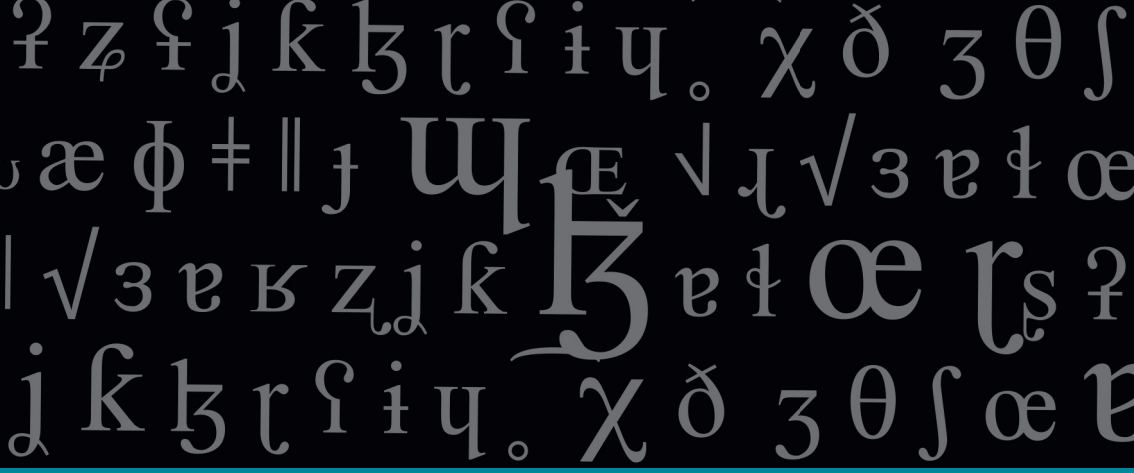

MULTILINGUAL EMOTIONS

The Perception of Affective Information in Spanish and English

ELISA PÉREZ-GARCÍA

11 monographs

PUV
VNIVERSITAT DE VALÈNCIA

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Learning a new language is like opening a new window on an unseen, and maybe even unimagined, part of the world.

Jean-Marc Dewaele, *Emotions in Multiple Languages*, 2010

In my L2 English, to Jean Marc-Dewaele

In my L1 Spanish, to my dear parents and sister, Marisa, Jose, and Julia

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LIST OF ABBREVIATIONS

AoA	Age of onset of language acquisition
AoAr	Age of arrival (to a country)
BEQ	*Bilingualism and Emotions Questionnaire* (Dewaele & Pavlenko, 2001)
CEFR	*Common European framework of reference for languages* (Council of Europe, 2001, 2018)
CoA	Context of language acquisition
ESC	English-speaking country
(E)FL	(English) Foreign language
L1	First acquired language
LexTALE	*Lexical Test for Advanced Learners of English* (Lemhöfer & Broersma, 2012)
Lextale-Esp	Spanish version of LexTALE (Izura et al., 2014)
LoR	Length of residence (in a country)
LX	Additional language acquired after L1 (L2, L3, L4, L5 = second, third, fourth, fifth language)
SSC	Spanish-speaking country
VIA	*Vancouver Index of Acculturation* (Ryder et al., 2000)

CHAPTER 1. INTRODUCTION

My mother tongue (L1) is Spanish and I was about six years old when I began to learn English as a foreign language at school. As a teenager I already knew that I wanted to become an English teacher; since then, my learning of English (L2) has been strongly linked to positive emotions and an even greater motivation to absorb the language and its culture. However, during my Erasmus in Nottingham, I experienced negative feelings about English for the first time. I was living in a university hall of residence with several English students who, at one of their parties, destroyed several pieces of furniture in our shared kitchen. We were forced to pay equally for the damage. I could not stay silent and I decided to speak to them—in my L2 English—and explain my anger and outrage at the situation of the righteous having to pay for the sinners. I prepared my speech and even looked up some swear words in the dictionary, but my anger, expressed in English, not only had no effect, either for them or for me, but also caused them considerable amusement. I realised then that I had no control over emotional communication in English and that knowing a language is completely different from being emotionally competent in that language. Quite unaware, I had already become fascinated with the relationship between emotion, language and culture. This personal experience taught me that emotional communication across languages in multilingual contexts is often complicated by cultural nuances, varying emotional expressions, and the limits of direct translation. Words that convey deep feelings in one language may lose their intensity or meaning in another, leading to misunderstandings.

Years later, when this work was in progress, emotions again became particularly relevant during the spread of COVID-19. In the social sphere, drastic social distancing and the wearing of facemasks affected human communication and thus emotion regulation and display in interpersonal encounters. In face-to-face meetings, it was uncomfortable to wear a mask while trying to express emotional information to interlocutors and it was difficult to comprehend what others were conveying in response. Lip-reading skills for successful and pleasant conversations are very often underrated but the pandemic definitely confirmed the immense importance

of watching mouth movements in order to understand more clearly what is being said. Similarly, in video calls, despite being without a mask in front of the screen, people needed to make extensive use of their facial expressions, gestures and body language, together with verbal skills, to support the lack of direct contact, to build personal rapport, and to create a satisfactory emotional environment. The pandemic underscored how crucial it is to understand emotional perception and non-verbal cues, especially in multilingual environments where verbal communication alone may fall short. It highlighted that effective emotional communication relies not only on language but on the ability to read and convey unspoken emotions across cultural and linguistic boundaries.

All in all, one general truth is clear: human emotions are difficult to manage and to communicate, both verbally and non-verbally, in any language and culture, even with a high linguistic command and cultural knowledge. For bilingual and multilingual language users, who have two or more linguistic repertoires in the mind, communicating feelings—both expression and perception—in their first (L1s) and additional (LXs) languages and cultures becomes an extraordinarily challenging process in that their sociopragmatic and/or pragmalinguistic knowledge, where emotion communication resides, is often conspicuously absent, requiring some time to become fully developed. This is why the present research focuses on and explores the perception of emotion by bi/multilinguals[1] with Spanish and English in their linguistic repertoire. It examines the complex variation that exists in this perceptual ability as a result of individual differences in bi/multilinguals' sociobiographical, linguistic and acculturation-based profiles.

A first study investigates how two groups of sequential bi/multilinguals—Spanish L1 users of LX English and English L1 users of LX Spanish—perceive the emotionality of 20 English-Spanish emotion word equivalents. The aim is an indirect approach to the semantic and conceptual representation of these emotion concepts in both target languages

[1] The term bi/multilingual in this study refers to individuals who know, regardless of their proficiency level, at least English and Spanish (hence bilingual) and who may also know other languages (hence multilingual). In other words, participants who have both languages in their linguistic repertoire, either as L1 or as LX. For more information, see section 3.1 and Chapter 4.

and the extent to which they restructure in the bi/multilingual mind. A second study focuses on the perception of purely visual and emotional stimuli by Spanish/English bi/multilinguals examining how differences in their sociobiographical and linguistic profiles and differences in the stimulus' kinesics influence such process. For this purpose, a total sample of 384 bi/multilinguals around the world participated in an online bilingual questionnaire, designed to collect quantitative and qualitative information on the variables under study. Emotion, elicited through two different channels—verbal (emotion words) and visual (emotional video clips)—was specifically measured by a two-dimensional semantic map: valence and arousal (Russell, 2003; Barrett, 2013).

This work extends previous research on emotion communication in bi/multilinguals in several respects. It provides a broad picture of how these populations perceive emotional information by addressing different types of stimuli: emotion words and emotional videos, and two different languages and discourse systems: English and Spanish (Alba-Juez & Mackenzie, 2016; Alba-Juez, 2023). Thus, the results will be useful for further understanding the complex process by which bi/multilinguals represent affective information in their L1s and/or LXs. Also, they will contribute to research on the linguistic and cultural differences between the English and Spanish languages (De Leersnyder et al., 2015). Furthermore, by examining how emotional valence and arousal associations may change due to, for example, linguistic or culture-related factors, this study contributes to the literature on emotional multicompetence and the ongoing restructuring of the bi/multilingual mind (Mavrou et al., 2022; Blanco-Canales & Martín Leralta, 2023). Another relevant aspect in methodological terms is that all comparisons in the analyses are made between bi/multilingual multicompetent users, thus avoiding the "monolingual" bias and the frequent and problematic comparison of bi/multilingual participants with rather monolingual users (Ortega, 2019; Dewaele, 2022).

The study of emotion word perception is especially relevant and novel because it analyses emotion words per se, differentiating them from other types of emotion vocabulary such as emotion-laden words. In doing so, the study supports the conceptualisation-expression distinction of emotion at the lexical level in linguistics (Foolen, 2012) while amending the lack of studies with clear criteria for selecting emotional verbal stimuli (Ferré et al., 2010; Rosselli et al., 2017; Velez-Uribe & Rosselli, 2019). Similarly,

using words that denote emotion and at the same time measuring their perception in terms of valence and arousal involve a combination of the functional and dimensional approach to emotion in language (Pavlenko, 2008a). Finally, this study also examines, among other factors, a variable that has been insufficiently studied so far (Pavlenko, 2012): the effect that the level of acculturation to the cultural values of the host country (Ryder et al., 2000) has on adult migrants' valence and arousal ratings in LX. Along the same lines, the effect of language competence is tested by using an objective measure of the language level in Spanish and English, instead of participants' self-ratings of proficiency (Dewaele, 2010).

Chapter 2, *Previous studies on emotion, language and culture*, sheds light on the complex world of emotions and their relationship to language and culture. First, current emotion theories and their key concepts are discussed in order to create a better understanding of how emotions can be investigated across languages and cultures. Treating emotions as universal and monolithic or as culture-dependent and thus more dynamic, as well as classifying them in terms of discrete categories or affective dimensions has profound implications for the way emotion conceptualisation and communication through language are approached. Second, the presentation of two main perspectives, not completely incompatible, on how to deal with and select emotion vocabulary: the functional approach, based on the conceptual-expressive distinction (Pavlenko, 2008a; Foolen, 2012, 2016) and the dimensional approach (Russell, 2003; Barrett, 2013), which measures emotional experience in terms of core features like valence. The first approach, which makes it possible to distinguish between emotion terms per se, emotion-laden words and even emotion-related words, does not prevent these words from being measured on the affective dimensions of valence, arousal and/or dominance or from being associated with discrete emotion categories. In addition, there is a special emphasis on how emotion vocabulary is difficult to measure in any language due to its conceptual variation over time and within and across individuals, languages and cultures at different levels of lexical encoding.

Chapter 3, *Emotions in the bi/multilingual world*, shows the complex emotion-language-culture relation in bi/multilingual populations. The first part presents and defines the academic jargon used within applied linguistics and second language acquisition research to treat these

populations accurately. This is followed by a comprehensive review of national and international research on how bi/multilinguals around the world communicate (in general) and represent and process (at deeper layers of the brain) affective information in their L1s and LXs, and how multiple factors (e. g., language-related) may contribute to modulating such processes to varying degrees. In addition to reviewing emotion perception more broadly, emotion vocabulary and emotion lexical concepts in L1s and LXs, their semantic and/or conceptual representation and processing, and potential restructuring and development in the bi/multilingual mind are carefully discussed.

Chapter 4, *Methodology*, introduces the objectives and the research questions of this work, which is organised into two distinct studies. The first study compares emotion vocabularies and scripts in English and Spanish. It focuses on emotion word pairs which have a priori partial equivalence in the two linguistic communities. This is intended to shed light on the extent to which the emotionality of such emotion terms is comparable and proportional in the bi/multilingual mind, or conversely, whether it differs depending on the language status of Spanish and English. Moreover, it explores whether individual factors like participants' linguistic or acculturation-based profiles play a role in the development and restructuring of core affect. The second study addresses the purely visual perception of emotional input by Spanish and English bi/multilinguals and explores internal and external variation within this identification process. This will contribute to the understanding of unresolved issues, for instance, whether emotion perception through visual cues shares universal features or whether it is rather culturally different. The following sections of this chapter explain in detail the online questionnaire used as a research instrument, data collection and analysis procedures, as well as a description of the sample.

Chapter 5, *Results*, presents the statistical and quantitative results of the above-mentioned studies. It is arranged in two main sections which constitute the spinal cord of this work: emotion words perception and emotional videos perception. The last section of this chapter, and probably the most special of all, supports the quantitative findings with real stories from participants about their experiences communicating emotions, thus adding ecological validity to the study.

Finally, Chapter 6, *Conclusions*, summarises the main findings, reflecting upon its limitations and exploring further research avenues.

Welcome to this emotional journey through the real-life experiences of bi/multilinguals in Spanish and English.

CHAPTER 2. PREVIOUS STUDIES ON EMOTION, LANGUAGE AND CULTURE

This chapter offers an exploration of the intricate relationship between emotion, language, and culture, highlighting the complexity and diversity inherent in the study of emotional expression. The first section reviews the theoretical approaches, from universalist to constructionist perspectives, providing a well-rounded view of how emotions are conceptualised and experienced across different linguistic and cultural contexts. It presents both traditional and contemporary theories, such as Ekman's basic emotion theory and Barrett's psychological construction approach, thus illustrating the evolving nature of emotion research. Overall, this section concludes that emotion communication should be viewed as a universal process, which simultaneously encompasses significant individual, linguistic, and cultural variability. The second section delves into the linguistic study of emotion at the lexical level. It explains how to classify emotion lexicon into, for instance, emotion words, emotion-related words, and emotion-laden words. Furthermore, the chapter's integration of cross-linguistic and cross-cultural variations in emotion lexicons, supported by empirical studies, underscores the complexity of emotion expression and its cultural specificity. The consideration of different lexical levels and measurement approaches enhances the reader's understanding of how emotions are lexicalised and measured across languages, enabling a better understanding of the next chapter on emotional communication in multilingual and multicultural settings.

2.1 THEORETICAL APPROACHES TO EMOTION ACROSS CULTURES

Investigating emotion, used here as a synonym for affect, feeling, mood, or sentiment, is as challenging as exploring human nature:

> Questions about emotion and affect […] force us to consider the relation of body, action, and mind; of embodiment and society; of biology and

> culture; of brain, body, action, and cultural meaning. They force us to ask what it is to be human. (Wilce, 2009: 28 in Resnik, 2018: 8)

Despite such complexity, an insight into the main interdisciplinary debates surrounding emotion is necessary to understand the present work. Major controversies centre on the types and nature of emotion, that is, whether emotions are biological and rather universal or whether they are culturally constructed (Oatley et al., 2006; Resnik, 2018). Indeed, one of the main problems in categorising emotion arises from the different viewpoints and definitions of emotions across disciplines (Alba-Juez, 2018).

Researchers supporting the most traditional universalist approach argue that there are basic (primary and innate) emotions, discrete and similarly experienced across cultures (Ekman, 1992; Plutchik, 1994). Basic emotion theories, also known as categorical or discrete theories, view emotions as separate categories which may combine to produce more complex secondary emotions. They postulate that "there exists a set of basic, universal human emotions which are produced by an innate hardwired neuromotor program, and out of which all other emotions can be built and explained" (Alba-Juez, 2018: 230). The number of primary emotions varies depending on the theorist's approach: Ekman's taxonomy (1992) includes six basic emotion categories (*joy*, *sadness*, *anger*, *fear*, *disgust*, *surprise*) and Plutchik's (1994) includes eight primary emotions (Ekman's six as well as *trust* and *anticipation*) which serve as the foundation for further complexity, as illustrated in his wheel of emotions (Plutchik, 2003).

Other scholars, starting from psychological appraisal theories, partially support the universalist approach but disagree on the view of single and clear emotions (Ortony & Turner, 1990; Scherer, 2003, 2009). They rather favour a component approach to emotions where these are seen as "response systems" (Ortony & Turner, 1990: 320), that is, systems of emotions having different components. As reviewed by Alba-Juez (2018: 231), authors like Panksepp and Watt (2011) identify the following emotion systems: "(1) *exploration-curiosity-foraging-expectation-desire*, (2) *flight-caution-anxiety-fear-horror*, (3) *offense-irritability-anger-rage-fury*, and (4) *crying-sadness-sorrow-grief-panic*".

Another paradigm from psychology is the so-called psychological construction approach (Barrett & Russell, 1999; Russell, 2003; Barrett, 2013, 2017; Pugh et al., 2022), which claims that "emotion instances are

created when afferent information from the body or its central nervous system representation […] is made meaningful in relation to the external surroundings" (Barrett, 2013: 380). Schumann (2019) cites Lisa Feldman Barrett and provides a very useful explanation of her psychological construction theory of emotions, which is worth including here:

> Emotions, according to Barrett […] are conceptualizations made by humans based on their observation of physiological changes in themselves and others. These conceptualizations are then categorized and labeled with emotion terms. Thus, they are created by humans and only exist if humans recognize them and label them with a cultural term taken from their language […] According to Barrett, an emotion is highly dependent on context such that emotions are category labels for particular states of the body in relation to the current states of the world that the individual is experiencing. (Schumann, 2019: 537)

Barrett defends the position that people's emotions are self-constructed in their minds based on their present and past experiences within a specific cultural and linguistic context. In addition, psychological constructionist supporters tend to agree that all emotional experiences are based on the so-called core affect or affective core, commonly characterised as valence (pleasantness level) and/or arousal (activation level) dimensions (Ortony et al., 1987; Barrett & Russell, 1999). They specifically argue that these two "universal semantic dimensions of emotion" (Russell, 2003: 153) are common to all "emotion instances" and serve as "descriptive properties" to represent the affective and subjective experiences of humans (Barrett, 2013: 384). In other words, they propose that these core semantic-affective dimensions can describe and measure all emotional experiences, which obviously vary across individuals.

A very similar approach to the psychological constructionist theory is the social constructionist, frequently known as relativist. Social construction positions on emotions focus on the cultural processes shaping them and assume that emotions are cross-culturally different, thus questioning the existence of primary universal emotions. Their supporters from social and cultural psychology (Markus & Kitayama, 1991; Kitayama & Markus, 1994; Mesquita et al., 2015; Mesquita et al., 2017), anthropology (Rosaldo, 1984) and cognitive linguistics (Athanasiadou & Tabakowska, 1998; Wierzbicka, 1999; Kövecses, 2003) have widely demonstrated that

emotion concepts or scripts may differ significantly across communities, with fascinating cultural differences in the understanding of emotions between, for instance, East and West due to different views of the self: "While in the West the self is viewed as independent, self-contained, and autonomous, it is considered interdependent in Asian, African, Latin-American and many southern European cultures" (Markus & Kitayama, 1991: 225). Individualist cultures thus tend to express both negative and positive emotions freely and frequently to people; meanwhile, emotional control seems to be the norm in more collectivist cultures (Markus & Kitayama, 1991: 236).

Social constructionists like Mesquita and her colleagues have advanced in their knowledge of emotion processes and propose a socio-dynamic model as the best way to research emotions in a globalised world and a multicultural society (De Leersnyder et al., 2015). Their model, without denying that emotions are biologically constrained in some way, conceives them as "interactive processes that are socially constructed" (Boiger & Mesquita, 2012: 221), that is, "dynamic systems that emerge from the interactions and relationships in which they take place" (Mesquita & Boiger, 2014: 298). Like social construction theories, the previously explained psychological construction approach also gives importance to the role of the social and cultural context in which emotions originate. Both perspectives are closely related, acknowledging that human emotions are made of past experiences among individuals' interactions as part of socialisation and acculturation within a particular cultural situation.

Below a more practical example which explains and compares the approaches discussed above is presented. Imagine you are walking at night and suddenly hear footsteps behind you. Your heart and breathing speed up. In this situation, basic emotion theories would suggest that this physical sensation automatically causes you feel fearful, arguing that an emotion like fear is biologically hardwired and linked to universal physiological responses. In contrast, the psychological constructionist approach would propose that fear is not a pre-programmed emotion; it is rather constructed based on core affect (how pleasant and aroused you feel) and how you interpret the situation using context and stored knowledge. Consequently, in the same scenario, the same bodily sensation (increasing heart and breathing rate) does not inherently mean fear; it can trigger a different emotional outcome instead and be reconstructed as surprise or even relief—if you realise it is a friend. This second ap-

proach sees emotions as fluid, context-dependent experiences, shaped by both biological states and mental interpretation. Similarly, the social constructionist approach would emphasise that how you understand and express that fear is influenced by what your community sees as appropriate in the specific social and cultural environment. Each theory offers a different lens: basic emotion theories sees emotions as pre-programmed, psychological constructionist as cognitively and context-dependent, and social constructionist as dependent on social and cultural expectations.

All in all, in the study of human emotions, all models, whether more basic, psychological, or social constructionist, function as different sides of the same emotional coin (Alba-Juez, 2023). As universal and cultural properties of emotions complement each other in complex ways, human emotions should be "placed in the framework of cultural differences as variations on a universal theme" (Kamiloglu et al., in press: 11). Focusing on their universality only ignores that their communication (expression, perception, regulation, etc.) is also influenced by social and cultural norms and values. Similarly, considering exclusively their cultural variation neglects the fact that all humans share basic cognitive mechanisms for their interpretation (Hareli et al., 2015). On the next section, the discussion of emotion vocabulary reflects this balance between universality and cultural variation, showing how words for emotions both tap into shared human experiences and adapt to cultural norms.

2.2 EMOTION VOCABULARY

The quote "language has a heart as well as a mind of its own" (Ochs & Schieffelin, 1989: 22) makes clear that emotions are inherent in human language and communication. Consequently, researching them is of particular interest in linguistics, specifically, since the beginning of the 21st century, when a paradigm shift towards affect took place, the so-called emotional turn (Wilce, 2009; Lüdtke, 2015). This "emotional turn" in linguistics refers to a shift in focus towards understanding how emotions influence and are expressed through language. This approach emphasises the role of emotions in communication, examining how emotional states affect language use, discourse, and linguistic structures (Alba-Juez & Mackenzie, 2016; Alba-Juez & Pérez-González, 2019). There is now a significant variety of studies on affect across linguistic

subfields (see Majid, 2012, for a review), although as yet there is no unified theory due to the complexity arising from emotion research itself and its relation to language.

Bednarek (2008, 2009) argues that linguistic approaches to emotion differ mainly according to whether they focus on emotion talk or emotional talk. Emotion talk refers to "linguistic expressions that denote (the speaker's and others') emotions"; it is constituted by "all those expressions in the dictionary that denote affect/emotion, for example *love*, *hate*, *joy*, *envy*, *sad*, *mad*, *enjoy*, *dislike*, and so on (as well as fixed expressions such as *He had a broken heart*)" (2008: 10-11). Emotional talk refers to "linguistic expressions that conventionally signal the speaker's emotions" and it includes "all those constituents (verbal, non-verbal, linguistic, non-linguistic) that conventionally express or signal affect/emotion" (2008: 10-11).

Emotion talk and emotional talk (Bednarek, 2008, 2009) are also equivalent in general terms to Foolen's (2012, 2015, 2016) distinction between the conceptualisation of emotions and their expression, both being natural but different functions of language. The first perspective deals with the way emotions are conceptualised in language and focuses on the referential function; the second focuses on the expressive function of language and considers linguistic elements with emotive meaning.

The expression of emotion takes place on different linguistic levels: phonological, lexical, grammatical, and discourse (see Alba-Juez & Mackenzie, 2016, for illustrations). At the lexical level, words serve as a pathway into the world of emotions. Based on the distinction between the conceptualisation and expression of emotion in language, Pavlenko (2008a) classifies emotion lexicon, according to their function, into emotion words, emotion-related words and emotion-laden words, addressed on the following lines.

2.2.1 Conceptual-expressive distinction at the lexical level

Emotion words serve to denote emotions and conceptualise them; they are "words that directly refer to particular affective states ('happy', 'angry') or processes ('to worry', 'to rage'), and function either to describe ('she is sad') or express them ('I feel sad')" (Pavlenko, 2008a: 148). Language commonly uses different parts of speech such as nouns (*love*), verbs

(*to love*), adjectives (*happy*), adverbs (*luckily*), prepositions[1] (*tremble with fear*), as well as fixed expressions (*to be as high as a kite*) (Foolen, 2012). These emotion terms need to be distinguished from emotion-related words (*tears* or *to scream*), which "describe behaviors related to particular emotions without naming the actual emotions" (Pavlenko, 2008a: 148). Scholars differ with regard to emotion-related words; some authors include them with emotion words and others exclude them from their collections (Wallace & Carson, 1973; Bednarek, 2008).

Different ways of classifying emotion vocabulary across studies pose a major problem when estimating the real size of emotion terms within a language. In the English language, for example, the number of emotion terms to refer to feelings differs depending on how these words are approached and analysed, with some studies mixing emotion words together with emotion-related words or even emotion-laden words. For example, Bednarek (2008) presents a comprehensive list of 1,060 emotion terms denoting affect in (British) English, offering researchers a valuable source for selecting emotion nouns, verbs, adjectives, and adverbs.

Emotion terms are indeed difficult to quantify in a language due to their continuous evolution. Variation is inherent in emotion vocabulary and its conceptualisation in the mind, an aspect previously emphasised by emotion theories expressed by psychological and social constructionists (Barrett, 2013; Mesquita & Boiger, 2014). Not only may emotion conceptualisation vary through time within a particular community, as evidenced by diachronic studies, but also across different languages and cultures, as demonstrated by cross-linguistic and cross-cultural emotion research (Foolen, 2012). Pavlenko's influential studies (2005, 2008a, 2014) on the organisation of the emotion domain within and across languages show that cross-linguistic emotion variation is normally found at three levels of lexical encoding: superordinate, basic and subordinate.

At the superordinate (and most general) level, many languages such as Chewong in Malaysia or Ifaluk in Micronesia do not have a term equivalent to our (Western) *emotion*. Pavlenko further explains that "this lexical gap does not mean that their speakers do not experience affect—rather,

[1] Prepositions also indicate relational aspects of the conceptualisation of emotions. As Foolen (2012: 353) states, "languages differ in their construal of the relation between emotions and their cause" (see his work for more examples of prepositions).

it suggests that experiences we see as 'emotional' are categorized and interpreted in different ways" (2014: 254). While Ifaluk, for example, sees emotions as processual and relational phenomena arising between people, other languages like English view feelings as individual and inner states arising within individuals. This author finally states that "our own category of emotions as a set of bodily feelings, disengaged from moral, cultural and social systems, is a relatively recent invention, linked to the rise of Western psychology" (Pavlenko, 2014: 254).

Other languages, despite having a superordinate term to refer to emotions, differ at the basic (structural) and subordinate (conceptual) levels of lexical encoding (Pavlenko, 2008a, 2008c, 2014). In terms of structure, languages may favour different morphosyntactic patterns when talking about emotions, leading to more or less structural equivalence. In Pavlenko's words, structural equivalence is found when "two languages encode particular emotion words through the same morphosyntactic categories (e.g., noun/noun, transitive verb/transitive verb, adjective/adjective) and where the words in question share at least some lexico-syntactic frames" (2008c: 92). Russian and English, for instance, have the same morphosyntactic categories: emotion nouns, adjectives and pseudo-participles, adverbs, and transitive and intransitive verbs, but their emotion terms are differently distributed across these categories, thus favouring different structural patterns of emotion description (Wierzbicka, 1999; Pavlenko, 2002b, 2008c). Russian favours emotion (intransitive) verbs which function as "relationship markers" and indicators of common features of Russian culture; specifically, collectivism and interdependence (Pavlenko & Driagina, 2007: 216). In contrast, English, which has few emotion intransitive verbs (*to rejoice*, *to rage*, *to worry*), expresses emotions mainly by means of monolexemic adjectives and pseudo-participles (*sad*, *worried*), often used with copula verbs (*to be*, *to become*, *to seem*) (Pavlenko, 2014). Adjectival constructions functioning as "self-markers" and representing emotions as "inner and passive states caused by external or past causes" help indeed to stress independence and individuality features in Anglo cultures (Pavlenko, 2008a: 150).

At this point, and in order to avoid generalisations about the way users of a given language and culture feel and express their feelings, it is necessary to introduce the notion of "discourse systems" formulated by Scollon et al. (2012). In intercultural communication or—as the authors emphasise—interdiscourse system communication, the concept of

"cultures" being rather ambiguous should be understood as "discourse systems" defined "in terms of four interrelated components: ideology, face systems, forms of discourse, and socialization" (Scollon et al., 2012: 277). As Alba-Juez and Mackenzie (2016: 27) further explain, discourse systems are:

> Complex systems which interact with one another and in which each speaker participates along her life. All of them adopt a given discursive form of expression, and they include the social practices and the values of the group in question, but they will differ for every speaker, even within the limits of the same 'culture'.

Thus, it is noteworthy that, when referring to "culture" in this work and, specifically, to the comparison between languages and cultures (be it Spanish, English or another), what is being analysed and compared are in fact discourse systems in which the expression of emotion may vary at all linguistic levels (Alba-Juez, 2023).

Finally, languages may also differ at the most conceptual level of lexical encoding (Pavlenko, 2014). Emotion concepts or scripts, their semantic content and boundaries may vary across languages, "reflecting distinct cultural norms governing the domain of emotions in different societies" (Pavlenko, 2008c: 91). Consequently, conceptual non-equivalence relationships between languages lead to language-specific emotion words that either lack translation equivalents or have two or three partial equivalents in other languages (Pavlenko, 2014). Russian, for instance, does not have single-word equivalents of common English emotion nouns like *fun* or *frustration* (Pavlenko & Driagina, 2007; Pavlenko, 2014). Similarly, studies analysing emotion concept comparability between Spanish and English have reported that the former uses, for example, the single term *vergüenza* while the latter distinguishes between the terms *shame* and *embarrassment* (Soriano, 2003; Hurtado-de-Mendoza et al., 2010).

The last type of emotion vocabulary is that of emotion-laden words, defined as "words that do not refer to emotions directly but instead express ('jerk', 'loser') or elicit emotions from the interlocutors ('cancer', 'malignancy')" (Pavlenko, 2008a: 148). Foolen (2012, 2015, 2016) clarifies that they are content words with referential and expressive meaning, that is, they have emotional connotations and evoke certain feelings. The following semantic areas are usually differentiated among

emotion-laden words (Pavlenko, 2008a): (1) taboo and swearwords or expletives, (2) insults/slurs, (3) reprimands, (4) endearments, (5) aversive words, and (6) interjections. There is similar variation in the manner in which emotion terms are conceptualised over time and across languages and cultures; there may be variation in the semantic areas emotion-laden words belong to, their boundaries not being clear-cut (Pavlenko, 2008a).

2.2.2 Measuring word emotionality across dimensions

Osgood, Suci and Tannenbaum (1957), from componential emotion approaches in psychology, revealed that three semantic-affective dimensions are needed to examine the emotional charge and connotations of lexical words (nouns, verbs, adjectives, adverbs): *evaluation*, *potency*, and *activity*, renamed in more recent versions as *valence*, *arousal*, and *dominance*, respectively (Russell & Barrett, 1999; Barrett, 2013). The first and most important dimension, valence, is "the degree to which the concept refers to something that you feel that is negative (aversive) or positive (attractive)" (Hinojosa et al., 2016: 281) and it ranges from very unpleasant (number 1) to very pleasant (number 9) on a 9-point Likert scale. The second most important dimension, arousal, describes "the degree of activation" that a stimulus provokes and ranges from calming to exciting or agitating (number 1 refers to something very relaxing and 9 means the maximum level of excitement or agitation on the 9-point scale). The last dimension, dominance, goes from feeling out of control or passive (number 1) to feeling in control or active (number 9 on the scale). Figure 1 provides a visual illustration for a better understanding of the three dimensions and their scale.

An example of a neutral-valence word is *stapler*, which is neither pleasant nor unpleasant (therefore rated around number 5 on the valence scale). An extreme-valence word, for example, is *politics*, which could be considered either pleasant or unpleasant. Despite the well-known positive bias in human communication towards positive-valence words (Boucher & Osgood, 1969), individual judgements about valence are well distributed over the scale from unpleasant to pleasant, hence showing more variety than judgements on arousal or dominance (Warriner & Kuperman, 2015; Mackenzie, 2016). High arousal (exciting/agitating) correlates well with extreme valence, whether pleasant or unpleasant.

Nevertheless, most words tend to be rather neutral in arousal or cause low arousal (calm/relaxation) (Mackenzie, 2016). While valence and arousal are the two affective variables "par excellence" (Guasch et al., 2016: 1367), dominance is the least studied dimension as it correlates rather well with valence. There are exceptions, though. For example, the emotion word *angry* tends to cause low valence (unpleasantness) but rather high dominance (strong/dominant); and *loved* usually causes positive valence (pleasantness) and quite negative dominance (weak/submissive) (Mackenzie, 2016). Although these semantic-affective dimensions to measure emotion are considered "universal" and "relatively language- and culture-neutral" (Pavlenko, 2008a: 148), the emotional associations of words may also differ over time and across individuals, genders and language communities. For instance, people will probably have either positive or negative feelings about the words *bullfighting* or *socialism* depending on time, and their views and personal ideas.

Figure 1. Valence, arousal, and dominance measurement scale

	9-point Likert scale								
	Low or negative extreme					High or positive extreme			
	1	2	3	4	5	6	7	8	9
Valence	*Unpleasant, negative, bad*					*Pleasant, positive, good*			
Arousal	*Calm, relaxed*				*Neutral*	*Exciting, agitating*			
Dominance	*Out of control, weak, submissive*					*In control, strong, dominant*			

Note: Figure designed by the author of this study.

Nowadays, there exist dozens of lexical sets collecting the emotional associations of words across these affective dimensions. Computational linguists involved in sentiment analysis have recently developed emotion lexicons in several languages, offering information on the valence of words and their degree of association with emotion categories. For example, the NRC Emotion Lexicon (Mohammad, 2015) is a list of about 14,000 English words and their associations with Plutchik's (1994) eight basic emotion categories and two sentiments (negative and positive). Similarly, from psycholinguistic research, normative affective word lists have been compiled in many languages, providing word information on affective dimensions (valence, arousal, and/or dominance) and/or

discrete emotion categories, even sometimes combining both approaches (Hinojosa et al., 2016).

Warriner, Kuperman and Brysbaert's (2013) normative study is the most representative database in the English language so far, as they include affective ratings on valence, arousal and dominance for 13,915 English words (see Bradley & Lang, 1999; Stevenson et al., 2007; Strauss & Allen, 2008; Grühn, 2016, for other lists in English). Their sample of lemmas, mainly including high-frequency nouns, verbs and adjectives "substantially covers the word stock of the English language and forms a solid foundation from which to automatically derive the values of the remaining words" (Warriner et al., 2013: 1192). In the Spanish language, the two largest sets of affective norms are those developed by Stadthagen-González and colleagues (see Redondo et al., 2007; Ferré et al., 2012; Guasch et al., 2016; Hinojosa et al., 2016; Ferré et al., 2017, for smaller lists in Spanish). Stadthagen-González et al. (2018) provide word ratings for five discrete emotions for 10,491 Spanish terms and Stadthagen-González et al. (2017) offer valence and arousal data for 14,031 Spanish terms (mainly nouns, verbs and adjectives). They used a very similar procedure to Warriner et al. (2013) and demonstrated that both norms are highly correlated.

This dimensional approach to measuring the emotional charge of words has advantages and disadvantages. On the one hand, it does not provide "principles for selection of emotion words, only for their evaluation on particular dimensions", making it impossible to "differentiate between emotion words per se and emotion-laden words" (Pavlenko, 2008a: 148). This is a major drawback. On the other hand, the most important advantage of this method is that the existence of consistent affective norms in many languages "allows for cross-language comparison studies" (Stadthagen-González et al., 2017: 112). For instance, based on the compatibility of the Spanish and English norms (Warriner et al., 2013), valuable "research on emotional aspects of bilingualism, translation studies, and cross-language research" can be performed (Stadthagen-González et al., 2017: 120).

In short, this chapter highlights complexity in the study of emotion in general and of its conceptualisation and representation in languages and cultures in particular. It is essential to take into account how different theoretical approaches define emotion in order to understand that its

communication must be understood as a universal process in which there is simultaneously a large amount of individual, linguistic and cultural variability. More specifically, in the linguistic research of emotion at the lexical level, it is of vital importance to understand the different ways of quantifying and measuring emotion vocabulary in order to complement them in the most effective way possible. That said, it is time to complicate this matter by translating this emotion-language-culture relation to the bilingual and multilingual world.

CHAPTER 3. EMOTIONS IN THE BI/MULTILINGUAL WORLD

This chapter highlights the intricate relationship between emotion, language and culture in bi/multilingual populations. In particular, the chapter examines the semantic and conceptual representation of emotion vocabulary in L1s and LXs, as well as its possible restructuring and development in the bi/multilingual mind. The first section introduces the existing terminology used in the field to accurately define and classify these participants. Similarly, it discusses other key concepts (pragmalinguistics, sociopragmatics, emotion lexical concepts) and theoretical frameworks (multicompetence and language embodiment) that contribute to understanding the semantic-conceptual representation of emotions. This section is followed by a thorough review of research on how bi/multilinguals communicate affective information in their L1s and/or LXs and how various factors may influence this process to varying degrees.

3.1 PREVIOUS CONSIDERATIONS

In line with researchers like Aneta Pavlenko and Jean-Marc Dewaele, this study adopts a use-based (functional) definition of bilinguals and multilinguals as "speakers who use two or more languages or dialects in everyday lives, regardless of their levels of proficiency in the respective languages" (Pavlenko, 2012: 407). Consequently, the narrow and conventional definition assuming that bilinguals have similar proficiency levels in two languages, typically learnt from birth is rejected (Dewaele, 2015a). Under such a broad definition of bi/multilinguals, a distinction needs to be made between different populations in terms of variables like order of language acquisition, age of acquisition (AoA), context of acquisition (CoA), or age of arrival (AoAr) to the country where the language is spoken as a native language (Pavlenko, 2012). Below, several of these variables are defined, which will be useful to subsequently understand the description and classification of the sample, as well as the results of the study.

Based on order of language acquisition, L1 refers to "a language or languages learned from birth, regardless of the speaker's current proficiency" (Pavlenko, 2012: 407). It is distinguished from LX which refers non-specifically to any language (L2, L3, L4, etc) learnt after age three, typically the boundary for L1 acquisition (Dewaele, 2010; Pavlenko, 2012). Following this chronological distinction, two key terms are L1 users and LX users. The first are understood as those who learnt an L1 before age three, who usually have a high level of proficiency in that language (it is not inherent in the term, though) and who can also be multicompetent in one or more LXs (Cook & Singleton, 2014; Dewaele, 2018c). LX users are understood as those who learnt one or more LXs after L1(s) to any level of proficiency, ranging "from minimal to maximal" and "equal or superior to that of L1 users in certain domains" (Dewaele, 2018c: 238):

> The dichotomy 'L1 user' versus 'LX user' does not imply that one is superior to the other. They are equal and can be complementary. It also suggests that variation can exist within both L1(s) and LX(s) and that all individuals can be multi-competent users of multiple languages. (Dewaele, 2018c: 239)

In terms of AoA, bi/multilinguals can be subdivided into simultaneous and sequential. The first are "speakers who acquired two or more languages from birth"; within the second group, early (young) and late (adult) bi/multilinguals refer to those who acquired any LX in early or middle childhood (prior to age 12) or post puberty, respectively (Pavlenko, 2012: 407). Based on the CoA, a three-way distinction is made between FL or instructed contexts (typical FL classrooms); naturalistic contexts, that is, learning a language in the environment where it is spoken; and mixed contexts: "Classroom learning supplemented by learning the language in the environment where it is used as a native language by the majority of the speakers" (Pavlenko, 2012: 407). This contextual variable together with AoA are the two most investigated variables in second language acquisition research (Dewaele, 2010; Cook & Singleton, 2014). Following the number of languages known (degree of multilingualism), there are more precise terms to describe bi/multilinguals depending on whether they know two, three, four, or five languages: bilinguals, trilinguals, quadrilinguals, and pentalinguals (Dewaele, 2010).

Language proficiency refers to the "overall level of achievement in a particular language" (Pavlenko, 2012: 407), that is, the degree of skill in reading, writing, listening, and speaking within each language. It differs from language dominance which refers to greater ability in use or importance of one language than another (Richards & Schmidt, 2010; Pavlenko, 2012). The dominant language may be any L1, any LX or a combination of both. According to these key terms and the complementarity principle (Grosjean, 2010; Dewaele, 2015a), there are balanced and dominant bi/multilinguals. The first are those who "have relatively similar skills in their respective languages across different areas" and the second "display greater ease in one of the languages (overall or in the domain in question)" (Pavlenko, 2012: 407).

AoAr to a country and LoR in its linguistic context are temporal variables, usually examined in studies with bi/multilingual migrants living in the LX environment (Pavlenko, 2012; Hammer & Dewaele, 2015). In terms of AoAr, early arrivals and late arrivals are usually distinguished, with the former arriving in the host country prior to age 12 and the latter after that age (Pavlenko, 2012: 407). It is worth stressing that AoA may be different from AoAr in the LX context. The two may coincide or differ, with some participants being introduced to the LX in the FL classroom before arriving in the LX context, and others starting LX learning in the LX context (Pavlenko, 2012, 2014).

Another term which is worth explaining to understand the sample of this work is "cultural migrant", referring to adult individuals who choose to migrate of their own free will for cultural, professional or personal purposes, and not only forced due to political causes (Lundell & Bartning, 2015). In a globalised world where migration is a broad reality, both this type of participants as well as their (emotional) acculturation processes deserve much more attention in second language acquisition research. Crossing geographical borders, that is, being a migrant and living in a different country, means opening a new cultural[1] and emotional world apart from the purely linguistic one (Dewaele, 2010) and it is tied to

[1] Cultures understood as "portable schemas of interpretation of actions and events that people have acquired through primary socialization and which change over time as people migrate or enter into contact with people who have been socialized differently" (Kramsch, 2015: 638).

(emotional) acculturation processes, bringing about changes in individuals' linguistic, cultural, social, psychological, and emotional patterns due to first-hand contact with an additional sociocultural context (Schumann, 1986; De Leersnyder et al., 2011; Hammer, 2017).

Similarly, the research on the semantic and conceptual representation of emotion in L1s and LXs and its restructuring in the bi/multilingual mind needs to be approached from a multicompetence perspective (Cook, 2012; Dewaele, 2013, 2016a, 2018c). The concept of multicompetence implies that the knowledge of more than one language (or variety) in the same mind of an individual is interrelated, affecting the whole language system; dynamic and ever-changing; and it interacts with other cognitive systems like emotional competence (Cook, 2012). In Dewaele's (2016a: 475) words, "the addition of a language (or a culture) to an individual's repertoire has profound repercussions on the whole system, including the individual's emotional geography". For instance, learning a new emotion word in an LX may refine or reframe how a bi/multilingual understands that emotion concept in their L1.

Other fundamental terms are pragmalinguistics and sociopragmatics, where the ability to communicate emotions resides (Kasper & Rose, 2001; Dewaele, 2015c, 2016a). Pragmalinguistics refers to the study of "form-function mappings" available in a language to communicate specific actions ("illocutions"), while sociopragmatics refers to the most appropriate choice of those "form-function" relationships depending on the social context (Kasper & Rose, 2001). Sociopragmatics involves knowing what a particular word or expression really means, how often and in what situation it can be used, what its illocutionary effects are, and what the social consequences may be of using it inappropriately (Dewaele, 2017a). Both are related skills but they may develop separately. For instance, a language user may know several English emotion words or phrases to swear but be unable to swear appropriately in an argument with an English speaker.

To later understand how emotion words (emotion lexical concepts) are represented, processed and developed in the bi/multilingual mind, it is worth introducing an explanation of grammatical versus lexical concepts, and how these two can be described at two levels: semantic and conceptual (Jarvis & Pavlenko, 2008; Pavlenko, 1999, 2009, 2014). Grammatical concept refers to the mental representations of morpho-syntax and grammatical notions (aspect or tense) while lexical concept

means the mental representations related to word forms (Pavlenko, 1999: 218). These two types of concepts can be represented (processed) at the semantic or the most conceptual level. Semantic representation refers to the lexical meaning of words, which is part of the speaker's linguistic competence. The conceptual level refers to non-linguistic representation (imagery, scripts). Pavlenko (1999: 212) perfectly illustrates this semantic-conceptual difference in the representation of a lexical concept and how these two levels can sometimes be "at maximal contrast" within the mind of bi/multilinguals:

> FL and L2 Russian learners of English were able to define the words 'privacy' and 'personal space', providing evidence that both groups have semantic representations of the two words. However, only L2 learners whose classroom learning was supplemented by interactions in a naturalistic environment used these words in a manner similar to that of native speakers [L1 users] of American English. […] They were the only group that had non-linguistic mental representations (in this case, imagery and scripts) of what the concepts of privacy, personal space and their invasion may entail and were able to access the concepts for purposes of inferencing and categorization.

Pavlenko's (1999) words on the semantic-conceptual representation of lexical concepts are in line not only with the distinction between pragmalinguistics and sociopragmatics, explained previously, but also with her theory of language embodiment, "which sees affective socialization in early childhood as the process of integration of phonological forms of words and phrases with information from visual, auditory, olfactory, tactile, kinesthetic, and visceral modalities, autobiographical memories, and affect" (Pavlenko 2012: 421). Thus, a language user may have pragmalinguistic knowledge of lexical concepts and be able to process them semantically, but this does not mean having full sociopragmatic understanding and processing them conceptually or affectively. Being able to represent (process) any lexical concept semantically thus involves knowing the "links [mappings] between words and concepts" (polysemy, collocation, association, synonymy, or antonymy; Pavlenko, 2009: 148). However, to be able to represent them conceptually, the lexical concepts need to be "linguistically and sensorily acquired", something influenced "by a unique configuration of linguistic, cultural and sociohistorical factors at play at a particular time in a particular speech community"

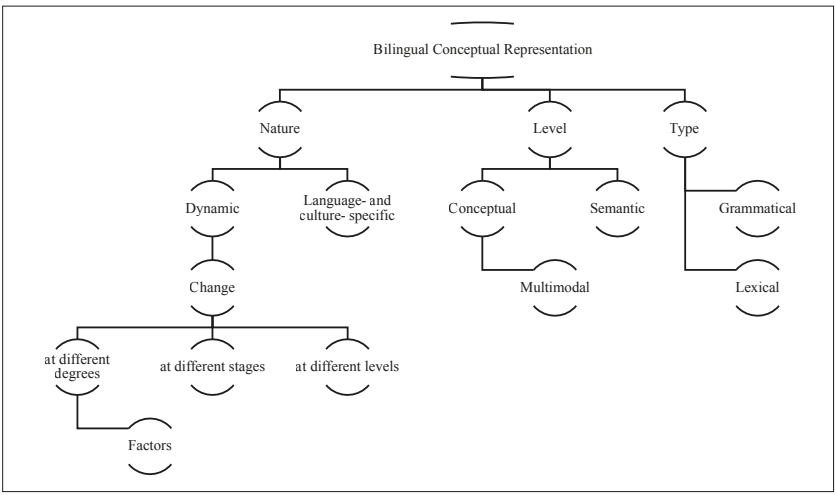
(Pavlenko, 1999: 212). Accordingly and more specifically, emotion lexical concepts are defined as:

> Multimodal mental representations that include visual (mental imagery), auditory (sound), perceptual (texture) and kinesthetic (sensory-motor) information stored in implicit memory. These representations are dynamic and as such are subject to developmental changes and generational and individual differences […] in a context-dependent manner. (Pavlenko, 2009: 132)

Bi/multilingual (conceptual) representation is truly based on "multi-modal representations" including "linguistic meaning as well as non-linguistic experiential representation" (Athanasopoulos, 2015: 276). In addition, the semantic and/or conceptual representations of lexical concepts (the grammatical ones too) are mostly language- and culture-specific, varying across languages and cultures, "with various degrees of equivalence on a continuum of near-equivalence to minimal equivalence" (Athanasopoulos, 2015: 277). Consequently, due to these cross-linguistic and cross-cultural differences, their (conceptual) representation is dynamic and flexible involving conceptual development and change (Pavlenko, 1999, 2009, 2014). This modulation or restructuring may happen "at different levels of behavior and representation" and "at different stages and degrees of bilingual experience", depending on "several factors such as language proficiency, socialization/acculturation, age of onset of bilingualism, frequency of language use, etc." (Athanasopoulos, 2015: 285-292).

As the above discussion makes clear, investigating the semantic-conceptual representation and processing of affective information and emotion lexical concepts in particular in bi/multilinguals involves assuming several key assumptions: their multimodality; their cross-linguistic and cross-cultural variation (an idea introduced in the first theortical part on emotion in language); and their potential restructuring and change at different levels, stages, and degrees modulated to a greater or lesser extent by a complex interaction of factors like social-related or linguistic-related (see Figure 2, for a visual representation of these ideas).

Figure 2. Semantic-conceptual representation and restructuring in bi/multilinguals' emotion lexicon



Note: Figure designed by the author of this study.

3.2 PERCEPTION AND RESTRUCTURING OF EMOTION BY BI/MULTILINGUALS

Emotion perception, or the ability to recognise and decode (at deeper layers of the brain) emotional information in L1s and LXs seems to be linked to individual (internal) factors like bi/multilinguals' linguistic, cultural and psychological profiles (Mavrou & Dewaele, 2020; Simón Cabodevilla & Martín Leralta, 2023). Factors such as the age at which a bi/multilingual person learns a given language, proficiency level, how it is acquired and the cultural environment (immersion or not), frequency of use, personal experiences in that language, their cultural identity, and their cognitive and emotional strategies may affect and modulate the ability to perceive emotions and the affective load associated with each language (Pavlenko, 2013). In addition, this perception skill can be influenced by stimuli-related (external) factors; for instance, the modality or channel (verbal, vocal, visual, or its various combinations) in which the affective information is presented and communicated, or the

kinesics level of the stimuli (Dewaele, 2022). That is, bi/multilinguals may process emotional information differently depending on whether they are reading (visual) or listening (auditory) to the affective content, and on the amount of facial expressions, gestures and body language of the input. Thus, the interaction between these factors creates a complex dynamic in emotional perception. The following review of studies highlights this complex variability which, in turn, allows bi/multilinguals to navigate between their different languages and cultures, adjusting their emotional expression to better adapt to each environment.

With regard to the emotion recognition ability of bi/multilinguals, Rintell (1984) asked Arabic, Chinese and Spanish participants enrolled in English classes in the United States to listen to recorded conversations in their LX English, identify the emotion expressed (*pleasure*, *anger*, *depression*, *anxiety*, *guilt*, *disgust*) and rate its intensity. Their responses were compared to those of a control group of English L1 users, who outperformed LX users (effect of language status and L1 advantage). The study also showed that LX proficiency had a strong effect on emotion recognition, with intermediate and advanced students scoring significantly higher than beginners. Cultural background also had an effect, with Chinese users of LX English having the most difficulty, followed by the Arabs, and finally the Spanish speakers. Similarly, Graham et al. (2001) found an effect of language status and L1 advantage, as their group of American English L1 users outperformed the two groups of English LX users (Japanese and Spanish participants in an EFL course). Contrary to Rintell (1984), the authors did not find a proficiency effect.

In a similar vein, Lorette and Dewaele (2015, 2019, 2020) have widely investigated variation in emotion recognition ability in English by more than one thousand L1 and LX users of English. Specifically, they examined the effect of modality, language status, language proficiency, and cultural background on emotion perception. In an online questionnaire, participants were presented with six audio-visual video clips corresponding to six basic emotions (*happiness*, *surprise*, *disgust*, *sadness*, *fear*, and *anger*) portrayed by a British English L1 actress and they had to choose which emotion they thought applied most to each video. They also completed the LexTALE test (Lemhöfer & Broersma, 2012), used to measure their English proficiency. When the three channels were available (no control for modality), language status (L1 vs. LX) did not affect emotion recognition. Both L1 and LX users of English recognised

an average of four emotions, despite the latter getting significantly lower proficiency scores. When controlling for modality (verbal-vocal-visual vs. verbal-vocal), there was a language status effect, with English L1 users performing better than English LX users in verbal-vocal emotion recognition ability. Linguistic proficiency turned out to be positively related to emotion recognition among the LX users, and marginally so among the L1 users. Cultural distance from the target language (English) also affected this ability, as Asian LX users scored significantly lower than European LX users, despite having similar linguistic proficiency. All in all, their findings suggest that English LX users at lower proficiency levels and from more distant cultures struggle to identify the correct emotion when the visual input is missing.

In a subsequent study, Lorette and Dewaele (2022) investigated the effect of modality (channel), language status and proficiency on emotion perception in English. The results showed that the audio-visual clips were rated as significantly more emotional compared to those without visual cues. Both L1 and LX participants rated emotional intensity as higher for audiovisual stimuli compared to auditory stimuli alone. However, the English LX users outperformed the L1 users in both conditions (LX advantage in emotion perception). Finally, proficiency in English was not significantly correlated with intensity ratings among L1 and LX users, suggesting that paralinguistic skills develop independently from linguistic skills.

Alqarni and Dewaele (2020) examined emotion recognition ability in English by Arabic-English bilinguals and English L1 users. Participants had to watch six short audio-visual clips of common conversations between English L1 actors and recognise the emotion. Again, the English LX users outperformed the English L1 users (effect of language status on emotion perception). This (small) bilingual advantage in emotion perception in LX English differed from previous studies reporting no significant differences between L1 and LX users when the three channels were available (Lorette & Dewaele, 2015) or finding an L1 advantage when only the audio condition was available (Rintell, 1984; Graham et al., 2001; Lorette & Dewaele, 2020).

Dewaele and Moxsom-Turnbull (2020) examined the effect of gestural intensity of the stimulus (low vs. medium intensity), language status (L1 vs. LX English), age, gender, number of languages known, LX proficiency, and LoR in the LX country on the perceived emotional intensity of

two videos (verbal-vocal-visual cues). They found that gestural intensity and language status were the only variables related to perception of emotional intensity. Participants perceived the medium gesture video as more emotional than the low gesture video, thus showing an effect of kinesics on perceived emotional intensity (Lhommet & Marsella, 2015). The LX users of English rated the emotional intensity of both videos significantly higher than the L1 users of English. Therefore, this LX advantage also differs from previous studies by Lorette and Dewaele (2015), who did not find a language status effect. As the authors explained, this difference probably lies in the use of conceptually-different tasks, with Lorette and Dewaele asking for "identifying an emotion" and this study asking for "judging the emotional intensity of a short story" (Dewaele & Moxsom-Turnbull, 2020: 510). The result of LX advantage is in line with the finding in Lorette & Dewaele (2022), where the English LX users rated the emotional intensity of six emotion videos significantly higher than the L1 users.

Riviello and Esposito (2012) examined emotion recognition ability across cultural backgrounds and channels. In their first study, American English L1 users and Italian and French users with L2 English listened to (audio cues) or watched (visual cues) short movie scenes eliciting six different emotional states. They had to choose the most appropriate emotion label for each clip (*happiness*, *irony*, *fear*, *anger*, *surprise*, *sadness*). In their second study, the same procedure was followed using the Italian language mode with Italian L1 users and American users with L0 Italian (they did not know Italian according to the authors' report). Taken together, the authors found that the cultural (linguistic) background of participants had an effect on emotion recognition for the vocal channel only. They stated that "at the base of the vocal emotional encoding there is a more language-specific process strictly related to the prosodic feature of the subject's native language" (Riviello & Esposito, 2012: 168). Contrarily, there was no such effect when emotional information was presented through visual cues (mute videos), as participants from different cultural backgrounds and regardless of language status recognised the emotional states similarly in both the English and Italian language modalities. The authors concluded that the visual channel seems to share universal features for a cross-cultural identification of emotional states (Ekman, 2007).

Jacob et al. (2013), using a sample of German L1 students, investigated the effects of verbal and non-verbal information on their valence ratings (on a 4-point scale: 1 *highly negative*, 2 *negative*, 3 *positive*, 4 *highly positive*) and found that non-verbal cues had a stronger impact on pleasantness ratings. They argued that although the three channels usually act together ("synergistic" relation), people tend to focus on non-verbal cues more in complex emotional situations. This so-called perceptual nonverbal dominance, that is, "the decoder's tendency to rely more on nonverbal information than on the verbal information" when identifying people's emotional states is indeed due to the more authentic knowledge provided by the former (Jacob et al., 2013: 783-784).

Finally, Mavrou and Dewaele (2020) investigated how emotional information presented through a video or a picture sequence (purely visual cues) was perceived by Spanish users, and specifically, whether language status, cultural background (American, Spanish, Asian people), and trait emotional intelligence (Petrides, 2009) had an effect on perceived emotional intensity and pleasantness. Overall, Spanish LX users tended to provide higher ratings of perceived emotionality (both for audio-visual and visual conditions) than L1 users. In terms of modality, the results showed that the video was rated as significantly more pleasant (equally emotional, though) than the picture sequence by L1 and LX users, something congruent with the idea that videos seem to elicit stronger emotional responses than pictures. Cultural background also had an effect on the two modalities, with American users of LX Spanish finding the video significantly more pleasant and emotional than Spanish and Asian participants (with the lowest ratings in the pleasantness scale). The Americans also found the pictures significantly more emotional and pleasant than their Spanish peers. The authors thus highlighted the well-established difference between Asian and Western cultures in the interpretation (and expression) of feelings (Markus & Kitayama, 1991; De Leersnyder et al., 2015).

The overview of the above studies reveals that the perception of emotional communication sometimes varies between L1 and LX users, and that each modality (verbal, vocal, visual) has its own characteristics in terms of effectiveness and emotional comprehension (Jacob et al., 2013; Mavrou & Dewaele, 2020). In general and although there is considerable variability, L1 users tend to perceive emotions better in the verbal and vocal modalities due to their familiarity with the language, while LX users may have difficulties depending, for example, on their level of language

proficiency (Rintell, 1984; Graham et al., 2001; Lorette & Dewaele, 2020). However, the visual modality is the most accessible and understandable for both native and non-native speakers, due to the universality of many visual emotional cues. This modality is the most universal and the least dependent on language proficiency, allowing both groups to perceive emotions in a similar way (Riviello & Esposito, 2012).

Moreover, that LX users may perceive emotional cues in different communication modalities equally or more accurately than L1 users could be due to a combination of several factors (Alqarni & Dewaele, 2020; Dewaele & Moxsom-Turnbull, 2020). LX speakers may exert more cognitive effort in the perception task, paying more attention to emotional cues to compensate for possible deficiencies in their comprehension of linguistic content, thus improving their perception of emotional intensity. In addition, bi/multilinguals normally benefit from increased exposure to different forms of emotional communication, which may equally improve their ability to perceive emotions in all their languages. Finally, as paralinguistic skills (interpretation of nonverbal cues) may develop independently of linguistic skills, bi/multilinguals can correctly capture emotion in audiovisual contexts (Mavrou & Dewaele, 2020).

Next, the review of studies focuses on bi/multilingual perception of purely verbal stimuli, specifically emotional vocabulary, the main focus of the present work, in order to further illustrate the complexity and variability of that process. From a more cognitive psychology perspective, researchers have used several methods to examine the (automatic or unconscious) affective processing of (emotional) words in bi/multilinguals' various languages: memory tasks (Anooshian & Hertel, 1994; Ferré et al., 2010), emotional Stroop tasks (Eilola et al., 2007; Sutton et al., 2007; Eilola & Havelka, 2011), affective priming tasks (Segalowitz et al., 2008; Degner et al., 2012), and skin conductance response tasks (Harris et al., 2003; Harris, 2004; Caldwell-Harris & Ayçiçegi-Dinn, 2009; Caldwell-Harris et al., 2010). These and similar studies have demonstrated that emotion vocabulary is a distinct class of words in the mental lexicon, differing from more neutral word types like concrete and abstract words in its processing advantage (Altarriba & Bauer, 2004; Pavlenko, 2008a). In addition, processing differences exist not only between emotional and non-emotional verbal stimuli, but also within emotion vocabulary per se, with differences between emotion word types (emotion terms and emotion-laden words) and between affective polarity (valence and arousal

dimensions). These processing differences have been found among more monolingual users in their L1s and among bi/multilinguals users, whose affective processing becomes a much more complex issue, as there exist extra processing differences between their L1s and LXs (see Pavlenko, 2012, 2014; Altarriba & Basnight-Brown, 2015; Rosselli et al., 2017, for in-depth reviews).

Regardless of the methodology used, many of the above studies demonstrate that affective processing tends to be more automatic in bi/multilinguals' L1s, with such automaticity decreasing in LXs acquired later in life (an effect of language status). For example, this L1 advantage in affective processing was evidenced by Segalowitz et al. (2008) with late English-French bilinguals; and by Degner et al. (2012) with late German-French and late French-German bilinguals, who responded faster in their L1 in affective priming tasks. Similarly, Anooshian and Hertel (1994), with late Spanish-English and English-Spanish bilinguals, showed L1 advantage for recalling words with emotional connotations. Harris et al. (2003) and Caldwell-Harris and Ayçiçegi-Dinn (2009), with late Turkish-English bilinguals, also found stronger skin conductance responses for L1 words and phrases, with the strongest responses elicited by Turkish L1 taboo words and childhood reprimands (see Dewaele's research on communicating swearing; Dewaele, 2015b, 2016b).

Nevertheless, despite this common processing advantage in L1s due to the deeper embodiment of affective information in first acquired languages, there are multiple factors that may contribute to modulating affective processing in bi/multilinguals' minds, allowing them to process emotional language similarly in L1s and LXs, or even better in LXs. For instance, AoA effects demonstrate that early bilinguals acquiring L2 earlier in life (prior to age 12) can perform similarly in their L1 and L2, as opposed to late bilinguals who often show an L1 advantage. AoA effects were evidenced by similar rates of recall in memory tasks in three groups of proficient and early bilinguals (Ferré et al., 2010), similar interference in emotional Stroop tasks (Eilola et al., 2007, with Finnish-English bilinguals; Sutton et al., 2007, with Spanish-English bilinguals; Eilola & Havelka, 2011, with proficient and early Greek-English bilinguals), and similar rates of skin responses in early Spanish-English bilinguals (Harris, 2004). Degner et al. (2012), although their late German-French and French-German bilingual groups responded faster in L1 in an affective priming task, also found priming effects in the L2 of those participants

who used it every day in a naturalistic context (effects of CoA and frequency of language use).

As regards the affective processing of valence and arousal and their polarity in L1s and LXs, controversies exist over whether the processing advantage is restricted to pleasant, unpleasant, low-arousal, or high-arousal stimuli (Caldwell-Harris, 2015). In terms of valence processing in LXs, some authors did not find a polarity effect, with an LX advantage for emotional verbal stimuli regardless of whether they were pleasant or unpleasant (Ferré et al., 2010; Ponari et al., 2015). Others argued that the processing advantage in the LX is restricted to high-valence or positive words. Wu and Thierry (2012), with Chinese-English participants, demonstrated that negative content did not produce translation equivalents in their L2 English. Jończyk et al. (2016), with Polish-English bilinguals, found that access to negative content in their L2 English was incomplete and suppressed. Sheikh and Titone (2016), with French-English users, also found that negative content was not read as quickly in the L2. Last but not least, Jiménez Catalán and Dewaele (2017), in a lexical availability task with young Spanish EFL learners, found a significant effect of positive valence on learners' lexical access to emotion prompts, with the positive (*happy* and *love*) eliciting a higher number of words than the negative (*hate* and *sad*).

As to the affective processing of arousal in LXs, Toivo and Scheepers (2019), despite finding a processing advantage in the L1 of late German-English and Finnish-English bilinguals, showed stronger pupil dilation effects in response to low-arousal versus high-arousal words in the LX of bilinguals. Among French L1 users, Kever et al. (2019) investigated whether the valence and arousal of words influenced their recognition times. Visual word recognition tasks showed faster recognition times for positive (high-valence) compared to negative (low-valence) words or neutral words, supporting the processing advantage for pleasant stimuli (Kuperman et al., 2014). The authors also found faster recognition times for exciting (high-arousal) compared to calming (low-arousal) words. This finding partially contrasts with previous research reporting no arousal effects (Kousta et al., 2009) or faster response times for calming compared to exciting words (Kuperman et al., 2014).

El-Dakhs and Altarriba (2019), in different psycholinguistic tasks, examined the influence of emotion word type (emotion words vs. emotion-laden words) and valence (positive vs. negative) on emotional language

processing among late Arabic-English learners, who were learning English in a FL context. They found emotion word type effects, with emotion words being processed differently than emotion-laden words and neutral words; and valence effects, with positive-valence words processed better than negative ones. Velez-Uribe and Rosselli (2019: 34) analysed "the direct assessment of words through conscious appraisal of emotional valence in bilinguals". They asked Spanish-English sequential bilinguals, highly proficient in both languages and living mostly in the United States, to rate the valence of emotion-laden words (positive, negative, and taboo) in the two target languages and two modalities (visual and auditory). In addition, they analysed the effect of several independent variables: gender, AoA of L2 English, LoR spent in the USA, self-rated language proficiency in Spanish and English, and Latino and US cultural identity. The effect of language status was not restricted to L1 Spanish, but was also observed in their L2 English, depending on the word category. Positive words were perceived as more pleasant in L2 English, negative words were more unpleasant in L2 too, but taboos were more negative in L1 Spanish. They also found that English and Spanish proficiency levels were the most significant predictors, suggesting a complex interaction between proficiency in both languages and differences in word valence perception.

Another group of studies carried out by Dewaele, Pavlenko and colleagues has shown that linguistic, psychological or demographic factors may influence the use (both production and perception) of emotion vocabulary in L1s and LXs, leading to some restructuring in bi/multilinguals' performance at the structural or the most conceptual levels of lexical encoding (Panayiotou, 2006; Alvarado & Jameson, 2011). Pavlenko (2002a, 2002b) investigated emotion discourse in Russian-English bilinguals. First, she examined similarities and differences in emotion narratives elicited from Russian L1 users and English L1 users. As already introduced, these two languages differ in some respects, for instance, English uses the adjectival pattern for emotion encoding while Russian favours the verbal (Wierzbicka, 1994). Then, she compared Russian and English L1 data to emotion narratives produced by late Russian-English migrants in the United States, who performed the task in their L1 or L2. She revealed that bilinguals' performance was linguistically and culturally appropriate in L1 Russian and L2 English. However, they also exhibited a restructuring of emotion concept encoding, specifically, "morphosyntactic transfer" from L2 English to L1 Russian, as the bilingual narratives in L1

Russian contained "perception copulas and change-of-state verbs, a characteristic feature of emotion encoding in the English language (Pavlenko, 2002a: 67). Together with these findings, Pavlenko highlighted crucial points for future research, namely, dealing with simultaneous bilinguals and focusing on cultural migrants moving to a new linguistic-cultural environment as prestigious as their first.

Dewaele and Pavlenko (2002) also provided a first step in research on emotion vocabulary use by bi/multilinguals, pointing out several variables that may influence their production. Their first study conducted with Dutch learners of L2 French (two languages whose emotion conceptualisation has been posited as similar) examined the effect of L2 proficiency, gender and extraversion on emotion vocabulary use in L2 French. They showed that female, high-proficiency and extravert learners produced more emotion words and richer vocabularies. Their second study focused on Russian-English bilinguals (some were learners and others were living in the L2 context) and the influence of their sociocultural competence on production in L2 English. The more acculturated Russian users of L2 English behaved in their two languages like English L1 users, favouring the adjectival pattern rather than the verbal. The authors argued then that the potential influence of sociocultural competence on emotion restructuring warrant "further attention to the ways acculturation interacts with emotion scripts and vocabulary" (2002: 293).

Pavlenko and Driagina (2007) investigated emotion vocabulary production in Russian L2 narratives produced by American learners and compared them to those of Russian and English L1 users. By examining structural and conceptual (non-)equivalence in emotion encoding, they revealed that Russian L2 learners approximated the verbal pattern of Russian emotion description, favouring emotion verbs over adjectives (internalisation of L2 emotion categories and patterns). Also, instances of morphosyntactic transfer from L1 English to L2 Russian were found, as they used the adjectival pattern where they should have used the Russian verbal pattern for emotion encoding. Similarly, Pavlenko (2008c) examined structural and conceptual restructuring in the use of pure emotion words in L2 Russian and L2 English. In line with Pavlenko and Driagina (2007), one of her findings was that bilingual participants were able to accommodate the structural pattern in their respective L2: towards verbs and adverbs in L2 Russian and towards adjectives in L2 English. Other authors like Stepanova Sachs and Coley (2006) found evidence

of conceptual restructuring in the encoding of the emotion concepts *jealousy/envy* in L2 English and their equivalents in L1 Russian among Russian-English bilinguals with a high level of L2 English.

Dewaele (2017b) investigated whether knowing more languages (multilingualism level) and country of residence may have a destabilising effect on the semantic representations (understanding of meaning, perceived offensiveness and self-reported frequency of use) of negative-valence emotion-laden words in L1 English. Participants were American English L1 users living in the USA, UK or another country, and knowing from one to more than five languages. The results demonstrated that semantic representations of American emotion-laden words remained very stable for L1 users in the USA. However, British words did not remain as stable in the minds of Americans abroad, who reported being more confident about their meaning and offensiveness and using them more frequently (an effect of language exposure on semantic representation leading to its restructuring). As to the effect of the number of languages known, the Americans who knew more languages understood British words better. The author argued that a higher multilingualism level may increase "the dynamic nature of the elements of the language system" and "keep pulling and pushing representations of words at the periphery of the mental lexicon" (Dewaele, 2017b: 334).

Finally, Dewaele (2010), with data collected through the BEQ (Dewaele & Pavlenko, 2001), presented a large-scale study on how multilinguals around the world communicate emotion in their various languages. Based on multilinguals' self-reports, L1 is normally chosen for positive and negative emotion communication (love, anger and swearing or taboos) and is perceived as significantly more emotional, in comparison to LXs which tend to have less emotional resonance, and thus, are less used for emotion expression. However, as highlighted before, this a priori emotional L1 advantage is not "a law of nature" (Dewaele, 2018a: 223). Actually, it is highly dynamic and can be modulated by multiple sociolinguistic variables. In LXs, factors like earlier AoA, naturalistic or even mixed contexts, higher frequency of use and thus stronger socialisation, a wider network of LX interlocutors, LX dominance, and higher proficiency seem to have significant positive effects (to different degrees) on the likelihood of perceiving LXs (and their language) as equally or more emotional than L1s and of choosing them more for emotional expression. Later, Dewaele's (2010) findings were confirmed overall by

Resnik (2018), who collected data with the BEQ from German-English and Asian-English multilinguals.

From a more social-psychological perspective, research has shown that a new culture in peoples' lives may have a profound influence on their restructuring of (previous) emotional patterns: "When people move from one cultural context to another, their patterns of emotional experience and expression may change; that is, they may acculturate emotionally" (De Leersnyder, 2017: 67). De Leersnyder et al. (2011), in a pioneering study on emotional acculturation, raised the question of whether and to what extent migrants' emotions acculturate (change) and become similar to the emotional patterns of their host culture. Their study focused on Korean immigrants in the United States (study 1) and Turkish immigrants in Belgium (study 2). The authors developed the *Emotional Patterns Questionnaire* to measure the emotional experiences of those immigrants as well as host group members (Americans and Belgians, respectively). Overall, they found that higher exposure to the host culture (LoR) and higher social interaction (social engagement) with members of the host culture produced higher emotional acculturation to the host culture's emotional patterns. In addition, acculturation attitudes towards the first culture did not show an effect on levels of emotional fit with the majority culture. In a similar vein, Panicacci (2019b) investigated whether use of LX English for communicating emotions may predict acculturation levels (attitudes) towards the heritage and host cultures of Italian users of LX English living in ESCs. She found that a higher use of LX English to communicate emotions was linked to higher acculturation levels to their host English culture. However, it did not affect migrants' attachment to their L1 and heritage culture.

As seen above, in the realm of emotion perception by bi/multilinguals, multimodality, mixed-emotion stimuli, multiple internal and external factors and mutual interaction make the task of perceiving emotional information, its meaning and intensity in L1s and LXs an inherently complex process (Pavlenko, 2009, 2014; Dewaele, 2016a). Linked to this, the methodological differences across studies in terms of stimuli, tasks and samples lead to mixed results. This calls for more research in order to triangulate findings and reach more valid conclusions on how bi/multilinguals perceive, represent, process, and modulate the emotion world through their first and additional languages and cultures.

CHAPTER 4. METHODOLOGY

This chapter is essential to understanding the purpose and internal structure of this work. The first section introduces the specific objectives of the study, moving on to the research instrument. Thus, the second section presents the online questionnaire used and its parts: a word rating task (in Spanish and English), a video rating task (in Spanish or English), an adapted version of the VIA (Ryder et al., 2000) for migrant bi/multilinguals, Lextale tests in English (Lemhöfer & Broersma, 2012) and Spanish (Izura et al., 2014) to objectively measure the proficiency level in both languages, and an adapted version of the BEQ on sociodemographic and linguistic backgrounds (Dewaele & Pavlenko, 2001). After reading this section, the reader will understand why each test was employed and the implications for data analysis. The third section describes in detail the sample of participants, highlighting the different factors that need to be accounted for in order to classify bi/multilingual populations accurately. The last section identifies the variables of the quantitative study, as well as the procedure followed for the qualitative analysis.

4.1 THIS STUDY

The general aim of this work is to explore how bi/multilinguals with Spanish and English in their linguistic repertoire perceive, and thus represent in their minds, emotional information: emotion words and visual and emotional video clips in Spanish and English as L1 and/or LX. Thus, based on the type of emotional information under study, the present research is organised and presented in two studies: (1) emotion words perception and (2) emotional videos perception.

First, it investigates the way in which sequential bi/multilinguals—a group of Spanish L1 users with LX English and another group of English L1 users with LX Spanish—perceive the emotionality of English-Spanish emotion word pairs (emotion lexical concepts) through the conscious rating of these stimuli in terms of valence and arousal. More specifically, it analyses whether the bi/multilinguals' emotional associations

of valence and arousal for emotion words change and develop due to individual differences in their socio-biographical, linguistic and acculturation-based profiles.

Second, it investigates how Spanish/English bi/multilinguals perceive the emotionality of visual and emotional video clips, also measured through valence and arousal ratings. In particular it examines the extent to which individual differences in participants' socio-biographical and linguistic profiles, and differences in the stimulus' kinesics influence such process.

The research questions for both studies were formulated as follows:

1. To what extent are the emotional associations (valence and arousal values) of emotion words and their modulation linked to individual differences in the socio-biographical, linguistic and acculturation-based profiles of sequential bi/multilinguals? These are: language status, AoA of the LX, CoA of the LX, language dominance, number of languages known, language proficiency, frequency of language use, L1 variety, being a migrant, acculturation level to the LX culture, LoR in the LX country, and maintenance of the L1 culture.
2. To what extent are the emotional associations (valence and arousal values) of visual and emotional videos linked to language modality (Spanish or English); individual differences in participants' socio-biographical and linguistic profiles (language status, language proficiency, the number of languages known, frequency of language use, AoA, current age, and gender); and kinesics level of the stimulus?

Following the results of the literature discussed in the previous two chapters, it is hypothesised, for the two research questions, that all the independent variables (factors) under study might have a significant effect, albeit at different degrees of significance, on the perception of emotion words and emotional videos. The effect of the variables is explored without making concrete predictions—hypothesising no particular direction—due to the nature of the study. By working with bi/multilingual individuals and two different languages and discourse systems (Alba-Juez & Mackenzie, 2016; Alba-Juez, 2023), namely, Spanish and English as L1 and/or LX, it is assumed that knowledge of more than one language in the same mind of an individual is inter-

related and affects the whole linguistic system; moreover, it is dynamic and constantly changing (Cook, 2012; Dewaele, 2013, 2016a, 2018c).

4.2 ONLINE QUESTIONNAIRE

An author-designed online questionnaire collected quantitative data from Spanish and English bi/multilingual participants, after which there was a follow-up and open-ended question in order to obtain first-hand quotes (qualitative data) which could help to explain the resulting quantitative findings. The use of this mixed-method approach helps to create a more comprehensive picture of the complex variations existing within bi/multilingual populations (Dewaele, 2010; Creswell & Plano Clark, 2011; Creswell, 2015; Resnik, 2018; Panicacci, 2019b; Dewaele, 2022). As to the benefits of online questionnaires, they offer researchers important advantages like efficient and cheap collection of large samples, sample diversity in terms of demographics, anonymity and thus more honest answers (Dörnyei & Csizér, 2012). In addition, they have been found to have very similar psychometric properties to traditional questionnaires (Dewaele, 2017b). It is acknowledged though that participants responding to second language acquisition questionnaires normally do not represent the general population, as they must possess enough metalinguistic awareness, that is, knowledge of their linguistic trajectories and motivation to answer questions on language preferences and use (Wilson & Dewaele, 2010; Rolland et al., 2023).

The online questionnaire (see Appendix A for a full version) was a bilingual survey written in Spanish and English, with some parts translated into both languages and others deliberately written in one or the other. Participants were told that the survey would take around 20 minutes of their time. They were required to be adults (over 18) and know Spanish and English (at least) at/above the basic level (A2 level, CEFR, Council of Europe, 2001, 2018) to be able to understand the wording of the questions. They could choose the main language (Spanish or English) to complete most of the questionnaire, except for some parts which were intentionally in one language only. They were informed that their responses would be anonymous and used for research purposes only. The questionnaire was mobile-friendly, but they were advised to use a laptop or desktop for better completion. Participants had to agree to take

part in the questionnaire and declare that they had read the instructions. They could choose to withdraw at any time.

The demographic questions were adapted from the BEQ (Dewaele & Pavlenko, 2001; Dewaele, 2010). Questions elicited information on gender (*male*, *female*, *other*), education level (*secondary education, A-level, vocational training, graduate, masters, doctorate*), current age, profession, and nationality. They were also asked the names of their countries of origin and current residence. The most monocultural participants who had never lived abroad skipped the questions in the next part.

The most multicultural participants who were living or had lived in a different country answered the section on acculturation-oriented information. As participants may have lived in more than one country, they were told to pick the one influencing them most and report on it thereafter. The questions, based on Hammer and Dewaele's (2015) questionnaire, asked for country name, AoAr to and LoR in that country, and cause of migration (*forced migration*, *professionally-oriented reasons*, *educationally-oriented*, *personally-oriented*). The final task within this section was an adapted version of the VIA test (Ryder et al., 2000). It consists of ten items assessing migrants' attachment to their culture of origin (L1 culture) and other ten items measuring their attachment to the culture of the country in which they were or had been residing (LX culture or host culture). The total of 20 items asked views on "values, social relationships, and adherence to traditions" (Ryder et al., 2000: 53) for each culture on a 9-point Likert scale (from 1 *strongly disagree* to 9 *strongly agree*). A Spanish version of the VIA (translated by the author of the present work) was provided for those participants choosing Spanish as the main language of the questionnaire. Final scores for each cultural scenario (L1 acculturation and LX acculturation levels) were computed by calculating the mean score of each set of 10 statements.

Using the VIA test to measure participants' self-reported "behavioural acculturation attitudes" offers several advantages. First, unlike unidimensional models that view acculturation as a single continuum, the VIA implies understanding acculturation as a bi-dimensional and dynamic construct (Panicacci & Dewaele, 2017: 422). Then, attachment to L1 culture and/or attachment to LX culture can be considered separate sides of the same coin, as both cultural identities may develop independently (De Leersnyder, 2019). This allows for a more nuanced understanding of how individuals navigate between cultures. Second, the

VIA is a robust and flexible tool. It has demonstrated strong reliability and validity across various studies (Panicacci, 2019a, 2019b) and it can be adapted to various cultural contexts, making it versatile for research in multicultural settings.

The next section, aimed at knowing participants' linguistic paths, included second language acquisition-oriented questions adapted from the BEQ (Dewaele & Pavlenko, 2001; Dewaele, 2010). The BEQ is a valuable instrument that offers practical benefits. Specifically, the sociodemographic and linguistic questions can be adapted for various languages and contexts, making it a flexible tool for researchers working with diverse bi/multilingual populations. Also, as it allows a thorough exploration of the experiences of bi/multilinguals in different languages, it provides data for most of the individual variables under study in this work. All participants answered this block. The questions asked for languages known in chronological order, AoA of each language, language dominance, CoA of each language (*outside of school*, *at school*, *both*), self-reported proficiency in speaking, understanding, reading, and writing in all languages (on a scale from 1 *minimal proficiency* to 5 *maximal proficiency*), and frequency of use of each language (*yearly or less*, *monthly*, *weekly*, *daily and all day*). Participants were informed that L1 referred to any language learnt before age three and that they may have more than one (L1A, L1B and/or L1C). They were also told that L2, L3, L4, and/or L5 referred to their LXs learnt after age three, regardless of their level of proficiency. As to dominance, participants were told that they could be dominant in more than one language, whether L1(s) and/or LX(s) and that dominance meant the language which they knew better and used more frequently and with ease, that is, the most important one for them of all the languages they knew. Participants were asked to report on the degree of skill in all their languages because the LexTALE and Lextale-Esp proficiency tests (see below) were only intended for English and Spanish languages.

The next part was the valence and arousal ratings of emotion words in Spanish and English. All participants rated the emotion words on the two dimensions in both languages. The language order was randomised; half of participants did English ratings first and Spanish ratings second; the other half did Spanish ratings first and English ratings second. The presentation order of the verbal stimuli in both languages was randomised too. However, participants always rated the valence dimension first and

arousal second. The instructions adapted from Stadthagen-González et al. (2017) were given in English for the English word ratings and in Spanish for the Spanish word ratings. Participants were asked to rate each emotion word on a 9-point Likert scale according to the level of pleasantness (from 1 *very negative* to 9 *very positive*) and activation (from 1 *very calm* to 9 *very exciting/agitating*) that they associated with each word. The anchor *very exciting/agitating* for the high-arousal extreme was selected so that participants could distinguish high arousal with both positive valence (*exciting*) and negative valence (*agitating*) (Russell & Barrett, 1999; Russell, 2003). Participants were told that the middle of the scale (5) meant neutral. There was a further option next to each word (scale) to indicate whether a word was unknown to participants, as "affective ratings are less valid/useful for words that are not known to most participants" (Warriner et al., 2013: 1192). Consequently, words marked as unknown by participants were not rated affectively and their scores were considered missing values for data analysis purposes. No more than 20 English-Spanish emotion word pairs (a total of 40 words) were selected as verbal stimuli in order to avoid fatigue and missing responses from participants in the rating task.

The pairs can be considered partial translation equivalents, as a complete overlap between two emotion concepts across languages is rather impossible (Pavlenko, 2008a). For the selection process, a first pool of English emotion words were selected from Bednarek's (2008) list. The partial translation from English to Spanish to create English-Spanish emotion word pairs[1] was determined following two translations by two bilinguals with a psychology education background and foreign to the present research. A first L1 English-LX Spanish user performed the forward translation from English to Spanish and a second L1 Spanish-LX English user translated it back into English. Differences between the original and back-translated versions were discussed and resolved with the agreement of both translators. Monolingual and bilingual versions of the Cambridge, Oxford, and Merriam dictionaries were used too. For the selection of the final set, the author avoided repeating emotion concepts like *joyful* and *happy* and included an equal balance of positive- and negative-valence as well as high- and low-arousal emotion words/concepts (see Appendix B

[1] See limitations of the study in the final chapter.

where the reader can check the original valence and arousal mean scores following Warriner et al., 2013 and Stadthagen-González et al., 2017). In terms of word category, 11 emotion word pairs were adjectives and nine pairs were nouns.

The next part consisted of the LexTALE (Lemhöfer & Broersma, 2012) and its Spanish version Lextale-Esp (Izura et al., 2014) that were used to measure objectively participants' proficiency in English and Spanish, respectively. The LexTALE is a 60-item lexical test in which participants have to indicate, for each item, whether it is an existing (British) English word or not (40 words and 20 nonwords). This "un-speeded visual lexical decision task" is quick (no more than five minutes), easy to administer and free (downloadable item list and instructions for implementation from the web http://www.lextale.com/index.html). Furthermore, it is a standardised test which has been shown to provide an objective and reliable measure of vocabulary knowledge and general language proficiency. Research has demonstrated it can be used to assess L1 and LX abilities of users with different social and linguistic backgrounds from low and intermediate to advanced levels (Lorette & Dewaele, 2019). Another crucial advantage is that it facilitates research on individual differences in language processing (Brysbaert, 2013; Ferré & Brysbaert, 2017). The Lextale-Esp presents all the advantages mentioned above but differs in some respects from the original LexTALE. It consists of 60 Spanish words and 30 nonwords, from very low to very high frequencies. Participants must indicate the Spanish words they really know without guessing, as errors are penalised (see Izura et al., 2014, for lexical information of their set of words and nonwords). This Spanish proficiency test is "suitable for English-Spanish and Spanish-English bilinguals" due to the "little overlap between English and Spanish", as "none of the words were cognates with the English language" and "none of the nonwords were words in Spanish or English" (Izura et al., 2014: 62).

Participants completed LexTALE following the instructions in English. They were presented with the 60 items one after the other on the computer screen (the authors presented them one by one). They had to decide whether each item was an existing English word by clicking on "yes" or "no". They were instructed to respond "yes" if they were sure that an item was an existing English word despite not knowing its exact meaning. They were instructed to respond "no" if they were uncertain. They were told that the task was not timed, to work individually, and not

to use a dictionary. As LexTALE is a standardised test, the presentation order of the items was neither changed nor randomised. The final LexTALE score was computed as follows: [(number of words correct/40*100) + (number of nonwords correct/20*100)] / 2 (Lemhöfer & Broersma, 2012). The first three items were dummies and were not taken into account for the calculation of the score. For Lextale-Esp, participants were given the instructions in Spanish. They were presented with the 90 items in a full list and asked to select the ones they considered as existing Spanish words by ticking a box next to each word. They were warned that the errors would be penalised. The instructions also explained that the task was not timed. They were asked to work individually and without a dictionary. The presentation order of the items was fixed. The global Lextale-Esp score was computed as follows: N yes to words – 2 * N yes to nonwords. As the authors explained, "test takers can even obtain a negative score if they are more likely to select nonwords from the list" (Izura et al., 2014: 58).

The two tests were completed within a three-minute timespan approximately (meanwhile participants completed the next part, see below). The test order was randomised, half of the participants did the English test first and the Spanish test second and the other half did the Spanish first and the English second. Participants were able to see each language proficiency score once finished; a strategy used to motivate them to fill in the questionnaire and recruit more volunteers. Indeed, the opportunity to know one's English and Spanish proficiency was advertised at the beginning. As participants could obtain a maximum score of 60 points in both tests, they were presented with three possible language levels and their corresponding raw scores: upper & lower advanced/proficient users (C1 & C2) = more than or equal to 48 points; upper intermediate (B2) = between 36 and 48 points; lower intermediate and lower (B1 & lower) = less than or equal to 36 points. The interpretation of the scores was adapted from Lemhöfer and Broersma (2012) on the relation between LexTALE scores and the CEFR levels (Council of Europe, 2001, 2018). The criteria used in this research to create proficiency groups are based on the guidelines of LexTALE (Lemhöfer & Broersma, 2012). Participants with scores between 80% and 100% are considered upper and lower advanced users, those with scores between 60% and 79% are upper intermediate users, while those with scores below 59% are

lower intermediate users and lower (criteria also used by Dewaele & Moxsom-Turnbull, 2020).

The last section asked to rate four video clips (silent and non-verbal) on the valence and arousal dimensions (9-point Likert scales; from 1 *very unpleasant* to 9 *very pleasant* and from 1 *very calm* to 9 *very exciting/agitating*) in one language modality only: Spanish or English. Each participant was randomly assigned to one language modality. The presentation order of the videos was randomised too. However, participants always rated the valence dimension first and the arousal second per video clip. The short video clips (see Table 1), around seven-seconds long ($M = 7.5$), were extracted from a longer film portraying a contemporary and universal setting of a young couple who live abroad and travel home to visit family for some weeks. The original version was edited in *iMovie*, a free app available in the Apple app store. The audio tracks were removed and the full video clip was divided into four clips representing four different emotional scenarios. Clip 1 showed the "happy" faces (zoom out) of a woman leaving the plane on her arrival in Spain and then walking through the airport. Clip 2 presented the "sad" faces (zoom out) of parents and daughter who wander around waiting for the return flight. Clip 3 showed the "happy" hugs (zoom in) between family members and clip 4 was about the "sad" hug (zoom in) between mother and daughter in the farewell. There was correct balance between the positive- and negative-valence emotional scenarios, as the two clips on the arrival were intended to convey happiness-related emotions and the other two on the farewell were intended to elicit sadness-related emotions. Two different conditions were applied to the clips in terms of kinesics level: happy or sad individual faces without interaction and lower gestural intensity (both zoom out) versus happy or sad face-to-face interaction (hugs) with higher gestural intensity from characters (both zoom in). Despite the fact that more zoom-in faces in the four clips would be more effective in emotion perception, this potential limitation does not invalidate the results since the stimuli are ecologically valid for being common scenarios in real communication. As Dewaele et al. (2019: 293) argue, the use of a dynamic video fragment rather than pictures to test participants' emotion perception ability has more ecological validity, as humans are constantly "scanning" the faces, voices and words of those nearby to identify their emotional state. In addition, compared to some studies (Riviello & Esposito, 2012; Lorette & Dewaele, 2015; Mavrou

& Dewaele, 2020) whose dynamic emotional stimuli portrayed by actors or actresses are simulations of emotions, the present research improves the value of the perceptual emotional content, as the real protagonists in the video clips were not asked to produce any emotion, instead they were recorded on video during a surprise and farewell event.

Table 1. Emotional video clips

Video clip	*Scenario*	*Seconds*	*Link*
clip 1	happy faces (zoom out)	8	https://youtu.be/J7i8jeeXbJg
clip 2	sad faces (zoom out)	7	https://youtu.be/nX-fjAH48wg
clip 3	happy hugs (zoom in)	8	https://youtu.be/14E9oU4aQMI
clip 4	sad hugs (zoom in)	7	https://youtu.be/cqKaNYgZv70

Finally, participants could choose whether to respond to a follow-up question aimed at collecting quotes on their experiences while using English and/or Spanish to express emotions. The question was formulated as follows: *Write a personal story about a situation when you felt very emotional and had to express your emotions in your foreign language (whether in English or in Spanish)*. They were free to write the story in any of the target languages. There was no word limit. A final question invited the participants to comment on the questionnaire itself.

The online questionnaire was administered through *Qualtrics*. It was advertised through several digital platforms like Linguist List, Research Gate, Academia, and around Facebook groups. The call for participation was announced in Spanish or English depending on the language group. It was also advertised through many emails to family and friends, contacts around the world, and colleagues and their students in academic institutions. Before its administration, an online pilot study was conducted with twenty participants, alien to this study, and some questions were changed for clarification. They were EFL students from Spain (females, three males only, *M* age = 18.60 years). The use of previously validated tools ensures both the validity and reliability of the online questionnaire. The use of standardised tools like the VIA (Ryder et al., 2000) and the BEQ (Dewaele & Pavlenko, 2001) were specifically adapted to suit the study's bi/multilingual (migrant) population, based on established

empirical research (Dewaele, 2010; Panicacci, 2019a, 2019b). To objectively assess language proficiency, the Lextale tests in English (Lemhöfer & Broersma, 2012) and Spanish (Izura et al., 2014) were employed, both of which are also standardised vocabulary-based tests with demonstrated correlations with general language proficiency. The word rating task in Spanish and English was designed following established affective norms. Similarly, the video rating task, available in Spanish or English depending on participant group, was validated through pilot testing to ensure appropriate emotional elicitation.

4.3 PARTICIPANTS

A total of 384 Spanish/English bi/multilinguals participated in this study[2] ($N = 384$). There were 293 females and 87 males (four participants reported being of another gender). The average age[3] was 32.13 years ($SD = 12.97$), ranging from 18 to 79. They were generally highly educated; 12 studied vocational training (3.1%), 30 Secondary Education (7.8%), 60 obtained an A-level (15.6%), 96 an undergraduate degree (25%), 111 a postgraduate degree (28.9%), and 75 a doctoral degree (19.5%). The strong proportion of highly-educated female participants (76.3% vs. 22.7% males) is indeed very typical in web-based language questionnaires (Dewaele, 2010; Resnik, 2018; Wilson & Dewaele, 2010). Most participants were professionally or academically active (only seven people reported being unemployed). They were mostly students (44.5%) and professionals in the teaching and knowledge world (40.4%). The rest of the sample were professionals in the business world, or science-related and other jobs. As to nationality, the largest group were Spanish citizens (52.3%), followed by Americans, Puerto Ricans, British, and other nationalities or dual nationalities. In terms of the number of languages known (multilingualism level), the sample consisted of 87 bilinguals (22.7%), 113 trilinguals (29.4%),

[2] Some participants did not answer all questions and totals may vary for individual variables. There were 322 completed responses and 62 uncompleted ones. The unfinished ones achieved at least 53% progress, meaning that all participants answered the emotion word rating task.

[3] Being over 18 years old was a requirement to participate in the study.

99 quadrilinguals (25.8%), 73 pentalinguals (19%), and 12 people knowing six languages (3.1%). According to their order of acquisition of Spanish and English, there were the following language subgroups: 239 Spanish L1 users with LX English living in SSCs or abroad; 56 English L1 users with LX Spanish living in ESCs or abroad; 49 Spanish and English L1 users with other LXs; and finally, 40 L1 users of other languages with Spanish and English as LXs (see Table 2).

Table 2. Cross-tabulation of the total sample of Spanish/English bi/multilinguals

		Spanish L1 and LX users		*Total*
		Spanish L1 users	*Spanish LX users*	
English L1 and LX users	English L1 users	49	56	105
	English LX users	239	40	279
Total		288	96	384

Data analysis required differentiating the perception of emotion words among language subgroups within the total sample. This study investigated which factors may contribute to the restructuring of valence and arousal ratings of emotion word pairs in sequential bi/multilinguals with English and Spanish in their linguistic repertoire. Therefore, not all language subgroups were of interest for this purpose, narrowing the focus on (1) the 239 Spanish L1 users with LX English and (2) the 56 English L1 users with LX Spanish. Despite their future potential, the other two subgroups of bi/multilinguals were excluded. To study the perception of emotional video clips, a total of 337 participants[4] completed the task of rating the videos on valence and arousal in one language modality[5] only (Spanish or English).

[4] 47 participants quit the questionnaire before answering this part.

[5] This differed from the study on the perception of emotion words, where participants did the task in two language modalities.

The 239 Spanish L1 users with LX English

They reported being mainly from Spain (*n* = 189, 79.1%), Spanish countries in Central and South America (*n* = 41, 17.2%), USA[6] (*n* = 4, 1.7%), and other countries[7] (*n* = 5). In terms of Spanish language varieties, there were 194 Spanish-Spanish L1 users (81.2%) and 45 Spanish-Latino L1 users (18.8%). Apart from LX English, other common LXs were French, German, Italian, Portuguese, Japanese, Catalan, and Chinese. Most reported being dominant in L1 Spanish (*n* = 181, 75.7%), followed by 28 users (11.7%) dominant in both, 20 users (8.4%) dominant in LX English, and 10 users (4.2%) dominant in other regional languages of Spain.

Describing their L1 Spanish

They learned L1 Spanish mainly in mixed contexts (*n* = 166, 69.5%) and naturalistically (*n* = 70, 29.3%). The mean score of the 222 users who answered Lextale-Esp was 87.55% (*SD* = 16.04), ranging from -8.33 to a maximum of 100%. After creating language proficiency groups, the Spanish L1 level distribution was as follows: 185 users had a C1/C2 level (advanced user), 24 had a B2 level (upper intermediate), and 13 had a B1 level and lower (lower intermediate). They also reported extremely frequent use of L1 Spanish (*M* = 4.73, *SD* = .55, on a 5-point Likert scale).

Describing their LX English

Their mean AoA of LX English was 8.24 years (*SD* = 5.84), ranging from 3 to 45 years. Most had learned LX English through classroom instruction only (*n* = 135, 57.9%); others had learned it in mixed contexts (*n* = 91, 39.1%) or naturalistically (*n* = 7, 3%). The mean score of those who answered LexTALE (*n* = 217) was 77.27% (*SD* = 11.53, ranging from 52.5% to 100%). Then, most were upper-intermediate users, that is, at a B2 level (*n* = 124), followed by advanced users at a C1/C2 level (*n* = 83),

[6] These Spanish L1 users had always lived there, but they reported being "Hispanic". The four acquired L1 Spanish in a natural context and learned L2 English after age three.

[7] These participants had L1A Russian, LA Arabic, L1A Romanian, L1A French, and L1A French, respectively and all of them had L1B Spanish (acquired before age three).

and low-intermediate users at a B1 level or lower (n = 10). A Wilcoxon signed-rank test showed that their Spanish L1 proficiency obtained in Lextale-Esp (*Mdn* = 93.33%) was significantly higher than the English LX level in LexTALE (*Mdn* = 76.25%): T = 3476.0, p < .001, r = -.56. Despite their English proficiency being lower, it was still very high. They also reported frequent use of LX English (M = 3.69, SD = .96, on a 5-point Likert scale), which indeed was significantly lower than their use of L1 Spanish (T = 1056, p < .001, r = -.68).

Describing the monoculturals and the multiculturals

A total of 101 (42.3%) had never left their country of residence, implying that they were non-migrants and thus less multicultural. The remaining 138 (57.7%) were migrants, that is, they had lived in a different SSC (n = 13), ESCs (n = 91), western European countries (n = 28), eastern European countries (n = 3), Asian countries (n = 2), and African countries (n = 1). Within the 91 Spanish L1 migrants in ESCs, their average AoAr to these countries was 21.98 years (SD = 6.4) while the average LoR spent in these countries was 6.11 years (SD = 9.78). Following the VIA, these migrants reported a high maintenance of their L1 (Spanish) culture (M = 7.12, SD = 1.03, ranging from 5 to 9 on a 9-point Likert scale). The average acculturation level to their ESCs was 6.68 (SD = .96).

The 56 English L1 users with LX Spanish

They reported to be American citizens (n = 27, 48.2%), British (n = 15, 26.8%), Irish (n = 7, 12.5%), New Zealanders (n = 3, 5.4%), and lower numbers of other nationalities. Apart from LX Spanish, other common LXs were French, Italian, German, Catalan, and Portuguese. Almost all reported being dominant in L1 English (n = 53, 94.6%), with two people (3.6%) dominant in English and Spanish (TLs), and only one person dominant in LX Spanish (1.8%).

Describing their L1 English

They learned L1 English mainly in mixed contexts (n = 39, 69.6%) and naturalistically (n = 16, 28.6%). The mean score of the 50 who answered to LexTALE was 95.3% (SD = 6.14, ranging from 70 to 100%,

Mdn = 97.5%). They also reported extremely frequent use of L1 English (*M* = 4.7, *SD* = .46, on a 5-point Likert scale).

Describing their LX Spanish

The mean AoA of their LX Spanish was 18.18 (*SD* = 12.11), ranging from 4 to 64 years. They learned LX Spanish mainly in instructed contexts (*n* = 29, 51.8%), followed by 18 people (32.1%) who reported mixed learning, and eight people (14.3%) reporting natural learning. The score of the 53 users who answered Lextale-Esp was 43.58% (*SD* = 28.99, ranging from -6.67 to 96.7%, *Mdn* = 41.67%). They were much more proficient in their L1 English, as they scored significantly higher in LexTALE than in Lextale-Esp (Wilcoxon signed-rank test: $z = -5.97$, $p < .001$, $r = -.87$). They also reported frequent use of LX Spanish (*M* = 3.43, *SD* = 1.02, on a 5-point Likert scale).

Describing the monoculturals and the multiculturals

A total of 12 (out of 56) were non-migrants and had never left their origin ESC to live abroad. The remaining 44 were migrants, that is, they had lived in other countries: another ESC (*n* = 4), SSCs (*n* = 29), western European countries (*n* = 7), and Asian countries (*n* = 4). Within the 29 English L1 migrants with LX Spanish in SSCs, they reported an average AoAr of 26.52 years (*SD* = 12.89) while the average LoR spent there was 6.48 years (*SD* = 9.43). Following the VIA, these migrants reported high maintenance levels of the (English) L1 culture (*M* = 7.4, *SD* = 1.01, on a 9-point Likert scale). They reported a lower acculturation level to the Spanish LX culture (*M* = 6.8, *SD* = 1.07).

The 337 Spanish/English bi/multilinguals

A total of 165 participants did the task following instructions in English (English modality). Among them, there were 49 English L1 users and 116 English LX users. A Mann-Whitney test comparing their English proficiency in LexTALE, showed that English L1 users (*M* = 88.75%, *SD* = 11.5, ranging from 43.75 to 100%) scored significantly higher than English LX users (*M* = 77.54%, *SD* = 12.11, from 43.75 to 100%): $U = 1337.5$, $z = -5.37$, $p < .001$, $r = -.42$.

As to the Spanish modality (n = 172 bi/multilinguals), a total of 136 were Spanish L1 users and 36 Spanish LX users. In terms of Spanish proficiency, a Mann-Whitney test (U = 950.5, z = -5.65, p < .001, r = -.43) showed that the Spanish L1 users (M = 84.42%, SD = 19.29, Mdn = 90, out of a maximum of 100%) also scored significantly higher than the Spanish LX users (M = 56.06%, SD = 28.92, Mdn = 55.83) in the Lextale-Esp test.

Overall, participants were 259 females (77.5%) and 75 males (22.5%), with three people reporting to be of another gender. The average current age was 31.69 (SD = 12.88, from 18 to 79 years). No significant age differences were found across the two language groups (English users and Spanish users), Mann-Whitney test: U = 12913.0, z = -1.43, p = ns. In terms of the multilingualism level, most were trilinguals (n = 97, 28.8%), followed by quadrilinguals (n = 85, 25.2%), bilinguals (n = 79, 23.4%), pentalinguals (n = 64, 19%), and six people reported knowing six languages (3.6%).

4.4 DATA ANALYSIS

The data were statistically analysed using *Microsoft Excel* and the software package *IBM SPSS Statistics Version 21*.

4.4.1 Emotion words

The dependent variable was the valence and arousal ratings of emotion words in Spanish and English. As acknowledged previously, those emotion words marked as "unknown" by participants and not rated affectively were considered as "missing values" for data analysis purposes. For the language subgroup of Spanish L1 users with LX English (n = 239), one-sample Kolmogorov-Smirnov tests showed that the valence and arousal emotion word scores in their LX English and L1 Spanish (dependent variable) were not normally distributed (all p-values < .001). Consequently, non-parametric statistical techniques were used, namely, independent samples Mann-Whitney tests, Kruskal-Wallis tests, Wilcoxon signed-rank tests, and Spearman correlation analyses (Larson-Hall, 2010; Field, 2013). Similarly, non-parametric statistical

techniques were used for the language subgroup of English L1 users of LX Spanish ($n = 56$), as the normality tests showed that the valence and arousal scores for the emotion words in their L1 English and LX Spanish were not normally distributed (all p-values < .05). The independent variables examined were participants' language status (L1 vs. LX), AoA of the LX, CoA of the LX, language dominance, number of languages known (multilingualism level), language proficiency measured by the respective Lextale test, frequency of language use, L1 variety (Spanish from Spain vs. Latino varieties and American vs. British English), being a migrant, acculturation level to the LX culture, LoR in the LX country, and maintenance of the L1 culture.

4.4.2 Emotional video clips

The dependent variable consisted of the valence and arousal scores of the four video clips. A series of one-sample Kolmogorov-Smirnov tests demonstrated that the scores of the dependent variable were not normally distributed (all p-values < .001) for either the Spanish modality or the English. Non-parametric statistical techniques were used. The independent variables tested were the nominal variables: language modality (English vs. Spanish), language status (English L1 vs. English LX and Spanish L1 vs. Spanish LX users), gender (males vs. females), kinesics level of the clips, and the continuous variables: language proficiency, number of languages known, frequency of language use, AoA, and current age.

The four valence scores and the four arousal scores (based on the original 9-point Likert scale, see above) were turned into a smaller 5-point Likert scale. Then, a *total valence emotionality score* and a *total arousal emotionality score* per participant was computed. This more-condensed measure lacking the semantic extremes of the two dimensions was useful to clarify and highlight some results.

4.4.3 Personal stories

From the total sample ($N = 384$), 45 bi/multilingual participants, with diverse cultural and linguistic profiles, wrote about their experiences in English or Spanish. The 45 quotes yielded a total corpus of 1,661 word

types and 5,659 word tokens. Through a thematic analysis "to identify the broad themes and subthemes" (Dewaele, 2018b: 39), the most representative quotes from participants were selected. Although their words are reported in section 5.3 as found in the original answer, that is, in the language (English or Spanish) used by each individual, without any change by the researcher so as to ensure the veracity of their speech, an English translation of the Spanish quotes is provided for the reader. Within some quotes, information on language status is provided in square brackets and some phrases are underlined for clarification purposes. It is important to note that many participants' stories were written by teaching- or knowledge-related professionals, female mainly, that seem to have full metalinguistic awareness of their linguistic and cultural identities and behaviours (Pavlenko, 2008b; Wilson & Dewaele, 2010; Resnik, 2018).

CHAPTER 5. RESULTS

This chapter reports the findings obtained in the research, providing the basis for the conclusions that will be presented in the next and final chapter. Organised in two different sections, it describes the results of the statistical and quantitative analyses through statistics, tables and graphs. The first section answers the first research question of the study and thus describes the results from the affective perception of emotion words by sequential bi/multilinguals and the factors involved in this process. The next section addresses the affective perception of visual stimuli and the determining factors, thereby answering the second research question of the study. The results in both sections are arranged by type of independent variable (factor) under study. The third and final section of the chapter integrates qualitative information, presenting the participants' stories to complement the quantitative data and give a more complete picture of the study.

5.1 EMOTION WORDS PERCEPTION

First, as a prerequisite for valid data analysis, it was established whether there was a relationship between the valence and arousal values for emotion words provided by English L1 users and Spanish L1 users in this database and the ratings by L1 participants on the original affective norms in English (Warriner et al., 2013) and Spanish (Stadthagen-González et al., 2017).

According to Pearson correlations (see Tables 3 and 4), the valence and arousal means for the English emotion words provided by the English L1 users ($n = 56$) were highly correlated to the valence and arousal means by the English L1 users in Warriner et al. (2013): $r = .94$, $p < .001$ for valence and $r = .79$, $p < .001$ for arousal (large correlation coefficients[1], Plonsky

[1] They wrote: "For correlation coefficients, we suggest that *r*s close to .25 be considered small, .40 medium, and .60 large. These values correspond roughly to the 25th, 50th, and 75th percentiles in our primary and meta-analytic samples. As with mean difference effect sizes, these results show very clearly that Cohen's benchmarks for small, medium,

& Oswald, 2014). The same was true for the valence and arousal means for the Spanish emotion words rated by the Spanish L1 users ($n = 239$), which were highly correlated to the means provided by the Spanish L1 participants in Stadthagen-González et al. (2017): $r = .98$, $p < .001$ and $r = .65$, $p = .002$, for valence and arousal, respectively (large correlation coefficients, Plonsky & Oswald, 2014). This highlights the validity of the valence and arousal ratings provided by L1 users participating in this work. The feasibility of L1 users' ratings is indeed important as these are later treated as a benchmark, that is, a desirable pattern for LX users.

There was a similar strong correlation between the L1 users of both languages for both emotional dimensions (see Tables 3 and 4). Stadthagen-González et al. (2017: 116) had already shown a strong general correlation between their Spanish norms and Warriner et al.'s English norms, as they reported: "$r = .79$, $p < .001$, and $r = .54$, $p < .001$, respectively, for valence and arousal". This high-correlation pattern between English and Spanish languages is confirmed in the present research too, where English L1 users' valence and arousal ratings of English emotion words were highly related to the means provided by Spanish L1 users for the Spanish word equivalents: $r = .91$, $p < .001$ and $r = .67$, $p = .001$, respectively, for valence and arousal. This high relationship in valence and arousal perception across the Spanish and English languages also indicates, to some extent, the universality of the perception of emotion, and more broadly speaking, of core affect (Russell, 2003; Barrett, 2017). That emotion word equivalents in English and Spanish share valence and arousal features suggests that these two linguistic communities are not so distant in terms of emotionality (Redondo et al., 2007). Nevertheless, this does not mean that all LX users of the two languages, many of whom are still developing their new emotional map in the LX, are able to understand and perceive the subtle and emotional nuances of all emotion words.

The higher correlation in valence is due to the simplicity, universality and consistency in how individuals evaluate positive and negative emotions. In contrast, arousal, being a measure of emotional intensity, is subject to greater variability and subjectivity, leading to lower correlations across individuals (Osgood et al., 1957; Bradley & Lang, 1999;

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and large correlations (.1, .3, .5) underestimate and are not appropriate for interpreting those found in L2 research" (Plonsky & Oswald, 2014: 890).

Table 3. Valence (Pearson) correlations for the emotion word means between the English and Spanish original norms and the English L1 users and Spanish L1 users in this database

	Warriner et al. (2013)	*English L1 users here (n = 56)*	*Stadthagen-González et al. (2017)*
Warriner et al. (2013)			
English L1 users here (*n* = 56)	.94***		
Stadthagen-González et al. (2017)	.89***	.86***	
Spanish L1 users here (*n* = 239)	.90***	.91***	.98***

Note: ***$p < .001$.

Table 4. Arousal (Pearson) correlations for the emotion word means between the English and Spanish original norms and the English L1 users and Spanish L1 users in this database

	Warriner et al. (2013)	*English L1 users here (n = 56)*	*Stadthagen-González et al. (2017)*
Warriner et al. (2013)			
English L1 users here (*n* = 56)	.79***		
Stadthagen-González et al. (2017)	.76***	.76***	
Spanish L1 users here (*n* = 239)	.72***	.67**	.65**

Note: **$p < .01$; ***$p < .001$.

Stevenson et al., 2007; Warriner et al., 2013; Citron et al., 2014). Emotional valence refers to the positivity or negativity of a stimulus, which is easier to assess quickly and consistently (Osgood et al., 1957; Bradley & Lang, 1999). Thus, valence tends to be a more direct and automatic emotional evaluation, whereas arousal requires more complex and detailed processing. Studies such as Stevenson et al. (2007) have shown that valence scales usually produce more consistent and replicable results compared to arousal scales. In their research, Warriner et al. (2013) also

found that valence ratings are more uniform and exhibit less variability than arousal ratings, which may be more dependent on context and individual subjectivity. This variability of arousal is also reflected by Citron et al. (2014), who showed that arousal ratings have larger dispersion compared to valence appraisals.

5.1.1 Effect of language status

The 239 Spanish L1 users with LX English

A series of Wilcoxon signed-rank tests showed that the Spanish L1 participants with LX English did not score all Spanish and English emotion word equivalents similarly in their L1 and LX in the valence and arousal dimensions (see Table 5 and Figure 3 for valence and Table 6 and Figure 4 for arousal).

In valence, out of 20 emotion word pairs, only five did not significantly differ: *pride/orgullo* and *pleased/contento* were perceived as positive; and *sorrow/pena*, *melancholy/melancolía* and *sadness/tristeza* were rated as negative words in L1 and LX. The remaining 15 words were rated differently in L1 and LX. From these 15 words, a total of ten terms were perceived as significantly more emotional (unpleasant or pleasant) in L1 Spanish than LX English. Four negative-valence emotion word pairs: *angustiado* (*distressed*), *agobiado* (*overwhelmed*), *disgusto* (*upset*), and *dolor* (*pain*) elicited a higher (more extreme) unpleasantness in L1. Similarly, six positive-valence emotion word pairs: *ilusión* (*anticipation*), *satisfacción* (*contentment*), *alegre* (*glad*), *entusiasmado* (*thrilled*), *eufórico* (*ecstatic*), and *encantado* (*delighted*) were perceived as significantly more pleasant in L1 Spanish than LX English. Surprisingly, three negative-valence words were rated as significantly more unpleasant in their LX English: *anxious* (*nervioso*), *shocked* (*impactado*), *devastated* (*desolado*) (means = 2.74 vs. 3.42; 3.88 vs. 4.46; and 1.59 vs. 1.84, respectively in LX English vs. L1 Spanish). This result may be due to the proximity of the English terms *anxious* and *devastated* to the Spanish terms *ansioso* and *devastado*. The emotion word pair[2] *eagerness/impaciencia* was rated as unpleasant (M = 3.35) in L1

[2] See limitations of the study in the final chapter.

Spanish and as pleasant ($M = 6.08$) in LX English, following the pattern of English L1 users in the same database ($n = 56$), who rated *eagerness* as pleasant ($M = 6.89$) and the Spanish LX equivalent *impaciencia* as unpleasant too ($M = 3.13$). Also, *stunned/estupefacto* was perceived as rather unpleasant ($M = 4.63$) in L1 Spanish and as pleasant ($M = 5.22$) in LX English.

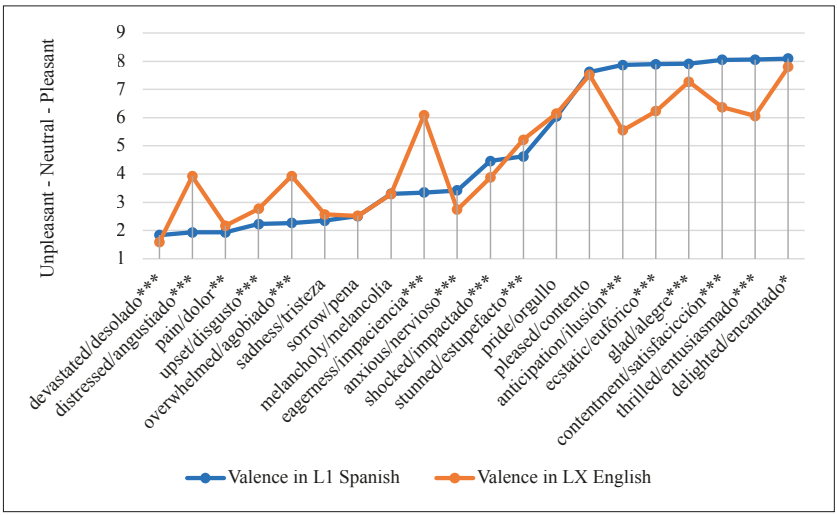
Table 5. The effect of language status (L1 Spanish vs. LX English) on emotion word valence (Wilcoxon signed-rank tests)

	Valence								
	L1 Spanish			*LX English*			*Z*	*p-value*	*r effect size*
	N	*M*	*Mdn*	*n*	*M*	*Mdn*			
01_eagerness/ impaciencia	239	3.35	3	190	6.08	6	-9.89	.000	-.72
02_anticipation/ilusión	238	7.86	8	233	5.55	5	-11.40	.000	-.75
03_contentment/ satisfacción	236	8.05	9	216	6.37	6	-9.73	.000	-.66
04_pride/orgullo	237	6.04	6	229	6.15	6	-1.03	.303	-.07
05_sorrow/pena	238	2.51	2	210	2.52	2	-0.62	.538	-.04
06_distressed/ angustiado	239	1.93	2	229	3.92	3	-9.41	.000	-.62
07_glad/alegre	237	7.91	8	230	7.27	7	-5.73	.000	-.38
08_overwhelmed/ agobiado	235	2.26	2	219	3.93	4	-8.22	.000	-.56
09_shocked/impactado	239	4.46	5	238	3.88	4	-4.61	.000	-.30
10_melancholy/ melancolía	239	3.30	3	239	3.29	3	-0.36	.719	-.02
11_pleased/contento	236	7.62	8	237	7.52	8	-0.83	.408	-.05
12_sadness/tristeza	239	2.35	2	238	2.57	2	-1.65	.098	-.11
13_stunned/estupefacto	236	4.63	5	213	5.22	5	-3.57	.000	-.24
14_thrilled/ entusiasmado	236	8.06	8	232	6.06	6	-9.16	.000	-.60
15_upset/disgusto	239	2.23	2	233	2.77	3	-5.12	.000	-.34

	Valence								
	L1 Spanish			*LX English*			*Z*	*p-value*	*r effect size*
	N	*M*	*Mdn*	*n*	*M*	*Mdn*			
16_ecstatic/eufórico	237	7.89	9	193	6.23	5	-7.64	.000	-.55
17_anxious/nervioso	239	3.42	3	239	2.74	2	-5.58	.000	-.36
18_delighted/encantado	236	8.09	9	224	7.80	8.5	-2.40	.017	-.16
19_devastated/desolado	236	1.84	1	238	1.59	1	-3.92	.000	-.25
20_pain/dolor	239	1.93	1	236	2.17	2	-2.77	.006	-.18

Note: Significant differences highlighted in orange.

Figure 3. Line graph showing valence (means) in L1 Spanish and LX English for the 20 emotion word pairs



Note: *p < .05; **p < .01; ***p < .001 (Wilcoxon signed-rank tests).

In arousal, six emotion word pairs did not significantly differ between their L1 Spanish and LX English: *pride/orgullo*, *overwhelmed/agobiado*, *stunned/estupefacto*, *upset/disgusto*, *pain/dolor*, and *sadness/tristeza*. The remaining 14 word pairs were rated differently in both languages. From

these, ten elicited a significantly more extreme arousal in L1 Spanish. Specifically, the Spanish L1 equivalents *impaciencia*, *ilusión*, *satisfacción*, *angustiado*, *alegre*, *contento*, *entusiasmado*, *eufórico*, and *encantado* were perceived and scored as more arousing than the English LX counterparts. The Spanish L1 word *pena* also obtained a lower arousal than the English LX equivalent *sorrow*, which was rather neutral in arousal (*Mdn* = 5). Again, the three negative-valence English words: *anxious*, *shocked*, and *devastated*, rated as significantly more unpleasant on valence in LX English (see above) also achieved extremely high arousal in LX in this emotional dimension. *Melancholy* was rated as a low-arousal (calm) word in both languages, but its score was significantly lower in LX English (*Mdn* = 3) than L1 Spanish (*Mdn* = 4).

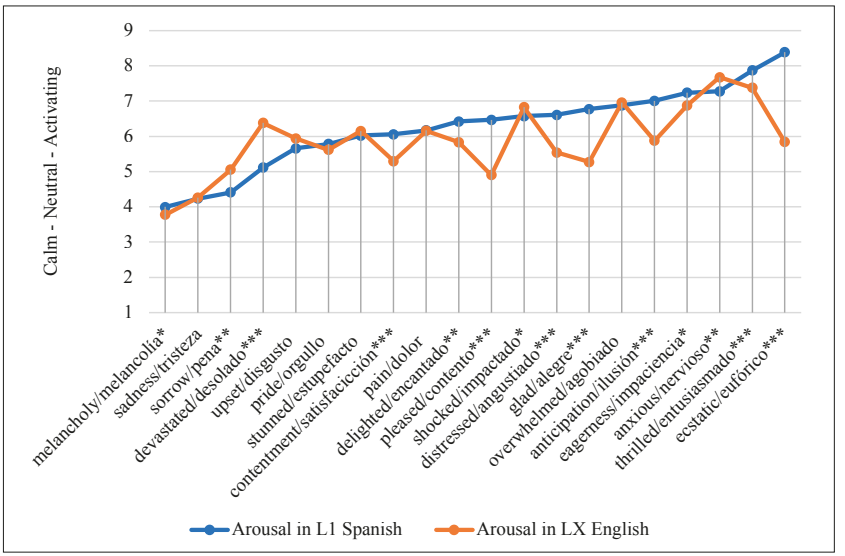
Table 6. The effect of language status (L1 Spanish vs. LX English) on emotion word arousal (Wilcoxon signed-rank tests)

	Arousal								
	L1 Spanish			*LX English*			*Z*	*p-value*	*r effect size*
	n	*M*	*Mdn*	*n*	*M*	*Mdn*			
01_eagerness/ impaciencia	239	7.24	8	190	6.87	7	-2.29	.022	-.17
02_anticipation/ilusión	238	7.01	7	234	5.88	6	-6.09	.000	-.40
03_contentment/ satisfacción	239	6.06	6	215	5.30	5	-3.65	.000	-.25
04_pride/orgullo	238	5.78	5.5	229	5.62	5	-0.90	.369	-.06
05_sorrow/pena	238	4.41	4	208	5.05	5	-2.89	.004	-.20
06_distressed/ angustiado	239	6.61	7	231	5.54	6	-4.75	.000	-.31
07_glad/alegre	239	6.77	7	230	5.27	5	-8.29	.000	-.55
08_overwhelmed/ agobiado	235	6.88	8	217	6.96	7	-0.60	.546	-.04
09_shocked/impactado	239	6.57	7	238	6.83	7	-2.13	.034	-.14
10_melancholy/ melancolía	239	4.00	4	239	3.78	3	-1.99	.046	-.13
11_pleased/contento	239	6.47	7	239	4.90	5	-7.69	.000	-.50
12_sadness/tristeza	239	4.23	4	238	4.26	4	-0.17	.862	-.01

	Arousal								
	L1 Spanish			*LX English*			*Z*	*p-value*	*r effect size*
	n	*M*	*Mdn*	*n*	*M*	*Mdn*			
13_stunned/estupefacto	236	6.02	6	217	6.15	6	-0.54	.592	-.04
14_thrilled/ entusiasmado	238	7.87	8	231	7.38	8	-3.53	.000	-.23
15_upset/disgust	239	5.66	6	232	5.94	6	-1.10	.271	-.07
16_ecstatic/eufórico	238	8.39	9	206	5.84	6	-9.69	.000	-.67
17_anxious/nervioso	239	7.28	8	239	7.67	8	-2.93	.003	-.19
18_delighted/encantado	239	6.42	7	229	5.83	6	-3.13	.002	-.21
19_devastated/desolado	237	5.11	5	237	6.38	7	-6.43	.000	-.42
20_pain/dolor	239	6.17	7	235	6.16	6	-0.45	.650	-.03

Note: Significant differences highlighted in orange.

Figure 4. Line graph showing arousal (means) in L1 Spanish and LX English for the 20 emotion word pairs



Note: *$p < .05$; **$p < .01$; ***$p < .001$ (Wilcoxon signed-rank tests).

The 56 English L1 users with LX Spanish

These participants did not perceive and rate the 20 emotion word equivalents similarly in their L1 English and LX Spanish, as revealed by several Wilcoxon signed-rank tests. In the valence dimension, 12 emotion word pairs did not significantly differ between the two languages and eight pairs were rated differently in L1 and LX (see Table 7 and Figure 5). A total of five words were perceived as significantly more emotional (more extreme valence) in L1. Specifically, *devastated* (*desolado*), *sorrow* (*pena*), *anxious* (*nervioso*), and *shocked* (*impactado*) were significantly more unpleasant (higher negative valence), and *thrilled* (*entusiasmado*) was significantly more pleasant (higher positive valence) in L1 English. On the contrary, the valence of two words was perceived as significantly more emotional in their LX Spanish: *disgusto* (*upset*) was rated as much more unpleasant and *alegre* (*glad*) as much more pleasant. As happened in the group of Spanish L1 users of LX English, the emotion word pair *eagerness/impaciencia*[3] was rated as unpleasant ($M = 3.13$) in their (LX) Spanish and as pleasant ($M = 6.89$) in their (L1) English.

Table 7. The effect of language status (L1 English vs. LX Spanish) on emotion word valence (Wilcoxon signed-rank tests)

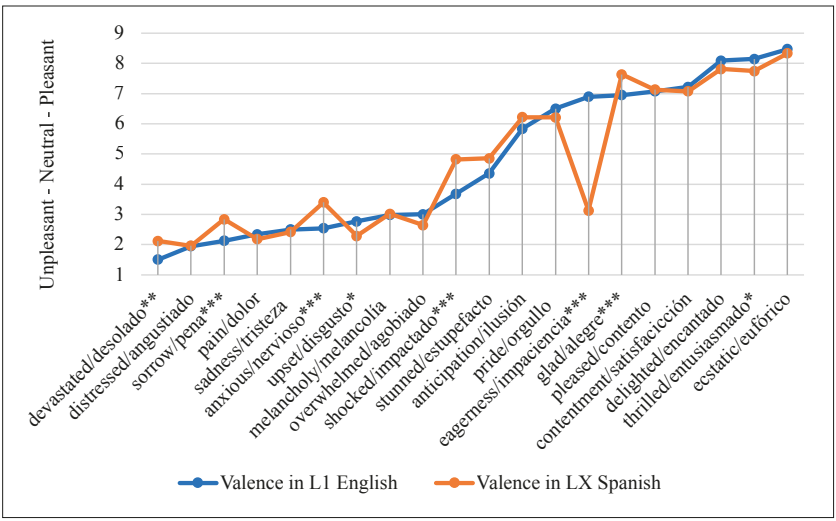
	Valence								
	L1 English			*LX Spanish*			*Z*	*p-value*	*r effect size*
	n	*M*	*Mdn*	*n*	*M*	*Mdn*			
01_eagerness/ impaciencia	56	6.89	7	55	3.13	3	-6.44	.000	-.87
02_anticipation/ilusión	56	5.84	6	55	6.22	6	-1.34	.179	-.18
03_contentment/ satisfacción	55	7.22	7	56	7.07	7	-0.55	.586	-.7
04_pride/orgullo	56	6.50	7	53	6.21	6	-1.30	.194	-.18
05_sorrow/pena	56	2.13	2	55	2.84	3	-3.73	.000	-.50
06_distressed/ angustiado	56	1.95	2	45	1.96	2	-0.12	.902	-.2

[3] See limitations of the study in the final chapter.

	Valence								
	L1 English			*LX Spanish*			*Z*	*p-value*	*r effect size*
	n	*M*	*Mdn*	*n*	*M*	*Mdn*			
07_glad/alegre	56	6.95	7	55	7.64	8	-3.86	.000	-.52
08_overwhelmed/ agobiado	56	3.00	3	36	2.64	2.5	-1.03	.304	-.17
09_shocked/impactado	56	3.68	4	55	4.82	5	-4.35	.000	-.59
10_melancholy/ melancolía	56	2.98	3	56	3.02	3	-0.77	.443	-.10
11_pleased/contento	56	7.07	7	55	7.13	7	-0.40	.689	-.5
12_sadness/tristeza	56	2.50	2	56	2.41	2	-0.68	.496	-.9
13_stunned/estupefacto	56	4.36	4.5	48	4.85	5	-1.47	.141	-.21
14_thrilled/ entusiasmado	55	8.15	9	54	7.74	8	-2.17	.030	-.29
15_upset/disgusto	56	2.77	3	56	2.29	2	-2.75	.006	-.37
16_ecstatic/eufórico	55	8.47	9	51	8.33	9	-0.97	.332	-.14
17_anxious/nervioso	56	2.54	2	56	3.39	3	-4.28	.000	-.57
18_delighted/encantado	56	8.09	8	54	7.81	8	-1.56	.118	-.21
19_devastated/desolado	56	1.50	1	52	2.12	2	-3.10	.002	-.43
20_pain/dolor	56	2.34	2	56	2.18	2	-0.90	.367	-.12

Note: Significant differences highlighted in orange.

Figure 5. Line graph showing valence (means) in L1 English and LX Spanish for the 20 emotion word pairs



Note: *$p < .05$; **$p < .01$; ***$p < .001$ (Wilcoxon signed-rank tests).

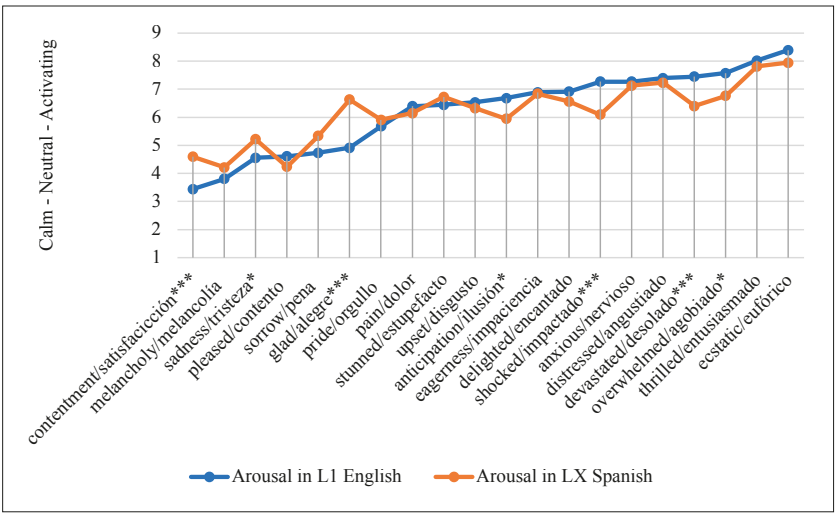
In the arousal dimension, the scores of 13 word pairs did not differ between their L1 English and LX Spanish, while seven words were rated significantly differently in both languages (see Table 8 and Figure 6). Specifically, for six emotion words, the English L1 equivalent was significantly more emotional (extreme) in arousal, that is, much more activating (*anticipation*, *overwhelmed*, *shocked*, and *devastated*) and calmer (*contentment* and *sadness*) than the corresponding Spanish LX equivalent. *Alegre* (the Spanish equivalent for *glad*) was the only word perceived as much more arousing in LX Spanish (*Mdn* = 7 vs. *Mdn* = 5 for L1 English), thus adjusting to the Spanish L1 users whose arousal mean score for *alegre* was 6.77 (*Mdn* = 7).

Table 8. The effect of language status (L1 English vs. LX Spanish) on emotion word arousal (Wilcoxon signed-rank tests)

	Arousal								
	L1 English			*LX Spanish*			*Z*	*p-value*	*r effect size*
	n	*M*	*Mdn*	*n*	*M*	*Mdn*			
01_eagerness/ impaciencia	56	6.89	7	55	6.84	7	-0.02	.988	.00
02_anticipation/ilusión	56	6.68	7	55	5.95	6	-2.36	.018	-.32
03_contentment/ satisfacción	55	3.44	3	56	4.59	5	-3.95	.000	-.53
04_pride/orgullo	56	5.68	6	54	5.91	6	-0.70	.486	-.09
05_sorrow/pena	56	4.73	5	54	5.33	6	-1.81	.071	-.25
06_distressed/ angustiado	56	7.39	8	47	7.23	7	-0.38	.701	-.06
07_glad/alegre	56	4.91	5	54	6.63	7	-5.30	.000	-.72
08_overwhelmed/ agobiado	56	7.57	8	34	6.76	7	-2.21	.027	-.38
09_shocked/impactado	56	7.27	7	51	6.10	6	-4.47	.000	-.63
10_melancholy/ melancolía	56	3.80	3	56	4.21	4	-1.41	.159	-.19
11_pleased/contento	56	4.61	5	56	4.23	4	-1.55	.120	-.21
12_sadness/tristeza	56	4.55	4	56	5.21	5	-2.58	.010	-.34
13_stunned/estupefacto	56	6.45	7	48	6.73	7	-0.77	.442	-.11
14_thrilled/ entusiasmado	56	8.02	8	54	7.81	8	-1.30	.194	-.18
15_upset/disgusto	56	6.54	7	56	6.32	6.5	-0.76	.447	-.10
16_ecstatic/eufórico	56	8.39	9	54	7.94	9	-1.54	.123	-.21
17_anxious/nervioso	56	7.27	7	56	7.13	7	-0.94	.346	-.13
18_delighted/encantado	56	6.91	7	55	6.56	7	-1.50	.135	-.20
19_devastated/desolado	56	7.45	8	53	6.40	7	-3.71	.000	-.51
20_pain/dolor	56	6.39	6	56	6.14	6.5	-0.71	.476	-.10

Note: Significant differences highlighted in orange.

Figure 6. Line graph showing arousal (means) in L1 English and LX Spanish for the 20 emotion word pairs



Note: *$p < .05$; **$p < .01$; ***$p < .001$ (Wilcoxon signed-rank tests).

Language status, that is, perceiving and rating the emotionality of emotion words in the corresponding L1 or LX, was found to have an effect on the valence and arousal of some words in both language groups. Despite the a priori partial translation equivalence of the 20 emotion word pairs, not all pairs were rated and, thus, indirectly represented similarly and with equal valence and arousal levels in L1 and LX.

The first group showed mainly an L1 advantage in valence (10 words out of 20 were more highly pleasant or unpleasant in L1 Spanish) and arousal (nine words with a more extreme high arousal and one word with a more extreme low arousal in L1 Spanish). The second most predominant pattern within this group was no language status effect, with five emotion word pairs in valence and six in arousal not differing in emotionality levels. Finally, an LX advantage was also found for three English emotion words (*shocked*, *anxious*, *devastated*) in valence and for these same three and the word *melancholy* in arousal. For instance and as explained before, this LX advantage in emotionality for *shocked*, *anxious* and *devastated*—perceived as more unpleasant and more activating than the corresponding Spanish L1 equivalents—may be due to the fact that

the noun *shock* is a very widespread anglicism in the Spanish language and that there are other and very similar Spanish translations for the other two terms: *ansioso/a* and *devastado/a*. Therefore, these Spanish L1 users may have mentally activated the translation in Spanish, thus scoring the English word as more emotional in valence and arousal (Pavlenko, 2009, 2012, 2013, 2014).

For the other group, the most predominant pattern showed no language status effect (12 words in valence and 13 in arousal without statistically significant differences between their L1 and LX). This was followed by an L1 advantage for five words in valence (*devastated*, *sorrow*, *anxious*, *shocked* obtained a higher unpleasantness and *thrilled* a higher positive valence in L1 English) and for six words in arousal (the English L1 equivalents *anticipation*, *overwhelmed*, *shocked*, *devastated* were more arousing and *contentment* and *sadness* were perceived as calmer or less activating than the corresponding Spanish LX terms). The less frequent pattern within this group was again an LX advantage. Specifically, the Spanish LX term *disgusto* was found to be significantly more unpleasant (in valence) than the English L1 noun *upset*; and *alegre* was more pleasant (in valence) and more exciting (in arousal) than the corresponding English L1 word *glad*.

All in all, different patterns of language status effect emerged along the two language groups: no effect at all, L1 advantage for some emotion word pairs, and LX advantage for others. However, the most frequent tendency was found to be an L1 advantage for perceiving the emotion word equivalent in L1 as more emotionally-charged in valence and arousal (evidenced by participants' higher scores towards the extremes in both dimensions).

5.1.2 Effect of AoA of the LX

The 239 Spanish L1 users with LX English

Spearman rank correlation analyses with a Bonferroni correction (see Table 10 later on) showed that no significant relationships existed between AoA of LX English and most valence and arousal values of English LX emotion words. In valence, a significant positive correlation was found for two English LX words: *anticipation* and *contentment*, with later

learners of LX English perceiving and scoring these two words as more positively-charged ($r_s = .23$, $p < .001$ and $r_s = .22$, $p < .012$, respectively; small correlation coefficient, Plonsky & Oswald, 2014). In arousal, the only significant negative correlation was for the emotion adjective *overwhelmed*, rated as more arousing by the earlier learners of LX English ($r_s = -.18$, $p < .012$; small correlation coefficient, Plonsky & Oswald, 2014).

The 56 English L1 users with LX Spanish

Spearman rank correlation analyses with a Bonferroni correction (see Table 13 later on) showed no significant relationships between AoA of LX Spanish and the arousal values of Spanish LX emotion words. In valence, one significant positive correlation was found for the Spanish LX word *desolado*, with later learners of LX Spanish perceiving and rating this word as significantly more pleasant ($r_s = .39$, $p < .012$; medium correlation coefficient, Plonsky & Oswald, 2014), and thus diverging from the Spanish L1 pattern. In other words, the emotion adjective *desolado*, being a negative-valence Spanish word (valence mean in L1 Spanish by the 239 Spanish L1 users in this database = 1.84 on the 9-point valence scale), was rated as more unpleasant by earlier learners of Spanish LX.

In terms of AoA of the LX (Spanish or English depending on the language group), few significant correlation patterns emerged and, in those significant cases, the resulting correlation coefficients were rather small (Plonsky & Oswald, 2014). In valence, and for the first group, only two English LX nouns (*anticipation* and *contentment*) were rated as more pleasant by later learners of LX English. In arousal, the reverse pattern was found in that the English LX emotion adjective *overwhelmed* was rated as more arousing by earlier learners of LX English. The English word *overwhelmed* is indeed a high-arousal emotion term for English L1 users ($M = 7.57$), something highlighting the idea that those Spanish learners/users who start to learn LX English earlier are able to adjust to the English L1 arousal pattern more precisely. For the second group, no correlations were found in the arousal dimension. In valence, the Spanish LX adjective *desolado* was positively correlated with AoA of LX Spanish. Later learners of LX Spanish scored it as more pleasant**,** thus diverging from the Spanish L1 pattern which indicates that *desolado* is indeed a very unpleasant word ($M = 1.84$ in L1 Spanish).

5.1.3 Effect of CoA of the LX

The 239 Spanish L1 users with LX English

Several Mann-Whitney analyses demonstrated no CoA effect of LX English (instructed n = 135 vs. mixed[4] n = 91) on the arousal values of English LX emotion words. However, there was a significant effect of CoA of LX English (instructed vs. mixed) on the valence of three English LX emotion words: *overwhelmed*, *eagerness* and *ecstatic*. Specifically, the participants with mixed learning (formal instruction at school plus a natural context of acquisition) rated these three English words (see Table 9) as significantly more emotional (more extremely pleasant or unpleasant) than those learning LX English through formal instruction only, whose scores were indeed less emotionally-charged in the valence dimension. In addition, as visualised in Figure 7, the mixed-learning English LX users were closer to the valence mean ratings by the English L1 users (n = 56) from the same database.

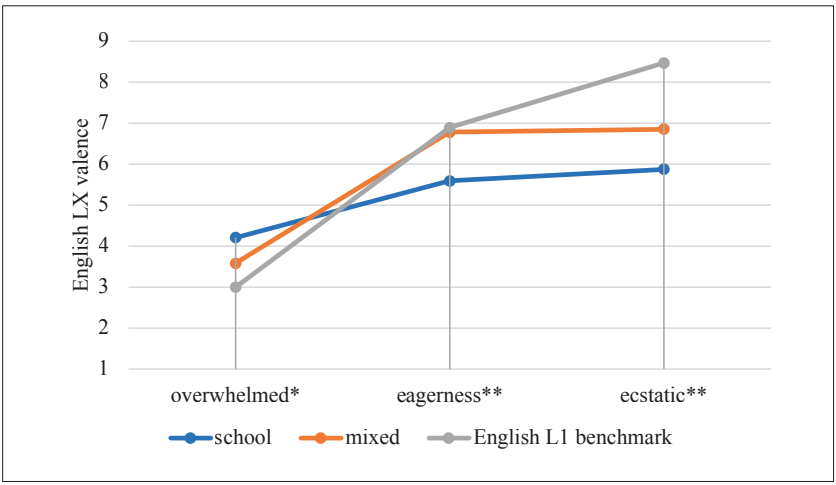
Table 9. The significant effect of CoA of LX English on the valence of three English emotion words (Mann-Whitney tests), plus English L1 benchmark (valence means)

	English LX valence									*Valence by English L1 users (n = 56)*
	school			*both*			*M-W Z*	*p-value*	*r effect size*	
	n	*M*	*Mdn*	*n*	*M*	*Mdn*				
01_eagerness	105	5.59	5	78	6.78	7	-3.18	.001	-.24	6.89
08_overwhelmed	119	4.21	4	88	3.58	3	-2.01	.044	-.14	3.00
16_ecstatic	110	5.87	5	74	6.85	7	-2.84	.005	-.21	8.47

Note: Significant tests are included only.

[4] Only seven participants reported a natural CoA. They were not included in these analyses due to the small number.

Figure 7. Line graph showing English LX valence (means) for the three emotion words with significant valence differences between CoA groups (Mann-Whitney tests), plus English L1 benchmark (valence means)



Note: *$p < .05$; **$p < .01$.

The 56 English L1 users with LX Spanish

Several Kruskal Wallis analyses did not show any significant effect of CoA of LX Spanish (instructed vs. mixed vs. natural) on the valence and arousal ratings of Spanish LX emotion words (all tests for the 20 words in both dimensions, *p*-values > .05).

All in all, an effect of CoA of the LX on the emotion word ratings appeared only in the valence dimension and for the first group. The CoA of their LX English (mixed vs. formal instruction) had a small but significant effect on the valence values of three English emotion words: *overwhelmed*, *eagerness* and *ecstatic*. Those English LX users with mixed learning rated these three English words as significantly more emotional (more extreme pleasantness for *ecstatic* and *eagerness* and unpleasantness for *overwhelmed*) than their peers who had received formal instruction at school only.

5.1.4 Effect of language dominance

For the group of Spanish L1 users with LX English, Kruskal Wallis analyses did not show a significant effect of dominance on the valence and arousal ratings in their L1 Spanish and LX English (Spanish-dominant $n = 181$, English-dominant $n = 20$, dominant in both languages $n = 28$, dominant in other languages $n = 10$; all tests in both languages and dimensions, p-values > .05). That is, they perceived and scored word emotionality in L1 Spanish and LX English similarly, regardless of feeling dominant in one or the other. The effect of language dominance was examined in this group only, as the other group felt mainly dominant in L1 English and the effect of variable effect could not be investigated.

5.1.5 Effect of number of languages known

The 239 Spanish L1 users with LX English

Spearman rank correlation analyses (see Table 10 for the correlation set with a Bonferroni correction) showed no significant relationships overall between this variable and the valence and arousal values for emotion words in LX English. A significant positive correlation was found only for the English word *thrilled* in the valence dimension, with the more multilingual English LX users who had a larger linguistic repertoire scoring it as more pleasant ($r_s = .18$, $p < .012$; small correlation coefficient, Plonsky & Oswald, 2014). As to the relationship between valence and arousal ratings in participants' L1 Spanish and level of multilingualism (see Table 11), only one significant positive correlation was found for the Spanish word *eufórico* in the arousal dimension, with the more multilingual Spanish L1 participants scoring this word as more exciting ($r_s = .20$, $p < .017$; small correlation coefficient, Plonsky & Oswald, 2014).

The 56 English L1 users with LX Spanish

As shown by Spearman rank correlation analyses with a Bonferroni correction (see Table 13), no significant relationships were found between these participants' multilingualism level and their valence and arousal values for emotion word in LX Spanish. No statistically significant cor-

relations emerged between this variable and their valence and arousal ratings in L1 English.

No overall relationship pattern existed between the multilingualism level and the valence and arousal word ratings in participants' L1 or LX in the two language groups analysed. However, it is worth mentioning that two weak (but statistically significant) positive correlations were found within the first and more varied group, with a higher number of languages in the mind increasing the perceived pleasantness of the English LX word *thrilled* and the excitement of the Spanish L1 word *eufórico*. This seems to suggest that those Spanish participants with a larger linguistic stock and degree of multilingualism may perceive higher levels of positive valence in LX and high arousal in L1 for some emotion concepts.

5.1.6 Effect of language proficiency

The 239 Spanish L1 users with LX English

Spearman rank correlation analyses with a Bonferroni correction (see Table 10) demonstrated that English LX proficiency—based on the scores from the English Lextale test (Lemhöfer & Broersma, 2012)—was significantly related to the valence of four and the arousal of seven English LX emotion terms. In valence, the more proficient participants were in LX English, the more emotionally they perceived the word valence (higher pleasantness or unpleasantness) of *eagerness* ($r_s = .23$, $p < .012$), *thrilled* ($r_s = .42$, $p < .001$), *ecstatic* ($r_s = .55$, $p < .001$), and *distressed* ($r_s = -.25$, $p < .001$). In arousal, a higher level of English LX proficiency was linked to a higher activation rating in all significant cases. In other words, the English emotion words *eagerness*, *thrilled*, *ecstatic*, *distressed*, *overwhelmed*, *stunned*, and *devastated* elicited a higher level of excitement and were perceived as much more arousing by the more proficient English LX users closer to the advanced level (see Table 10 for exact correlation coefficients).

Furthermore, another set of Spearman rank correlations with a Bonferroni correction (see Table 11) showed that participants' Spanish L1 proficiency—based on their scores in the Spanish Lextale test (Izura et al., 2014)—was significantly related to the valence of two Spanish words: *ilusión* and *desolado*. The more proficient and literary Spanish users were

in their L1 Spanish, the more emotionally they rated these two words; specifically, *ilusión* as more pleasant ($r_s = .19$, $p < .017$) and *desolado* as more unpleasant and negatively-charged ($r_s = -.24$, $p < .001$). Nevertheless, it must be stressed that the correlations are considered rather small coefficients (Plonsky & Oswald, 2014).

Table 10. The relationship between English LX valence and arousal of emotion words and AoA, proficiency, frequency of use of LX English, and number of languages known (Spearman rank correlations with Bonferroni correction)

	English LX valence				*English LX arousal*			
	Eng. AoA	*prof.*	*freq. use*	*nº Ls*	*Eng. AoA*	*prof.*	*freq. use*	*nº Ls*
01_eagerness	.00	.23**	.11	.16	-.03	.29***	.14	.07
02_anticipation	.23***	.14	.02	.06	.09	.16	.00	.00
03_contentment	.22**	.01	.03	-.04	.17	-.14	-.18**	-.03
04_pride	-.07	-.09	-.01	.00	-.09	-.05	.03	.01
05_sorrow	.06	-.04	-.25***	-.10	-.11	.02	.03	.11
06_distressed	-.06	-.25***	-.29***	-.05	-.04	.34***	.29***	.06
07_glad	.06	-.14	-.11	.00	.09	-.11	-.11	.06
08_overwhelmed	-.04	-.02	-.10	.13	-.18**	.23**	.19**	.13
09_shocked	-.15	.05	.19**	.07	-.08	.09	.05	.02
10_melancholy	.05	-.02	-.12	-.05	-.11	.10	.19**	.08
11_pleased	.07	-.11	-.06	-.07	.14	-.05	-.12	.01
12_sadness	.08	.08	.00	.02	-.06	.02	-.02	.01
13_stunned	-.08	.00	.03	.07	.04	.19**	.16	.08
14_thrilled	-.01	.42***	.38***	.18**	-.05	.22**	.15	.12
15_upset	.08	.05	-.05	-.07	.07	.11	.04	-.06
16_ecstatic	.10	.55***	.26***	.10	-.06	.44***	.21**	.07
17_anxious	.08	.09	-.03	.08	-.14	-.10	.01	-.02
18_delighted	-.05	.165	.11	.03	-.03	.14	.15	.07
19_devastated	.02	-.08	-.15	-.11	-.07	.20**	.18**	.05
20_pain	-.06	.04	-.05	-.04	.03	-.04	-.04	.00

Note: To reduce the possibility of Type I error in this set of correlation analyses, a Bonferroni correction was applied and only *p*-values < .012 (.05/4) were considered significant, **$p < .012$ (highlighted in light orange); ***$p < .001$ (highlighted in dark orange).

Table 11. The relationship between Spanish L1 valence and arousal of emotion words and proficiency, frequency of use of L1 Spanish, and number of languages known (Spearman rank correlations with Bonferroni correction)

	Spanish L1 valence			*Spanish L1 arousal*		
	Spa. prof.	*freq. use*	*nº Ls*	*Spa. prof.*	*freq. use*	*nº Ls*
02_ilusión	.19**	.23***	.06	.02	.08	.03
16_eufórico	.04	.03	.02	.12	.07	.20**
19_desolado	-.24***	-.10	-.06	.04	-.03	.10

Note: To reduce the possibility of Type I error in this set of correlation analyses, a Bonferroni correction was applied and only *p*-values < .017 (.05/3) were considered significant, **p < .017 (highlighted in light orange); ***p < .001 (highlighted in dark orange). Significant correlations are included only.

Apart from looking at the effect of English LX proficiency with correlations, additional analyses explored this variable effect in more detail. Kruskal-Wallis tests with valence and arousal scores of English LX words (9-point Likert scale) as the dependent variable and English LX proficiency groups (C1-C2, B2, and B1 and lower, based on the English Lextale test) as grouping variable turned out to be significant (*p*-values < .05) for five emotion words in valence: *eagerness*, *thrilled*, *ecstatic*, *distressed*, and *delighted*; and seven emotion words in arousal: *eagerness*, *thrilled*, *ecstatic*, *distressed*, *contentment*, *stunned*, and *overwhelmed* (see Table 12). Mann-Whitney tests were used to follow up these overall effects. A Bonferroni correction was applied and so all effects are reported at $p = .0167$ level of significance (.05/3 = .0167). It appeared that the valence and arousal values by B1 and B2 English LX users did not differ, but theirs were significantly less emotional than the scores by C1/C2 users. Furthermore, by looking at the line graphs showing the valence and arousal means across proficiency groups together with the English L1 means as benchmark (see Figure 8 for valence and Figure 9 for arousal), it is evident that the most competent English LX users (C1 and higher) were able to perceive the valence of those five words and the arousal of those seven words as significantly more emotional, adjusting more to the English L1 pattern and even surpassing English L1 users' perceived emotionality in some cases.

Table 12. The significant effect of English LX proficiency on valence of five and arousal of seven English LX emotion words (Kruskal-Wallis tests)

	English LX valence												
	B1 and lower			*B2*			*C1/C2*			*Chi²*	*df*	*p-value*	*Follow-up MW tests*
	n	*M*	*Mdn*	*n*	*M*	*Mdn*	*n*	*M*	*Mdn*				
01_eagerness	8	3.88	4	85	5.85	6	83	6.61	7	13.60	2	.001	b1/c1 p = .002, r = -.32 b2/c1 p = .013, r = -.19
06_distressed	9	4.33	5	117	4.51	4	83	3.08	3	13.97	2	.001	b2/c1 p = .000, r = -.26
14_thrilled	10	5.80	5.5	120	5.27	5	81	7.44	8	34.68	2	.000	b2/c1 p = .000, r = -.41
16_ecstatic	9	4.89	5	90	5.40	5	74	7.47	8	40.90	2	.000	b1/c1 p = .000, r = -.43 b2/c1 p = .000, r = -.46
18_delighted	10	6.90	8	112	7.62	8	81	8.23	9	7.01	2	.030	*ns*
	English LX arousal												
01_eagerness	8	6.00	6	84	6.46	6.5	83	7.33	7	12.60	2	.002	b2/c1 p = .001, r = -.25
03_contentment	10	5.90	6	105	5.57	5	81	4.79	5	7.40	2	.025	b2/c1 p = .014, r = -.18
06_distressed	9	5.00	5	118	4.98	5	83	6.53	7	19.18	2	.000	b2/c1 p = .000, r = -.30
08_overwhelmed	9	6.67	7	105	6.74	7	83	7.47	8	9.75	2	.008	b2/c1 p = .002. r = -.22
13_stunned	10	5.25	7	103	6.15	6	82	6.72	7	7.06	2	.029	b2/c1 p = .01. r = -.19
14_thrilled	10	6.70	6.5	119	7.25	8	82	7.91	8	8.50	2	.014	b1/c1 p = .013, r = -.26
16_ecstatic	9	3.11	4	98	5.12	5	79	7.08	8	34.26	2	.000	b1/c1 p = .000, r = -.41 b2/c1 p = .000, r = -.38

Note: Significant Kruskal-Wallis tests are included only. In the follow-up Mann-Whitney (MW) tests (last column), a Bonferroni correction was applied and only p-values < .0167 (.05/3) were considered significant; only significant comparisons between proficiency groups are reported.

Figure 8. Line graph showing English LX valence (means) for five emotion words with significant valence differences across English LX proficiency groups (Kruskal-Wallis tests), plus English L1 benchmark (valence means)

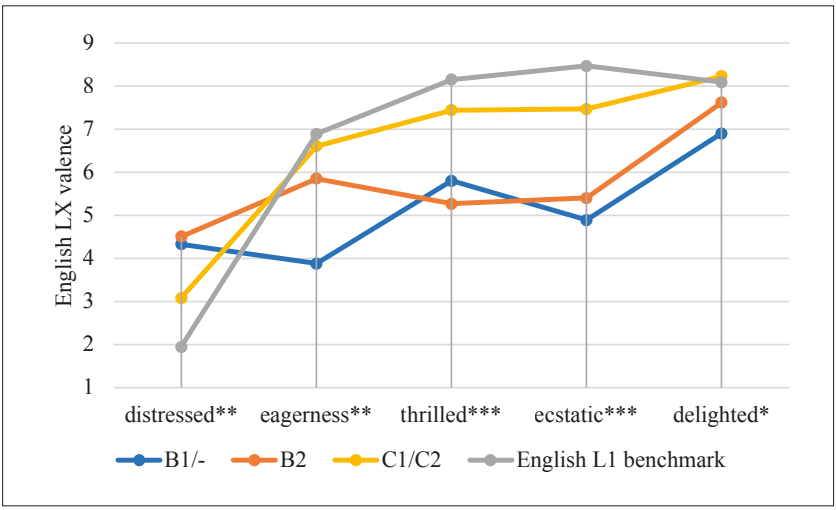
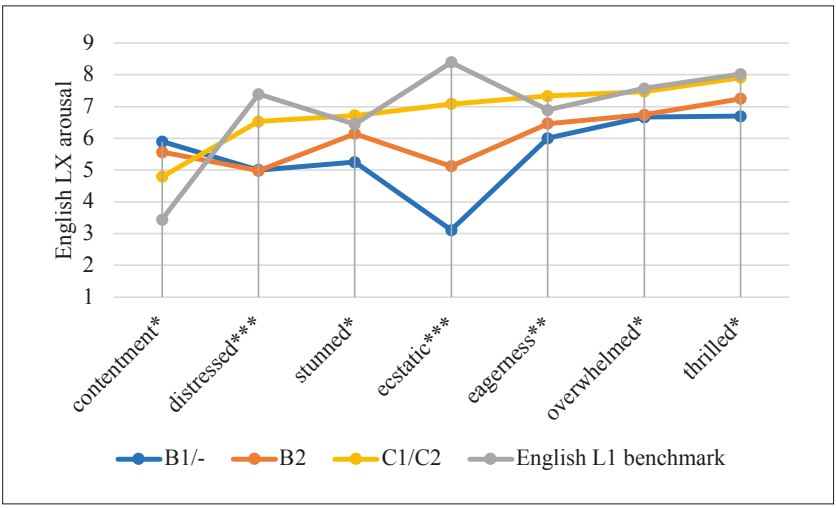


Figure 9. Line graph showing English LX arousal (means) for seven emotion words with significant arousal differences across English LX proficiency groups (Kruskal-Wallis tests), plus English L1 benchmark (arousal means)



The 56 English L1 users with LX Spanish

Spearman rank correlation analyses with a Bonferroni correction (see Table 13) indicated that Spanish LX proficiency was significantly related to the valence of two Spanish LX emotion words. The pattern found was that a higher level of Spanish LX proficiency was linked to a significantly more extreme valence for *ilusión* (higher positive valence, r_s = .46) and *angustiado* (higher negative valence, r_s = -.50; medium correlation coefficients, Plonsky & Oswald, 2014).

Table 13. The relationship between Spanish LX valence and arousal of emotion words and AoA, proficiency, frequency of use of LX Spanish, and number of languages known (Spearman rank correlations with Bonferroni correction)

	Spanish LX valence				*Spanish LX arousal*			
	Spa. AoA	*prof.*	*freq. use*	*nº Ls*	*Spa. AoA*	*prof.*	*freq. use*	*nº Ls*
2_ilusión	-.02	.46**	.30	-.08	.11	.25	.08	.01
6_angustiado	-.04	-.50**	-.36	.08	-.09	.26	-.09	.08
19_desolado	.39**	-.22	-.12	.29	-.18	.17	.22	-.08

Note: To reduce the possibility of Type I error in this set of correlation analyses, a Bonferroni correction was applied and only *p*-values < .012 (.05/4) were considered significant. **p < .012 (highlighted in light orange); ***p < .001. Significant correlations are included only.

Kruskal-Wallis tests further clarified the effect of Spanish LX proficiency (C1/C2 level vs. B2 level vs. B1 level or lower) on valence ratings of Spanish LX emotion words. A significant difference emerged in the perceived valence of *ilusión* and *angustiado* across proficiency groups (see Table 14). Specifically, post hoc Mann–Whitney tests with a Bonferroni correction (p = .0167 level of significance) showed that there was a significant valence difference for both emotion words between the most proficient C1/C2 users and the less proficient participants at B1 and lower levels. The most competent participants in LX Spanish, that is, those at C1/C2 levels rated *ilusión* as much more pleasant (*M* valence = 7.63) and *angustiado* as much more unpleasant (*M* valence = 1.13) than their peers at lower levels. In addition, by looking at the valence mean scores of these two words provided by the 239 Spanish L1 users in the same

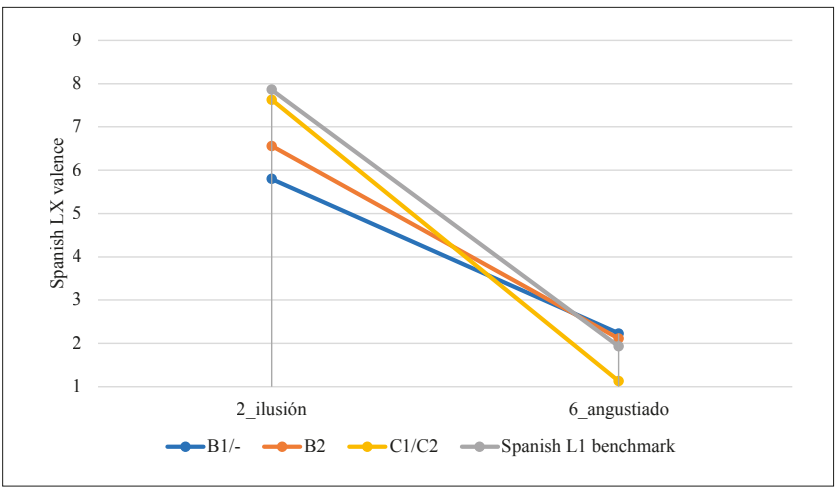
database, it is evident that the most proficient Spanish LX users adjusted to the Spanish L1 pattern more precisely, thus diverging from their less proficient peers (see Figure 10). The emotion adjective *angustiado* was even more emotionally negative for the Spanish LX users at C1 levels than for the Spanish L1 users.

Table 14. Significant effect of Spanish LX proficiency on valence of two Spanish emotion words (Kruskal-Wallis tests)

	Spanish LX valence												
	B1 and lower			*B2*			*C1/C2*			*Chi²*	*df*	*p-value*	*Follow-up MW tests*
	n	*M*	*Mdn*	*n*	*M*	*Mdn*	*n*	*M*	*Mdn*				
2_ilusión	35	5.80	5	9	6.56	7	8	7.63	8	6.53	2	.038	b1/c1 $p = .01$, $r = -.39$
6_angustiado	26	2.23	2	9	2.11	2	8	1.13	1	8.68	2	.013	b1/c1 $p = .004$, $r = -.50$

Note: Significant Kruskal-Wallis tests are included only. In the follow-up Mann-Whitney (MW) tests (last column), a Bonferroni correction was applied and only *p*-values < .0167 (.05/3) were considered significant; only significant comparisons between proficiency groups are reported.

Figure 10. Line graph showing Spanish LX valence (means) for two emotion words with significant valence differences across Spanish LX proficiency groups (Kruskal-Wallis tests), plus Spanish L1 benchmark (valence means)



Another set of Spearman correlation analyses between English L1 proficiency, self-reported English L1 frequency of use, number of languages known and valence and arousal values for emotion words in L1 English examined the extent to which these three language-related variables affected the emotional ratings in L1 English. After applying a Bonferroni correction (*p* level of significance .05/3 = .0167), no significant relationships emerged between proficiency levels in L1 English and L1's valence and arousal ratings (all *p*-values > .0167).

In summary, language proficiency, objectively measured by the corresponding Lextale test, was found to affect the valence and arousal values of emotion words in the L1 and LX lexicon to different degrees. With regard to the L1 lexicon of the first group, those Spanish users who were more competent in L1 Spanish rated *ilusión* as more pleasant and *desolado* as more negative in valence. For the second group, English L1 proficiency did not affect either the valence or the arousal of any English L1 words. As to the LX emotion lexicon, LX proficiency had an advantageous effect on the valence and arousal ratings of several LX words. In valence, and for the first group, *eagerness*, *thrilled* and *ecstatic* were perceived as markedly more pleasant and *distressed* as noticeably more unpleasant by the most proficient English LX users. Moreover, subsequent analyses demonstrated that the English LX users at C1 and higher levels (Council of Europe, 2001, 2018) were able to perceive (and thus represent) these four words together with *delighted* as markedly more emotional, adjusting to the valence pattern in L1 English more precisely, and even surpassing English L1 users' valence scores in some cases. In the second group, the English L1 participants who had a higher level of LX Spanish rated *ilusión* and *angustiado* as significantly more pleasant and unpleasant, respectively. Further statistical analyses also demonstrated that the significant differences lay specifically between C1 and B1 levels. In the arousal dimension and for the first group only, the beneficial effect of English LX proficiency was demonstrated in higher proportions. The English LX participants at the most advanced levels (C1 and higher) experienced higher activation (positive arousal) for *eagerness*, *thrilled*, *ecstatic*, *distressed*, *overwhelmed*, *stunned*, and *devastated*; and calmness (low arousal) for *contentment*. They were able to adjust to English L1 users more accurately in comparison with their peers who were at lower stages of English learning.

5.1.7 Effect of frequency of language use

239 Spanish L1 users with LX English

Significant negative and positive correlations were found between English LX frequency of use and the valence of five English LX words and the arousal of six words (see Table 10 above). In valence, the main pattern was that *sorrow* and *distressed* were rated as significantly more unpleasant (r_s = -.25 and r_s = -.29) and *shocked*, *thrilled* and *ecstatic* (r_s = .19, r_s = .38 and r_s = .26) as more pleasant by those participants reporting a higher frequency of LX English. In arousal, the overall pattern was a higher arousal rating for the English emotion words *distressed*, *overwhelmed*, *melancholy*, *ecstatic*, and *devastated* by those users using LX English more frequently in daily life. The English word *contentment*, which has low arousal in the English language (arousal mean by the English L1 participants in this database = 3.44) was actually perceived as much more "calm" by the Spanish users using LX English more frequently.

In the emotional ratings of Spanish L1 words, correlation analyses showed that participants reporting a higher frequency of use of L1 Spanish rated *ilusión* as significantly more pleasant in valence (r_s = .23, $p < .001$) (see Table 11 above). No significant relationships emerged for the rest of the Spanish L1 words, either for valence or for arousal.

The 56 English L1 users with LX Spanish

After applying a Bonferroni correction to the Spearman rank correlation analyses (see Table 13 above), no significant relationships emerged between their Spanish LX frequency of use and their valence and arousal values for the words in LX Spanish. Similarly, no significant correlations emerged between frequency of use of L1 English and L1's valence and arousal ratings.

5.1.8 Effect of L1 variety

Spanish L1 users

As revealed by Mann-Whitney tests (see Table 15), Spaniards perceived the valence of two emotion words: *ilusión* and *pena* as significantly more

emotional compared to Latinos; specifically, a greater pleasantness for the first term (*Mdn* = 9 vs. *Mdn* = 6) and a higher unpleasantness for *pena* (*Mdn* = 2 vs. *Mdn* = 3). Additionally, the emotion adjective *impactado* was rated as significantly more unpleasant by Spaniards than Latinos (small effect size, though), but overall it was perceived as rather neutral in valence by both groups of Spanish L1 users.

As to arousal, three words reached statistical significance, with *ilusión* and *melancolía* being perceived as more emotionally extreme (more exciting and calmer, respectively) by Spaniards (*Mdn* = 8 and *Mdn* = 4) than Latinos (*Mdn* = 5 and *Mdn* = 5). However, the word *orgullo* was perceived as significantly more arousing by Latinos.

Table 15. Significant effect of Spanish L1 variety on valence of three and arousal of three Spanish L1 emotion words (Mann-Whitney tests)

	Spanish L1 valence								
	Latinos			*Spaniards*			*M-W Z*	*p-value*	*r effect size*
	n	*M*	*Mdn*	*n*	*M*	*Mdn*			
02_ilusión	45	6.53	6	193	8.17	9	-5.90	.000	-.38
05_pena	44	3.30	3	194	2.34	2	-3.33	.001	-.22
09_impactado	45	5.02	5	194	4.33	5	-2.34	.019	-.15
	Spanish L1 arousal								
02_ilusión	45	5.44	5	193	7.37	8	-5.24	.000	-.34
10_melancolía	45	4.80	5	194	3.81	4	-2.37	.018	-.15
04_orgullo	44	6.25	6	194	5.68	5	-1.97	.049	-.13

Note: Significant tests are included only.

English L1 users

Mann-Whitney tests revealed that there were non-significant valence and arousal differences between American ($n = 26$) and British ($n = 15$) English L1 users for any emotion word (p-values > .05 in all tests). This result may be due to the small numbers of British L1 users in the present database.

5.1.9 The migrant effect

The Spanish L1 users with LX English

Being or having been a migrant (n = 138, regardless of the type of host country), and thus having more intercultural competence, significantly influenced the valence ratings of two English LX emotion words: *anticipation* and *thrilled* and the arousal of seven words: *eagerness*, *distressed*, *glad*, *overwhelmed*, *stunned*, *upset*, and *devastated* (see Table 16). Spanish L1 migrants rated these emotion words in LX English as significantly more pleasant (in valence) and more activating (in arousal) than the most monocultural Spanish L1 non-migrants (n = 101).

Furthermore, by looking at the line graphs showing the valence and arousal mean ratings provided by English L1 users from the same database (n = 56), it is evident that Spanish L1 migrants were closer to the English L1 pattern than non-migrants in their English LX valence and arousal ratings (see Figure 11 for valence and Figure 12 for arousal). Not only were the migrants in an intermediate position between non-migrants and English L1 users in the ratings of English LX emotion words, but they also scored the arousal of *eagerness* and *glad* higher than the L1 users (arousal means = 7.17 in LX English vs. 6.89 in L1 English for *eagerness* and 5.6 vs. 4.91, respectively, for *glad*).

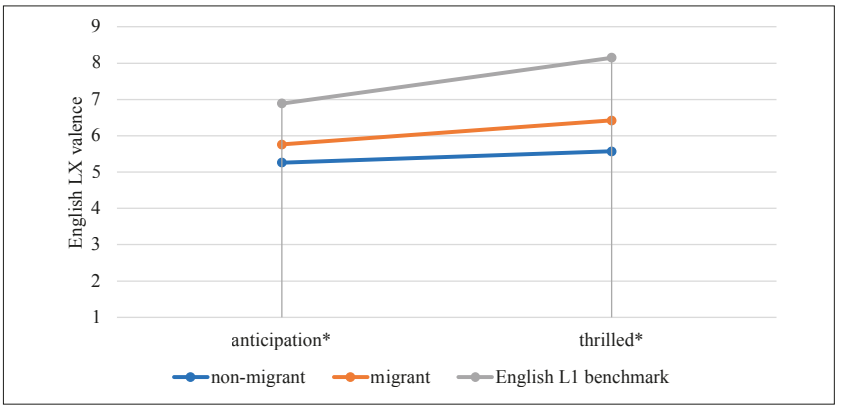
In the emotional ratings of Spanish L1 emotion words, the migrant condition did not affect the valence values of Spanish L1 terms (all comparisons were non-significant at p-values > .05). In other words, the most monocultural and the most multicultural Spanish L1 users perceived equal degrees of pleasantness in their L1. As to arousal, there was a significant difference between non-migrants and migrants for six Spanish L1 words, which elicited a higher positive-arousal (excitement) in migrant participants (see Table 17).

Table 16. Significant effect of being a migrant on the valence of two and the arousal of seven English LX emotion words (Mann-Whitney tests)

	English LX valence								
	non-migrant			*migrant*			*M-W Z*	*p-value*	*r effect size*
	n	*M*	*Mdn*	*n*	*M*	*Mdn*			
02_anticipation	98	5.26	5	135	5.76	5	-2.076	.038	-.14
14_thrilled	97	5.57	5	135	6.42	7	-2.367	.018	-.16
	English LX arousal								
01_eagerness	68	6.34	6	122	7.17	7	-2.782	.005	-.20
06_distressed	99	5.05	5	132	5.91	7	-2.575	.010	-.17
07_glad	93	4.71	5	137	5.66	6	-2.769	.006	-.18
08_overwhelmed	85	6.54	7	132	7.23	8	-2.174	.030	-.15
13_stunned	85	5.72	6	132	6.43	7	-2.851	.004	-.19
15_upset	95	5.54	6	137	6.22	6	-2.252	.024	-.15
19_devastated	99	5.85	7	138	6.76	8	-2.759	.006	-.18

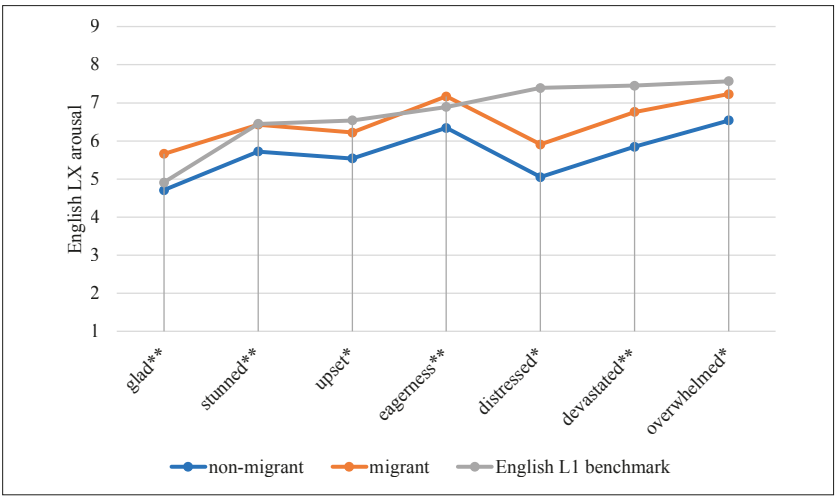
Note: Significant tests are included only.

Figure 11. Line graph showing English LX valence (means) for two emotion words with significant valence differences between English LX migrants and non-migrants (Mann-Whitney tests), plus English L1 benchmark (valence means)



Note: *$p < .05$.

Figure 12. Line graph showing English LX arousal (means) for seven emotion words with significant arousal differences between English LX migrants and non-migrants (Mann-Whitney tests), plus English L1 benchmark (arousal means)



Note: *$p < .05$; **$p < .01$; ***$p < .001$.

Table 17. Significant migrant effect on arousal of six Spanish L1 emotion words (Mann-Whitney tests)

	Spanish L1 arousal								
	non-migrant			*migrant*			*M-W Z*	*p-value*	*r effect size*
	n	*M*	*Mdn*	*n*	*M*	*Mdn*			
02_ilusión	101	6.62	7	137	7.29	7	-2.21	.027	-.14
06_angustiado	101	6.13	7	138	6.96	8	-2.88	.004	-.19
08_agobiado	98	6.38	7	137	7.23	8	-2.48	.013	-.16
13_estupefacto	99	5.66	6	137	6.28	6	-2.09	.037	-.14
17_nervioso	101	6.92	7	138	7.54	8	-2.34	.019	-.15
19_desolado	101	4.65	4	136	5.46	5	-2.14	.032	-.14

Note: Significant tests are included only.

English L1 users with LX Spanish

A series of Mann-Whitney tests showed a non-significant effect of being (or having been) a migrant on Spanish LX valence (all tests were non-significant at *p*-values > .05). However, a significant effect was found on the arousal values of three Spanish LX words: *ilusión*, *orgullo*, and *melancolía* (see Table 18). The most multicultural English migrants with LX Spanish rated these three Spanish words differently from the most monocultural non-migrants and adjusted to the Spanish L1 pattern more precisely (see Figure 13). In addition, this condition did not affect the valence and arousal emotion word ratings in their L1 English.

All in all, the migrant condition, and thus having higher levels of intercultural competence, had a positive (advantageous) effect on the valence and arousal ratings of LX emotion vocabulary. In the first group, Spanish migrants with LX English perceived the English LX words *anticipation* and *thrilled* as more pleasant in valence and *eagerness*, *distressed*, *glad*, *overwhelmed*, *stunned*, *upset*, and *devastated* as more activating in arousal than their Spanish peers who were non-migrants. The English LX migrants were able to adjust to the English L1 emotional pattern more precisely in all significant cases; they even surpassed English L1 users on two occasions in arousal, as *glad* and *eagerness* were shown to be more activating for migrants. In the second group, English L1 migrants and non-migrants with LX Spanish perceived similar degrees of pleasantness (the migrant condition had no effect on Spanish LX valence) but they differed statistically in the arousal ratings of *ilusión*, *orgullo*, and *melancolía*. The English L1 users who were current or former migrants adjusted to Spanish L1 arousal norm more precisely than their non-migrant peers, who underestimated or overestimated the activation degree of such terms.

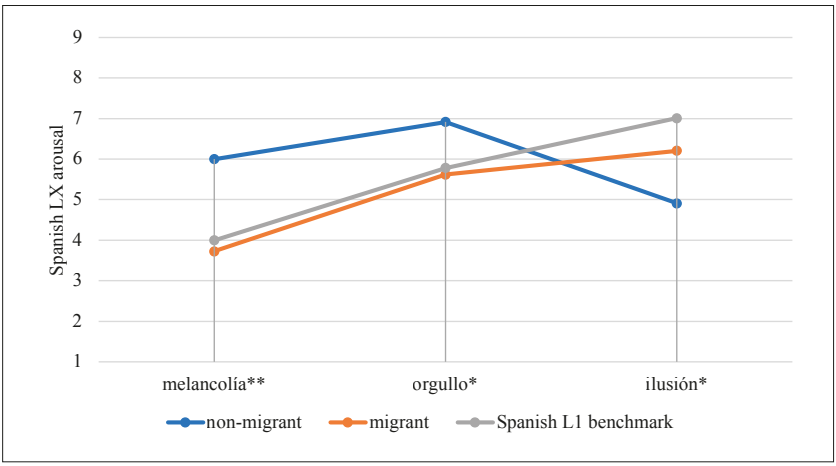
As to the variation in emotion lexicon in L1, being a migrant only had an effect on some arousal ratings for the first language group. The Spanish migrants rated a total of six Spanish L1 emotion words as significantly more activating (higher arousal) than their Spanish L1 peers who have never left their origin countries.

Table 18. Significant migrant effect on arousal of three Spanish LX emotion words (Mann-Whitney tests)

	Spanish LX arousal								
	non-migrant			*migrant*			*M-W Z*	*p-value*	*r effect size*
	n	*M*	*Mdn*	*n*	*M*	*Mdn*			
02_ilusión	11	4.91	5	44	6.20	6	-2.54	.011	-.34
04_orgullo	12	6.92	6.5	42	5.62	6	-2.19	.029	-.30
10_melancolía	12	6.00	6.5	44	3.73	3.5	-2.92	.003	-.39

Note: Significant tests are included only.

Figure 13. Line graph showing Spanish LX arousal (means) for three emotion words with significant arousal differences between Spanish LX migrants and non-migrants (Mann-Whitney tests), plus Spanish L1 benchmark (arousal means)



Note: *$p < .05$; **$p < .01$.

5.1.10 Effect of acculturation level to LX culture, LoR, and maintenance level of L1 culture

Spanish L1 users with LX English in ESCs

Within the group of 91 Spanish L1 migrants with LX English who reported living or have been living in ESCs, a set of Spearman rank correlation analyses with a Bonferroni correction (see Table 19) revealed that the acculturation level (Ryder et al., 2000) to the English LX culture was significantly related to the valence of *thrilled* and the arousal of *contentment*. Those Spanish L1 migrants in ESCs who were more acculturated to the culture of their respective ESC rated the word *thrilled* as significantly more pleasant in valence (r_s = .26) and the word *contentment* as significantly more relaxing in arousal (r_s = -.34).

As to the effect of LoR (years) spent in the English LX country, those reporting a higher LoR rated the valence of *contentment* and *thrilled* as significantly more pleasant (r_s = .30 and .43, respectively) and *distressed* as significantly more activating in arousal (r_s = .29). These correlation coefficients, ranging between .26 and .43, fall again between small and medium effect sizes according to Plonsky and Oswald's (2014) criteria for L2 research.

Table 19. Relationship between English LX valence and arousal of emotion words and acculturation level to and time spent in English-speaking countries (Spearman rank correlations with Bonferroni correction)

	English LX valence		*English LX arousal*	
	Acculturation level	*LoR (years)*	*Acculturation level*	*LoR (years)*
03_contentment	.09	.30**	-.34**	.01
06_distressed	-.19	-.12	.21	.29**
14_thrilled	.26*	.43***	.15	.16

Note: To reduce the possibility of Type I error in this set of correlations, a Bonferroni correction was applied and only *p*-values < .025 (.05/2) were considered significant. *p < .025; **p < .01; ***p < .001. Significant correlations are included only.

The relationship between maintenance of cultural ties with Spanish L1 culture and valence and arousal ratings of Spanish L1 emotion words turned out to be non-significant for all words (*p*-vales > .05), as revealed by Spearman correlation analyses.

English L1 users with LX Spanish in SSCs

A study within the group of 29 English L1 migrants with LX Spanish who were living in SCCs (Spain, Puerto Rico, Mexico, Chile, Argentina, and Peru), determined whether acculturation level to and years spent in the host SSC had an effect on the valence and arousal ratings of Spanish LX emotion words. A set of Spearman correlations with a Bonferroni correction—only *p*-values < .025 (.05/2) were considered significant to avoid Type I error—did not reveal any significant link between cultural integration to the respective SSC and the valence and arousal scores in LX Spanish. Years spent (LoR) in the Spanish LX environment turned out to be related to the valence of *dolor* only (r_s = -.43, p = .019, n = 29, medium correlation coefficient, Plonsky & Oswald, 2014). It seems then that the English migrants with LX Spanish who have spent more time (years) in SSCs perceived higher unpleasantness for the emotion noun *dolor.*

Finally, Spearman's correlations showed that a higher level of maintenance of the English L1 culture was related only to the arousal of two English L1 emotion words: *eagerness* (r_s = .45, p = .014, n = 29) and *pain* (r_s = -.71, p < .001, n = 29).

The change in the valence and arousal values of LX emotion words in the minds of migrants was linked to their acculturation level to the LX culture/country and years spent there (LoR) to different degrees. For instance, those Spanish L1 migrants in ESCs who were more acculturated to the English LX culture rated the word *thrilled* as more pleasant and *contentment* as more relaxing (low arousal) in line with the respective emotional pattern in L1 English. The number of years spent in the English LX culture was also related in a positive and beneficial way to the valence of the two words, perceived and rated as significantly more pleasant by more experienced migrants, again in line with the emotional pattern followed in L1 English. In the minds of the other subgroup, English L1 migrants with LX Spanish in SSCs, acculturation level to SSCs had no effect on valence and arousal, but more years spent there affected the

valence of the Spanish LX word *dolor* in a positive way, which elicited greater unpleasantness.

Although few significant relations emerged on the effect of acculturation-based profiles, the resulting small and medium correlation coefficients are still of importance, implying that acculturation level to the LX country and more importantly, time spent living there, play a vital role in the development of some emotion concepts in the bi/multilingual mind.

The maintenance level of L1 culture had almost no effect on migrants' L1 emotion words and their valence and arousal values.

5.2 EMOTIONAL VIDEOS PERCEPTION

5.2.1 Effect of language modality and language status

First, an analysis established whether the valence and arousal scores of emotional visual stimuli varied between the two language modalities and among the L1 and LX users of each language. Two Kruskal-Wallis tests with *total valence emotionality score* and *total arousal emotionality score* (recodified 5-point Likert scales) as dependent variables and *status of the language mode* (L1 English, LX English, L1 Spanish, or LX Spanish) as the grouping variable turned out to be non-significant: $\chi^2(3) = 2.84$, $p = .42$, $n = 337$ for valence and $\chi^2(3) = 2.94$, $p = .40$, $n = 337$ for arousal. This means that all language users, regardless of the language modality of the task and the status of the language, perceived similar levels of pleasantness (valence) and excitement (arousal) from visual information. Despite not reaching statistical significance, it is worth stressing that Spanish L1 users in the Spanish mode tended to perceive the valence and arousal emotionality degree as slightly higher than their Spanish LX peers (see Table 20).

Table 20. Total valence and arousal emotionality scores (recodified 5-point Likert scales) across language groups per language modality

	Spanish language				*English language*			
	L1 Spanish (n = 136)		*LX Spanish (n = 36)*		*L1 English (n = 49)*		*LX English (n = 116)*	
	M (SD)	*Mdn*	*M (SD)*	*Mdn*	*M (SD)*	*Mdn*	*M (SD)*	*Mdn*
Total valence emotionality score	2.96 (0.77)	3	2.84 (0.65)	2.75	2.9 (1.02)	2.75	3.04 (0.8)	3
Total arousal emotionality score	2.94 (0.87)	3	2.83 (0.68)	2.75	2.85 (0.94)	3	2.75 (0.83)	2.75

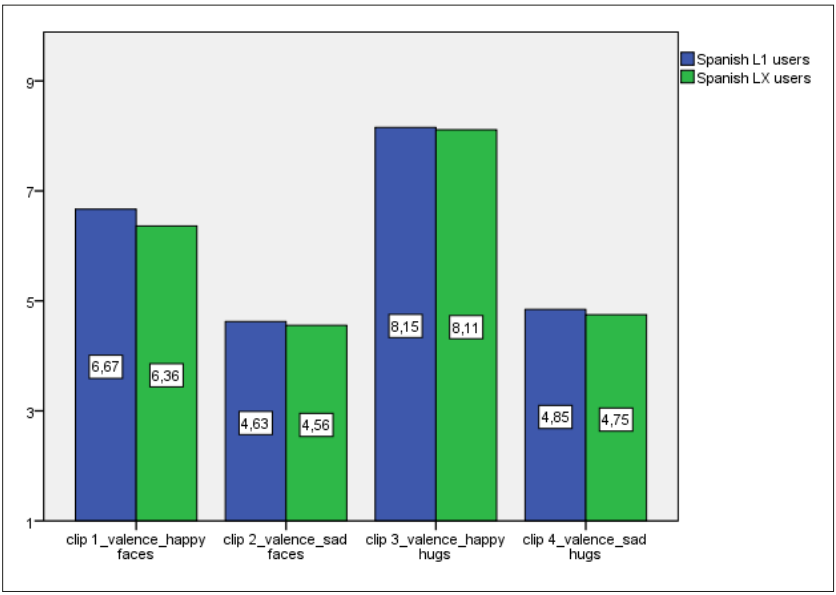
Note: Total valence and arousal emotionality scores are based on recodified 5-point Likert scales (from 1 *neutral*/*unemotional* to 5 *highly emotional*). This recodified measure, lacking the semantic extremes of the original 9-point scales, served to clarify and highlight some results.

Additional tests offered a more accurate analysis by looking at the four clips individually and considering the original valence and arousal scores on the 9-point Likert scales. For the Spanish modality ($n = 172$), a series of Mann-Whitney tests with perceived valence and arousal scores per clip as dependent variables and Spanish L1 users ($n = 136$) and Spanish LX users ($n = 36$) as the grouping variable demonstrated that there were no significant differences in how they perceived each video (p-values $> .05$ for all tests in both dimensions). This means that both Spanish L1 and Spanish LX participants perceived similar valence and arousal in the visual clips (see Table 21). Similarly, for the English modality ($n = 165$), most Mann-Whitney tests were non-significant (p-values $> .05$), suggesting that English L1 ($n = 49$) and LX users ($n = 116$) also perceived similar valence and arousal levels. There was one exception, though. In the valence dimension, English LX users perceived the happy face clip as significantly more pleasant ($Mdn = 7$) than the L1 users ($Mdn = 6$): $U = 2293.5$, $z = -1.99$, $p = .046$, $r = -.15$; small effect following Plonsky and Oswald (2014). For a visual representation of the valence and arousal mean scores per clip, dimension, and language groups, see Figures 14 and 15.

Table 21. Valence and arousal ratings (9-point Likert scales) across clips and language status groups per language modality

	Spanish language				*English language*			
	L1 Spanish (n = 136)		*LX Spanish (n = 36)*		*L1 English (n = 49)*		*LX English (n = 116)*	
	M (SD)	*Mdn*	*M (SD)*	*Mdn*	*M (SD)*	*Mdn*	*M (SD)*	*Mdn*
Valence								
clip 1 happy faces	6.67 (1.62)	6	6.36 (1.26)	6	6.06 (1.87)	6	6.66 (1.66)	7
clip 2 sad faces	4.63 (1.16)	5	4.56 (1.05)	5	4.61 (1.56)	5	4.33 (1.5)	5
clip 3 happy hugs	8.15 (1.29)	9	8.11 (1.25)	8.5	7.8 (1.52)	8	7.8 (1.84)	9
clip 4 sad hugs	4.85 (2.53)	5	4.75 (2.44)	5	4.78 (2.51)	5	4.08 (2.23)	4
Arousal								
clip 1 happy faces	5.46 (2.03)	5	5.03 (1.91)	5	5.1 (2.21)	5	5.34 (1.94)	5
clip 2 sad faces	4.68 (1.88)	5	4.5 (1.55)	5	4.29 (2.02)	5	4.86 (1.96)	5
clip 3 happy hugs	7.35 (1.71)	7	7.39 (1.31)	7	6.71 (1.95)	7	6.86 (1.85)	7
clip 4 sad hugs	6.74 (2.08)	7	6.58 (2.27)	7	6.51 (1.84)	7	6.2 (1.93)	6

Figure 14. Valence and arousal mean scores across clips
by Spanish L1 and LX users



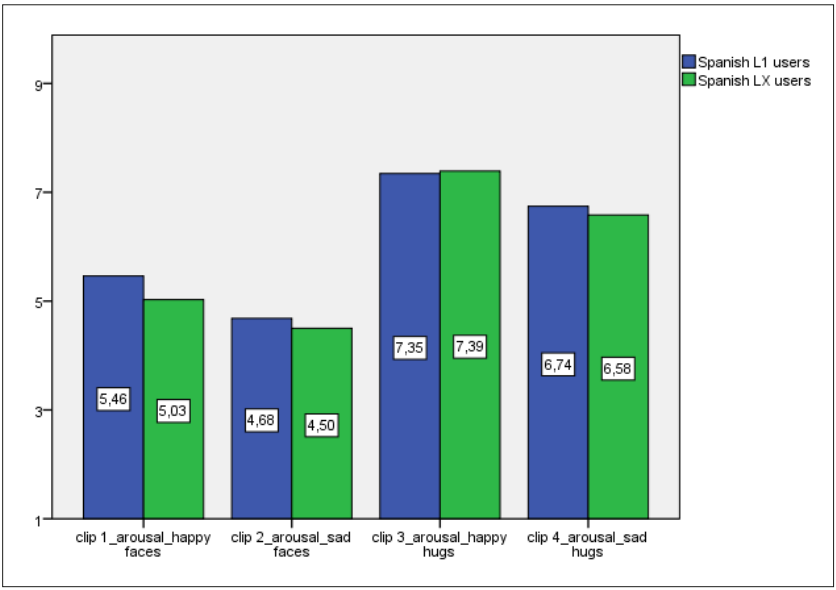
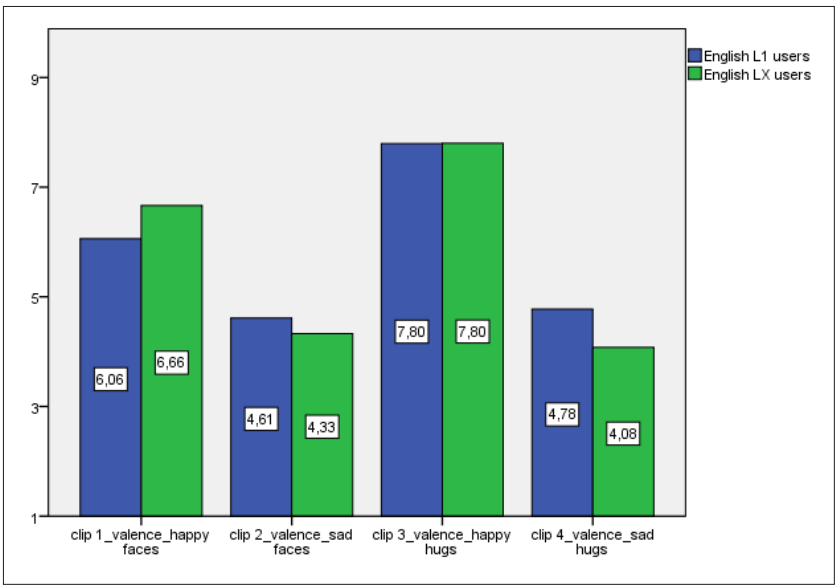
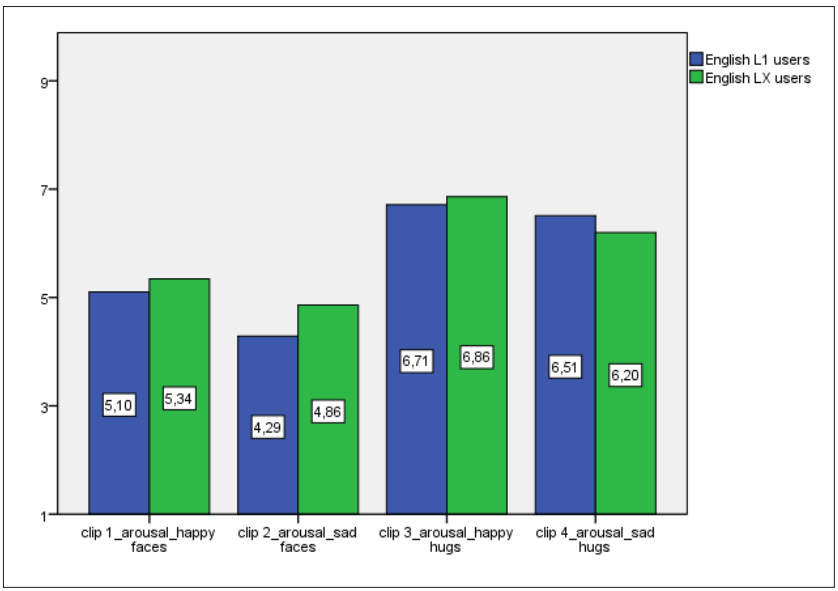


Figure 15. Valence and arousal mean scores across clips
by English L1 and LX users





5.2.2 Effect of language proficiency, multilingualism level, frequency of language use, AoA, and current age

Several Spearman's correlation analyses were conducted in order to determine if there were any significant relationships between perceived valence and arousal scores and the continuous variables under study: current age of participants, AoA of the language mode, multilingualism level, proficiency of the language mode (measured by the respective Lextale test), and frequency of use of the language mode. Correlations considered language groups per modality (L1 and LX users of Spanish and English) and the four clips individually. After Bonferroni correction, no significant correlation patterns emerged (see Table 22). The participants' current age was not related to perceiving more or less extreme valence and arousal. The results also showed that the perception of visual (non-verbal) emotional stimuli does not depend on language-related variables, even though the emotional appraisal of these stimuli was made through language.

Table 22. Spearman's rank correlations (with Bonferroni correction) between perceived valence and arousal scores of the four clips and continuous variables

		Valence				*Arousal*			
		Happy faces	*Sad faces*	*Happy hugs*	*Sad hugs*	*Happy faces*	*Sad faces*	*Happy hugs*	*Sad hugs*
Age	L1 English	.14	.34	-.15	-.05	.19	.20	-.22	-.02
	L1 Spanish	-.10	.14	-.03	.15	-.05	-.09	-.01	-.07
	LX English	-.04	.07	.02	0	-.01	.06	-.09	.07
	LX Spanish	-.18	.27	-.24	-.08	-.08	.06	-.21	.10
Age of acquisition	L1 English	-.10	-.26	.15	.03	.03	-.07	-.03	-.21
	L1 Spanish	.06	.15	-.16	.02	.16	.01	-.25	-.14
	LX English	.02	.02	-.20	-.03	.07	.04	-.21	-.14
	LX Spanish	.01	.02	-.27	-.09	-.05	.13	-.01	-.07

		Valence				*Arousal*			
		Happy faces	*Sad faces*	*Happy hugs*	*Sad hugs*	*Happy faces*	*Sad faces*	*Happy hugs*	*Sad hugs*
Multilingualism	L1 English	.02	-.18	0	-.36	.08	.19	.01	.08
	L1 Spanish	-.07	.08	-.09	-.01	-.02	.07	-.10	-.01
	LX English	.07	.08	-.03	-.08	-.14	-.11	-.07	.05
	LX Spanish	-.13	-.01	-.18	.29	.13	.09	-.01	-.04
Proficiency	L1 English	.15	.10	-.05	.04	-.03	.05	-.16	-.12
	L1 Spanish	-.03	-.02	-.04	.05	.07	.11	0	-.05
	LX English	-.09	.19	-.07	.10	-.11	-.04	-.18	-.05
	LX Spanish	-.20	.26	-.33	.15	.01	.04	-.04	.05
Frequency of use	L1 English	.01	-.07	.19	-.11	-.16	-.13	.10	.08
	L1 Spanish	.04	-.11	.08	.06	.02	.13	.02	-.03
	LX English	.03	.18	.02	.04	-.09	-.05	-.07	-.11
	LX Spanish	-.17	.23	-.19	.01	-.13	.13	-.09	-.12

Note: n = 49 for L1 English, n = 116 for LX English, n = 136 for L1 Spanish, and n = 36 for LX Spanish. To reduce the possibility of Type I error in this set of correlation analyses, a Bonferroni correction was applied and only p-values < .01 (.05/5) were considered significant.

5.2.3 Gender effect

Several Mann-Whitney tests were run by language group per modality (L1 Spanish, LX Spanish, L1 English, and LX English), emotional dimension (valence and arousal) and video clip, with gender (females vs. males) as the grouping variable. In valence, the only significant difference was found for English LX users group, with females rating the happy clips (both faces and hugs) significantly higher (*Mdn* = 7 and 9, respectively) than males (*Mdn* = 6 and 8, respectively): U = 892.5, z = -2.56, p = .01, r = -.24, n = 116 and U = 904, z = -2.63, p = .01, r = -.24, n = 116. In terms of arousal, Mann-Whitney tests revealed that English LX females also perceived the happy face clip as more arousing. In addition, for users of L1 English, LX English and L1 Spanish, female participants found the happy hug clip significantly more activating than male users

on the 9-point arousal scale (see Table 23 below for medians): $U = 134$, $z = -2.48$, $p = .01$, $r = -.36$, $n = 47$ for L1 English; $U = 970$, $z = -2.05$, $p = .04$, $r = -.19$, $n = 116$ for LX English; and $U = 839$, $z = -2.25$, $p = .02$, $r = -.19$, $n = 135$ for L1 Spanish.

Table 23. Effect of gender on valence and arousal of visual clips across language groups

			Females			Males			*U*	*Z*	*p*
			n	*M (SD)*	*Mdn*	*n*	*M (SD)*	*Mdn*			
Val.	Happy faces	LX English	86	6.94 (1.56)	7	30	5.87 (1.74)	6	892.5	-2.56	0.01
	Happy hugs	LX English	86	7.98 (1.82)	9	30	7.3 (1.86)	8	904	-2.63	0.01
Aro.	Happy faces	LX English	86	5.56 (1.9)	6	30	4.73 (1.98)	5	975	-2.03	0.04
	Happy hugs	LX English	86	7.03 (1.88)	7	30	6.37 (1.75)	6.5	970	-2.05	0.04
	Happy hugs	L1 English	32	7.19 (1.71)	7	15	5.6 (2.16)	6	134	-2.48	0.01
	Happy hugs	L1 Spanish	114	7.49 (1.59)	8	21	6.48 (2.14)	7	839	-2.25	0.02

Note: Significant Mann-Whitney tests are included only.

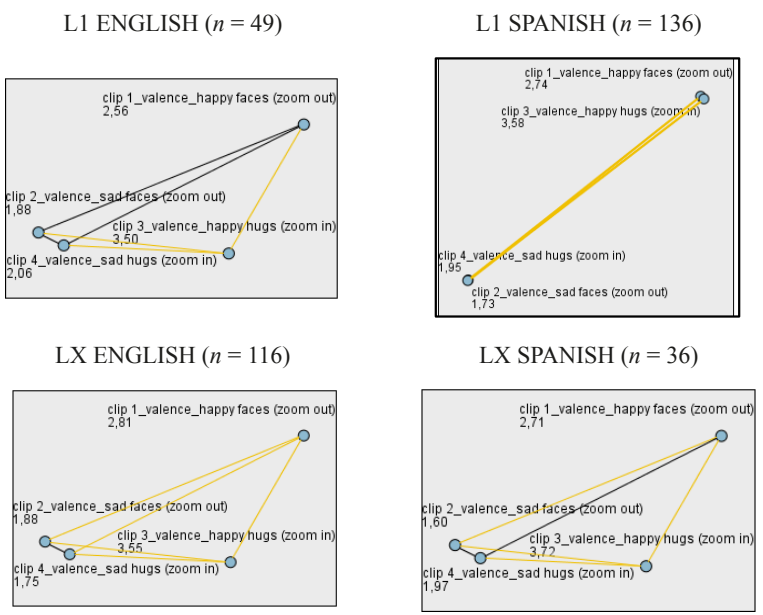
Gender had a significant effect in some language groups and for some video clips only. Specifically, English LX female participants were able to perceive much more pleasantness and more extreme agitation than males, as evidenced by their higher ratings in valence and arousal for the two happy-eliciting clips. Similarly, English L1 and Spanish L1 female users perceived the two clips eliciting happiness as significantly more arousing than males. These results highlight that overall females seem to have an advantage in perceiving a higher emotionality when the visual input involves happiness-related feelings.

5.2.4 Effect of kinesics level of the stimulus

In the valence dimension, four different Friedman's ANOVA tests were done, one per language group: Spanish L1 users, $\chi^2(3) = 196.82$, $p < .001$,

n = 136; Spanish LX users, $\chi^2(3) = 60.52$, $p < .001$, $n = 36$; English L1 users, $\chi^2(3) = 56.33$, $p < .001$, $n = 49$; and English LX users, $\chi^2(3) = 164.89$, $p < .001$, $n = 116$. As these four main analyses were significant at $p < .001$, post hoc pairwise comparison tests (with the Dunn-Bonferroni-adjusted significance) were run automatically to look for differences between pairs (see Figure 16 below). The happy hug clip, with higher interaction degree between characters, was significantly more positive than the happy face video in the four language groups. Contrarily, the comparison between sad faces and sad hugs in valence was non-significant for the four language groups (p-values = *ns* after Bonferroni adjustments). This means that all groups of language users found the clips eliciting "sadness", regardless of their kinesics level, to be rather neutral in valence, that is, neither pleasant nor unpleasant (*Mdn* = 5 on the 9-point Likert scale).

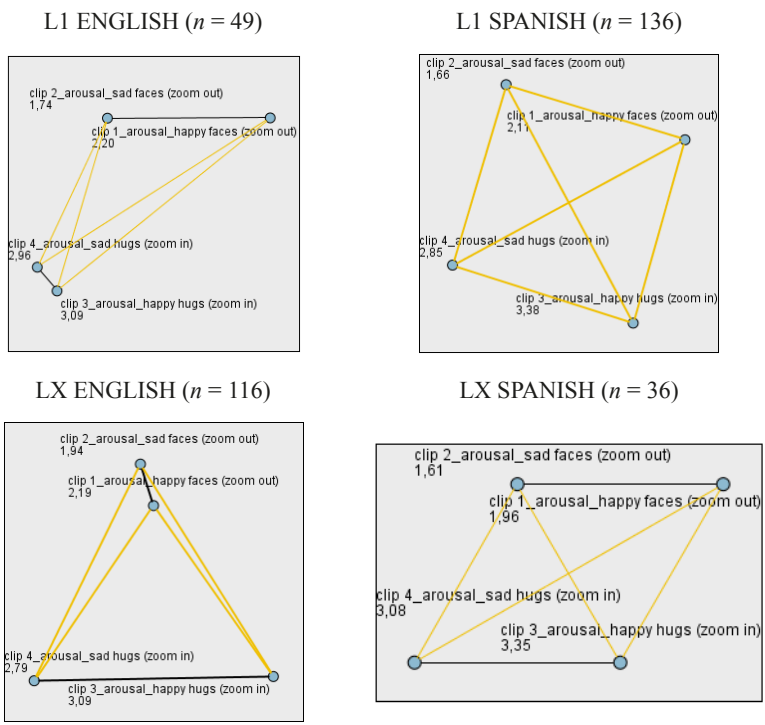
Figure 16. Post hoc pairwise comparisons between clips per language group in the valence dimension



Note: Yellow lines mean statistically significant tests and black lines are non-significant comparisons.

In the arousal dimension, four different Friedman's ANOVA tests were done, one per language group: Spanish L1 users, $\chi^2(3) = 168.29$, $p < .001$, $n = 136$; Spanish LX users, $\chi^2(3) = 52.04$, $p < .001$, $n = 36$; English L1 users, $\chi^2(3) = 43.79$, $p < .001$, $n = 49$; and English LX users: $\chi^2(3) = 68.89$, $p < .001$, $n = 116$. These four initial analyses were significant at $p < .001$. Thus, Dunn-Bonferroni post hoc tests were run automatically to look for differences between pairs of clips. There were significant differences between faces/hugs clips (p = or < .001 after Bonferroni adjustments) in the four language groups (see Figure 17). Participants found the two clips involving (sad and happy) hugs much more agitating (the two with *Mdn* = 7 on the 9-point arousal scale in the

Figure 17. Post hoc pairwise comparisons between clips per language group in the valence dimension



Note: Yellow lines mean statistically significant tests and black lines are non-significant comparisons.

four groups) than the two clips involving (sad and happy) faces, which were rather neutral in arousal (the two with *Mdn* = 5 in the four groups). There were no significant arousal differences either between sad and happy faces (*Mdn* = 5) or between sad and happy hugs (*Mdn* = 7) for Spanish LX users, English L1 users and English LX users. Spanish L1 users were the only group who significantly perceived the happy hugs as more exciting than the sad ones, and the happy faces as more activating than the sad faces.

5.3 PERSONAL STORIES ON EMOTION COMMUNICATION

In the following lines, first-hand quotes from participants' follow-up stories are presented. Their personal experiences, describing emotionally-charged situations where they had to use an LX to communicate emotions, serve to qualitatively support the more quantitative patterns found before (Creswell & Plano Clark, 2011; Dewaele, 2018b). As explained in section 4.4.3, although their quotes are presented below in the original language (English or Spanish) used by each participant, an English translation of the Spanish quotes is provided for the reader.

Some stories reinforce the common tendency of an LX disadvantage in favour of an L1 advantage for verbalising emotions. A Spanish L1 male participant (41 years old), knowing LX English, highly proficient in both, from Spain but currently living in the United States for 13 years, reported his difficulty in automatically translating emotional Spanish L1 words to his LX English during his first acceptance speech in English after his arrival to the States:

> […] Todas las expresiones de agradecimiento que me venían a la cabeza eran en español [L1]. Con los nervios del momento, traducirlas se me hizo imposible, ante el miedo de acabar utilizando calcos literales sin sentido en inglés [LX]. Terminé dando muchos rodeos […] tras muchos años, ahora puedo expresar mis emociones en inglés [LX] con bastante precisión.
>
> *[...] All the expressions of gratitude that came to my mind were in Spanish [L1]. With the nerves of the moment, translating them became impossible, for fear of ending up using meaningless literal calques in English [LX]. I*

> *ended up taking a lot of detours [...] after many years, I can now express my emotions in English [LX] quite accurately.*

Finally, he acknowledged that, after living in the States for many years, he is able to talk about emotions in LX English more precisely. This improvement in his emotional expression in LX reflects the advantageous effect that variables such as being immersed for several years in the LX culture, and thus, a higher degree of emotional acculturation, language level and frequency of use may have on the modulation of emotional competence over the years.

A 26-year Spanish L1 female teacher, with LX English and highly proficient in both languages, talked about her dissatisfaction with the English phrases that came out of her mouth when expressing enthusiasm to her American friends during a visit to the States, despite having been studying there before for two years:

> Era un *emotional mess* [italics added] y no podía expresarme para nada con mis amigos de allí, aunque quería. Estaba tan emocionada que lo que conseguía decir era todo el rato lo mismo: Oh my God! I can't believe it! This is like a movie!, etc.
>
> *It was an emotional mess [italics added] and I couldn't express myself at all to my friends there, even though I wanted to. I was so excited that all I managed to say was the same thing all the time: Oh my God! I can't believe it! This is like a movie!, etc.*

This story may reflect two different realities that show how emotional competence is dynamic and ever-changing: (1) studying English (LX) for two years in the natural context of the language is not sufficient and a longer period of immersion and acculturation is needed to acquire certain fluency in emotional expression; or (2) the acquired ability to communicate emotionally in LX may be weakened if one stops living in the country and using the language.

A 79-year American female participant, highly competent in L1A English and L1B Spanish (simultaneous bilingual) and having spent two years studying in Costa Rica during her youth, explained her trouble translating emotional negative phrases from English (the L1 she seems to use more) to Spanish and trying to find the most accurate equivalent:

> When my husband died and I had to tell my Spanish speaking friends about my grief and anguish, I felt that the words I needed in Spanish [L1B] were not a faithful rendering of my emotions. For example, for 'I am still grieving', 'todavia estoy de luto' was more about mourning than grieving, so I preferred, 'sigo angustiada'.

Her experience proves that there can also be an emotional mismatch between two L1s of simultaneous bilinguals—not analysed in this work—and an emotional advantage for a particular L1. Furthermore, this extract reflects how each emotion word (concept) in one language has unique nuances, which are difficult to translate into another language despite the existence of words for it. According to her story, although she feels more identified with the English word equivalents in her emotional expression, she acknowledged a preference for the more comforting and warmer hugs by Spanish-speaking people:

> Pero los abrazos de los hispanohablantes fueron y son más fuertes, más calurosos. Entienden lo que es sufrir.
>
> *But the hugs from Spanish speakers were and are stronger, warmer. They understand what it is to suffer.*

As illustrated below as well, these words highlight the positive effect of kinesics and interpersonal contact to facilitate emotional communication in some collectivist cultures such as Spanish or Latin American.

Contrary to these participants who seem to have a preference for one language to express emotions, the following 35-year Spanish L1 woman, living in the UK for 12 years at the time of data collection and highly proficient in Spanish and English, pointed out that expressing one's emotions in very sad (negative) situations can be equally painful in both languages:

> […] when my dad passed away […] the pain was so large that the language did not matter. I had to explain and talk to it in English [LX] and Spanish [L1] and it was equally painful.

The following theme also emerged from the stories of several Hispanic participants: cross-generational communication between Spanish L1 grandparents (monolinguals, normally) or parents and their multilingual

grandchildren or children (usually non-dominant or non-proficient in their grandparents/parents' L1). Participant 33 (male, 23, American, from Puerto Rico, L1 English, LX Spanish) wrote about having problems in adjusting to his mother's dominant language while trying to communicate unpleasant feelings:

> Me being an English [L1] dominant speaker, had to express my feelings to my mom about me having a panic attack. When having these strong feelings of distress, I had to adjust to her dominant language [unknown, L1 Spanish probably]. This difficulty had me delve into incoherency and I had to end up translating adjectives that described my feelings accurately.

Participant 202 (female, 40, Argentinian, L1 Spanish, LX English, current resident in the States for 18 years) reported being dominant and highly proficient in both languages, but remembered that her first verbal impulse to scold her child was in L1 Spanish, switching immediately into English:

> Cuando se perdió mi hijo y tuve que retarlo por escaparse en la bicicleta. Obviamente la primera reacción fue en español [participant's L1] pero luego cambié al inglés [LX].
>
> *When my son got lost and I had to challenge him for escaping on his bike. Obviously the first reaction was in Spanish [participant's L1] but then I switched to English [LX].*

Participant 155 (female, 24, American, English L1 dominant, and low level of LX Spanish in the test) explained the challenge of verbalising sad emotions in L2 Spanish to her grandmother:

> When my mom was feeling sad about arguments with my dad and I felt mad and sad, I had to explain to my grandma what was going on since she was downstairs. It is difficult because I don't know a lot of words in Spanish and sometimes have a loss of words.

While not directly connected to emotion communication, it is worth reporting the story told by an American teacher (36 years, L1 English, LX Spanish) about her perception of cultural differences between Spanish and English-speaking countries, and the role of the grandmother ("abuela") in Hispanic families from South America:

> While doing research in Buenos Aires during an inundación y paro de transporte [*a flooding and transport stoppage*], I had to convince my friend's abuela to let me leave the house. No one was happy, but I had work to do and didn't want to get stuck where I couldn't do it. My American individualism told me that, given my age and independence, I was free to make my own decisions. Argentina familial structure said otherwise, and the family was offended that I didn't listen to the abuela.

Another group of participants also provided stories about an intercultural couple's communication and the difficulties in verbalising (negative) emotions in the language (LX in most cases) used with their partners (Dewaele, 2018b). Participant 209 (female, 35, American, L1 English and LX Spanish), despite feeling dominant in her L2 Spanish and being acculturated to Chile's cultural attitudes (as evidenced by the high score in the VIA test, Ryder et al., 2000), reported that arguing with her Chilean boyfriend in Spanish was an emotional challenge for her:

> Fighting with my Chilean boyfriend who didn't speak any English was a good exercise in emotional Spanish communication.

In relation to the expression of anger in couple arguments, Participant 378 (male, 61, Irish teacher, English L1 dominant, LX Spanish, high proficiency in both languages, current migrant in Spain, LoR = 33 years) highlighted the fact that anger is a difficult emotion to manage in a foreign language (LX):

> My partner is Spanish and we normally speak Spanish. If we have an argument, it is usually in Spanish. On a number of occasions I have felt that I don't control the strength of what I am saying if I get angry in Spanish, and so have ended up being more hurtful than I intended to be.

Participant 319 (female, 29, L1 British English, LX Spanish, highly competent in both languages, but dominant in English) reported being skilful in communicating love, tenderness, happiness, and even sadness in LX Spanish, having been residing in Mexico with her Hispanic husband for six years. However, she still found more difficulty in expressing anger ("enojo") and agitation in LX Spanish than L1 English:

> Diría que experimento la emoción correspondiente cuando lo expreso en mi L2 [Spanish], y en ese instante no me fijo en nada más. El amor romántico y la ternura se siente más natural en español después de 7 años con mi esposo, además de que los mexicanos por promedio son mucho más cálidos que los ingleses. En general me cuesta más expresar el enojo en español que en inglés, aunque no me es muy fácil en inglés tampoco. En general soy una persona muy emocional y no me cuesta expresar mi tristeza ni felicidad en cualquiera de los 2. A veces si quiero procesar una situación con más calma y menor grado de agitación me ayuda pensarlo en español y darle vueltas así.
>
> *I would say that I experience the corresponding emotion when I express it in my L2 [Spanish], and in that moment, I don't pay attention to anything else. Romantic love and tenderness feel more natural in Spanish after 7 years with my husband, besides Mexicans on average are much warmer than English people. In general I find it harder to express anger in Spanish than in English, although it is not very easy for me in English either. In general I am a very emotional person and it is not difficult for me to express my sadness or happiness in either language. Sometimes if I want to process a situation more calmly and with less agitation it helps me to think about it in Spanish and think about it that way.*

Similarly, a Hispanic female teacher (46 years, from Ecuador, dominant and highly proficient in L1 Spanish and LX English, and residing in the States for 22 years) vividly described her strong English LX disadvantage while fighting (verbally) with her English-proficient Indian husband during the first years of marriage:

> I learn English [her L3] in my late 20s. I am Hispanic and grew up in an environment where emotions were freely shared and openly displayed. I married an Indian man, upper class, whose true mother tongue was English. My English proficiency was low during the first two years of our marriage. I often felt at a disadvantage, while having regular conversations and, even worse, while having arguments. I was fluent in French and Spanish, but had extreme difficulties expressing my point of view to my own husband, who often reacted by rehearsing my linguistic shortcomings. I remember in particular a fight in which I tried to explain how frustrated I felt, and could only express mild annoyance, because I was unable to find the words to describe my ideas. As the argument continued, I felt powerless and more upset, until I literally was shaking and could not say another word.

As this participant stressed in her story, being a less proficient user than your partner in the language used for emotional communication can aggravate the LX disadvantage even more. This idea is shared too by Participant 222 (female, 21, from Spain, L1 Spanish, LX English), who felt anxious while talking in English to her more proficient Dutch boyfriend:

> It was very stressful since people from Holland tend to have a better English level than Spanish people and he mocked.

Letting aside these participants, sequential bilinguals in most cases, who reported some kind of LX disadvantage in couple arguments, Participant 329 (male, 21, from Colombia, simultaneous bilingual in L1A English-L1B Spanish, and former migrant in America in his early childhood) remembered his preference for Spanish for couple arguing, despite considering himself dominant in English. His story, reflecting a high degree of metalinguistic awareness, due probably to his knowledge-related job linked to the emotion domain, was as follows:

> I got into an incredibly emotional relationship with an incredibly manipulative person. One day in Bogotá, she won't stop yelling at me and telling me that I ruined her life and whatever. I have to note that we're both Bilingual (C1 Eng and Spa), but we would exclusively speak in English. It was at this moment that I realized I could explain myself better in Spanish, as I felt the words were truer to the emotional expression I wanted to convey than anything English was able to provide me with. It was very curious, as I always consider English to be my main language, but in this emotionally tense moment, my Spanish felt more appropriate.

Other participants' reports indicated the necessity of using the language of a country to really describe its cultural heritage and emotional load; for example, the emotional attachment to "food" commonly shared by the Spanish society in Spain. Thus, a New Zealander English L1 woman (75 years old), residing in Spain for four years and with a high knowledge of LX Spanish (as revealed by the proficiency test), wrote an elaborate story about Brexit and her feeling of dissatisfaction when talking about it in her LX Spanish:

> I came to Spain to retire with my English husband, knowing that membership of the EU would enable us to remain. After our arrival, in 2016, the Brexit referendum took place, which would remove the UK from the EU and endanger our capacity to remain here. At present we have access to state health care paid for by the British NHS. We contributed to this fund for forty years and now the government has told us that if there is a no deal Brexit, our health care will stop in six months and our pension (for which we have contributed) in three years. As age and infirmities make it impossible to acquire health insurance, we will have to leave Spain. I have explained this over and over to anybody who will listen, the butcher, the waitress in the cafe where we have breakfast, the bar where we have an affordable drink. I usually lose track of my Spanish [participant's LX] because I can't speak fast enough to express my anxiety, disappointment, outrage and fury. I get lost in sentence construction, lose vocabulary in both languages due to the anxiety and agitation I am experiencing and, as I explain to them, we can make no decisions until Brexit is decided, so I also feel very insecure.

Likewise, but turning unpleasant feelings into positive ones, a 42-year female participant (from Spain and a current migrant in Australia, LoR = 2 years, with a B2 level of LX English) recounted the difficulty she felt when explaining with English words the Spaniards' emotional and/or cultural attachment to the Iberian ham, after being given a ham as Christmas reward by her Australian employers:

> En Australia trabajaba en un restaurante y todos los años por Navidad los dueños regalaban algo de la despensa a cada empleado. A mí me tocó un jamón cocido. Me hizo muchísima ilusión […]. Cuando mis jefes y compañeros me vieron llorar se preocuparon mucho y me preguntaron que qué me pasaba [...]. Tuve que hacer gala de mi mejor inglés [participant's LX] (aunque todavía no lo dominaba mucho) y también hacer de tripas corazón para sacar mi mejor sonrisa y explicarles que en España es típico que las empresas regalen a sus empleados cestas de Navidad […]. Para mí aquel jamón era mucho más que un jamón; era como la forma de decirme que me apreciaban, valoraban mi trabajo y que alguien, tan lejos de mi casa, me quería […]. Me costó mucho encontrar las palabras para que me entendiesen, pero creo que entre mis gestos, mi cara y dos o tres palabras en español que dije me entendieron perfectamente (y que el chef era muy viajado y cuando dije 'Iberic Ham' y 'Jamón de Jabugo' asintió como diciendo 'Lo he probado y es verdad, es una delicatessen').

> *In Australia I worked in a restaurant and every year at Christmas the owners gave something from the pantry to every employee. I got a cooked ham. I was very excited [...]. When my bosses and colleagues saw me crying, they were very worried and asked me what was wrong [...]. I had to show off my best English [participant's LX] (although I had not yet mastered it very well) and also do my best to put on my best smile and explain to them that in Spain it is typical for companies to give their employees Christmas hampers [...]. For me that ham was much more than a ham; it was like a way of telling me that I was appreciated, that my work was valued and that someone, so far from my home, loved me [...]. I had a hard time finding the words to make them understand me, but I think that between my gestures, my face and two or three Spanish words that I said, they understood me perfectly (and that the chef was well travelled and when I said 'Iberic Ham' and 'Jamón de Jabugo' he nodded as if to say 'I tried it and it's true, it's a delicatessen').*

It is worth mentioning that this participant stressed the use of gestures and her face (body language) to support the lack of LX words and be able to express properly. She also makes use in her above story (and probably in the real conversation) of the code-switched word "Jamon de Jabugo", which is even a more specific word to name a part of Spain.

Other stories illustrated the so-called LX detachment as an advantage for emotional well-being in interactions. That is, the fact of not feeling or embodying the emotional load of some LX words can make language users talk freely in conversations. A 29-year Spanish L1 female teacher with LX English and highly proficient and dominant in both languages, who also was a former migrant in the UK for three years, described:

> I do feel a lot more comfortable using jokes and expressing my feelings in English [participant's LX] (I guess it is not my native language and I kind of can hide behind that wall...like I am not truly showing the person who I am).

Similarly, another Swiss female participant, with a low level of L1B Spanish and a high one of LX English, but dominant in her L1A French, reported:

> I was in Rome with my colleague for a conference. […] She asked me about my sexual orientation (in English), how I came to know I was a lesbian. I told her it was a difficult question for me. […] But somehow

> the fact that I was using English [participant's LX], instead of French [her L1A] put a lot of distance to my words. They would have hurt me more if I had had to tell them in French."

In relation to the communication of taboos and swearwords by multilinguals, a topic carefully investigated by Dewaele (2004a, 2004b, 2016b, 2017a), a 72-year English L1 man, from the UK but residing in Finland for most of his life, shared his pleasure at using Spanish foreign (LX) words:

> With regard to Spanish, my experience of emotionally-charged situations is rather sparse, but I do recall that (at the age of 25), while participating in six weeks' TEFL teaching practice (sent by London University) at a Barcelona secondary school, I took enormous PLEASURE in castigating a number of Spanish teenage boys in classes with the command 'SILENCIO, Jesús!' [*SILENCE, Jesus!*]. Having had an annoyingly fundamentalist protestant childhood (in the South of England), the command gave me enormous pleasure in the sense of breaking a taboo by means of this accidental coincidence of the Spanish name with that of an omnipresent figure in my childhood.

Two Puerto Rican students and simultaneous Spanish-English L1 users explained in their stories the necessity of using Spanglish and a combination of both languages to really express their feelings. The first (female, 21, dominant in both) told:

> Whenever I get emotional, English and Spanish get muddled and I end up speaking in Spanglish which helps me to get my point across.

The second (female, 20, dominant in English) wrote:

> A few years ago, when I was 16 years old, I participated in a summer program […] in Roger Williams University in Bristol, Rhode Island. It was the longest time I had ever spent away from my home and my country, Puerto Rico. After a while, I began to feel very homesick. The people around me only spoke English, and even though I'm proficient in the language and I tend to prefer speaking it, my inability to communicate in a combination of English and Spanish, like I normally do at home, frustrated me. I tried speaking to a counselor about it, but I found I couldn't express myself properly in English. It was as if the words weren't enough;

> no existing words in the English language were accurate enough to truly convey my emotions. After the unsuccessful meeting with the counselor, I called my mom and let loose all the Spanish I had been keeping pent up for the past weeks, and I immediately felt better. I realized that, as much as I may enjoy the English language and may sometimes prefer it, Spanish is and always be an essential part of who I am.

As evidenced from the previous reports, bi/multilinguals usually prefer one particular language from their repertoire (the L1, in many cases) for successful emotional verbal communication, and feel more doubtful about using the remaining ones (LXs normally) as the languages of their heart. However, in those cases where the (LX) words are not enough to transmit what one really feels, (non-verbal) body language tends to serve as a powerful communication tool. A 38-year woman from Greece, with a high level of English and Spanish (both LXs) and who had lived in Spain for three years, shared the view that her non-verbal language showed much more emotionality than her Spanish LX words in her attempt to thank her friends for their support:

> Lo más difícil fue agradecer [in LX Spanish] a mis colegas todo el apoyo, pero sin limitarme solo a un 'muchas gracias'. Al final creo que mis expresiones no verbales mostraron mucho más que mis palabras.
>
> *The hardest thing was to thank [in LX Spanish] my colleagues for all the support, but without limiting myself to just 'thank you very much'. In the end I think my non-verbal expressions showed much more than my words.*

Similarly, a 29-year Spanish L1 female user, from Spain and with an upper-intermediate level of LX English, explained that her non-verbal language was more informative than her English words in a farewell with English-speaking friends:

> […] me di cuenta de que no importaba si sabía más o menos palabras […] me expresé como pude [in LX English], pero básicamente mis lágrimas y sonrisa lo decían todo.
>
> *[...] I realised that it didn't matter if I knew more or less words [...] I expressed myself as I could [in LX English], but basically my tears and smile said it all.*

A British English L1 woman (29 years old), residing in Spain for eight years and with a high level of LX Spanish, also wrote about an "upsetting experience" where she opted to use gestures as she could not find the right words to express herself in LX Catalan during a first conversation with Catalan speakers after her arrival to Spain:

> When I first arrived in Spain, I attended a family gathering with a host family. […] During the meal I felt very overwhelmed and anxious, I found it hard to follow so many simultaneous conversations (in Catalan) [participant's LX, apart from Spanish]. When I started crying, I tried to hide it since I couldn't find the words to express how I was feeling. In the end I managed to communicate my anxiety with the help of gestures and a dictionary.

In the same vein, a 23-year female student from Spain, with an upper-intermediate level of LX English and who had never lived abroad, reported that she had to hug her dear Italian friend to say her sad farewells to him as she was unable to find the right words in LX English, the language they used to talk to each other:

> Un compañero de la residencia debía volver a su país de origen, Italia. Así que todas las personas del piso decidimos organizar una última cena para despedirnos. Normalmente, cuando estamos tod@s juntos hablamos en inglés [participant's LX]. Yo estaba realmente emocionada, pero no sabía expresarme con claridad, y simplemente decidí darle un abrazo. Las únicas frases que pude pronunciar fueron 'we will miss you' y 'safe journey back home', cuando en realidad me hubiera gustado decir mucho más.
>
> *A fellow resident was due to return to his home country, Italy. So all the people in the flat decided to organise a last dinner to say goodbye. Normally, when we are all together we speak in English [participant's LX]. I was really excited, but I didn't know how to express myself clearly, so I just decided to give him a hug. The only phrases I could utter were 'we will miss you' and 'safe journey back home', when in fact I would have liked to say much more*

Another L1 Spanish-LX English woman (56 years old), from Spain and advanced level in both languages, pointed out that she preferred reading translated English books while she enjoyed watching original

version films due to the advantage of visual cues and body language provided by characters:

> Aunque creo que tengo un nivel aceptable de inglés [participant's LX] prefiero leer libros traducidos, si bien en el caso de las películas, sí me gusta verlas en la versión original, aunque sea de un idioma que desconozco, pues percibo la naturalidad en el uso del lenguaje en que hablan los personajes.
>
> *Although I think I have an acceptable level of English [participant's LX] I prefer to read translated books, although in the case of films, I do like to watch them in the original version, even if it is in a language I do not know, because I perceive the naturality in the use of the language in which the characters speak.*

An American female participant (24-years old), from a Latino family but living in the United States and with a higher level of LX English than L1 Spanish, explained that her lack of Spanish words to express love for her Spanish grandmother made her use body language:

> I don't have enough of a grasp of Spanish [participant's L1] to express myself in it. The only people I ever speak to in Spanish are older strangers and my grandmother, so there really isn't much of a chance to get emotional. […] If my grandmother is telling me how much she loves/appreciates me in Spanish [L1 for both], I can really only say 'Te amo mucho', and like, give her hand a squeeze and make my face soft, so I mostly use body language to express emotions in Spanish.

In summary, the narratives of the bi/multilingual participants from this study vividly support the quantitative findings presented in the previous two chapters and summarised in the final chapter. Taken together, their experiences illustrate that emotion communication, a complicated endeavour on its own, becomes a much more complex process when more than one discursive, and thus emotional, system is involved. Each language offers different communicative resources, verbal, non-verbal and with unique emotional and cultural connotations, which bi/multilinguals must combine and integrate into their affective and cognitive repertoire. Initially, it is clear that, at least for sequential bi/multilinguals, L1s and their words tend to be more emotional overall. However, the stability and emotional advantage of L1s and their words are liable to change as the

semantic-affective structure of another language and the bi/multilinguals' new linguistic and cultural circumstances intervene. Their stories also reveal that non-verbal resources, body language and kinesics are equally necessary for effective emotional communication. In fact, non-verbal language would suffice on many occasions given its communicative power in any linguistic and cultural context.

CHAPTER 6. CONCLUSIONS

The final chapter opens by recapitulating the objectives and research questions of the study, in order to link them to the key findings obtained. The chapter discusses the implications of the results, connecting them to previous research and exposes again the inherent complexity in the process of emotion perception in bi/multilingual individuals because of a fascinating interplay between language, culture, and personal experience. This complexity and variation in emotional perception underscores the necessity for an integrated approach that considers both linguistic, socio-cultural, and contextual aspects to fully comprehend how bi/multilinguals construct and interpret emotional experience. Finally, the chapter lists the limitations of the study and suggests future directions for research that could further explore this fascinating multilingual phenomenon.

6.1 CONCLUDING REMARKS

Communicating emotions through verbal and non-verbal channels is a natural human process and a vital part of sociopragmatic competence in language. Learning to perceive and express them may pose an enormous challenge to bi/multilingual individuals due to, among other reasons, linguistic and cultural differences in the understanding of emotion and its conceptualisation between the languages they know. In this context, the objective of the present work was to explore emotion perception by bi/multilingual users in the Spanish and English languages in order to indirectly approach the mechanisms of emotion representation in the mind. More specifically, this study examined how the emotionality of emotional information, measured by a two-dimensional semantic map: valence and arousal (Russell, 2003; Barrett, 2013) is perceived by this population and how this perceptual process is subject to change because of internal variation in participants' profiles and other external factors.

The first exploration was the perception of emotional verbal stimuli—English-Spanish emotion word pairs with partial translation equivalence—by two groups of sequential bi/multilinguals. The research question

formulated for this study investigated the extent to which the emotional associations of valence and arousal for emotion words and their modulation in the bi/multilingual mind were linked to individual differences in the participants' sociobiographical, linguistic and acculturation-based profiles. The hypothesis was that all the variables under study would have an effect on this process to a greater or lesser extent and, according to the findings, this was largely confirmed as language dominance was the only variable that did not affect the emotional associations of emotion words, neither in the L1 lexicon nor in the LX lexicon.

With regard to language status, an analysis established whether participants differed in the perception and emotional ratings of the same emotion concepts in L1 versus LX. Overall, participants—the group of Spanish L1 users with LX English in particular—favoured an L1 advantage, perceiving most emotion word equivalents in L1 as more emotionally-charged in valence and/or arousal than the corresponding LX equivalents. L1 advantage was followed by no effect of language status on emotional associations, with many participants rating both equivalents similarly in their L1 and LX. Finally, LX advantage was also minimally observed for some emotion words. These three emotional patterns suggest that sequential bi/multilinguals can perceive different degrees of emotionality of the same lexical concept (emotion word) when it is presented to them in their L1 or LX, due to a combination of psychological, linguistic and cultural factors that influence how they process and experience the emotions associated with words.

As the literature on the subject has shown and it is again demonstrated in this study, an emotional advantage in L1 is the most common scenario. Words in L1 tend to have a deeper emotional resonance because they are associated with early socialisation, family and cultural experiences. That is, L1 is rooted in emotional and social experiences from childhood, making words in this language linked to emotional memories experienced from an early age and therefore more emotionally resonant (Pavlenko, 2005; Dewaele, 2010; Altarriba & Basnight-Brown, 2015). In addition, linguistic proficiency in L1 is generally well-established, which facilitates a more direct connection between words and emotions. In contrast, in LX, emotional associations may not be as automatic or deep due to delayed learning and possible language barriers (Dewaele, 2010, 2015c, 2016a, 2022; Pavlenko & Driagina, 2017; Velez-Uribe & Rosselli, 2019; Garrido & Prada, 2021; Imbault et al., 2021). As stated

by Pavlenko (2012: 405), "in some bilingual speakers, in particular late bilinguals and foreign language users, respective languages may be differentially embodied, with the later learned language processed semantically but not affectively". In the present research, on the assumption that emotion words rated by participants were known to them to some extent, they were given an extra option next to the scales to indicate it and avoid rating the word in case of unfamiliarity. Therefore, the LX disadvantage for some emotion words poses interesting questions about the notion of language embodiment and the idea that knowing an LX word does not mean feeling it. For example, knowing the English adjective *thrilled* in LX English and its meaning and translation (*entusiasmado*) in L1 Spanish is not enough to feel and perceive the same emotional associations for both word equivalents. This idea was indeed supported and reinforced by participants' stories at the end of the questionnaire, many of which illustrated the fact that emotion communication through LX words involves more difficulty and frustration.

Although L1 emotional advantage tends to be the norm, there is evidence that sequential bi/multilinguals, under certain conditions, can show similar emotional behaviour in their two languages (Ferré et al., 2010; Degner et al., 2012; Winskel, 2013). The results of this study also demonstrate this pattern, since the emotional load of emotion words was similar in L1 and LX in some cases. Regardless of the factors that may contribute to this comparable emotional perception, this pattern could be explained, for example, by the transfer of emotional experiences or by shared linguistic and cultural factors between the discourse systems under study. Emotional experiences undergone in L1 can be transferred to LX and reinterpreted within the new linguistic and cultural context. This means that emotions associated with certain words in L1 may maintain a similar emotional charge when used in LX, especially if the underlying experiences are shared or similar in both contexts (Pavlenko, 2012, 2014). Furthermore, when emotional words are embedded with shared cultural meanings, bi/multilinguals may experience a similar emotional charge when using those words in both languages (Alba-Juez, 2023). As previously mentioned, the emotional advantage for the lexicon in LX was the least observed pattern in this research. However, studies such as Kazanas and Altarriba (2016) or Vélez-Uribe and Rosselli (2019) document the possibility of this phenomenon, attributing it, for instance, to an over dimension effect and the idealised representation of

the target language and its sociocultural context (Hernández Muñoz & Blanco-Canales, 2023).

The discussion now moves on to consider the effect of factors that contribute to the same emotional concepts being perceived differently in L1 and LX of bi/multilingual users. In LXs, the usual disadvantage for affective perception does not always last forever and the emotional associations of emotion vocabulary in LXs can in fact be modulated, readjusted and developed in the bi/multilingual mind (Dewaele, 2017b). Although such emotional (and cognitive) restructuring may depend on a complex interaction of factors, the present research argues that emotional word associations in LXs and their development in sequential bi/multilinguals are mainly linked to LX proficiency level, being a migrant and frequency of LX use. In addition to these key agents, other less influential factors such as—in decreasing order of significance according to the analyses and results in this study—AoA of the LX, CoA of the LX, LoR in the LX culture, and degree of acculturation to the LX culture tend also to modulate the degree of pleasantness and/or activation of some emotion words in a positive and beneficial way. As introduced beforehand, the effect of language dominance was insignificant and the effect of multilingualism level on valence perception in LX was almost negligible too. Although these variables may influence the communication of emotion in general, for example, the preference of L1s and/or LXs for emotional expression, they seem not to so powerfully impact affective representations of emotion words in the LX lexicon (Dewaele, 2010, 2017b).

LX proficiency was definitely the linguistic variable under study that most beneficially affected the emotional associations of LX words. The most proficient English LX users at around the C1 level (CEFR, Council of Europe, 2001, 2018) were able to perceive the valence and arousal associations of some emotion words as stronger and more extreme, conforming more closely to the English L1 pattern. This finding shows that achieving an intermediate or advanced level in a language is crucial for bi/multilinguals to perceive and process words and especially emotion vocabulary in LX in a similar way to L1 users. In other words, an advanced proficiency level in LX is necessary for the semantic-affective representations of LX words to begin to modulate and approach the emotional norm of the target language (Ferré et al., 2010; Lorette & Dewaele, 2015, 2019, 2020; Resnik, 2018). Emotional word

processing in a language involves a series of automatic processes that develop with practice and continuous exposure. Thus, higher levels of language proficiency allow speakers to automate these processes, which facilitates faster and more efficient perception (Segalowitz et al., 2008). Similarly, an advanced level of linguistic competence in LX implies a deeper and broader knowledge of the semantics of this type of lexicon. This knowledge is essential to understanding the subtleties and nuances of words, allowing for more natural processing and perception (Altarriba & Basnight-Brown, 2015).

As bi/multilinguals become more proficient, they are likely to spend more time immersed in LX through reading, listening and conversing with other speakers. Consequently, increased exposure and use allow for deeper emotional connections to be formed with words. As such, the English LX participants in this study that reported a higher use of LX English also provided stronger emotional associations for some English LX words. The positive effect of using the LX on a frequent basis was also found by Dewaele (2004a, 2004b) in his research on bi/multilingual swearing. He specifically showed that LX users who used the target language less frequently for swearing gave lower ratings on the emotional force of swear words and taboo words in that language compared to frequent users of the language who provided stronger associations.

In relation to the effect of CoA of the LX, this study also reinforces the idea that the way bi/multilinguals learn their languages impacts their cognitive restructuring (Athanasopoulos, 2016). Here, for instance, the valence of some English LX words (*overwhelmed*, *eagerness*, *ecstatic*) came closer to the English L1 norm when the acquisition of LX English was supported by doses of natural learning in mixed contexts. It has been shown that the context of LX acquisition, particularly if it is immersive, enables stronger emotional association with words. Learners who acquire an LX in a natural context, where they are exposed to real emotional situations, develop a deeper understanding of the emotional connotations of words (Dewaele, 2010). Contrarily, the context of LX acquisition did not have a significant impact on the arousal ratings of words. This suggests that arousal is less subject to change through learning compared to valence. This may be because, unlike valence, arousal refers to a more automatic and physiological response. Arousal is more related to autonomic responses that are not easily learned in an LX, as opposed to

valence which can be modified by conscious and repetitive experiences (Harris et al., 2003; Harris, 2004; Pavlenko, 2005; Schumann, 2019).

Furthermore, being a migrant and living immersed in LX culture facilitates the understanding of the LX and its emotional dimensions, thereby strengthening emotional associations with words and aligning them more closely with those of L1 speakers. Compared to the most monocultural non-migrants, the Spanish migrants in this study perceived some emotion words in LX English as more extremely pleasant in valence and more activating in arousal, adjusting to the English L1 pattern more precisely in all cases. Thus, immersion, which provides frequent exposure to the LX in various contexts, allows learners to gain deeper insights into the cultural background and social norms and then to understand the emotional nuances associated with words in real-life situations, reinforcing emotional connections and making them more similar to those of native speakers (Hernández Muñoz & Blanco-Canales, 2023). In addition to the increased exposure, contextual use, and cultural and social integration that immersion provides, immersion also generates a deepening of affective memory. Emotional experiences in LX tend to be encoded more deeply in affective memory when experienced in an immersion context, which in turn increases the emotional charge of words in LX (Abbassi et al., 2015).

As for the emotional associations of emotion words in the L1 lexicon, the results showed that, in general, the variables under study—language dominance, multilingualism level, L1 proficiency, L1 use, being a migrant, L1 variety, maintenance level of the L1 culture—barely affect the perceived emotionality of L1 words in the two groups of sequential bi/multilinguals and, when they do, they affect a lower number of words and the size of the significance tends to be small (Plonsky & Oswald, 2014). For instance, the Spanish L1 users with a higher language repertoire and level of multilingualism perceived *eufórico* as more activating; and those with higher level of Spanish and frequency of use perceived *ilusión* as more positive and *desolado* as more negative in valence. In addition, those migrants who lived or had lived in other countries perceived the arousal of six Spanish L1 words (*ilusión*, *angustiado*, *agobiado*, *estupefacto*, *nervioso*, *desolado*) as more activating compared to non-migrants. In the other group, the English L1 migrants who still maintained a strong attachment to their L1 culture rated the English words *eagerness* and *pain* as much more activating in L1 English too. Nevertheless, the limited

influence of linguistic and cultural factors on the emotional associations of emotion L1 terms implies that bi/multilinguals' L1 lexicon is much more stable and reluctant to change (Pavlenko, 2008a, 2008c; Athanasopoulos, 2015, 2016). This is directly linked to the fact that L1 is "the language most closely associated with the development of emotion in childhood and adolescence in the culture-of-origin [L1 culture], and any changes would have to overcome these deeply-engrained patterns of thought and affect" (Schrauf & Sanchez, 2011: 183). Contrarily, the bi/multilinguals' LX lexicon and its emotional and semantic structure are more dynamic and open to restructuring due to the constant interaction between and influence of language- and culture-related factors (Rosselli et al., 2017).

As to L1 variety in the group of Spanish L1 users, knowing L1 Spanish from Central and South America or from Spain had an effect on the emotional associations of five words (*ilusión*, *pena*, *impactado*, *melancolía*, and *orgullo*), providing evidence that although there is indeed emotional (cultural) agreement on some emotion word concepts, there also exist small differences in others and thus cross-cultural variation between European Spanish and Latin-American Spanish (Ogarkova et al., 2012; Dewaele, 2015b). Delgado et al. (2020: 10), who compared the lexical structure of Spanish emotion terms in eight Spanish-speaking linguistic areas, found a broad consensus among areas and "cross-cultural generalizability", but advised that further investigation should explore whether there are basic semantic similarities and/or particular nuances in meaning of emotional vocabulary in different Spanish-speaking countries. Thus, the present work supports the existence of differences in emotional judgements of the same emotion concept between Spanish-speaking areas. A case in point is *orgullo*, which was perceived as more activating by Latinos than Spaniards, reflecting the more collectivistic culture of the former (Wierzbicka, 1994, 1999). The findings on the effect of Spanish variety on emotion word perception in Spanish leads to the need to create a normative affective word list for Latin-American Spanish, which would help to compare the lexical-emotional structure of different Spanish language varieties (Delgado et al., 2020).

Other points to highlight in relation to the perception of emotion words are, on the one hand, that emotion terms denoting feelings, despite belonging to the same semantic category, are not restructured equally and at the same speed in the bi/multilingual mind, nor is their semantic-affective development influenced by the same variables (Pavlenko, 2008a, 2012).

On the other hand, it is important to note that the valence and activation of emotional associations of words also function independently and are not always affected by the same factors (Barrett, 2017). This supports the notion that these two emotional variables assess different dimensions of emotional experience; while arousal refers to a more automatic and less conscious process, valence measures evaluative and purely semantic processes (Citron et al., 2014; Kuperman et al., 2014; Pavlenko, 2014; Hernández Muñoz & Blanco-Canales, 2023).

The second study focused on visual and emotional videos in order to investigate how bi/multilinguals in Spanish and English perceive emotional information when only visual cues are available. The research question specifically examined the extent to which the emotional associations of valence and arousal for the videos were linked to differences in the participants' sociobiographical and linguistic profiles and to the stimuli characteristics. The hypothesis about the potential effect of all the variables under study on this perceptual process was only partially confirmed, with gender and kinesics level of the stimulus being the sole significant factors.

Overall, participants judged the emotional visual stimuli similarly in the valence and arousal dimensions regardless of the language modality (Spanish or English) followed in the perception task. The absence of significant differences, and thus, the similarity between the Spanish and English languages implies that the perception of emotion through visual channels has a more universal structure across the discourse systems under study. This result is consistent with Ekman's research on the universality of emotional facial recognition, an important component of visual emotional perception. It has been shown that facial expressions of basic emotions, such as happiness and sadness, are recognised similarly in different ethnic and linguistic groups (Ekman, 1992, 2007). Similarly, Lindquist et al. (2012) proved that the presentation of positive or negative emotional images induced consistent emotional responses in terms of brain activity and autonomic activity in individuals from different cultural backgrounds.

The emotional perception of the visual scenarios by bi/multilinguals was independent of their linguistic profiles, as no factor was found to affect this perceptual process. In general, the non-effect of these language-related variables emphasises that visual and non-verbal emotion recognition transcends linguistic (and cultural) barriers, being a more

automatic and rapid process that does not require conscious linguistic analysis even though the perception task is performed through language (Calder & Jansen, 2005; Matsumoto & Willingham, 2009). As to the status of the language modality (L1 or LX), bi/multilinguals doing the task in their L1 or LX perceived more or less equal degrees of pleasantness and activation of the visual clips, implying that there is no L1 advantage for visual emotion recognition ability (Lorette & Dewaele, 2015, 2019). Indeed, a small (English) LX advantage was found for the emotionality degree of the happy face video in valence. In their study, Mavrou and Dewaele (2020: 326) also reported that Spanish LX users perceived visual stimuli as significantly more emotional than Spanish L1 users, arguing that "LX users tend to perceive emotional intensity and pleasantness at equal or even higher levels than L1 users" when only visual cues are available. These findings are also in line with those of Riviello and Esposito (2012), who found that participants in the English and Italian language modalities, regardless of the language status and cultural background, recognised emotional states similarly when emotional information was presented through visual cues (mute videos).

Without intending to discuss gender issues, in this study, females tended to perceive visual stimuli, particularly those with positive valence, as more emotional than males (cf. Lorette & Dewaele, 2015; Dewaele & Moxsom-Turnbull, 2020; where gender did not affect emotional intensity). Neuroscientific studies have shown that there are disparities in brain activation between males and females when processing emotional visual stimuli. For example, a study using functional magnetic resonance imaging (fMRI) found that women exhibited higher activation in brain areas associated with emotion, such as the amygdala and the prefrontal cortex, when exposed to positive emotional images compared to men (Proverbio et al., 2008).

Finally, the kinesics level of the stimulus—interaction degree among characters in the video: individual faces vs. interaction with hugs—significantly influenced the perceived emotionality. The visual videos portraying a higher level of body language, gestures and interaction among characters were perceived as much more emotional overall. Hence, it seems that the way the body is moved may intensify or attenuate the perception of emotions such as happiness or sadness (Mavrou & Dewaele, 2020). The same pattern was obtained by Dewaele and Moxsom-Turnbull (2020), who investigated the effect of gestural intensity (combined with facial

expressions) and found that English users perceived the medium-gesture video as more emotional than the low-gesture video. Kinesics is then crucial for conveying emotions effectively and plays a key role in the expression, perception and understanding of emotions during interpersonal interaction (Matsumoto, 2006). The importance of paralinguistic skills was indeed acknowledged through stories told by participants, who explained the advantage of relying on body language and visual information to communicate emotions when having difficulties doing it verbally.

6.2 LIMITATIONS AND FURTHER RESEARCH

Based on participants' final comments on the online questionnaire, there are at least three potential limitations concerning the questionnaire design. A first limitation concerned its length, as some participants reported that the time taken to complete it was longer than expected. Although its time completion (around 20 minutes depending on participants' sociodemographic, linguistic, and cultural background) was advertised on the questionnaire instructions, the real and underestimated length of the questionnaire for some people definitely made them leave the questionnaire earlier, thus lowering the completion rate. It may also have reduced the number of bi/multilinguals answering the follow-up question, asking for a personal story about a situation where they felt very emotional and had to express their emotions in a foreign language. With regard to the wording of the follow-up question, a second limitation was the marked bias of the term "foreign" in favour of bi/multilingual participants knowing Spanish and/or English as LX, but not embracing simultaneous bilinguals who learnt these two languages from birth and who do not feel them as *foreign*. Similarly, the phrase "foreign country" was used in the wording of the adapted VIA test (Ryder et al., 2000), devoted to measuring migrants' maintenance of cultural practices of their country of origin (L1 culture) and acculturation to cultural practices of the foreign country (LX culture). Although this questionnaire section was checked carefully in the pilot study, the term "foreign" again proved problematic for some language users. This issue was rightly stressed by a male participant (simultaneous bilingual and highly proficient in L1A Spanish and L1B English, current migrant in the UK for more than

10 years, and highly acculturated to both cultural environments) in his comment at the end of the questionnaire:

> I had to choose the United Kingdom as a foreign country, but I do not really consider myself as living in a foreign country. The questionnaire does not consider people like myself who are bilingual from "birth" and who have a dual national identity. Yes, I grew up in Spain. However, I always considered myself both English and Spanish, and never thought of the UK as foreign.

The term "foreign (country)" should have been changed by the most appropriate noun phrase "LX country or culture", meaning the country and cultural environment where the LX is spoken. A third limitation was that some statements that participants had to agree or disagree with on the VIA test were slightly difficult to answer because of their vagueness for a complex multicultural world. This was reported by an L1 English-L3 Spanish bi/multilingual from the UK and living in Spain for six months at the time of data collection:

> I feel like I involve myself in British "cultural practices" every day (e.g. in what I eat, what I wear, the hobbies I have), but I do not consider myself in slightest bit nationalistic and I don't do those things because they are cultural practices of my country of origin - I do them because I am conditioned to act that way from my childhood, yet I would still consider them aspects of British culture. However, there are many things that I would never do which would also be considered a British cultural practice.

These limitations: length, bias and vagueness in particular warrant further attention when designing online questionnaires to support equitable multilingualism for all (Ortega, 2019). More specifically, emotion words in English and Spanish were difficult to rate in the arousal dimension. Several participants reported on their problems in understanding the real meaning and nuances of the scale anchors "very calm" and "very exciting/agitating". Therefore, despite having been checked in the pilot study too, a more careful explanation of these two terms would be necessary for similar future research working with the arousal scale.

The selection of some of the emotion words used as verbal stimuli is also acknowledged as a limitation of the study. Firstly, it should be noted that some emotion words in English and Spanish are ambiguous

in terms of grammatical category (part of speech) and that, depending on the context, they can function as nouns, adjectives or even verbs. For example, in the pair *upset/disgusto*, the English word "upset" was considered a noun and translated as "disgusto" in Spanish. However, it could have been considered an adjective and translated as "disgustado". Secondly, the English-Spanish translation of some emotion word pairs could be questionable and perhaps other equivalent terms would have been more accurate. For example, the pair *eagerness/impaciencia*, although well translated according to dictionaries such as Cambridge (https://dictionary.cambridge.org/es/diccionario/ingles-espanol/eagerness), presents ambiguity in emotional charge depending on the context. "Eagerness" has indeed a more positive connotation than "impaciencia" and, therefore, more appropriate equivalents like the Spanish terms "afán", "ansia" or "ilusión" may be more adequate. Similarly, the emotional charge of the pair *stunned/estupefacto* may also differ depending on the context.

In terms of future research, increasing the sample size of simultaneous bi/multilinguals in L1 Spanish and L1 English and participants with Spanish and English as LXs is advisable in order to analyse individual differences in these two language groups and compare them with the sequential bi/multilinguals. Another potential study would be to investigate how emotion word pairs and their valence and arousal ratings in Spanish and English relate to lexical variables like word frequency or word category (emotion adjective vs. noun). This would enable an investigation into, for example, whether Spanish emotion words with a higher frequency in the language (*dolor*) are perceived and rated as more emotional by Spanish L1 and LX users than low-frequency emotion words (*desolado*), or whether emotion adjectives in English (*thrilled*) are more emotional and elicit more extreme valence and arousal scores than emotion nouns (*pain*). This last point may shed light on the degree of structural (non-)equivalence between Spanish and English emotion vocabularies and whether these two languages differ in the word categories favoured in emotion encoding (Jarvis & Pavlenko, 2008; Pavlenko, 2012, 2014). In addition, apart from word frequency and word category, examining other lexical variables like word concreteness, imaginability or age of acquisition of the word would be of interest (Duchon et al., 2013; Warriner et al., 2013; Stadthagen-González et al., 2017).

This work certainly provides researchers interested in the topic with a new perspective on how bi/multilingual populations communicate and

represent affective information in L1s and LXs (Mavrou et al., 2022; Blanco-Canales & Martín Leralta, 2023). Specifically, this study examines how bi/multilinguals' emotional associations may change due to individual differences, as all comparisons in the analyses are performed between multicompetent bi/multilingual users. It also contributes to the literature on emotion multicompetence and the continuous restructuring and development of the bi/multilingual mind (Cook, 2012; Dewaele, 2016a). Taken together, the results will help to triangulate previous research findings, something always necessary in the field in order to gain a full and critical understanding of the whole picture (Dewaele, 2019).

Finally, this work is of particular relevance to the teaching and learning of foreign languages (see Appendix C for a proposal on teaching materials). The results of this study highlight the importance of focusing on emotion vocabulary and addressing its delicate nuances from the first stages of language learning (Jiménez Catalán & Dewaele, 2017; Gkonou et al., 2020; Pérez-García & Sánchez, 2020; Sánchez, Fernández, & Pérez-García, 2022; Sánchez & Pérez-García, 2020). In a globalised society, language students normally face emotional communication in LXs in their daily lives or at the workplace, having to use emotional vocabulary in an LX which may not be the one preferred for affective expression and to understand (non-)verbal cues in cultural contexts that may differ significantly from those to which they are accustomed. This makes it extremely important that LX students should undertake (English) language courses where they are also taught this sociopragmatic skill. Although the common lack of emotionality in language classrooms seems to be changing, as advertised by the CEFR (Council of Europe, 2018) which introduces emotion production and recognition skills among its descriptors at different proficiency levels, the truth is that the emotional reality of the (E)FL classroom is still in its infancy. Linking theory and practice is rather an arduous task and much more work remains to be done in the classroom to supply students with the range of automatically generated emotions in natural learning contexts.

All in all, to experience emotion is a human gift and learning to communicate feelings in our first and additional languages will definitely help us be better individuals and to come closer to those we love.

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APPENDICES

APPENDIX A. ONLINE QUESTIONNAIRE

You are invited to participate in this funny questionnaire on emotion perception in Spanish and English.

You will have the opportunity to know your proficiency level in both languages with a fast and easy test.

The survey will take around 20 minutes of your time.

To participate, you must be adult (over 18) and have at least basic knowledge (A2 level) of Spanish and English to be able to understand the questions. Some parts will be in just one language. However, you can choose from the top right menu the main language (Spanish or English) of the questionnaire.

Your responses will be anonymous and used for research purposes only.

Although the questionnaire is mobile-friendly, completion is easier on a laptop or desktop.

Thank you in advance for your time and contribution!

If you click on "I agree", you agree to take part in the questionnaire and declare that you have read the information above. You may choose to withdraw at any time.

o *I agree

***Gender**

o Male
o Female
o Other

***Current age**

A number is required.

***Education level (highest diploma or degree)**

o Secondary Education
o A-level
o Vocational training

o Graduate
o Masters, MA
o Doctorate, PhD

***Profession**

***Nationality**

***Is your country of origin a Spanish-speaking country, an English-speaking country or other?**
o A Spanish-speaking country (e.g., Spain, Mexico, etc.)
o An English-speaking country (e.g., USA, New Zealand, etc.)
o Neither a Spanish-speaking nor an English-speaking country (e.g., France, Italy, etc.)

***Write the name of your country of origin**

***Do you live (or have you ever lived) in a country different from your country of origin?**
o Yes, I am currently living in a foreign country.
o Yes, I have lived in a foreign country before but not now.
o No, I have never lived in a foreign country.

Display This Question: Do you live (or have you ever lived) in a country different from your country of origin? = No, I have never lived in a foreign country.
***Write the name of your country of residence**

***Is the foreign country where you are currently living (or have lived) a Spanish-speaking country, an English-speaking country or other?**
If you have lived in more than one foreign country, pick the one that has influenced you most.
o A Spanish-speaking country.
o An English-speaking country.
o Neither a Spanish-speaking nor an English-speaking country.

***Write the name of that country**

***Your age of arrival to that country**
A number is required.

***Length of residence in that country**
o Less than 1 year
o More than 1 year

Display This Question: Length of residence in that foreign country (i.e., number of months, years, etc. you have been living... = Less than 1 year
***How many months?**
A number is required.

Display This Question: Length of residence in that foreign country (i.e., number of months, years, etc. you have been living... = More than 1 year
***How many years?**
A number is required.

***Which was your motivation to move to that foreign country?**
o Forced migration (due to war, famine, etc.)
o Professionally or economically oriented reasons (to earn money, to work or find a job)
o Educationally oriented motivation (to learn a new language and culture, to study)
o Personally oriented motivation (to be closer to family or friends)

Please select one of the numbers to the right of each question to indicate your degree of agreement or disagreement.

The scale ranges from 1 “Strongly Disagree” to 9 “Strongly Agree”.

If you feel completely neutral, neither agreement nor disagreement, select the middle of the scale (number 5).

Some of these questions refer to your country of origin and its cultural practices. Others refer to the foreign country where you live (or have lived) and its cultural practices.

(*)

1. I often participate in the cultural traditions of my country of origin.
2. I often participate in the cultural traditions of my foreign country.
3. I would be willing to marry a person from my country of origin.
4. I would be willing to marry a person from my foreign country.
5. I enjoy social activities with people from my country of origin.
6. I enjoy social activities with people from my foreign country.
7. I am comfortable interacting with people from my country of origin.
8. I am comfortable interacting with people from my foreign country.
9. I enjoy entertainment (e.g. movies, music) from my country of origin.
10. I enjoy entertainment (e.g. movies, music) from my foreign country.
11. I often behave in ways that are typical of my country of origin.
12. I often behave in ways that are typical of my foreign country.
13. It is important for me to maintain or develop cultural practices of my country of origin.
14. It is important for me to maintain or develop cultural practices of my foreign country.
15. I believe in the values of my country of origin.
16. I believe in the values of my foreign country.
17. I enjoy the jokes and humour of my country of origin.
18. I enjoy jokes and humour from my foreign country.
19. I am interested in having friends from my country of origin.
20. I am interested in having friends from my foreign country.

Which languages do you know and in what order did you learn them? Indicate the age at which you started learning each language.

The first language (L1) refers to any language learnt before age three.

You may have more than one L1; if so, indicate all of them. Then, indicate your additional languages learnt after age three, regardless of your level of proficiency.

	Language	*Age* *A number is required.*
L1A		
L1B		
L1C		
L2		
L3		
L4		
L5		

Was acquisition naturalistic (outside of school), instructed (at school) or mixed (both)?

	Outside of school	*At school*	*Both*
L1A	o	o	o
L1B	o	o	o
L1C	o	o	o
L2	o	o	o
L3	o	o	o
L4	o	o	o
L5	o	o	o

***Which do you consider to be your dominant language(s)?**

Language dominance refers to the language which you know better and use more frequently and with greater ease, that is, the most important one for you from all the languages you know. Your dominant language(s) does not have to be the L1; it may be the L2, L3, etc.

On a scale from 1 (minimal proficiency) to 5 (maximal proficiency) how do you rate yourself in speaking, understanding (listening), reading, and writing in all your languages?

Language proficiency is inside each of your languages and refers to the degree of skill in speaking, listening, reading, and writing in each of them.

	Speaking					*Understanding*	*Reading*	*Writing*
	minimal (1)	*low (2)*	*medium (3)*	*high (4)*	*maximal (5)*			
L1A	o	o	o	o	o			
L1B	o	o	o	o	o			
L1C	o	o	o	o	o			
L2	o	o	o	o	o			
L3	o	o	o	o	o			
L4	o	o	o	o	o			
L5	o	o	o	o	o			

How frequently do you use each of your languages?

	Frequency				
	yearly or less	*monthly*	*weekly*	*daily*	*all day*
L1A	o	o	o	o	o
L1B	o	o	o	o	o
L1C	o	o	o	o	o
L2	o	o	o	o	o
L3	o	o	o	o	o
L4	o	o	o	o	o
L5	o	o	o	o	o

This task is in English.

You will use two different scales to rate your associations while reading English words.

The first scale PLEASANTNESS ranges from 1 "Very negative" to 9 "Very positive".

Here, you will indicate the level of pleasantness that you associate with each English word. If you judge a word to be "very negative", select 1. For a "very positive" word, select 9. For a "neutral" word, select the middle of the scale (5).

The second scale AROUSAL ranges from 1 "Very calm" to 9 "Very exciting/agitating".

Here, you will indicate the level of arousal that you associate with each English word. If you judge a word to be "very calm", select 1. For a "very exciting/agitating" word, select 9. For a "neutral" word, select the middle of the scale (5).

Please work at a rapid pace and don't spend too much time thinking about each word.

There are no right or wrong answers.

You will have a further option to indicate that you don't know the word.

PLEASANTNESS

(*)	*1 (very negative)*	*2*	*3*	*4*	*5 (neutral)*	*6*	*7*	*8*	*9 (very positive)*	*I don't know the word*
eagerness	o	o	o	o	o	o	o	o	o	o
anticipation	o	o	o	o	o	o	o	o	o	o
contentment	o	o	o	o	o	o	o	o	o	o
pride	o	o	o	o	o	o	o	o	o	o
sorrow	o	o	o	o	o	o	o	o	o	o
distressed	o	o	o	o	o	o	o	o	o	o
glad	o	o	o	o	o	o	o	o	o	o
overwhelmed	o	o	o	o	o	o	o	o	o	o

(*)	*1 (very negative)*	*2*	*3*	*4*	*5 (neutral)*	*6*	*7*	*8*	*9 (very positive)*	*I don't know the word*
shocked	o	o	o	o	o	o	o	o	o	o
melancholy	o	o	o	o	o	o	o	o	o	o
pleased	o	o	o	o	o	o	o	o	o	o
sadness	o	o	o	o	o	o	o	o	o	o
stunned	o	o	o	o	o	o	o	o	o	o
thrilled	o	o	o	o	o	o	o	o	o	o
upset	o	o	o	o	o	o	o	o	o	o
ecstatic	o	o	o	o	o	o	o	o	o	o
anxious	o	o	o	o	o	o	o	o	o	o
delighted	o	o	o	o	o	o	o	o	o	o
devastated	o	o	o	o	o	o	o	o	o	o
pain	o	o	o	o	o	o	o	o	o	o

AROUSAL

[Same Table with the arousal scale]

Esta tarea es en español.

Usarás dos escalas diferentes para valorar tus asociaciones mientras lees cada palabra española.

La primera escala AGRADABILIDAD va desde 1 "Muy negativo" hasta 9 "Muy positivo".

Aquí, indicarás el nivel de agradabilidad que asocias a cada palabra española. Si consideras que una palabra es "muy negativa", selecciona 1. Para una palabra "muy positiva", selecciona 9. Para una palabra "neutral", selecciona el medio de la escala (5).

La segunda escala ACTIVACIÓN va desde 1 "Muy calmada" hasta 9 "Muy emocionante/agitante".

Aquí, indicarás el nivel de activación que asocias a cada palabra española. Si consideras que una palabra es "muy calmada", selecciona 1. Para una palabra "muy emocionante/agitante", selecciona 9. Para una palabra "neutral", selecciona el medio de la escala (5).

Por favor responde rápidamente y no pases mucho tiempo pensando en cada palabra.

No hay respuestas correctas o incorrectas.

Tendrás una opción más para indicar que no conoces la palabra.

AGRADABILIDAD

(*)	*1 (muy negativa)*	*2*	*3*	*4*	*5 (neutral)*	*6*	*7*	*8*	*9 (muy positiva)*	*No conozco la palabra*
impaciencia	o	o	o	o	o	o	o	o	o	o
ilusión	o	o	o	o	o	o	o	o	o	o
satisfacción	o	o	o	o	o	o	o	o	o	o
orgullo	o	o	o	o	o	o	o	o	o	o
pena	o	o	o	o	o	o	o	o	o	o
angustiado	o	o	o	o	o	o	o	o	o	o
alegre	o	o	o	o	o	o	o	o	o	o
agobiado	o	o	o	o	o	o	o	o	o	o
impactado	o	o	o	o	o	o	o	o	o	o
melancolía	o	o	o	o	o	o	o	o	o	o
contento	o	o	o	o	o	o	o	o	o	o
tristeza	o	o	o	o	o	o	o	o	o	o
estupefacto	o	o	o	o	o	o	o	o	o	o
entusiasmado	o	o	o	o	o	o	o	o	o	o
disgusto	o	o	o	o	o	o	o	o	o	o
eufórico	o	o	o	o	o	o	o	o	o	o
nervioso	o	o	o	o	o	o	o	o	o	o

(*)	*1 (muy negativa)*	*2*	*3*	*4*	*5 (neutral)*	*6*	*7*	*8*	*9 (muy positiva)*	*No conozco la palabra*
encantado	o	o	o	o	o	o	o	o	o	o
desolado	o	o	o	o	o	o	o	o	o	o
dolor	o	o	o	o	o	o	o	o	o	o

ACTIVACIÓN

[Same Table with the arousal scale in Spanish]

This task is in English.

This is a test to measure your English proficiency. It consists of around 60 strings of letters. Your task is to decide whether they are existing English words or not.

Click on "YES" if you think it is an existing English word, even though you don't know its exact meaning.

Click on "NO" if you think it is not an existing English word. If you are not sure that the word exists, you should respond "no".

In this experiment, British English rather than American English spelling is used. For example: "realise" instead of "realize"; "colour" instead of "color", and so on. Please don't let this confuse you. This experiment is not about detecting such subtle spelling differences anyway.

The results from this test are only valid if you work individually and don't use a dictionary.

You have as much time as you like for each decision.

Once finished, you will obtain your score.

Please, use this chart to interpret your score.

English language level	Score over a maximum of 60
C1 & C2	More than or equal to 48
B2	Between 36 and 48
B1 & lower	Less than or equal to 36

(*)	*YES*	*NO*		
1. platery	o	o		
2. denial	o	o		
3. generic	o	o		
4. mensible	o	o		
5. scornful	o	o		
6. stoutly	o	o		
7. ablaze	o	o		
8. kermshaw	o	o		
9. moonlit	o	o		
10. lofty	o	o		
11. hurricane	o	o		
12. flaw	o	o		
13. alberation	o	o		
14. unkempt	o	o		
15. breeding	o	o		
16. festivity	o	o		
17. screech	o	o		
18. savoury	o	o		
19. plaudate	o	o		
20. shin	o	o		
21. fluid	o	o		
22. spaunch	o	o		
23. allied	o	o		
24. slain	o	o		
25. recipient	o	o		
26. exprate	o	o		
27. eloquence	o	o		
28. cleanliness	o	o		
29. dispatch	o	o		
30. rebondicate	o	o		
31. ingenious	o	o		
32. bewitch	o	o		
33. skave	o	o		

(*)	*YES*	*NO*		
34. plaintively	o	o		
35. kilp	o	o		
36. interfate	o	o		
37. hasty	o	o		
38. lengthy	o	o		
39. fray	o	o		
40. crumper	o	o		
41. upkeep	o	o		
42. majestic	o	o		
43. magrity	o	o		
44. nourishment	o	o		
45. abergy	o	o		
46. proom	o	o		
47. turmoil	o	o		
48. carbohydrate	o	o		
49. scholar	o	o		
50. turtle	o	o		
51. fellick	o	o		
52. destription	o	o		
53. cylinder	o	o		
54. censorship	o	o		
55. celestial	o	o		
56. rascal	o	o		
57. purrage	o	o		
58. pulsh	o	o		
59. muddy	o	o		
60. quirty	o	o		
61. pudour	o	o		
62. listless	o	o		
63. wrought	o	o		

Esta tarea es en español.

Es una prueba para medir tu nivel de español. Consta de 90 secuencias de letras. Solo algunas de ellas son palabras españolas de verdad.

Marca las palabras que conoces y estás convencido que son palabras españolas, incluso aunque no seas capaz de dar el significado preciso.

Pero ten cuidado: Los errores se penalizan. Por eso, no tiene sentido tratar de incrementar tu puntuación marcando "palabras" que no has visto nunca.

Los resultados de esta prueba sólo son útiles si trabajas individualmente y no utilizas un diccionario.

Tienes tanto tiempo como necesites para cada decisión.

Una vez terminado, obtendrás tu puntuación. Por favor, usa esta tabla para interpretar tu puntuación.

Nivel de idioma español	Puntuación sobre un máximo de 60
C1 y C2	Más de o igual a 48
B2	Entre 36 y 48
B1 y más bajo	Menos de o igual a 36

	¿Palabra española?
1. terzo	o
2. pellizcar	o
3. pulmones	o
4. batillón	o
5. zapato	o
6. tergiversar	o
7. pésimo	o
8. cadeña	o
9. hacha	o
10. antar	o
11. cenefa	o
12. asesinato	o
13. helar	o
14. yunque	o
15. regar	o

	¿Palabra española?
16. abracer	o
17. floroso	o
18. arsa	o
19. brecedad	o
20. ávido	o
21. capillo	o
22. lacayo	o
23. lampera	o
24. latigo	o
25. bisagra	o
26. secuestro	o
27. acutación	o
28. merodear	o
29. decar	o
30. alardio	o
31. pandilla	o
32. fatacidad	o
33. pauca	o
34. aviso	o
35. rompido	o
36. loro	o
37. granuja	o
38. estornudar	o
39. torpe	o
40. alfombra	o
41. rebuscar	o
42. cadallo	o
43. canela	o
44. cuchara	o
45. jilguero	o
46. martillo	o
47. cartinar	o
48. ladrón	o

	¿Palabra española?
49. ganar	o
50. flamida	o
51. candado	o
52. camisa	o
53. vegada	o
54. fomentar	o
55. nevar	o
56. musgo	o
57. tacaño	o
58. plaudir	o
59. besar	o
60. matar	o
61. seda	o
62. flaco	o
63. esposante	o
64. orgulloso	o
65. bizcocho	o
66. hacido	o
67. cabello	o
68. alegre	o
69. engatusar	o
70. temblo	o
71. polvoriento	o
72. pemición	o
73. hervidor	o
74. cintro	o
75. yacer	o
76. atar	o
77. tiburón	o
78. frondoso	o
79. tropaje	o
80. hormiga	o
81. pozo	o

	¿Palabra española?
82. empirador	o
83. guante	o
84. escuto	o
85. laúd	o
86. barato	o
87. grodo	o
88. acantilado	o
89. prisa	o
90. clavel	o

This task is in English.

You will use the same scales as before to rate how you perceive four silent video clips.

The first scale PLEASANTNESS ranges from 1 "Very unpleasant" to 9 "Very pleasant".

The second scale AROUSAL ranges from 1 "Very calm" to 9 "Very exciting/agitating".

For a neutral video, select the middle of the scale (5).

Please work at a rapid pace and don't spend too much time thinking about each video.

NOTE: After watching each clip, there may appear a YouTube menu with a collection of possible videos. Please, ignore them.

PLEASANTNESS*	1 (very unpleasant)	2	3	4	5 (neutral)	6	7	8	9 (very pleasant)
	o	o	o	o	o	o	o	o	o
AROUSAL*	1 (very calm)	2	3	4	5 (neutral)	6	7	8	9 (very exciting/ agitating)
	o	o	o	o	o	o	o	o	o

Esta tarea es en español.

Usarás las mismas escalas que antes para valorar cómo percibes cuatro fragmentos de video mudos (sin sonido).

La primera escala AGRADABILIDAD va desde 1 "Muy desagradable" hasta 9 "Muy agradable"

La segunda escala ACTIVACIÓN va desde 1 "Muy calmado" hasta 9 "Muy emocionante/agitante".

Para un video neutral, selecciona el medio de la escala (5).

Por favor responde rápidamente y no pases mucho tiempo pensando en cada video.

NOTA: Después de cada fragmento podría aparecer un menú de YouTube con sugerencias de posibles vídeos. Por favor, ignóralos.

AGRADABILIDAD*	1 (muy desagradable)	2	3	4	5 (neutral)	6	7	8	9 (muy agradable)
	o	o	o	o	o	o	o	o	o
ACTIVACIÓN*	1 (muy calmado)	2	3	4	5 (neutral)	6	7	8	9 (muy emocionante/ agitante)
	o	o	o	o	o	o	o	o	o

Dear participant,

You are almost done!

The final task is to write a personal story about a situation when you felt very emotional and had to express your emotions in your foreign language (whether in English or in Spanish).

Feel free to write it in English or Spanish (choose the one you prefer) and use as much space as you want to answer the question.

All situations and personal experiences you wish to share are more than welcome!

Write a personal story about a situation when you felt very emotional and had to express your emotions in your foreign language (whether in English or in Spanish).

Feel free to write it in English or Spanish (choose the one you prefer) and use as much space as you want to answer the question.

Do you have any other comments on this questionnaire?

APPENDIX B. EMOTION WORDS

English emotion word	*Word category*	*Valence mean (Warriner et al., 2013)*		*Arousal mean (Warriner et al., 2013)*	
01. eagerness	noun	(eager)	6.37	(eager)	5.78
02. anticipation	noun		5.26		5.39
03. contentment	noun		6.62		4.60
04. pride	noun		6.50		5.54
05. sorrow	noun		2.95		3.55
06. distressed	adjective		3.38		6.28
07. glad	adjective		7.55		3.71
08. overwhelmed	adjective		2.80		4.90
09. shocked	adjective	(shock)	3.90	(shock)	5.95
10. melancholy	noun		3.74		4.13
11. pleased	adjective		7.82		4.25
12. sadness	noun		2.40		2.81
13. stunned	adjective	(stun)	4.55	(stun)	5.50
14. thrilled	adjective	(thrill)	7.37	(thrill)	7.19
15. upset	noun		2.45		4.49
16. ecstatic	adjective		6.45		6.95
17. anxious	adjective		3.80		6.20
18. delighted	adjective		7.74		5.00
19. devastated	adjective	(devastation)	2.91	(devastation)	5.48
20. pain	noun		2.00		6.27
Spanish emotion word	*Word category*	*Valence mean (Stadthagen-González et al., 2017)*		*Arousal mean (Stadthagen-González et al., 2017)*	
01. impaciencia	noun		3.45		6.70
02. ilusión	noun		8.10		6.45
03. satisfacción	noun		8.30		5.10

Spanish emotion word	*Word category*	*Valence mean (Stadthagen-González et al., 2017)*		*Arousal mean (Stadthagen-González et al., 2017)*	
04. orgullo	noun		4.95		6.50
05. pena	noun		1.90		5.85
06. angustiado	adjective		2.38		7.00
07. alegre	adjective		8.50		5.68
08. agobiado	adjective		1.88		7.80
09. impactado	adjective	(impactar)	4.80	(impactar)	7.10
10. melancolía	noun		2.85		5.00
11. contento	adjective		8.50		6.10
12. tristeza	noun		1.80		4.45
13. estupefacto	adjective		5.10		6.32
14. entusiasmado	adjective	(entusiasmo)	7.80	(entusiasmo)	6.85
15. disgusto	noun		2.05		6.60
16. eufórico	adjective		6.83		7.90
17. nervioso	adjective		3.43		7.65
18. encantado	adjective	(encantar)	8.05	(encantar)	5.45
19. desolado	adjective	(desolación)	2.65	(desolación)	6.35
20. dolor	noun		2.15		8.25

APPENDIX C. TEACHING MATERIALS

The following lines include a proposal for teaching materials to implement emotion communication and emotion vocabulary in the English as a foreign language classroom, where it is normally more difficult to develop this essential sociopragmatic competence. The materials focus on emotion perception and/or production, present emotional stimuli through different channels (verbal, vocal, visual, and their combinations), and the practice of both positive and negative feelings. In addition, they may be adapted to different ages, language levels, and learning contexts and be equally used by (English) teachers and researchers alike. The latter may indeed use this material as stimuli for future investigation.

First, *Emotional barometer* includes cards which explain emotional states or moods to help people verbally describe them more precisely. Second, *Emotionary* is an emotion dictionary designed for readers of all ages to develop their emotional intelligence. It includes positive and negative emotional states with illustrations and explanations of their meanings and antecedents. An interesting point is that it is available not only in Spanish and English languages but also in Catalan, Basque, and Galician. Third, *How to Swear: An Illustrated Guide* is a humour and grammar book to teach readers the tricky world of swearing in English. Swear and taboo words are emotion-laden words (Pavlenko, 2008a) with multiple pragmatic functions in language and they are directly linked to the communication of negative and positive feelings. Nevertheless, learning how to express this kind of speech act is a delicate task in L1s and almost an impossible one in LXs in that it requires high levels of sociopragmatic competence (Dewaele, 2004a, 2004b, 2017a, 2018a, 2018b). Therefore, *How to Swear* is an essential tool to approach this specific language domain from a linguistic and humorous point of view. Finally, *How it feels to be human* is a series of videos from the BBC webpage, presenting the complexity of human emotions through short audio-visual clips in English told by experienced professionals like psychotherapists, linguists and cultural historians. For instance, "What's the point of humiliation?" explores the social (dis)advantages of this conflicting emotion and "*Schadenfreude*: Why do we feel joy at another's pain?" explains the existence of this German-termed emotion in other languages and cultures. All videos are

freely available on the web and have the open transcript, then, offering a wide range of pedagogical and research possibilities and dozens of emotion vocabulary in English.

The communication of emotions through verbal and non-verbal channels is a natural human process and a vital part of sociopragmatic competence in language. Learning to perceive and express them may pose an enormous challenge to bi-multilingual individuals due to, among other reasons, major cross-linguistic and cross-cultural differences in the understanding of emotion and its conceptualisation. The present book focuses on and explores the perception of emotion by bi/multilinguals with Spanish and English in their linguistic repertoire. It examines the complex variation that exists in this perceptual ability across bi-multilingual populations as a result of individual differences in their sociobiographical, linguistic, and acculturation-based profiles.

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