eilola et al. (2007) found in an emotional Stroop task that interference from emotionally negative and taboo stimuli had the same magnitude in both L1 and L2. This finding, Eilola et al. suggest, may indicate that threatening word stimuli activate the same threat-response mechanisms in L1 and L2.

Using electrodermal recordings in response to affectively charged language, Harris and colleagues have noted that differences in emotional evocativeness of L1 vs. L2 words appear to be influenced by age of onset of bilingualism (with greater differences in late bilinguals) and degree of proficiency (proficiency may facilitate access to emotional contexts in L2), but also note that the studies to date do not allow us to disentangle the influence of these variables (Harris et al., 2006).

Given the inconsistency across studies, there is a need for more systematic investigation of the potential impact of language dominance differences between bilinguals in emotion perception. As used here, language dominance refers to a composite of proficiency and use of a language across a range of contexts (Dunn & Fox Tree, 2009). As measured by the Bilingual Dominance Scale developed by Dunn and Fox Tree (2009), language dominance prioritizes

spoken over written language fluency and includes information about age of acquisition of L1 and L2, how languages are used, and feelings towards the languages. All other things being equal, we might expect that individuals who are more dominant in one of their languages will show greater emotional response in that language as compared to individuals who are balanced bilinguals.

1.6. Impact of Language Brokering Experience on Affective Judgments

Another potential source of variability in affective judgments in bilinguals relates to the extent to which these bilinguals are enlisted as informal translators (or so-called *language brokers*) in their language use history. Language brokering refers to a common practice found in immigrant communities and language contact situations whereby bilingual adolescents engage in informal translation on behalf of their family or community members. In one of the earliest studies of this phenomenon, Tse (1996) defines it as "facilitating communication between two linguistically or culturally different parties" (p. 485).

Language brokering often starts very early in life; immigrant children have been shown to engage in language brokering 1 to 5 years after arrival when they are as young as 8 or 9 years old (McQuillan & Tse, 1995; Tse, 1995, 1996). Typically, children translate in the school setting, home, and community. Translation could involve anything from simply interpreting a word to translating entire legal or medical documents or interfacing with school administrators about performance in school.

Orellana, Dorner, and Pulido (2003) found that in relation to the school context, child brokers may attend parent-teacher conferences, translate notes exchanged between the school and the parents, and help younger children with homework. In the medical context, they are often in charge of calling to schedule a doctor's visit as well as behave as an interpreter for the parent

during said visit. In the legal and financial context, language brokers reported helping family members with immigration paperwork, applying for public assistance, interpreting bills and writing checks and handling banking related matters. At the informal level, they helped parents understand things such as movies or a television show by translating or interpreting it. As such, language brokers not only behave as interpreters of the host language but as cultural brokers as well, with children having to interpret elements of the host culture for family members. Importantly, brokers act as linguistic and cultural intermediaries between their heritage community and the host community.

Language brokering has begun to be explored as a variable in psycholinguistic research alongside other sources of individual differences among bilinguals in language use (Lopez, 2020; Vaid & Meuter, 2017). From a series of studies comparing bilinguals with brokering experience and those without it on a range of linguistic and cognitive tasks, Vaid and colleagues concluded that brokers appear to show a closer coupling of translation equivalents in their two languages (Lopez & Vaid, 2018a; Lopez et al., 2017). For example, one study found that brokers' responses on a category exemplar generation task showed greater cross-language overlap than did responses of non-brokers, who showed more differentiation across languages (Lopez & Vaid, 2018b).

A recent study looked at the impact that proficiency and feelings about brokering experience may have on cognitive tasks such as the Simon task, a measure of executive function (Lopez et al., 2021). Findings showed that individuals with high Spanish proficiency (Spanish as L1), regardless of their feelings (positive or negative) towards brokering experience, showed faster reaction times overall on that task. Clearly, more work is needed to understand how feelings about brokering experience may affect cognitive functioning, if at all.

From an affective perspective, some researchers have argued that language brokering leads to emotional parentification, that is, an accelerated feeling of responsibility, given that these roles may thrust children into stressful situations on behalf of family members (Arellano et al., 2018). Some research has found that emotional parentification is positively correlated with higher levels of depressive symptoms in later adolescence (Khafi et al., 2014). What is clear is that language brokers begin navigating two languages and emotionally laden situations at an early age. Child brokers have reported that while they have the desire to help their parents, frustration and feelings of inadequacy may surface through the practice of brokering (Dement & Perez, 1999). Some brokers, however, report that brokering has allowed them to learn about their language and culture, thereby helping them retain the two languages (Tse, 1995).

Given that there has been little work to date directly comparing bilinguals with extensive brokering experience with those with little brokering experience on their emotional responsiveness across languages, this is an important gap in both the literature on language brokering and the literature on bilingualism and emotion. The present study sought to fill this gap.

Taken together, there is evidence from a range of domains that bilinguals perceive and respond differently to affect-laden words and situations. However, the evidence is scattered and limited. There is rich anecdotal literature but to date there has been limited experimental investigation of how an emotion-laden event may be experienced differently by bilinguals in one language vs. another, and how differences among bilinguals may, in turn, moderate how affect is experienced across languages.

1.7. Measuring Affective Responses to Emotion-Laden Text

An emotional response can be described and analyzed at two levels, conscious and unconscious (Velez-Uribe & Rosselli, 2017). At a conscious level, self-report rating scales ask individuals to make an appraisal of the emotionality of the text in front of them (Velez-Uribe & Rosselli, 2017). When using self-report measures, studies have typically examined either the valence (positive, negative, or neutral) or the levels of arousal (high, moderate, low) induced by the words used as stimuli.

To assess affective responses in ways that tap into unconscious responses, a number of measures have been used. These include autonomic nervous system reactivity to emotional stimuli measured via electrodermal monitoring (i.e., galvanic skin response, GSR), event-related potentials (ERPs), functional magnetic resonance imaging (fMRI), and pupil dilation via eye-tracking.

Research using skin conductance measures with monolingual populations has shown that emotion and taboo words elicit greater skin conductance responses in comparison to neutral words (Gray, Hughes, & Schneider, 1982; McGinnies, 1949). Similarly, research with bilinguals has shown that taboo words and childhood reprimands produce the largest physiological response amongst all emotionally-laden text used as stimuli (Harris, Aycicegi & Gleason, 2003). Harris et al. (2003) found that, among bilinguals, emotionally laden words elicit larger skin conductance responses when presented in L1 than in L2. Furthermore, Harris et al. (2003) found that bilinguals have stronger autonomic reactivity when emotional language is presented orally rather than in written form.

In eye tracking studies, pupil dilation has been shown to increase under conditions of increased emotional arousal. This allows changes to pupil size to be used as another measure of emotional arousal, to assess for reactivity to emotionally charged language (Sirois & Brisson,

2014). Specifically, Iacozza and Duñabeitia (2017) found increased pupil dilation amongst bilinguals when presented with emotionally charged text in their native language in comparison to a neutral text.

1.8. Use of Vignettes to Elicit Affective Judgments

Eliciting responses to vignettes of affect-laden situations can provide researchers a useful and focused way to manipulate and examine variables of interest. Vignettes have been used in social research to evaluate various aspects of clinical judgments and decision-making processes (Gould, 1996). They provide a way to measure attitudes, beliefs, values, and perceptions that may, in turn, inform clinical care (Flaskerud, 1979). Some work has shown that performance on vignettes can reliably predict actual behavior (Evans et al., 2015).

Vignettes can provide a useful alternative to direct observation in clinical settings, given that direct observations may have ethical limitations. Furthermore, vignettes have been used in a community setting with Latinx and Caucasian individuals to evaluate differences in perception and understanding of mental health disorders (Karno & Edgerton, 1969). In sum, vignettes can provide a simulacrum of real situations to assess values or beliefs elicited by scenarios that would otherwise not be measurable.

A study by Vaid, Choi, Chen, and Friedman (2008) used vignettes to examine linguistic and cultural dimensions of judgments of embarrassment and humorousness of everyday predicaments. Participants were Korean-speaking monolinguals, English-speaking monolinguals, and Korean-English proficient bilinguals. In their first experiment, results showed that English-monolinguals reported higher levels of amusement for certain predicaments than the two Korean groups, who reported higher levels of embarrassment for those situations. Furthermore, for bilinguals, who were given the vignettes in both languages, embarrassing predicaments were

judged to be more embarrassing when they were presented in Korean than when they were presented in English, but were judged to be more amusing when English emotion labels were used. In the second experiment, which examined participants' preferred responses to embarrassing predicaments, English monolinguals showed a preference for justifications or humor to minimize embarrassment from social gaffes, whereas Korean-English bilinguals preferred to give apologies or else say nothing. This study demonstrates that language and culture both affect the perception of and response to affect-laden situations.

1.9. The Present Study

As reviewed above, a preponderance of evidence suggests that bilinguals show a heightened response to emotion-laden words in their native language than in a second language, but to date there has been little examination of individual differences in emotional response across languages among different subgroups of bilinguals varying in their language practices. The present study sought to examine two potential sources of variability in how bilinguals judge emotion-laden vignettes (and neutral controls) presented across languages: differences arising from language dominance and differences arising from language brokering frequency.

Based on prior research from autobiographical studies, as well as laboratory studies showing that emotional expressions elicit a stronger physiological reaction in the language in which bilinguals are more proficient (e.g., Harris et al., 2006), it is hypothesized that bilinguals will show heightened emotional response to vignettes presented in their dominant language than to those presented in the nondominant language. It is further hypothesized that language differences in emotional reactivity will be reduced in bilinguals who report equivalent proficiency across languages.

It is less clear how to theorize the impact of language brokering frequency on response to emotion-laden vignettes. On the one hand, it could be argued that experience moving between two languages may make bilinguals with extensive brokering experience show less of a language difference in emotional responsiveness as compared to those with little or no brokering experience. This is because language brokers may identify as bicultural and thus, perhaps, may respond more equivalently to emotional situations regardless of language.

On the other hand, it could be argued that brokering experience may make bilinguals more emotionally attuned to their culture of origin, given that they have had to engage with often rather charged situations when translating for their parents or extended family. Alternatively, by virtue of having to translate for a variety of individuals on a variety of topics, language brokers may have become more skilled in navigating family dynamics. This might in turn make them more adept than bilinguals with little or no brokering experience in recognizing affective dimensions of discourse in Spanish.

2. METHOD*[1]

2.1. Participants

Participants were drawn from college students recruited from the Texas A&M University Psychology Participant pool and from community members reached via online social media platforms throughout the United States. Participants from Texas A&M University were offered class credit for their participation. Community members were offered a chance to enter a drawing for a $25-dollar gift card.

The initial sample included 270 Spanish-English bilingual participants who self-identified as both Spanish-English bilingual and as Hispanic/Latinx. However, 160 were excluded from the analysis due to failure to respond to all vignette items of the online study or because of other incomplete information submitted, as well as failure to give consent after initial screening.

The final sample was composed of 110 Spanish-English bilingual participants. Of these 19 identified as male (17.3%), 89 identified as females (80.9%), one identified as non-binary (0.9%), and one identified as two-spirit (0.9%). Participants' ages ranged from 18 years old to 70 years ($M = 28.58$ years, $SD = 11.31$). Six participants reported English as their first language (5.5%), 90 reported Spanish as their first language (81.8%), and 13 reported learning Spanish and English at the same time (11.8%); one person reported learning more than two languages (0.9%).

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Participants were subdivided on the basis of language dominance and frequency of language brokering experience. The Bilingual Language Dominance Questionnaire (Dunn & Fox Tree, 2009) was used to classify participants. This scale has items such as "At what age did you first learn Spanish? English?" and "What language do you predominantly use at home?". Based on their responses on this questionnaire, participants were classified as English-dominant (n = 45), Spanish-dominant (n = 25), or Balanced (n = 40).

An adaptation of the Language Brokering Scale (Zhang et al., 2020) was administered to participants. Based on their responses on one item on this scale, participants were classified into high or low brokering experience. Individuals who brokered for family members on average "a few times every 3 to 6 months" or less were classified as *low brokers* and participants who brokered for family members on average "a few times a month" or more were classified as *high brokers*. Using this criterion there were 64 (58.2%) low brokers and 46 (41.8%) high brokers. See Appendix A for further information about participant demographics.

2.2. Materials

2.2.1. Emotion-Laden Vignettes and Neutral Controls

Prior research has found that in accordance with the Latinx value of *simpatía*, individuals of Latinx heritage find positive emotions, such as gratitude, as more desirable to experience and express (Senft et al., 2020) and as experienced more frequently and more intensely when compared with other collectivist societies (Corona et al., 2020). As such, gratitude was chosen as an exemplar of the positive emotion to be tested. Additionally, negative emotions, such as guilt, were found to be highly undesirable and inappropriate. Guilt has been conceptualized as including "distinct features associated with self-reflection and social ties that set it apart from

other affective experiences" (Covarrubias et al., 2020, p.1555). As such, due to its relationship to negative affect but also social ties, guilt was selected as an exemplar of negative emotions.

The vignettes used in the study were arrived at from responses to a mini survey administered via a listserv and Facebook group for Latinx individuals pursuing college education. The 72 participants included in this survey were selected if they self-identified as Latinx/Hispanic and as users of English and Spanish. These respondents were asked to describe three circumstances that made them feel guilty and three that made them feel grateful. Survey results were evaluated for themes associated with the target emotion to construct vignettes.

A total of 27 written vignettes were developed (9 vignettes each for positive, neutral, and negative emotions) in English and were then translated into Spanish and back translated in English by the experimenter. A panel of 35 Spanish-English bilingual volunteers were then asked to rate each of the 27 vignettes on pleasantness, emotion elicited, and intensity of emotion elicited. Individuals were asked to choose their preferred language for rating prior to vignette presentation. From these, six vignettes for positive emotions, six for negative, and four neutral were selected as the strongest exemplars of the target emotions across languages. Additionally, at this stage feedback regarding confusion due to the use of the word *gratitud* in Spanish for *gratitude* was taken into consideration and was replaced with *agradecimiento*, which raters understood more readily.

For the experiment, participants were presented with half of each vignette type in English and half in Spanish - i.e., three positive vignettes, three negative vignettes and two neutral ones were presented in English per participant, and the same for Spanish. This resulted in a total of 16 trials per participant. Per trial, participants were to rate the responses on degree of pleasantness of the vignette, using a 5-point scale (as a measure of valence), describe the emotion conveyed

by each vignette, and rate the degree to which the vignette conveys the emotion identified, using a 5-point Likert scale. The set of 16 vignettes were presented in a random order. See Appendix B for vignette information.

2.2.2. Self-Assessment Manikin (SAM)

Emotional valence was measured using the SAM, a non-verbal culture-free five-point Likert scale that measures the pleasantness (valence) associated with the vignettes presented. Norms have been collected that demonstrate their validity across cultures and age groups (Bradley & Lang, 1994). Ratings using the SAM have been widely used in both advertising and psychophysiological studies with subjects completing the rating in less than 15 seconds, allowing for quick and reliable way to measure the valence induced by a stimulus.

2.2.3. Bilingual Dominance Scale (BDS)

Participants were classified into three subgroups based on their responses on this scale. The BDS is a twelve-item scale that targets three criteria to assess language dominance: 1) percent use of each language; 2) age of acquisition and age at which they felt comfortable in each language, and 3) the restructuring of language fluency due to changes in linguistic environments. This scale has been validated with both college students and community members (Dunn & Fox Tree, 2009). Questions contained in this scaled are assigned a numerical value for Spanish and English. Scores are calculated by subtracting the total value for Spanish from the English total. Scores in the 5 and above range indicate Spanish-Dominance, scores between -5 and 5 indicate a Balanced bilingual, and scores -5 and below indicate English-dominance.

2.2.4. Language Brokering Measures

A modified version of a Language Brokering Scale (LBS) was administered to classify participants as high or low in frequency of language brokering experience (Zhang et al., 2020).

The LBS was initially used as part of a study measuring parent-acculturation in Mexican immigrant families and includes attitudes towards language brokering and the frequency of this activity as well. The critical question for the present study was frequency of brokering experience (Zhang et al., 2020). In addition, participants were administered a modified version of the *Language Background and Brokering Questionnaire* (Vaid & Lopez, 2012). This is an inventory of language use and contexts of brokering. The instrument is divided into three sections: 60 to 30 items on language acquisition history and current use, items on informal translation history and contexts of brokering, and items on language switching/mixing. Responses on this measure were used to characterize participants' language and brokering profiles more fully. This questionnaire was administered in English.

2.2.5. Modified Bilingual Emotional Experience Questionnaire (M-BEQ)

A modified version of the Bilingual Emotional Questionnaire (BEQ) by Dewaele and Pavlenko (2001), aimed at gathering information about how participants experience emotions and emotional experiences in their first language versus their second. This questionnaire has been truncated from its original 35 questions to 17 to specifically assess the relationship between bilingualism and emotional experience. This measure was included to describe participants' general perception of emotional experiences in their L1 versus their L2 on selected items of interest, e.g., language chosen when speaking about neutral matters, personal matters, and emotional matters. This measure was administered in English.

2.2.6. The Abbreviated Multidimensional Acculturation Scale (AMAS-ZABB)

The AMAS-ZABB was used to assess the degree of acculturation and cultural identity (Zea, Asner-Self, Birman, & Buki, 2003). This is a 42-item scale validated with both a community sample and among college students that is reliable across age ranges. This measure

was designed based on the model of acculturation that states that cultural identity does not equate cultural competence. The scale measures three dimensions: cultural identity, language competence, and cultural competence (Zea, Asner-Self, Birman, & Buki, 2003). The measure was administered in English.

2.3. Procedure and Design

There were three parts to the research study. All parts were administered via an online platform.

2.3.1. Part 1

Participants were provided with a link to the online study administered through Qualtrics, an online survey tool. Screening questions to determine eligibility were presented. These questions asked participants if they identified as a Spanish-English bilingual and as Hispanic/Latinx. Informed consent was then presented electronically if participants met participation criteria. Once participants agreed to participate, they were first asked to fill out the Bilingual Dominance Scale (BDS) (Dunn & Fox Tree, 2009) followed by a brief version of a modified Language Brokering Scale (Zhang et al., 2020) to assess whether they have had experience as a language broker.

2.3.2. Part 2

Next, participants were presented with a set of written vignettes presented one at a time through Qualtrics. Each participant was presented with three positive vignettes (designed to elicit gratitude) and three negative vignettes (designed to elicit guilt) in English, and three other positive and three negative vignettes in Spanish. The vignettes are not translation equivalents, but across participants, any given vignette was presented equally often in Spanish or in English. The total set of 12 emotion-laden vignettes (6 per language) was presented in a random order (so

that, from one trial to the next, the language and/or the valence might shift). In addition, four

neutral vignettes (two per language) were interspersed among the emotion-laden vignettes during

the test session.

On reading each vignette, participants were asked to give three judgments: (a) a

pleasantness rating; (b) identify which emotion was elicited by the vignette; and (c) a judgment

about on the intensity of evoked feelings identified in part (b) (depending on the nature of the

particular vignette). For examples, see Figures 1 through 6.

Figure 1. Sample Neutral Vignette in English[2]

I realized I forgot my wallet when I got in my car. I ran into my house and grabbed it before heading to work.

(a) Pleasantness Rating:
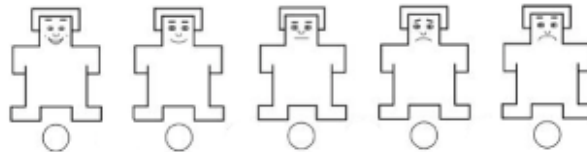
Please rate how this vignette made you feel:

(b) Which emotion is conveyed in this vignette:
  1) Guilt,
  2) Gratitude
  3) No emotion in particular (neutral)

(c) For the emotion you specified (including if you chose 'neutral') please indicate the degree to which the vignette conveys that emotion:
  1) A little bit
  2) Slightly
  3) Moderately
  4) Strongly
  5) Very Strongly

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Figure 2. Sample Neutral Vignette in Spanish[3]

Mientras conducía hacia el trabajo, noté que tenía poco combustible. Me detuve en la estación de servicio y llené mi tanque.

(a) Pleasantness Rating:
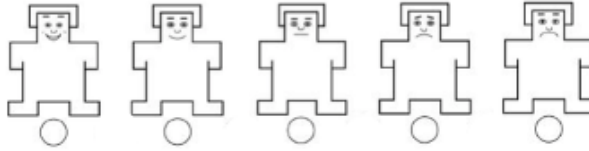
Por favor indica cómo te hizo sentir esta viñeta:

(b) Qué emoción se transmite en esta viñeta:
1) Culpa
2) Agradecimiento
3) Ninguna emoción en particular (neutro)

(c) Para aquella emoción que indico previamente (incluso si indico 'neutro'), indique en que medida la viñeta le transmitió esta emoción:
1) Un poco
2) Ligeramente
3) Moderadamente
4) Fuertemente
5) Muy fuerte

Figure 3. Sample Negative Emotion (Guilt) Vignette in English[4]

I am the only one of my family born in the US. My parents are undocumented. In college I was presented with the opportunity to study abroad. I asked my parents to help me pay for it, they willingly obliged. Later I realized, that while I am in Europe, they can't leave the US without risking deportation.

(a) Pleasantness Rating:
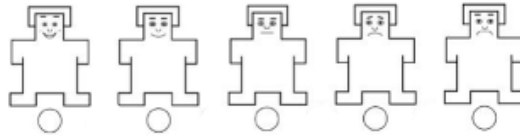
Please rate how this vignette made you feel:

(b) Which emotion is conveyed in this vignette:
1) Guilt,
2) Gratitude
3) No emotion in particular (neutral)

(c) For the emotion you specified (including if you chose 'neutral') please indicate the degree to which the vignette conveys that emotion:
1) A little bit
2) Slightly
3) Moderately
4) Strongly
5) Very Strongly

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Figure 4. Sample Negative Emotion (Guilt) Vignette in Spanish[5]

I was on a bus with my 70-year-old grandma holding many bags. All the seats were taken, and grandma was having trouble holding on to the bags and keep her footing, but my hands were full as well and I could not help her. A young man notices my grandma is struggling and offers his seat. He stands while grandma takes his seat.

(a) Pleasantness Rating:

Please rate how this vignette made you feel:
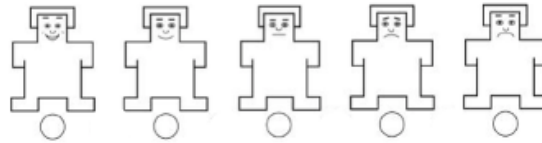
(b) Which emotion is conveyed in this vignette:
    1)   Guilt
    2)   Gratitude
    3)   No emotion in particular (neutral)

(c) For the emotion you specified (including if you chose 'neutral') please indicate the degree to which the vignette conveys that emotion:
    1)   A little bit
    2)   Slightly
    3)   Moderately
    4)   Strongly
    5)   Very Strongly

Figure 5. Sample Positive Emotion (Gratitude) Vignette in English[6]

I was on a bus with my 70-year-old grandma holding many bags. All the seats were taken, and grandma was having trouble holding on to the bags and keep her footing, but my hands were full as well and I could not help her. A young man notices my grandma is struggling and offers his seat. He stands while grandma takes his seat.

(a) Pleasantness Rating:

Please rate how this vignette made you feel:
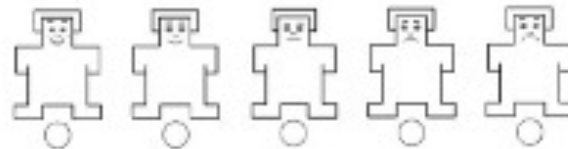
(b) Which emotion is conveyed in this vignette:
    1)   Guilt
    2)   Gratitude
    3)   No emotion in particular (neutral)

(c) For the emotion you specified (including if you chose 'neutral') please indicate the degree to which the vignette conveys that emotion:
    1)   A little bit
    2)   Slightly
    3)   Moderately
    4)   Strongly
    5)   Very Strongly

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Figure 6. Sample Positive Emotion (Gratitude) Vignette in Spanish[7]

Estaba en un autobús con mi abuela de 70 años sosteniendo muchas bolsas. Todos los asientos estaban ocupados, y mi abuela tenía problemas para sostener las bolsas y mantener el equilibrio. Mis manos también estaban llenas y no la podía ayudar. <u>Un joven nota</u> que mi abuela está luchando para mantenerse en pie y le ofrece su asiento. Se pone de pie mientras mi abuela toma asiento.

(a) Pleasantness Rating:
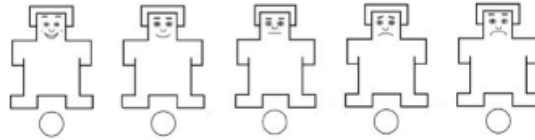
Por favor indica cómo te hizo sentir esta viñeta:

(b) Qué emoción se transmite en esta viñeta:
1) Culpa
2) Agradecimiento
3) Ninguna emoción en particular (neutro)

(c) Para aquella emoción que indico previamente (incluso si indico 'neutro'), indique en que medida la viñeta le transmitió esta emoción:
1) Un poco
2) Ligeramente
3) Moderadamente
4) Fuertemente
5) Muy fuerte

2.3.3. Part 3

After all vignettes were presented, participants were presented with additional questionnaires assessing their cultural identity, language brokering experience, and emotional sensitivity in each language. (See Appendix A, C, and D)

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<center>3. RESULTS</center>

3.1. Participant Characteristics

A majority of participants were born in the U.S. ($n = 72$). Participants were classified as high brokers if they translated for family members on average "a few times a month" or more and as low brokers if they translated for family members on average "a few times every 3 to 6 months" or less.

Of those classified as high brokers, 21 were balanced bilinguals (45.65%), 13 were Spanish-dominant (28.26%), and 12 were English-dominant (26.09%). Of those classified as low brokers, 19 were balanced bilinguals (29.69%), 12 were Spanish-dominant (18.75%), and 33 were English-dominant (51.56%). Thus, a difference in frequency of brokering in this study also signaled possible differences in proficiency in English, given that over half of the low-broker group were English-dominant.

Other characteristics of the brokering experience of participants were as follows. High brokers reported that the majority of their brokering occurred at home (41.3%). Most of the high brokers (71.8%) reported translating for their mother (on a frequency ranging from a few times a week to daily basis) whereas 58.7% reported translating for their fathers to the same extent. Only 34.8% of high brokers reported translating for other family members (with a frequency ranging from a few times a week to daily). By contrast, for low brokers the only source of daily translation was for their mothers (3.1%). For their fathers (1.6%) and other family members (12.5%), participants translated with a frequency ranging from a few times a week to a few times a month.

The high and low broker groups differ in three aspects: translation at home, translation in marketplaces, and doctor's offices. Translation at home occurred 72.7% of the time for high

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brokers, and 42.7% of the time for low brokers, ranging on a frequency scale from often to always. Translation in marketplaces (stores) occurred 59.10% of the time for high brokers and 27.9% for low brokers, on a frequency scale from often to always. Lastly, translation in doctor's offices occurred 56.8% of the time for high brokers and 26.2% of the time for low brokers, ranging on the same frequency scale of often to always. A more detailed summary of responses of the two groups on other measures is provided in Appendix C.

3.2. Acculturation

Separate analyses of variance were conducted to compare high vs. low brokers on cultural identification and language competence, based on their responses on the acculturation scale. Low brokers ($M = 2.83$) showed a significantly greater affiliation with an American culture identity than high brokers ($M = 2.74$), and significantly greater cultural competence of American culture ($M = 2.94$) than high brokers ($M = 2.84$). Lastly, low brokers ($M = 3.79$) reported significantly greater language competence in English than high brokers ($M = 3.65$).

3.3. Valence (Pleasantness Judgments) by Group and Vignette Language Per Vignette Type

Two sets of analyses of variance were conducted comparing group and language effects on participants' mean ratings on a 5-point scale of how the vignette made them feel (ranging from 1, indicating "very positive" to 5, indicating "very negative"). In one set, the bilingual subgroup variable was defined in terms of language dominance (three levels) and in another set it was defined in terms of brokering experience (two levels). Separate analyses of variance were conducted on each of the three vignette types.

For each vignette type, mean ratings of pleasantness were entered into a 3(English-dominant, Spanish-dominant, or Balanced) x 2(English vs. Spanish language of presentation)

analysis of variance, and a 2(High vs. Low Broker) x 2(English vs. Spanish presentation) mixed model analysis of variance.

For the analysis by language dominance, there was no effect of language dominance group $F(2,107) = 1.39$, $p = 0.26$, $\eta_p^2 = 0.03$ or vignette language $F(1,107) = 0.69$, $p = 0.41$, $\eta_p^2 = 0.01$ for neutral vignettes. There was also no effect of group $F(2,107) = 1.12$, $p = 0.33$, $\eta_p^2 = 0.02$ or vignette language $F(1,107) = 0.21$, $p = 0.65$, $\eta_p^2 = 0.00$ for negative vignettes. And there was no effect of group $F(2,107) = 1.13$, $p = 0.33$, $\eta_p^2 = 0.02$ or vignette language $F(1,107) = 0.27$, $p = 0.61$, $\eta_p^2 = 0.00$ for positive vignettes.

The results of the analyses of the analysis of high vs. low broker groups are summarized below.

Positive Vignettes. There was no significant main effect of vignette language ($F(1,108) = 1.09$, $p = 0.30$, $\eta_p^2 = 0.01$). Additionally, the main effect of broker group was not significant, indicating that brokering experience on its own did not differentially affect emotional pleasantness ratings ($F(1,108) = 1.30$, $p = 0.26$, $\eta_p^2 = 0.01$).

However, there was a significant interaction between vignette language and broker type with a small to medium effect size, $F(1,108) = 4.43$, $p = 0.038$, $\eta_p^2 = 0.04$). Pairwise comparisons indicate high brokering participants rated vignettes in English ($M = 1.83$) significantly less positively than vignettes in Spanish ($M = 1.59$), $p = 0.04$. Additionally, when rating vignettes in English, low brokering participants rated vignettes significantly more positively ($M = 1.56$) than high brokering participants ($M = 1.83$). See Figure 7 (please note: lower numbers here indicate more positive pleasantness ratings).

Figure 7. Low vs. High Brokers on Spanish vs. English Positive Vignettes
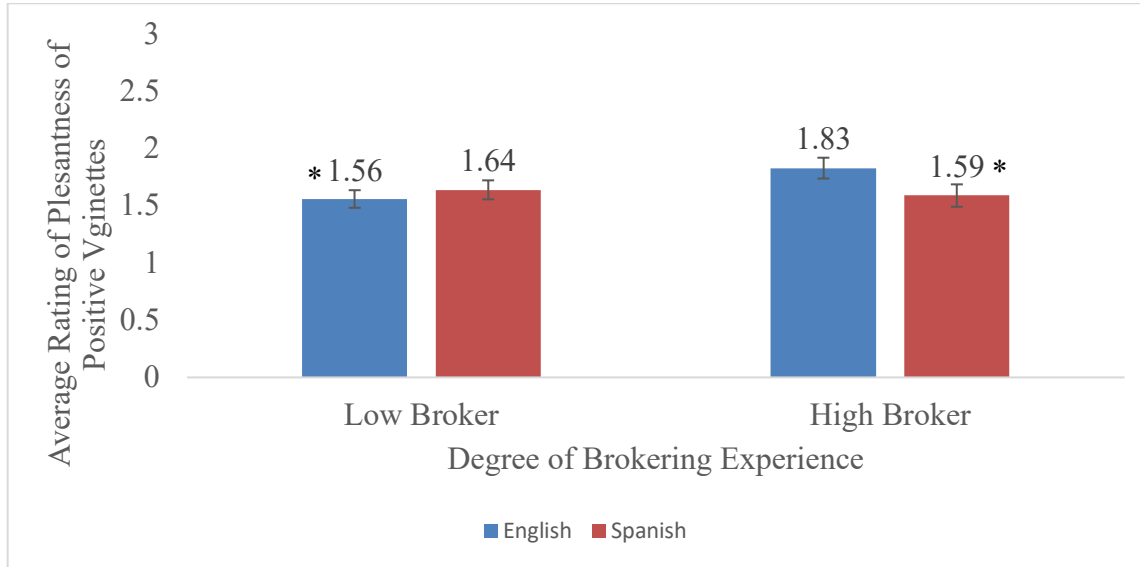
Negative Vignettes. Analysis of variance of negative vignettes showed that there was no significant main effect of vignette language ($F(1, 108) = .02$, p = 0.89, $\eta_p^2 = 0.00$). Furthermore, the main effect of group was not significant, indicating that brokering experience on its own did not differentially affect emotional pleasantness ratings ($F(1,108) = .03$, p = .87, $\eta_p^2 = .00$). Lastly, there was no significant interaction between vignette language and broker type, $F(1,108) = 1.76$, $p = 0.19$, $\eta_p^2 = .02$.

Neutral Vignettes. Analysis of variance of neutral vignettes showed that there was no significant main effect of vignette language ($F(1, 108) = 0.47$, $p = 0.50$, $\eta_p^2 = 0.00$). Furthermore, the main effect of group was not significant, indicating that brokering experience on its own did not differentially affect emotional pleasantness ratings ($F(1,108) = 0.11$, $p = 0.74$, $\eta_p^2 = .00$). Lastly, there was no significant interaction between vignette language and broker type, $F(1,108) = 0.001$, $p = 0.98$, $\eta_p^2 = 0.00$.

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3.4. Emotion Representativeness Judgments by Group, Vignette Language, and Vignette Type

Two sets of analyses of variance were conducted on participants' mean ratings on the intensity of the emotion portrayed by the vignette (from 1 to 5, where 1 indicated that the designated emotion conveyed in the vignette "a little bit" and 5 that it conveyed the emotion "very strongly"). In one set, the bilingual subgroup variable was defined in terms of language dominance (three levels) and in another set it was defined in terms of brokering experience (two levels). The analyses were conducted separately for each of the two bilingual subgroup variables.

Language Dominance as a between-subject variable. The mean ratings were entered into a 3 (English-dominant, Spanish-dominant, or Balanced) x 2 (English vs. Spanish language of presentation) x 3 (positive, negative, or neutral) mixed model analysis of variance. The results showed no significant main effect of vignette language ($F(1,107) = 1.04$, $p = 0.31$, $\eta_p^2 = 0.01$), or group, indicating that language dominance on its own did not differentially affect emotional intensity ratings ($F(2,107) = 1.178$, $p = 0.31$, $\eta_p^2 = 0.02$). There was also no significant interaction between vignette language and language dominance ($F(2,107) = 2.37$, $p = 0.098$, $\eta_p^2 = 0.042$) or between vignette type and language dominance, $F(2.99, 159.71) = 0.66$, $p = 0.58$, $\eta_p^2 = 0.01$ (Greenhouse-Geisser correction is reported because of violation of sphericity of vignette type).

However, there was a significant main effect of vignette type with a large effect size, $F(1.49,159.72) = 88.65$, $p < 0.001$, $\eta_p^2 = 0.45$. (Mauchly's test of sphericity was significant, X^2 (2) = 44.03, $p < 0.001$, indicating a violation to the sphericity assumption, therefore the Greenhouse-Geisser ($\varepsilon = 0.74$) correction is reported using adjusted degrees of freedom). Bonferroni-adjusted pairwise comparisons indicated that participants rated the emotional

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intensity of negative vignettes ($M = 3.93$) significantly higher ($p < 0.001$) than that of neutral

vignettes ($M = 2.99$). Furthermore, subjects rated the emotional intensity of positive vignettes ($M = 4.17$) significantly higher ($p < 0.001$) than that of neutral vignettes ($M = 2.99$). And lastly,

subjects rated the emotional intensity of positive vignettes ($M = 4.17$) significantly higher ($p < 0.001$) than that of negative vignettes ($M = 3.93$). Figure 8 summarizes the mean intensity

ratings of each language dominance group by vignette type.

Figure 8. Summary of Emotional Intensity Ratings by Language Dominance Group by Vignette Type
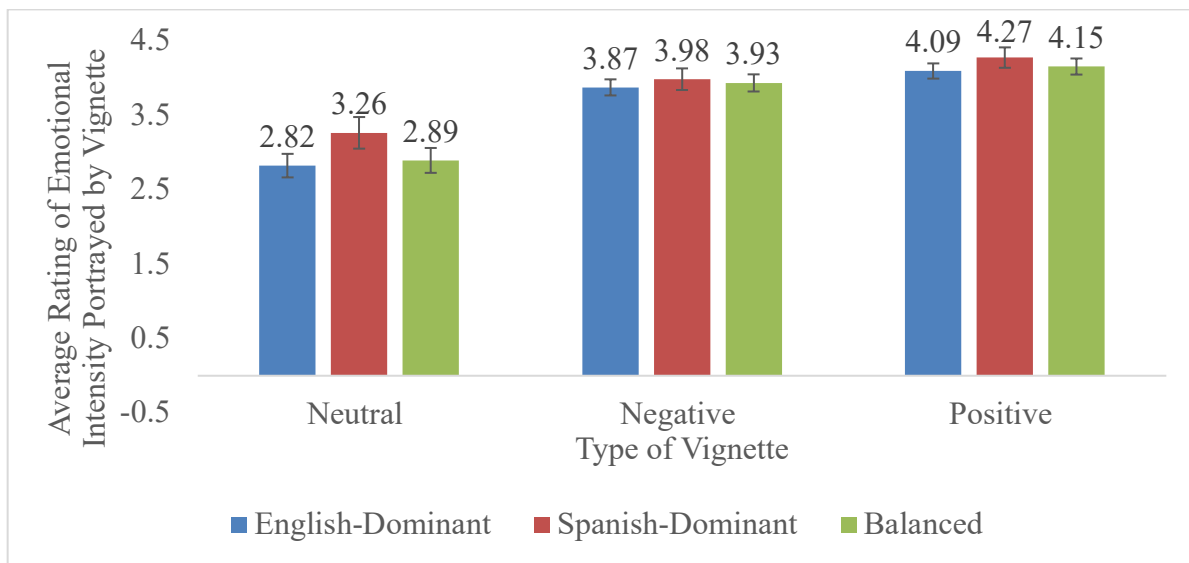
Brokering experience as a between-subject variable. Mean ratings were entered into a 2

(High vs. Low Broker) x 2 (English vs. Spanish presentation) x 3 (positive, negative or neutral

vignette) mixed model analysis of variance. The results showed no significant main effect of

vignette language ($F(1,108) = 0.29$, $p = 0.59$, $\eta_p^2 = 0.003$) or of group, indicating that brokering

experience on its own did not differentially affect emotional intensity ratings ($F(1,108) = 2.74$, $p = .10$, $\eta_p^2 = .03$).

There was also no significant interaction between vignette language and brokering experience, $F(1,108) = 1.82$, $p = 0.18$, $\eta_p^2 = 0.02$ or between vignette type and brokering experience, $F(1.50,161.43) = 2.16$, $p = 0.13$, $\eta_p^2 = 0.02$ (Greenhouse-Geisser correction is reported because of violation of sphericity of vignette type).

There was a significant main effect of vignette type with a large effect size, $F(1.50, 161.43) = 94.11$, $p < 0.000$, $\eta_p^2 = 0.47$. (Mauchly's test of sphericity was significant, $X^2(2) = 44.15$, $p < 0.000$, indicating a violation to the sphericity assumption, therefore the Greenhouse-Geisser ($\varepsilon = 0.75$) correction is reported using adjusted degrees of freedom). Bonferroni-adjusted pairwise comparisons indicated that participants rated the emotional intensity of negative vignettes ($M = 3.93$) as significantly ($p < 0.0001$) greater than that of neutral vignettes ($M = 2.98$). Furthermore, subjects rated the emotional intensity of positive vignettes ($M = 4.16$) significantly greater ($p < 0.001$) than that of neutral vignettes ($M = 3.93$). And lastly, subjects rated the emotional intensity of positive vignettes ($M = 4.16$) as significantly greater ($p < 0.001$) than that of negative vignettes ($M = 3.93$). Figure 9 summarizes the mean intensity ratings of each broker type group by vignette type.

Figure 9. High Broker vs. Low Broker Average Ratings of Emotional Intensity Portrayed by 3 Vignette Types
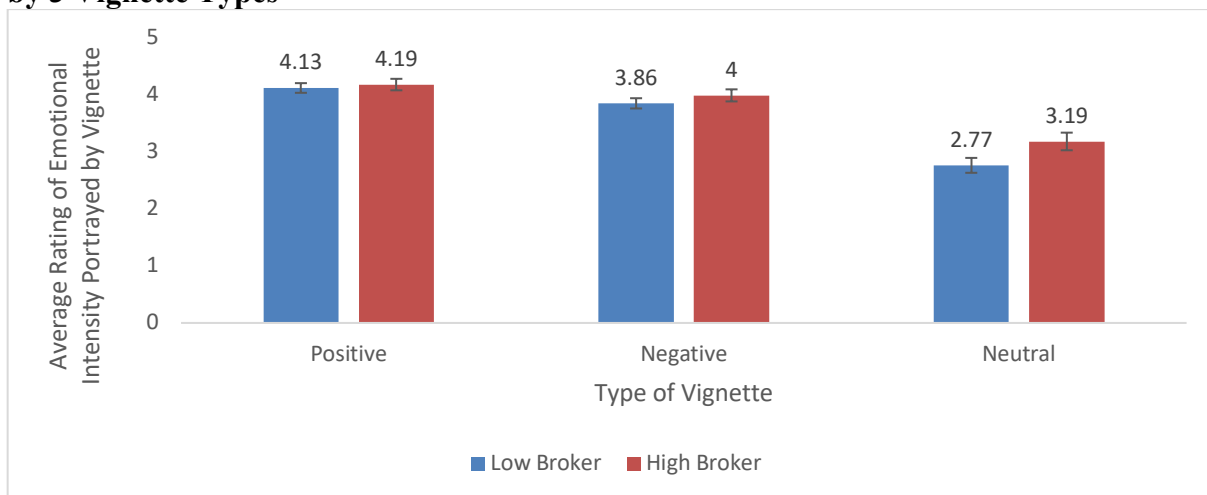
4. DISCUSSION

Whereas much previous research on bilinguals' reactions to emotion-laden text has been focused on single words or affectively charged expressions such as insults or terms of endearments (Harris, 2004), the present research examined this issue in the context of emotion-laden situations. The scenarios chosen depicted a particular type of positive emotion (gratitude), a particular negative emotion (guilt), and a neutral situation. Vignettes of these three conditions were presented in English or Spanish to bilingual users. Of interest was whether bilinguals' ratings of the pleasantness or intensity of the emotions conveyed in the vignettes would be influenced by the language of presentation of the vignette and/or by differences in their language experience.

Two dimensions of variability in bilingual language experience were studied: differences in language dominance and differences in the frequency of informal translation or brokering experience (these variables were looked at as independent of each other). Thus, the purpose of this study was to explore how differences among Spanish-English bilinguals in language dominance and frequency of language brokering experience may contribute to differences in responding to emotionally laden situations presented in each language.

Based on an extensive prior literature pointing to a greater affective salience of the first spoken language of bilinguals (Harris et al., 2006), it was expected that ratings of emotional valence and intensity would be stronger in the more dominant language than in the less dominant one. This was not found. Instead, our results showed that bilinguals rated the vignettes comparably across languages regardless of their dominant language. That is, no evidence was obtained for differences in felt emotion as a function of their dominant language. As expected, balanced bilinguals showed no significant difference between their ratings in emotional valence

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and intensity, perhaps due to their equivalent proficiency across languages. However, pleasantness and intensity ratings in response to vignettes presented in the bilinguals' dominant language were not significantly different than those to vignettes in the less dominant language.

The lack of an effect of language dominance in judgments of emotion was surprising as it goes against evidence from previous research. Nevertheless, the absence of an effect of language dominance cannot be interpreted to mean that our study lacked power to detect group differences, as a significant group difference was found on the dimension of brokering experience. Specifically, in ratings of pleasantness of the emotion depicted in the vignettes, bilinguals with a high degree of brokering experience rated the positive vignettes as significantly more positive in Spanish than in English, and as significantly less positive in English as compared to how bilinguals with low brokering experience rated the vignettes on English. In ratings of intensity of emotion, no brokering group differences, or language differences were observed. It is possible that because the Bilingual Dominance Scale favors spoken fluency over written and the stimuli were presented in written form, this measurement of dominance was not a good fit for the type of stimuli utilized.

Further, across all groups and in both languages, judgments of the intensity of emotion of vignettes depicting positive emotions were significantly higher than judgments of the intensity of negative emotions or of the neutral vignettes. The overall higher rating of emotional intensity for positive vignettes is consistent with the findings of Senft et al. (2020). They examined negative and positive emotions values among people of Asian heritage, European heritage, and Latino heritage. Their findings showed that compared to the Asian sample, people of Latino heritage rated positive emotions more desirable and appropriate to experience and express but as less desirable and appropriate to experience than did individuals of European heritage. Furthermore,

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people of Latino heritage rated negative emotions as more undesirable to experience and to express compared to people of Asian heritage and more inappropriate to experience and to express than people of European heritage.

Similarly, Corona et al. (2020) evaluated the experience of gratitude among people of Asian heritage, Latino heritage, and European heritage. Latinos reported higher desirability of experiencing and expressing gratitude than Asians, as well as a greater appropriateness of expressing gratitude, its frequency of expression and the intensity of the emotion experienced. For their part, individuals of European heritage rated experiencing gratitude more frequently than did both groups. Together these studies suggest that the experience of positive emotions such as gratitude is desirable because of the cultural model of *simpatía*, which values positive emotions as means to maintain interpersonal harmony, and views negative emotions as highly undesirable and inappropriate (Dingfelder, 2005).

The finding that judgments of emotional valence are stronger in Spanish than in English among bilinguals with a history of language brokering experience has not previously been reported in the literature on bilingualism. The rapidly growing literature on language brokering does point to a range of complex and often ambivalent emotions associated with the experience of being a broker for one's family members (Mier-Chairez et al., 2019). The finding from the present research adds to this literature and suggests that further research may be warranted to better understand what aspects of brokering experience may contribute to making the bilingual's heritage language more affectively resonant. Perhaps cultural values associated with the concept of *gratitud* and *agradecimiento* need to be explored in further detail. Anecdotally during the vignette selection process participants expressed confusion between the terms, and often identified *agradecimiento* or *agradecido/a* as the appropriate term to describe the emotion

depicted by the gratitude vignettes. Further exploration into how language brokers translate more nuanced terms such as gratitude could perhaps provide insight that can allow us to better understand the differences observed.

A better understanding of the way language brokering affects the way individuals process both negative and positive emotions can be helpful in understanding how to cater to the needs of individuals who are unable to verbally express themselves. Past research has found that many children who behave as language brokers experience trauma through the process of immigration and often find it difficult to express these traumas through verbal communication (Santiago, Raviv, & Jaycox, 2018). Children who language broker for families need nonverbal ways to process their experiences (Thompson, Green, Taylor, & Corey, 2018). Understanding how emotionally laden situations as experienced differently due to frequency of brokering can help better cater to the needs to children who take on these roles for their families.

The present research demonstrated that emotionally-laden vignettes are not always perceived as having the same degree of affective valence across languages or different types of bilinguals, which is important because it addresses the heterogeneity within the Spanish-English bilingual speaker community. Whereas there was no effect of language of vignette presentation in judgments of how well a given emotion was conveyed in the vignette, the type of emotion being conveyed mattered. Across languages and bilingual subgroups, vignettes portraying positive emotions were judged as conveying those emotions better than vignettes portraying negative emotions or neutral events. Similarly, the findings showed no effects of language or bilingual type in the feelings elicited by neutral or negative vignettes.

For positive vignettes, distinct language and group effects were noted, with Spanish presentation being more evocative for bilinguals with high brokering experience and English

presentation being more salient for bilinguals with low brokering experience. Importantly, there were no group differences in affective experience related to language dominance. The fact that language brokering experience emerged as the only significant individual difference variable in judgments of emotional salience of emotion-laden vignettes is a novel finding and one that warrants additional study in future work.

While the rationale behind why individuals who engage in language brokering more frequently rated positive vignettes as more positive in Spanish than in English is not fully understood. Harris et al. (2006) offer the "emotional contexts of learning" theory that may help us better understand our findings. Harris and colleagues posit that "language comes to have a distinctive emotional feel by virtue of being learned, or habitually used, in a distinctive emotional context" (Harris et al., 2006, p.272). The act of brokering itself can be very emotionally loaded. This may be because of the material being translated or due to the broker's own emotional experience while in the act of brokering. As such, the theory proposed by Harris et al. (2006), would suggest that individuals who broker at a higher frequency may have language that has a more distinctive emotional feel than for individuals who broker on a low frequency. Because high brokers engage with their Latinx culture of origin more frequently than low brokers (through the act of brokering), it is possible they have created a greater number of connections between emotionally relevant personal memories and their first language. High brokers' regular use of L1 through act of brokering reinforces connections to emotionality associated with earlier childhood experiences, more so than for those who broker irregularly (low brokers). Individuals who are low brokers when evaluated through this lens (regardless of whether they brokered as younger children), as adults are less exposed to the context in which early childhood emotionality occurred and thus are most distanced from the emotionality of L1.

First language is universally learned in an emotional context, as attachment to caregivers occurs early in life. As Venta et al. (2017) suggest, internal working models of attachment are linguistically and emotionally laden and may affect how language is used to create emotional distance and how individuals relate to others. This suggests the younger an individual learns a language, the greater amount of time they have to develop emotional memories using that language. As such, age of acquisition can serve a proxy for language emotionality. Harris et al. (2006), however, argue that while the research in emotionality of language suggests age of acquisition, as well as language proficiency, have been found to have the highest correlation with emotional responsiveness, they are not to be interpreted as causal factors. The current research supports this perspective. When participants were grouped according to their language dominance, no difference was observed in the reported valence. However, when participants were grouped based on their brokering experience, a significant difference was seen among individuals who engaging in brokering at a high frequency. This supports the notion that the emotional context of brokering sensitizes individuals to emotionality more so than language dominance, and that the root of the emotionality experienced through language has more to do with emotional contexts of learning than other factors.

Additionally, it is important to consider the role of cultural frame switching, a phenomenon that occurs to many bilinguals. It could be speculated that language brokers consistently engage in cultural frame switching as part of the brokering experience and that through the presentation of an emotionally laden situation high brokers unconsciously engage in this phenomenon. This in turn may cause individuals to endorse Latinx cultural values such as *simpatía* and *familismo.* The *familismo* value is particularly important to consider, as the majority of the positive vignettes entailed positive emotions in relation to a family member or to

one's family as a whole, which is in alignment with *familismo*. Perhaps in future studies including a measure of this cultural value could allow researchers to better understand if the content of the vignette along with the language of presentation induces cultural frame switching. The cultural value of *simpatía* would also be importance to evaluate as in itself may be having an effect on ratings, as preference for positive emotions is culturally valued.

Although bilingualism research to date has mainly focused on understanding the cognitive impact of mastering two or more languages, the research has, until recently, downplayed the heterogeneity of bilingual experience. In particular, while certain sources of potential variability in the bilingual experience have been acknowledged as being possible mediators of cognitive or linguistic or affective differences, namely, differences in language proficiency or age of onset of bilingualism, other aspects of bilinguals' language use history – in particular, language brokering, have not been systematically considered.

Language brokering is a widespread phenomenon (Morales & Hanson, 2005) and encompasses elements of trauma, forcing individuals to consistently navigate both the linguistic and cultural environments that is the source of that trauma. Individuals are consistently faced with the challenges of navigating their own emotions while serving a very instrumental role for their families. However, it is not uncommon that the role of the language broker changes the longer they live in their host country. As such, future research should focus on exploring the emotional experience of brokers at various developmental stages.

In line with the current research study, presenting individuals who engage in language brokering for their families with age-appropriate vignettes depicting emotionally laden situations, and evaluating their emotional experience could be insightful. A better understanding of the longitudinal changes that occur as language brokers grow up can provide researchers and

clinicians alike with a better understanding of the emotional experience of language brokers across their development into adulthood.

Research findings regarding the way language brokers feel toward the act of brokering for family is mixed. In reviewing the literature, Morales, and Hanson (2005) found that overall language has been associated with feelings of pride, more exposure to both languages and to their own culture, and higher academic achievement. They also found that other research suggests that the parentification that sometimes occurs with brokers is associated with depressive symptoms and feels of frustration and inadequacy. While the current study did not directly ask participants to rate their proneness for feelings of guilt and gratitude, future research could look at the relationship between their ability and tendency to experience these emotions and how they relate to feelings toward language brokering.

Another observation from the current research is that language brokers in general engage in brokering with a higher frequency for their mothers than fathers. While the rationale behind this finding is not clear, it could potentially be explained by Latinx cultural values. Anecdotally, it is common for the man/father to be designated as the breadwinner and gatekeeper for an immigrant family. In alignment with the cultural construct of *machismo*, the man is the one in control of the finances and exerts dominance over the home, this in itself may be a driving force for fathers to learn English faster than mothers do. A father's job is to provide. Mothers in this context are expected to be subordinates and passive. A mother's job is to care for the family and the household. Language fluency represents independence and access to job opportunities, which could represent a threat to masculine dominance. It could be speculated that because of the very defined gender roles in immigrant families, mothers do not find themselves in a position to develop more competence in English and thus rely heavily on their children to understand the

language. Future studies would benefit from exploring the differences in brokering for mothers versus fathers to better understand the family dynamics that are putting children in the role of language and cultural brokers.

There were a few methodological limitations of the study. First, the vignettes were initially written in English and then translated into Spanish and back translated into English. In future research, it would be best if half of the stimuli were originally written in Spanish and then translated into English and back translated in Spanish. It is possible that the fact the vignettes were originally conceptualized in English affected the language chosen to describe the situations and misses the cultural nuances that affect the way a situation is presented were it to be originally conceptualized in Spanish. Secondly, the majority of participants were females (80.9%). This is a limitation because gender roles have a strong influence in Latinx culture with *machismo* and *marianismo* juxtaposing each other. Females are culturally expected to respect, family-oriented, and be pleasant. As such, it is possible that the response patterns may be influenced by the gender roles ascribed by Latinx culture. A third limitation is that questionnaires regarding brokering experience did not capture information regarding the recency of the brokering experiencing or for how long individuals engaged in this act. Due to the wide range in ages, it is possible that while older individuals may have brokered for family members at one point, they engage in brokering less as they age. Lastly, another limitation to consider is that data was collected during the COVID-19 pandemic. The pandemic was an emotionally draining experience for many where many things had to be done in front of a screen (i.e., online class, working remotely, doctor's visits, therapy sessions, etc.), often not in the most convenient spaces with limited time. Therefore, it is possible individuals completing the study were not only

dealing with daily stressors due to changes brought on by the pandemic, but also with screen time fatigue, which may have influenced their ability to attend and complete the study.

In future work it will be important to expand the scope of investigation to consider a broader spectrum of emotion-laden situations. It would also be important to expand the scope of the research design to manipulate not just the language in which the situation is described but also to manipulate the language in which the situation is to be responded to. This may require a modification of the task such that participants may be asked how they might respond if the situation described in the vignette happened to them. Future research could also focus on better understanding the experience of language brokers and utilize vignettes that depict scenarios for which language brokers are typically asked to translate and evaluating their emotional response. Finally, it would be interesting to examine the impact of language brokering and language dominance treating each of these as varying on a continuum rather than as discrete groups.

5. CONCLUSION

In conclusion, it is important to evaluate not only language dominance as a variable but brokering experience as well when trying to understand the bilingual experience. Understanding the role that language has played in the bilingual lives of the participants is important to understand emotionality and the cognitive processes that may be occurring. Additionally, in specifically manipulating emotionally laden situations, Latinx cultural values as identified by research should be more closely evaluated and incorporated into the creation of stimuli.

Further understanding the emotional experience of language brokers can have clinical implications. Children usually begin behaving as language brokers for their families in their middle to late childhood when children themselves are undergoing a variety of changes. Specifically, children at this age are developing their own sense of individuality and self-esteem as well as undergoing emotional development. Positive parent-child relationships can influence the child's view of self, as such, further exploration into how the act of brokering affects their view of self in the context of their family is important. Children who engage in this activity are often parentified and take on responsibilities that are not developmentally appropriate. Understanding how they see themselves as part of the family unit, for example, what role they take in decision-making or assuming responsibilities, can help elucidate some of the challenges faced by the families and child who engage in this practice. A better understanding of these family dynamics can help better inform clinical work from a systems approach when working with language brokering children.

Due to the fact that language brokering starts at a relatively young age and at least 1 year after arrival to the new country, there a variety of adjustments these children need to go through.

Exploring how these children deal with the burden of acculturation along with a responsibility to family over an extended period of time is important to better cater to their needs. If the average age when children start brokering is 8 years old (Morales & Hanson, 2005), by the time these children are fully acculturated and achieve near native language proficiency, they will be in the early stages of adolescence. At that time individuals begin to explore their independence while still holding an obligation to family. Past research has found an association between substance use and high levels of language brokering (Mier-Chairez et al., 2019), clearly indicating that not all children deal well with the emotional burden of brokering. Further research to help better understand how to properly implement treatment interventions that teach adolescents how to utilize self-regulation skills within these family contexts is important to help offset some of the negative outcomes observed in this population.

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PARTICIPANT DEMOGRAPHICS

Table 1. Race Distribution

Race	n	%
White/Caucasian	44	46.3%
Hispanic/Latinx/a/o	28	29.5%
Mixed/Multiethnic	10	10.5%
Native American	2	2.1%
Brown	2	2.1%
Other	4	4.2%
Decline to respond	5	5.3%

Table 2. Ethnicity Distribution

Ethnicity	n	%
Hispanic/Latinx	67	70.5%
Mexican/Mexican American	18	18.9%
Puerto Rican/Boricua	5	5.3%
Guatemalan	1	1.1%
South American (Colombia, Venezuela, Peru)	4	4.2%

Table 3. Age of Acquisition of L2

Age of L2 Acquisition	n	%
0-4 years old	37	38.9%
5-8 years old	29	30.5%
9-12 years old	9	9.5%
12 years old+	20	21.1%

Table 4. Acculturation Subscales (AMAS-ZABB)

Subscale	Min	Max	*M*	*SD*
U.S. Acculturation Overall Score	2.10	4.00	3.22	.43
U.S. Cultural Identity	1.00	4.00	2.79	.76
U.S. Language Competence	2.89	4.00	3.72	.37
U.S. Cultural Competence	1.33	4.00	2.89	.67
Latinx Overall Score	1.95	4.00	3.14	.41
Latinx Cultural Identity	1.83	4.00	3.61	.48
Latinx Language Competence	1.78	4.00	3.38	.50
Latinx Cultural Competence	1.00	4.00	2.33	.70

Table 5. Level of Education of Participants

Level of Education	*n*	%
High School Graduate	1	0.9%
Freshman in College	15	13.6%
Sophomore in College	14	12.7%
Junior in College	5	4.5%
Senior in College	10	9.1%
Graduated with bachelor's degree	7	6.4%
Graduate Student	27	24.5%
Graduated with master's degree	5	4.5%
Doctoral Student	2	1.8%
Graduated with Doctoral Degree	7	6.4%
Other	17	15.5%

APPENDIX B

VIGNETTE INFORMATION

Table 6. Average Rating on Emotional Intensity per Vignette Type

Vignette Type	*M*	*SD*
All Neutral	2.88	1.05
Neutral English	2.91	1.12
Neutral Spanish	2.84	1.07
All Negative	3.89	.73
Negative English	3.91	.82
Negative Spanish	3.88	.82
All Positive	4.11	.70
Positive English	4.11	.78
Positive Spanish	4.12	.75
Spanish Only	3.61	.65
English Only	3.64	.65

Table 7. Average Rating of Emotional Intensity for Neutral Vignettes per Language

Neutral Vignettes	*n*	*M*	*SD*
Item 7- English Version Description: Went to church.	47	3.09	1.30
Item 9- English Version Description: Grabbed umbrella because it was raining.	63	3.05	1.31
Item 10- Spanish Version Description: Forgot wallet in the car.	47	3.00	1.20
Item 7- Spanish Version Description: Went to church.	63	2.95	1.22
Item 10- English Version Description: Forgot wallet in the car.	63	2.94	1.20
Item 8- Spanish Version Description: Filled up on gas because tank was low.	63	2.86	1.18
Item 9- Spanish Version Description: Grabbed umbrella because it was raining.	47	2.85	1.12
Item 8- English Version Description: Filled up on gas because tank was low.	47	2.81	1.30

Table 8. Average Rating of Emotional Intensity for Positive Vignettes per Language

Positive Vignettes	n	M	SD
Item 5- English Version Description: Parent ill and family receives help from church	55	4.51	0.70
Item 6- English Version Description: Parents are proud of college acceptance.	55	4.49	0.70
Item 5- Spanish Version Description: Parent ill and family receives help from church	55	4.44	0.92
Item 6- Spanish Version Description: Parents are proud of college acceptance.	55	4.35	1.04
Item 3- English Version Description: Partner helps out financially.	55	4.18	1.06
Item 1- Spanish Version Description: Stranger is kind to 70-year-old grandma.	55	4.13	0.80
Item 3- Spanish Version Description: Partner helps out financially.	55	4.09	0.85
Item 1- English Version Description: Stranger is kind to 70-year-old grandma.	55	4.07	1.07
Item 2- Spanish Version Description: Parent helps with move.	55	4.07	0.81
Item 2- English Version Description: Parent helps with move.	55	3.87	1.23
Item 4- Spanish Version Description: Work gives day off to handle family emergency.	55	3.85	1.10
Item 4- English Version Description: Work gives day off to handle family emergency.	55	3.80	0.97

Table 9. Average Rating of Emotional Intensity for Negative Vignettes per Language

Negative Vignettes	*n*	*M*	*SD*
Item 11- English Version Description: Parents work extra to pay education.	47	4.51	0.66
Item 11- Spanish Version Description: Parents work extra to pay education.	63	4.29	0.91
Item 12- English Version Description: Need to move away from home and parent gets sick.	47	3.57	1.23
Item 12- Spanish Version Description: Need to move away from home and parent gets sick.	63	3.46	1.18
Item 13- English Version Description: Arriving home drunk.	47	3.72	1.36
Item 13- Spanish Version Description: Arriving home drunk.	63	3.84	1.23
Item 14- English Version Description: Spent rent money at bar drinking.	63	4.02	1.06
Item 14- Spanish Version Description: Spent rent money at bar drinking.	47	4.04	1.14
Item 15- English Version Description: Missing family gathering to go hang out with friends.	63	3.79	1.07
Item 15- Spanish Version Description: Missing family gathering to go hang out with friends.	47	3.94	0.85
Item 16- English Version Description: Being able to travel while parents cannot because they are undocumented.	63	3.97	1.09
Item 16- Spanish Version Description: Being able to travel while parents cannot because they are undocumented.	47	3.94	1.07

APPENDIX C

BROKER CHARACTERISTICS

Table 10. Acculturation Scale (AMAS-ZABB) by Broker Type

	Low Broker			High Broker		
	n	*M*	*SD*	*n*	*M*	*SD*
U.S. Total Acculturation	52	3.27	0.45	43	3.16	0.4
U.S. Cultural Identity	52	2.83	0.74	43	2.74	0.79
U.S. Cultural Competence	52	2.94	0.69	43	2.84	0.66
U.S. Language Competence	52	3.79	0.32	43	3.65	0.42
Latinx Total Acculturation	52	3.14	0.45	43	3.15	0.36
Latinx Cultural Identity	52	3.6	0.5	43	3.63	0.46
Latinx Cultural Competence	52	2.3	0.72	43	2.37	0.68
Latinx Language Competence	52	3.4	0.49	43	3.36	0.51

Table 11. Percent Language Usage for Daily Activities

In what language do you typically:	Low Broker				High Broker			
	Spanish	English	Both	Other	Spanish	English	Both	Other
			%				%	
Express affection	15.90	27	57.10	0	18.20	18.20	63.60	0
Express anger	19	28.60	50.80	1.60	20.50	22.70	56.80	0
Pray	30.20	27	23.80	19	56.80	11.40	27.30	4.50
Dream	4.80	57.10	38.10	0	15.90	27.30	54.50	2.30
Think to yourself	6.30	54	39.7	0	6.80	45.50	47.70	0
Mentally add, multiply	20.60	65.10	14.30	0	15.90	54.50	29.50	0
Tell jokes or funny stories	4.80	44.40	50.80	0	15.90	20.50	63.60	0
Keep a diary	4.80	63.50	17.50	14.30	2.30	56.80	22.70	18.20
Swear	6.30	28.60	63.50	1.60	15.90	18.20	65.90	0
Mentally talk to yourself (inner speech)	4.80	47.60	47.60	0	6.80	31.80	61.40	0

Table 12. Places Where Brokers Translate

Place	High Brokers					Low Brokers				
	Never	Rarely	Sometimes	Often	Always	Never	Rarely	Sometimes	Often	Always
			%					%		
Home	0.00	4.50	22.70	29.5	43.20	8.20	18	31.10	36.1	6.60
Stores	2.30	9.10	29.50	31.8	27.30	9.80	29.50	32.80	24.6	3.30
School	6.80	9.10	34.10	29.5	20.50	18	16.40	31.10	26.2	8.20
On the street	4.50	20.50	36.40	29.5	9.10	11.50	27.90	47.50	9.80	3.30
Doctor's office	11.40	13.60	18.20	31.8	25%	24.60	21.30	27.90	21.3	4.90
Dentist's office	13.60	15.90	20.50	27.3	22.70	44.30	21.30	14.80	14.8	4.90
Restaurants	4.50	18.20	31.80	29.5	15.9	9.80	34.40	37.70	14.8	3.30
Post Office	18.20	38.60	27.30	9.10	6.80	59	24.60	6.60	6.60	3.30
Bank	15.90	25	29.50	18.2	11.40	54.10	24.60	9.80	6.60	4.90
Where parents work	34.10	27.30	25	6.80	6.80	70.50	14.80	8.20	6.60	0
Church	52.30	29.50	11.40	4.50	2.30	73.80	16.40	6.60	3.30	0

Table 12. Places Where Brokers Translate Continued

Place	High Brokers					Low Brokers				
	Never	Rarely	Sometimes	Often	Always	Never	Rarely	Sometimes	Often	Always
			%					%		
Parent-teacher conference	25	11.40	29.50	15.9	18.20	54.10	9.8	16.4	14.8	4.90
Car dealerships	31.80	18.20	29.50	11.4	9.10	73.40	6.30	9.40	6.30	0
Real estate agents	47.70	22.70	18.20	0	11.40	82.00	8.2	3.30	6.60	0
Pharmacy	25	18.20	22.70	18.2	15.90	59	9.80	23	4.90	3.30
Library	36.40	29.50	20.50	6.80	6.80	72.10	14.80	3.30	8.20	1.60
Government office (e.g., social security, welfare, city hall, courthouse, etc.)	20.50	11.40	22.70	18.2	27.30	50.80	11.50	14.80	18	4.90

Table 13. Frequency of Language Switching for High Brokers

Frequency	When speaking about neutral matters	When speaking about personal matters	When speaking about emotional matters
	%	%	%
Never	4.80	2.40	4.70
Rarely	14.30	9.50	9.30
Sometimes	47.60	28.60	30.20
Frequently	23.80	35.70	25.60
All the time	9.50	23.80	30.20
All the time	9.40	15.10	17

Table 14. Frequency of Language Switching for Low Brokers

Frequency	When speaking about neutral matters	When speaking about personal matters	When speaking about emotional matters
	%	%	%
Never	7.50	5.70	11.30
Rarely	34	22.60	17
Sometimes	39.60	35.80	30.20
Frequently	9.40	20.80	24.50
All the time	9.40	15.10	17

Table 15. Reported L1 by Broker Type

Language	High Broker		Low Broker	
	n	%	*n*	%
English	1	2.20	5	7.80
Spanish	43	93.50	47	73.40
Both	2	4.30	11	17.20
More than 2 languages	0	0	1	1.60

APPENDIX D*[8]

STIMULI

Bilingual Dominance Scale (BDS) (Dunn & Fox Tree, 2009)

Questions 1 and 2: At what age did you first learn Spanish _____ English _____?
Scoring: 0–5 yrs = +5, 6–9 yrs = +3, 10–15 yrs = +1, 16 and up = +0

Questions 3 and 4: At what age did you feel comfortable speaking this language? (If you still do not feel comfortable, please write "not yet.") Spanish _____ English _____
Scoring: 0–5 yrs = +5, 6–9 yrs = +3, 10–15 yrs = +1, 16 and up = +0, "not yet" = +0

Question 5: Which language do you predominantly use at home? Spanish _____ English _____ Both _____
Scoring: if one language used at home, +5 for that language; if both used at home, +3 for each language

Question 6: When doing math in your head (such as multiplying 243 × 5), which language do you calculate the numbers in? _____
Scoring: +3 for language used for math; +0 if both

Question 7: If you have a foreign accent, which language(s) is it in? _____
Scoring: if one language is listed, add +5 to the opposite language of the one listed; if both languages are listed, add +3 to both languages; if no language is listed, add nothing

Question 8: If you had to choose which language to use for the rest of your life, which language would it be? _____
Scoring: +2 for language chosen for retention

Questions 9 and 10: How many years of schooling (primary school through university) did you have in: Spanish _____ English _____
Scoring: 1–6 yrs = +1, 7 and more yrs = +2

Question 11: Do you feel that you have lost any fluency in a particular language? _____ If yes, which one? _____ At what age? _____
Scoring: −3 in language with fluency loss; −0 if neither has lost fluency

Question 12: What country/region do you currently live in? _____
Scoring: +4 for predominant language of country/ region of residence

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Positive Vignettes (Gratitude)

English
I was on a bus with my 70-year-old grandma holding many bags. All the seats were taken, and grandma was having trouble holding on to the bags and keep her footing, but my hands were full as well and I could not help her. A young man notices my grandma is struggling and offers his seat. He stands while grandma takes his seat. (Gr3-E)
I needed to move away to go to college. My parents took off from work to help me drive 500 miles to move into my new place. (Gr4-E)
I was short on cash to buy food for the week. When I mentioned this to my partner, they arrived with a trunkful of groceries the next day. (Gr5-E)
I had a family crisis come up. My parents needed my help. I called my job and communicated my struggle. They told me to not worry about work and just take the day off to help my family. (Gr7-E)
It was Christmas break at college. I could not afford to go home and visit family. My friends knowing my financial problems pooled money together and bought my ticket home as a Christmas gift. (Gr8-E)
When I graduated high school, my parents told me how proud they were of me for getting into college. They told me that whatever I needed; they would be there for me. (Gr9-E)
Spanish
Estaba en un autobús con mi abuela de 70 años sosteniendo muchas bolsas. Todos los asientos estaban ocupados, y mi abuela tenía problemas para sostener las bolsas y mantener el equilibrio. Mis manos también estaban llenas y no la podía ayudar. Un joven noto que mi abuela está luchando para mantenerse en pie y le ofrece su asiento. Se pone de pie mientras mi abuela toma asiento. (Gr3-S)
Necesite mudarme para ir a la universidad. Mis padres se tomaron días de descanso del trabajo para ayudarme a conducir 500 millas a mi nuevo hogar. (Gr4-S)
Me faltaba dinero para comprar comida para la semana. Cuando le mencioné esto a mi pareja, llego con un montón de víveres al día siguiente. (Gr5-S)
Tuve una crisis familiar. Mis padres necesitaban mi ayuda. Llamé a mi trabajo y comuniqué mi situación. Me dijeron que no me preocupara por el trabajo y que me tomara el día libre para ayudar a mi familia. (Gr7-S)
Eran las vacaciones de Navidad en la Universidad. No podía permitirme el lujo de ir a casa y visitar a la familia. Mis amigos que sabían mis problemas financieros juntaron dinero y compraron mi boleto a casa como regalo de Navidad. (Gr8-S)
Cuando me gradué de la escuela secundaria, mis padres me dijeron lo orgullosos que estaban de mí por ingresar a la universidad. Me dijeron que lo que necesitaba; Estarían allí para mí. (Gr9-S)

Negative (Guilt) Vignettes - English

English
My parents are working two jobs each to pay for my education. I procrastinate and hand in a major assignment late. The professor warns me that I risk failing the class. (Gu1-E)
I graduated college and decided to apply to a graduate program in my area of study. I applied to programs all over the country and received multiple interview offers. Later I receive news regarding my admission and the only school that has admitted me is 1500 miles away from my family. Tuition and all fees are covered plus I am offered a stipend to cover living expenses. However, a couple months before I was set to move across the country, my father gets sick, but I decide to continue with moving away for my education anyways. (Gu3-E)
I went out with my friends and had more drinks that I intended to. The party is over, and I need to go back home. I know my parents don't agree with me consuming alcohol, but I have nowhere else to go. I arrive home and see my parents are watching TV while they wait for me to come home. My mom notices I have been drinking and yells at me, my dad just looks at me with disappointment on his face and walks away. (Gu6-E)
My parents sent me money while I was away at school to help me with rent. It was a friend's birthday, and I went out to a bar. I ended up spending more money than I planned and was short on rent. (Gu7-E)
My family had a family get-together planned. I had already made plans to go out with friends. I left the family gathering to go dancing with my friends. That was the first time my family was together in the last 5 years. (Gu8-E)
I am the only one of my family born in the US. My parents are undocumented. In college I was presented with the opportunity to study abroad. I asked my parents to help me pay for it, they willingly obliged. Later I realized, that while I am in Europe, they can't leave the US without risking deportation. (Gu9-E)

Negative (Guilt) Vignettes- Spanish

Spanish
Mis padres están trabajando en dos trabajos cada uno para pagar mi educación. Postergo y entrego una tarea importante tarde. El profesor me advierte que me arriesgo a reprobar la clase. (Gu1-S)
Me gradué de la universidad y decidí postularme a un programa de posgrado en mi área de estudio. Solicité programas en todo el país y recibí múltiples ofertas de entrevistas. Más tarde recibo noticias sobre mi admisión y la única universidad que me ha admitido está a 1500 millas de distancia de mi familia. La matrícula y todas las tarifas están cubiertas, además se me ofrece un estipendio para cubrir los gastos de subsistencia. Sin embargo, un par de meses antes de que me mudara, mi padre se enferma, pero de todos modos decido continuar irme para mi continuar con mi educación. (Gu3-S)
Salí con mis amigos y tomé más bebidas de las que pretendía. La fiesta terminó y tengo que volver a casa. Sé que mis padres no están de acuerdo con que consuma alcohol, pero no tengo a dónde ir. Llego a casa y veo que mis padres están mirando televisión mientras esperan que regrese a casa. Mi madre se da cuenta de que he estado bebiendo y me grita, mi padre solo me mira con cara de decepción y se aleja. (Gu6-S)
Mis padres me enviaron dinero mientras estaba en la escuela para ayudarme con el alquiler. Era el cumpleaños de un amigo y salí a un bar. Terminé gastando más dinero de lo que planeé y me quedé corto para pagar el alquiler. (Gu7-S)
Mi familia tenía una reunión familiar planeada. Yo ya había hecho planes para salir con amigos. Dejé la reunión familiar para ir a bailar con mis amigos. Esa fue la primera vez que mi familia estuvo junta en los últimos 5 años. (Gu8-S)
Soy el/la único de mi familia nacido en los Estados Unidos. Mis padres son indocumentados. En la universidad se me presentó la oportunidad de estudiar en el extranjero. Le pedí a mis padres que me ayudaran a pagarlo, lo aceptaron de buena gana. Más tarde me di cuenta de que, mientras estoy en Europa, no pueden salir de los Estados Unidos sin correr el riesgo de ser deportados. (Gu9-S)

Neutral Vignettes

English
I went to church on Sunday with my family. After service the pastor motioned everyone to congregate in the community center adjacent to the church. (N3-E)
As I was driving to work, I noticed I was low on gas. I stopped by the gas station and filled my tank. (N6-E)
I looked outside and noticed it was raining. I went to the wardrove and grabbed the umbrella before leaving the house. (N7-E)
I realized I forgot my wallet when I got in my car. I ran into my house and grabbed it before heading to work. (N9-E)
Spanish
Fui a la iglesia el domingo con mi familia. Después de misa, el pastor indicó a todos que se congregaran en el centro comunitario adyacente a la iglesia. (N3-S)
Mientras conducía hacia el trabajo, noté que tenía poco combustible. Me detuve en la estación de servicio y llené mi tanque. (N6-S)
Miré hacia afuera y noté que estaba lloviendo. Fui al armario y agarré el paraguas antes de salir de la casa. (N7-S)
Me di cuenta de que olvidé mi billetera cuando subí a mi auto. Entré corriendo a mi casa y la agarré antes de irme a trabajar. (N9-S)

The Self-Assessment Manikin (SAM)- Pleasantness Scale (Valence- English Version)[9]

(a) Please rate how this vignette made you feel:
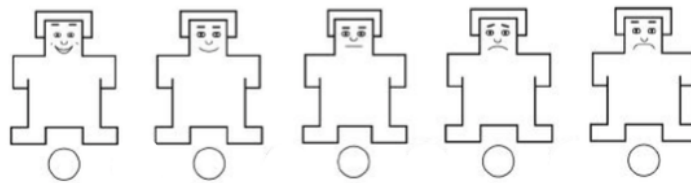
Likert Scale- English

(b) Which emotion is conveyed in this vignette:
    a. Guilt,
    b. Gratitude
    c. No emotion in particular (neutral)
    d. Some other emotion (please specify): _____

(c) For the emotion you specified (including if you chose 'neutral') please indicate the degree to which the vignette conveys that emotion:
    1) A little bit
    2) Slightly
    3) Moderately
    4) Strongly
    5) Very Strongly

The Self-Assessment Manikin (SAM)- Pleasantness Scale (Valence)- Spanish[10]

(a) Por favor indica cómo te hizo sentir esta viñeta:
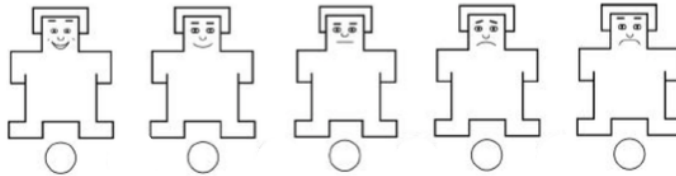
Likert Scale- Spanish

(a) Qué emoción se transmite en esta viñeta:
    1) Culpa
    2) Agradecimiento
    3) Ninguna emoción en particular (neutro)
    4) Otra emoción (por favor especifica): _____
(b) Para aquella emoción que indico previamente (incluso si indico 'neutro'), indique en que medida la viñeta le transmitió esta emoción:
    1) Un poco
    2) Ligeramente
    3) Moderadamente
    4) Fuertemente
    5) Muy fuerte

---

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Modified-Language Brokering Experience (Zhang et al., 2020)[11]

How often do you translate for your:

Mother:
      (0) Never
      (1) *a few times a year*
      (2) *a few times every 3 to 6 months*
      (3) *a few times a month*
      (4) *a few times a week*
      (5) *every day*.

Father:
      (0) Never
      (1) a few times a year
      (2) a few times every 3 to 6 months
      (3) a few times a month
      (4) a few times a week
      (5) every day.

Other family members
      (0) Never
      (1) a few times a year
      (2) a few times every 3 to 6 months
      (3) a few times a month
      (4) a few times a week
      (5) every day.

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Abbreviated Multidimensional Acculturation Scale (AMAS-ZABB)[12]

The following section contains questions about your culture of origin and your native language. By culture of origin, we are referring to the culture of the country either you or your parents came from (e.g., Puerto Rico, Cuba, China). By native language we refer to the language of that country, spoken by you or your parents in that country (e.g., Spanish, Quechua, Mandarin). If you come from a multicultural family, please choose the culture you relate to the most.

Instructions: Please mark the number from the scale that best corresponds to your answer

	Strongly disagree	Disagree somewhat	Agree somewhat	Strongly agree
1. I think of myself as being U.S. American.				
2. I feel good about being U.S. American.				
3. Being U.S. American plays an important part in my life.				
4. I feel that I am part of U.S. American culture.				
5. I have a strong sense of being U.S. American.				
6. I am proud of being U.S. American.				
7. I think of myself as being (a member of my culture of origin).				
8. I feel good about being (a member of my culture of origin).				
9. Being (a member of my culture of origin) plays an important part in my life.				
10. I feel that I am part of culture (culture of origin).				
11. I have a strong sense of being (culture of origin).				
12. I am proud of being _____ (culture of origin).				

_____

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Please answer the questions below:

How well do you speak English:	Not at all	A little	Pretty well	Extremely well
13. at school or work				
14. with American friends				
15. on the phone				
16. with strangers				
17. in general				

How well do you understand English:	Not at all	A little	Pretty well	Extremely well
18. on television or in movies				
19. in newspapers and magazines				
20. words in songs				
21. in general				

Please answer the questions below:

How well do you speak your native language:	Not at all	A little	Pretty well	Extremely well
22. with family				
23. with friends from the same country as you				
24. on the phone				
25. with strangers				
26. on the phone				

How well do you understand your native language:	Not at all	A little	Pretty well	Extremely well
27. on television or in movies				
28. in newspapers and magazines				
29. words in songs				
30. in general				

How well do you know:	Not at all	A little	Pretty well	Extremely well
31. American national heroes				
32. popular American television shows				
33. popular American newspapers and magazines				
34. popular American actors and actresses				
35. American history				
36. American political leaders				

How well do you know:

	Not at all	A little	Pretty well	Extremely well
37. national heroes from your native culture				
38. popular television shows in your native language				
39. popular newspapers and magazines in your native language				
40. popular actors and actresses from your native culture				
41. history of your native culture				
42. political leaders from your native culture				

Bilingualism and Emotions- Modified (Dawaele & Pavlenko, 2001-2003)[13]

1. Occupation/Profession
2. Is your occupation related to your bilingualism or languages in a way?
3. What language(s) does your partner speak?
4. Do you switch between languages when talking about certain matters? (Mark where appropriate)

	Never	Rarely	Sometimes	Frequently	All the time	Not Applicable
When speaking about neutral matters						
When speaking about personal matters						
When speaking about emotional matters						

If you have no children go to **question 8**

5. If you have children, what language do you typically use with:

a) the oldest	Never	Rarely	Sometimes	Frequently	All the time	Not Applicable
L1						
L2						

b) the youngest	Never	Rarely	Sometimes	Frequently	All the time	Not Applicable
L1						
L2						

6. What language do you favor in scolding or disciplining them?

	Never	Rarely	Sometimes	Frequently	All the time	Not Applicable
L1						
L2						

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7. What language do you select for praise and/or intimate conversations with them?

	Never	Rarely	Sometimes	Frequently	All the time	Not Applicable
L1						
L2						

8. Here are some **subjective statements** about the languages you know. Please mark to what extent they correspond to your own perceptions. There are no right or wrong answers.

Which is your first language? _____

	Not at all	Somewhat	More or Less	To a large extent	Absolutely
My L1 is useful					
My L1 is colorful					
My L1 is rich					
My L1 is poetic					
My L1 is emotional					
My L1 is cold					

Which is your 2nd language? _____

	Not at all	Somewhat	More or Less	To a large extent	Absolutely
My L2 is useful					
My L2 is colorful					
My L2 is rich					
My L2 is poetic					
My L2 is emotional					
My L2 is cold					

9. Do swear and taboo words in your different languages have the same emotional weight for you?

	Not Strong	Little	Fairly	Strong	Very Strong	Not Applicable
L1						
L2						

10. What language do you express your deepest feelings in?

a) When alone	Never	Maybe	Probably	Certainly	Without any doubt	Not Applicable
L1						
L2						

b) In letters and e-mail	Never	Maybe	Probably	Certainly	Without any doubt	Not Applicable
L1						
L2						

c) When talking to friends	Never	Maybe	Probably	Certainly	Without any doubt	Not Applicable
L1						
L2						

d) When talking to parents	Never	Maybe	Probably	Certainly	Without any doubt	Not Applicable
L1						
L2						

e) When talking to partners	Never	Maybe	Probably	Certainly	Without any doubt	Not Applicable
L1						
L2						

f) When talking to strangers	Never	Maybe	Probably	Certainly	Without any doubt	Not Applicable
L1						
L2						

11. How **anxious** are you when speaking your different languages with different people in different situations?

	Not at all	A little	Quite anxious	Very anxious	Extremely anxious	Not Applicable
When speaking L1 with friends						
When speaking L1 with colleagues						
When speaking L1 with strangers						
When speaking L1 on the telephone						
When speaking L1 in public						

	Not at all	A little	Quite anxious	Very anxious	Extremely anxious	Not Applicable
When speaking L2 with friends						
When speaking L2 with colleagues						
When speaking L2 with strangers						
When speaking L2 on the telephone						
When speaking L2 in public						

12. Does the phrase "I love you" have the same emotional weight for you in your different languages? Which language does it feel strongest in?

13. Do you have a preference for emotion terms and terms of endearment in one language over all others? Which language is it and why?

14. Do your languages have different emotional significance for you? if yes, then how do you see this significance for each language? Is one more appropriate as the language of your emotions than others?

15. If you were to recall some bad or difficult memories, what language would you prefer to discuss them in and why?

16. If you are married to or living with a speaker of a language that is not your L1, what language do you generally use at home? What language do you argue in?

17. Do you feel like a different person sometimes when you use your different languages?

Language Background and Brokering Questionnaire (Modified)

Sex:____ **Age:**____ **Yr in college** ___
Place of Birth _____

       If born outside of this country, your age of arrival in the US _____
       Any siblings (sex and ages) _____
       Mother's place of birth _____ Mother's Yrs of schooling (1-17)_____
       Father's place of birth _____ Father's Yrs of schooling (1-17)_____
       Maternal grandparents' place of birth: _____
       Paternal grandparents' place of birth: _____

What is your first language, i.e., what you first learned to speak first? (If more than one, state all): _____

What other languages do you speak? (If more than one, state all):
_____
When did you learn your other language(s)? ___ 0-4yrs ____ 5-8 _____ 9-12 _____ > 12

Was acquisition **naturalistic** (outside of school), **instructed** (at school), or both?
What was/is the main language of instruction in your:
a. Elementary School _____
b. Middle School   _____
c. High School   _____
d. College   _____

In your high school, about what percentage of students were the same ethnicity as you? (Please circle)
   1. less than 10%
   2. around 25%
   3. around a third
   4. 50%
   5. 75%

Use the scale below to answer to indicate how much you enjoy (Please circle):

	Not at all	A little	Somewhat	To a large extent	Absolutely
1.Listening to music in Spanish					
2. Watching TV programs or movies in Spanish					
3. Eating food from your heritage culture					
4. Travelling to Spanish-speaking countries					
5.Listening to music in English					
6. Watching TV shows or movies in English					
7. Eating all American food					
8. Travelling and visiting in the US					

Please rate your language ability in English and Spanish on a 7-point scale where
1=very little knowledge and 7=use it like a native speaker:

Very little knowledge						**Like a native speaker**
1	**2**	**3**	**4**	**5**	**6**	**7**

Speak English	1	2	3	4	5	6	7
Read English	1	2	3	4	5	6	7
Write English	1	2	3	4	5	6	7
Understand English	1	2	3	4	5	6	7
Speak Spanish	1	2	3	4	5	6	7
Read Spanish	1	2	3	4	5	6	7
Write Spanish	1	2	3	4	5	6	7
Understand Spanish	1	2	3	4	5	6	7

What language(s) do you **mostly use** when speaking with each of the following (Please circle):

	English	Spanish	Both	Other
a. Mother	1	2	3	4
b. Father	1	2	3	4
c.Siblings	1	2	3	4
d.Grandparents	1	2	3	4
e. Friends	1	2	3	4
f. Classmates	1	2	3	4
g. Co-workers	1	2	3	4
h.romantic partner	1	2	3	4
i.Other (specify)	1	2	3	4

In which language(s) do you/would you **typically** do each of the following activities (Please circle):

	English	Spanish	Both	Other
a. Express affection	1	2	3	4
b. Express anger	1	2	3	4
c. Pray	1	2	3	4
d. Dream	1	2	3	4
e. Think to yourself	1	2	3	4
f. Mentally add, multiply	1	2	3	4
g. Tell jokes or funny stories	1	2	3	4
h. Keep a diary	1	2	3	4
i. Swear	1	2	3	4

j. Mentally talk to yourself (inner speech)				

In which language(s) do you feel you can communicate most effectively?
_____

Language use: Use the following scale to answer questions 1-4:

Only Spanish	More Spanish than English	Both Equally	More English than Spanish	Only English
1	2	3	4	5

1. In general, what language or languages do you currently speak?	1	2	3	4	5
2.what language or languages did you use as a child?	1	2	3	4	5
3.What language do you usually speak with your friends?	1	2	3	4	5
4.What language do you usually speak at home (with your parents)?	1	2	3	4	5

TRANSLATING

If you have translated informally in your childhood at what age did you begin that? ___
Do you still translate for others? _____ If not, how many years ago did you stop? _____

Please rate your feelings about translating using the scale below:

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

1.I feel embarrassed when I translate for others	1	2	3	4	5
2.My parents learned English slower because I translated for them	1	2	3	4	5
3.My parents know less about Americans because I translated for them	1	2	3	4	5
4.I feel nervous when I translate for others	1	2	3	4	5
5.My parents know more about Americans because I translated for them	1	2	3	4	5
6. I have to translate for others even when I don't want to	1	2	3	4	5

7. Translating has helped me to better understand people who are from other cultures	1	2	3	4	5
8. I think translating helped me learn English	1	2	3	4	5
9. Translating for others made me feel more grown up	1	2	3	4	5
10. Translating helped me learn my other language	1	2	3	4	5
11. Translating has helped me to understand my parents better	1	2	3	4	5
12. I like to translate	1	2	3	4	5
13. I feel good about myself when I translate for others	1	2	3	4	5
14. My parents learned English faster because I translate for them	1	2	3	4	5
15.Translating has helped me to care more for my parents	1	2	3	4	5
16. Translating was a source of pride for me.	1	2	3	4	5
17. Translating gave me a greater self-esteem.	1	2	3	4	5
18. Translating was burdensome for me.	1	2	3	4	5

Did you ever "misinterpret" on purpose for your own advantage? (Yes/No) _____

Under what circumstances did you misinterpret? (Explain) _____

Do you still translate for anyone?_____
     For who?_____
     In what situations?_____

Places/Domains where you have translated
Please use the following scale in rating your responses below:

Never	**Rarely**	**Sometimes**	**Often**	**Always**
1	**2**	**3**	**4**	**5**

1.Home	1	2	3	4	5
2.Stores	1	2	3	4	5
3.School	1	2	3	4	5

4.On the street	1	2	3	4	5
5.Doctor's office	1	2	3	4	5
6.Dentist's office	1	2	3	4	5
7.Restaurants	1	2	3	4	5
8.Post office	1	2	3	4	5
9.Bank	1	2	3	4	5
10.Where your parents work	1	2	3	4	5
11.Church	1	2	3	4	5
12.Parent-teacher conference	1	2	3	4	5
13.Car dealerships	1	2	3	4	5
14.Real estate agents	1	2	3	4	5
15. Pharmacy	1	2	3	4	5
16.Library	1	2	3	4	5
17.Government office (e.g. Social security, welfare, city hall, courthouse, etc.)	1	2	3	4	5

Things you have had to translate for others at least once (using the scale above)

1.Notes from school	1	2	3	4	5
2.Credit card bills	1	2	3	4	5
3.Telephone bills	1	2	3	4	5
4.Insurance forms	1	2	3	4	5
5.Bank statements	1	2	3	4	5
6.Immigration forms	1	2	3	4	5
7.Job applications	1	2	3	4	5
8.Rental contacts	1	2	3	4	5
9.Forms from the doctor's office	1	2	3	4	5
10.Instructions for a new appliance	1	2	3	4	5
11.Making/cancelling appointments	1	2	3	4	5

12.Homework	1	2	3	4	5
13.Report cards	1	2	3	4	5
14.Traffic or other signs	1	2	3	4	5
15.TV shows	1	2	3	4	5
16.Radio shows	1	2	3	4	5
17.Movies	1	2	3	4	5
18.Newspaper	1	2	3	4	5
19.Story books	1	2	3	4	5
20.Letters or emails	1	2	3	4	5
21.Salespeople on the phone	1	2	3	4	5
22.Conversations	1	2	3	4	5

LANGUAGE SWITCHING/MIXING

"When speaking with other bilinguals I switch between languages during a conversation."
Please rate how often you switch languages for each of the reasons below:

Never	Rarely	Sometimes	Often	All the time
1	2	3	4	5

1.I might not know a word	1	2	3	4	5
2.To express myself more fully	1	2	3	4	5
3.There is no translation for a concept	1	2	3	4	5
4.For added emphasis	1	2	3	4	5
5.To express closeness	1	2	3	4	5
6.To express distance	1	2	3	4	5
7.To affirm my identity	1	2	3	4	5
8.To facilitate communication (for the listener)	1	2	3	4	5
9.To talk in code/secretly	1	2	3	4	5
10.To quote someone	1	2	3	4	5

11.To mimic someone	1	2	3	4	5
12.To be playful	1	2	3	4	5
13.Other (explain)					

1.At home	1	2	3	4	5
2.At school	1	2	3	4	5
3.At work	1	2	3	4	5
4.With girlfriend/boyfriend/spouse	1	2	3	4	5
5.At family gatherings	1	2	3	4	5

The following statements are possible descriptions of experiences you may have had while growing up, that is, the time during which you lived at home with your family. Please indicate if the statement describes your own experience or not by noting down **True or False**.

1.At times, I felt I was the only one my mother/father could turn to.	T	F
2. I often silently resented being asked to do certain kinds of jobs.	T	F
3. As a child I was often described as mature for my age.	T	F
4. I was more likely to spend time with friends than with family members.	T	F
5. Members of my family hardly ever looked to me for advice.	T	F
6. I often felt more like an adult than a child in my family	T	F
7. I was very active in the management of my family's financial affairs.	T	F
8. Members of my family rarely needed me to take care of them.	T	F