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**Bilingualism and Emotions**

**A Critical Literature Review**

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Appendix I

Literaturverzeichnis III

# 1) Introduction

“In order to understand multilinguals’ emotional lives and affect performances, we need an approach that does not view either multilingualism or emotions as unitary phenomena.” (EMP 41)

“Several psychological journals focus explicitly on emotion (Emotion and Cognition, Emotion Review). No such journal exists within applied linguistics. Not surprisingly, the study of emotion within the field broad field of Applied Linguistics, language teaching research and cognitive linguistics is much more limited. Although emotions play a crucial part in foreign language learning, researchers have typically focused on the emotions that drive the acquisition of the LX (i.e. motivation, FLA) and on the effect that the learning, or use, of an LX has on the sense of self of the learner (much of this research has been published in social psychological journals).” (p.29) EMLD

“An interest in ‘bilingualism and emotions’ can help to integrate the psycholinguistic approaches to bilingualism with studies aiming at a better understanding of cross-cultural lives, including the special problems and needs of immigrants. At the same time, an interest in ‘bilingualism and emotions’ can help to restore the balance between, on the one hand, ‘objective’ and ‘scientific’ study of language and cognition and on the other, a study open to the ‘soft data’ of human testimonies and subjective experience, including experiential knowledge of bilingual persons.” (p.103f.) BBW

Additionally, recent neurological research has found that already newborn children have the ability to recognize and process emotions through facial expressions (Huotilainen 95), which underlines dramatically the importance of emotions for human communication purposes

16% are Hispanic; however, this amount does not include undocumented Hispanics (U.S. Census Bureau 2012a). The number of undocumented Latinos is estimated at 11.2 million, with 8 million being part of the workforce (Passel & Cohn, 2011). This data imply that a large number of the US population is also bilingual, and considering that the Hispanic population is growing at a faster pace than the population as a whole, it is expected that by 2050 Latinos will no longer be a minority in the USA (U.S. Census Bureau 2012b); therefore, there will be a shift from a predominant monolingual population to a mostly bilingual one. It is estimated that more than half of the world’s population is bilingual or multilingual at some level of proficiency (Paradis, M., & Libben, G. (1987)…

# 2) Bilingualism

## 2.1) Why Bilingualism

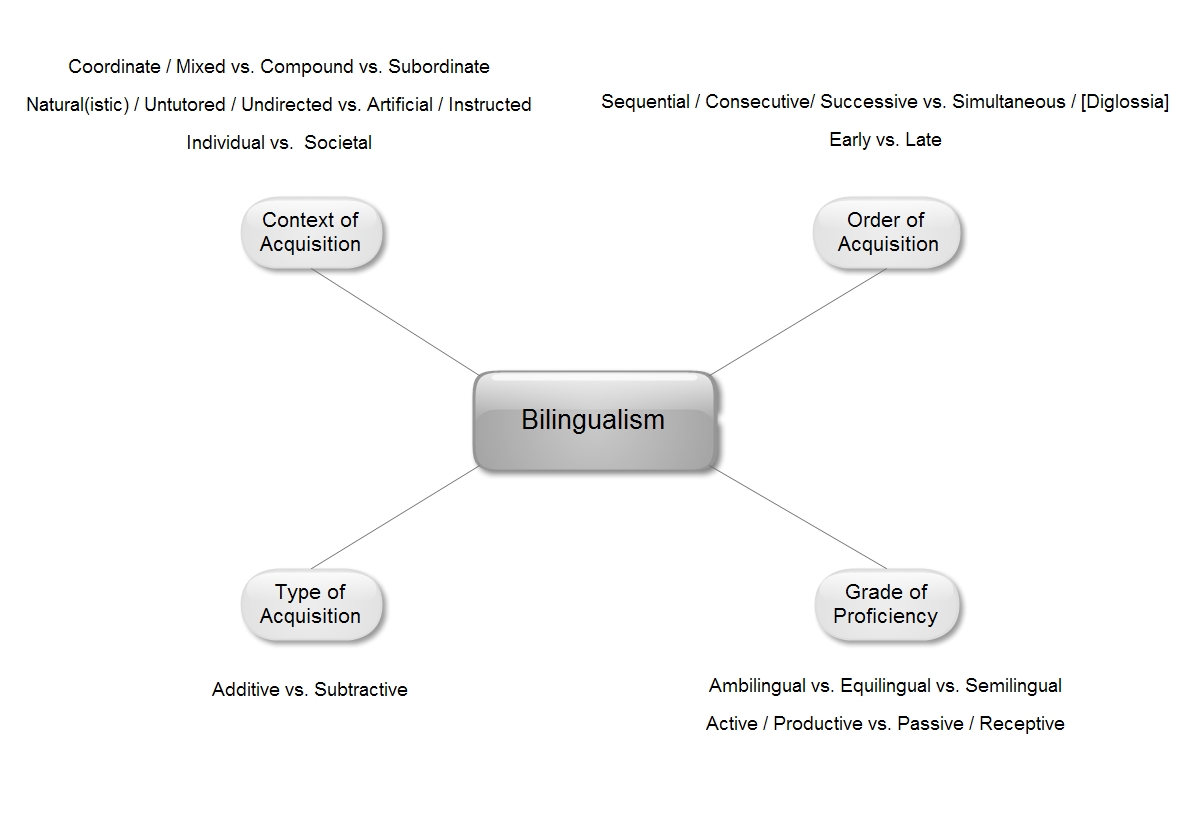
While a growing part of the world population is raised bi-or multilingual and uses more than one language in their daily lives, in fact it is estimated that “more than half of the world’s population is bilingual or multilingual at some level of proficiency” (Paradis and Libben 1987 in Puente et al. 16), in many fields researchers stick to a monolingual perspective. An example for this is that mostly supposedly monolingual speakers are chosen as participants in studies concerning the connection of language and emotions. Scientists often recoil from doing research on bilingual speakers, arguing that language learning is highly individual and thus variable across bilingual speakers (HGBM 258) and sometimes obviously have the aspirations to only work with ‘balanced bilinguals’, as other forms of bilingualism might lack essential features and might therefore not be sufficiently suitable. However, bilingual speakers outperform monolingual speakers in many aspects. As Albrecht (2003) puts it, “many bilinguals master more than one language in the same way as monolinguals master one” (7). It was moreover shown by Pearl and Lambert (1962) that bilinguals had better results in verbal and non-verbal intelligence tests, were mentally more flexible and did better in concept formation. Moreover, there is evidence for bilingualism to have a protective effect against Alzheimer’s disease and that bilinguals were more attentive and had a more distinct executive function (Bialystok 2011 and Yang, Yang, and Lust 2011 in Puente et al. 27f.). Additionally, a higher linguistic tolerance, more creativity and more sensuality to perceptual feedback were shown. Bilinguals seemed further to benefit from bicultural experience and could use already learnt languages to learn new ones more quickly (Albrecht 10, Field 43). This is supported by research that found children of mixed marriages to be more open-minded and more tolerant than children from non-mixed marriages (Albrecht 12, SDLL) as well as claiming that they show higher language and cultural awareness (Albrecht 20). Dewaele (2010) mentions in this context Lasagabaster and Huguet (2006) who found multilingual children to “grow up with an acute sense of the complex attitudes toward the various languages in their environment” (p.134). He cites Javier (2007) and Xiao-Lei Wang (2008), adding that a cultural and linguistic, as well as emotional awareness, is crucial for a multilingual child, which has to organize similarly several codes in order to express or decode an emotion (EMLD 3). Research in education contexts has further discovered that the use of bilingualism in classroom had positive effects on the pupil’s frustration tolerance as well as indicating better social skills and lower levels of peer victimization (SDLL). Putting it in a nutshell, it can simply be stated: “the minds, languages and lives of L2 users are different from those of monolinguals” (Cook 2002 in EMLD 2).

## 2.3) What is Bilingualism?

As many positive statements can be found concerning bilingualism and bilingual speakers as urgent stays the question what bilingualism is; what bilingual speakers are. As Field (2011) puts it, “[a] bilingual is obviously not a monolingual in two languages” (41), but this does rather not answer the question.

It is certain that as in every other field, maximalists as well as minimalists can be found in the field of bilingualism. In the case of bilingualism, maximalists as Bloomfield might characterize bilingualism as “[the] native-like control of two languages” (1933; in Albrecht 6), while minimalists as Macnamara regard every speaker who can use any skill of a second language as a bilingual speaker (1969; in Albrecht 6). This is supported by Pavlenko (2007) who claims that while a layperson might only perceive those person as bilinguals, who speak two languages on the same level of proficiency, scholars in the field of bilingualism might rather prefer a definition of bilingualism that includes speakers that use two or more languages or even dialects on a daily basis (EMP 6).

## 2.4) Types of Biligualism



Generally spoken, the field of Bilingualism can be divided into four major categories that can be seen as influencing factors of bilingualism: The context of acquisition (CoA), the order of acquisition (OoA), the type of acquisition and the grade of proficiency (GoP), or the relationship of proficiency between the two languages spoken. Each of these four categories has subcategories of its own, which depend on the classification of the respective author or theoretical framework he works with.

The category ‘Context of Acquisition’ can be parted into three types of differences of acquisition contexts, thus, where the two languages have been learned. The first distinction differentiates between coordinate or mixed CoA in contrast to compound and While individual bilingualism refers CoA (Weinrich 1953 in Field p.40, EMP 8, Puente et al. 19) and also serves to portray the representation of two languages in the brains of bilinguals. Coordinate or mixed bilingualism is, hence, when the first language L1 is learned at home and the second language (L2) at school. Hence, the two languages are learned in two distinct environments. Compound bilingualism represents the acquisition of two languages in the same context, which indicates a possible “fused representational system” (Field 40). Subordinate bilingualism describes the state in which the L2 is weaker than L1 and can, therefore, only be accessed through the first language (Field, p.41). The second distinction differentiates between While individual bilingualism refersnatural(istic) or untutored or undirected bilingualism, mixed bilingualism and artificial or instructed bilingualism. While the first describes the acquisition of two languages in a non-educational context, in the second context languages are acquired educationally and non-educationally and in the third context exclusively in an educational context (EMLD 57, Albrecht 9). This, however, correlates in most cases strongly with the definition of coordinate or mixed bilingualism. The third differentiation with regard to CoA differentiates between individual bilingualism and societal bilingualism (Albrecht 7, Puente et al. 19f.). While individual bilingualism refers to one bilingual speaker, societal bilingualism describes the condition in which a society speaks two languages as, for example, in a country with two official languages.

The second major category is ‘Order of Acquisition’ (OoA), which can also be parted into three subcategories: Sequential or consecutive or successive in contrast to simultaneous bilingualism or diglossia, early bilingualism vs. late bilingualism, and strong vs. weak bilingualism. Sequential (consecutive/successive) bilingualism describes that the person acquires the languages one after the other and has already achieved some degree of mastery of L1. Simultaneous OoA is characterized by the fact that the two languages are learned at the same time. This implicates that a bilingual speaker with simultaneous OoA has two native languages. Diglossia, however, is a particular case, because the OoA is not the important factor, but the speech situation, as diglossia describes that each language is assigned to a specific speech situation (McLaughlin 1984 in Albrecht 15, Field 35f., 38, EMP 8, Puente et al. 19f.). Early and late bilingualism are terms that are found in multiple ways in studies concerning bilingualism. Even though these terms are not defined in any way, it is possible to infer that early bilingualism represents the acquisition of two languages as a child or adolescent while late bilingualism refers to the acquisition of two languages as an adult. This differentiation is important, as there are implications that “early bilinguals acquire a native-like accent, fluency and intonation pattern with much more ease than late bilinguals” (Albrecht 9, Puente et al. 19) Strong vs. weak bilingualism refers to the degree of similarity between the two languages, which may be significant in some research concerning bilingualism (cf. James 1979 in Puente et al. 20).

The third major category, ‘Type of Acquisition’ (ToA) has only one subcategory, which differentiates between additive and subtractive bilingualism. Additive bilingualism describes that a language is added to the child’s linguistic repertoire, which is also connoted with a positive outcome. Subtractive bilingualism is the case when the language “is learned at the expense of the native language.” (Field 35) The assumption of the existence of subtractive bilingualism is, however, in current research highly controversial (Baker 2006 in Field 39, Puente et al. 19f.).

The fourth category ‘Grade of Proficiency’ (GoP) can be subdivided into two subcategories: Ambilingual in contrast to equilingual and semilingual bilingualism and active or productive vs. passive or receptive bilingualism. An ambilingual speaker can be described as a “perfect speaker of two languages” (cf. Halliday, 1968 in Albrecht 8, Puente et al. 19f.), which is sometimes also known as ‘ideal’ or ‘balanced’ bilingualism (Field 44, EMP 8, Puente et al. 17, Puente et al. 19f.). An equilingual speaker has the same proficiency in two languages. This does, however, not mean that the speaker masters the languages on a high level. The categorization into semilingual, meaning that the speaker does know neither language “to a sufficient degree” is also highly critical and controversially debated (Albrecht 8, Baker 2006 in Field 44, Puente et al. 19f.). A rather two-branched than three-branched model distinguishes between active or productive in contrast to passive or receptive bilingualism. While an active/productive bilingual is (only) able to speak and write in his two languages, a passive/perceptive bilingual is (only) able to read and hear in his L1 and L2 (Albrecht 9, Puente et al. 19f.).

However, the measurement of proficiency is a highly controversial topic, as there is until today no objective and scientific way to determine it (Field 47). That this is true can, for instance, be seen as research has shown that it is even for investigators in the field extremely hard to differ between late bilinguals and native speakers, as late bilinguals often have similar proficiency scores (EMP 10). “Thus, when questioning whether someone is proficient in a language, the following two questions arise: What constitutes proficiency? Where in the continuum of proficiency does this person fall under?” (Proctor & Silverman in Puente et al. 22). These are crucial issues that have to be answered in future in the scientific discourse in order to ensure comparability and, hence, the scientific nature of the field of bilingualism and emotions.

# 3.) Emotions

## 3.1) What are Emotions?

‚Emotion’ is a word that can be heard in everyday language, so apparently everybody seems to have a common sense about what is an emotion. But does this mean that there is a clear-cut definition? In this chapter, I want to point out that even in emotion research the term is not clear at all and that there are a number of definitions, and approaches depending on which perspective has been taken on.

As Ahnert et al. (436) points out, emotions are difficult to approach for scientific investigators. Meyer et al. go even further and claim that it was not possible to define emotions unless working with a working definition (Meyer et al. 22). This has to do with the fact that until now there is no agreement when it comes to defining the emotion term (Parrott 2004 in Ahnert et al. 436f., BBM 55), though scientists agree that such a definition should be the goal of scientific research efforts and cannot be set right at the beginning (Meyer et al. 16). Meyer et al. (16) point out possible reasons for the difficulty of defining emotion, which stem in their opinion from the young age of the field of psychology as scientific discipline, the complexity of the subject, outstanding methodological problems, especially when examining negative emotions and the fragmentation of the field of psychology in partial disciplines. However, working with the emotion term requires at least a preliminary working definition, which describes those phenomena that are the subject of emotion research. A currently broadly consensual emotion definition refers to emotions as

"occurrences of as joy, sadness, anger, fear, pity, disappointment, relief, pride, shame, guilt, envy, as well as other kinds of states that are sufficiently similar to those mentioned. These phenomena have the following features in common: (a) they are current (mental) states of persons; (B) they differ by type or quality and intensity [...]; (C) they are usually object-oriented [...]; (D) persons who are in one of the states listed usually have a characteristic experience (…) and commonly include certain physiological changes (…) and behavior (…).” (Meyer et al. 24)

In addition, James (1890 in Ahnert et al., p. 436f.) pointed out that emotions are experienced as events that happen to a person and cannot be voluntarily evoked. Merten (2003, p.34) cites Ekaman and Davidkson (1994), conveying that emotions are more than the sum of their part; that is, emotional processes can even occur if partial components are not active.

An analysis of the above-mentioned working definition shows the difficulties of working with such a common-ground approach: If we have a closer look at the definition, the usage of words as ‘sufficiently’, ‘usually’, or ‘certain’ shows its vagueness. Thus, I consider it to require much effort to investigate emotions on a scientific level, so that the research can easily be compared and validated by self-conducted research. An advantage of this working definition, however, is the utility when it comes to distinguishing emotions from related phenomena, as for instance moods or sentiments (Frijda et al. 1991 in Ahnert et al. 437), which differ form moods in that they lack directedness and therefore no causal trigger can be determined. This means that moods can, for instance, last for days and therefore have a considerably longer duration than emotions that usually persist seconds or minutes. In opposition to emotions, sentiments are permanently linked to a particular object and not just episodic, as in the case of emotions (Ahnert et al. 437). Merten (16, Meyer et al. 26, 30) adds that emotions should not only be defined by feelings, but also by the fact that they initiate and control actions. Moreover, he insists on the differentiation between emotions and reflexes, instincts or impulses. Dependent on the research, emotions differentiate in particular through three to four dimensions, namely valence (positive vs. negative, activity (grade of arousal), potential (high vs. weak) and in some cases intensity (Meyer et al. 2001, p. 39, Merten 20, ABM 247, Marian et al. 192).

In order to classify emotions, the existence of an innate repertoire of basic emotions, which can be found at people of all cultures already from the first year of their life, is considered. Although the discussion which emotions are determined to be basic emotions did not end yet (Ahnert et al. 441, EMP 80), there is evidence that there is a common emotion repertoire, which can be found in all cultures (Ahnert et al. 454). Meyer et al. (2001, p.36) quotes Ekman (1982) and Izard (1991), pointing out that research has shown that people in different cultures associate consistently certain facial expressions with specific emotions, as for example joy, sadness, fear, anger, disgust or surprise. They believe that this might be the reason for many emotion psychologists to advocate the theory already expressed by Darwin that emotion-specific facial expressions do have a genetic basis. Merten (2003, p.18) cites in this context Izard’s ten basic emotions[[1]](#footnote-1), who are part of the Differential Emotion Scale and who could be scientifically confirmed despite the emotion of disgust.

Thus, research on human emotions has yet not agreed on what extent emotions should be considered as universal or culture-specific. The most differentiated proposed solution from the field of socio-cultural theories conceptualizes emotions as multi-component systems and proposes to carry out a cross-cultural analysis of the individual components (Holodynski, 2006; Holodynski & Friedlmeier, 2012; Mesquita & Leu, 2007; Shweder et al., 2008. in Ahnert et al. 2014, p.459, Meyer et al. 2011, p.32). Hence, emotions can be considered as multi-component systems, including the by the individual estimated situation, expression, body response and subjective feeling. This means that that people from different cultures can experience comparable emotions, but not likely in the pre-formed manner, as conceptualized in the theories of basic emotions (Ahnert et al. 2014, p.461).

In addition, Meyer et al. (2001) comments on the possible problems regarding the measurement of emotions. First, it is important to note that the emergence of emotions is mostly not caused by objective causes of events, but by the related beliefs of the individual (Meyer et al. 2001, p.31, Merten 2003, p.33). This implies that emotions are highly individual and therefore difficult to be measured scientifically.

“In other words, the emotional experience is part of the inner world of the experiencing person, which can only directly be accessed by her. This means that the observer has to infer the existence of a feeling in another person; that is, he must make assumptions or come to conclusions from what he knows and can observe, as to whether the person is currently experiencing a feeling and, if so, which one” (translated by B.G.H., Meyer et al. 2001, p.38)

If this is true, how does research then measure emotions? Some use the physiological aspect of emotions, also known as autonomous changes of the nervous system, as they cannot be controlled or changed by the experiencing person. These physiological changes include, for example, an increase or decrease in heart rate, changes in breathing or sweating of the hands (Grossman 1967 in Meyer et al. 34). Another method to measure emotions is the investigation of so-called emotion words. Table 1 (Appendix 1) for instance shows the percentage of spontaneous utterances of emotion-words in seven different countries (according to Meyer et al. 27). An analysis of the significant numbers (numbers that are at least 25% higher as the column’s mean value) and the assumption that emotions words represent the feelings of the corresponding word, would have to conclude that the British are particularly lucky, beloved and hatred, while Belgian and French individuals are particularly joyful and that Swiss and Dutchmen are not emotional at all. This, however, is not something that would ever be claimed seriously by any researcher of linguistics or social sciences. But this is not the only reason why the usage of emotion words to measure emotions is highly controversial. It is also questionable which part of the emotional process is referred to if emotion words are used to measure emotions. Furthermore, is criticized that there is no standard definition what an emotion word is and that those words that mostly are described to be emotion words only refer to partial aspects of emotions as for example moods as nervousness (Merten 21). Merten (22) comments that in his opinion the analysis of emotion words reflects rather the structure of the analyzed language than the structure of emotions, which leads to adulterated results.

# 4) Bilingualism and Emotions: Research Findings

## 4.1) Bilingual Speaker’s Emotion Expression and Perception

After having discussed the different approaches and definitions concerning bilingualism and emotions, respectively, what follows is an overview on the literature and findings that scientific literature on the interdisciplinary field of “Bilingualism and Emotions” has published. As will be seen, the main aspect lays on the research, whether emotions are expressed or perceived more strongly in the first language (L1) or rather in the second language (L2) and if so, why.

In order to answer this question, Altarriba (2006) dealt with the question how to label words that either label emotion or are related to emotion and how to distinguish between them (ABM 233). She calls words that label emotion, as for example ‘joy’, ‘happy’, or ‘sad’, “emotion words”, while calling words that do not label emotion, but are related to them, as ‘kiss, or ‘death’, “emotion-laden words” (ABM 232, PavB08 148) Pavlenko (2008) classifies emotion words as “words that refer to emotions, such as 'fright' or 'grief'”, while emotion-laden words are words “with a strong emotional connotation” (92), such as taboo and swearwords, insults, reprimands, endearments, aversive words, or interjections (PavB08 148). Furthermore, they are characterized to be affective, valent, and arousing[[2]](#footnote-2) (ABM 235). There are reasonable assumptions that emotion words are especially suitable to measure emotions, as they are found to be more easily memorable and imaginable than abstract words and better memorable than concrete words (PavB08 149). This was also supported by the findings of several research, who found that emotion words were remembered more often and perceived more strongly in the L1 than in the L2, whereas this was not the case with concrete and abstract words (AHCE et al. 509, 511, EMP 95, ABM 234, ACLC 291, WFM et al. 73, Sutton et al. 1079, Eilola et al. 1071, Ferré 776 DBM 119, 125). Altarriba et al. (2006) found this to be also true for emotion-laden words (ABM 238f., EMP 95) and inferred hence that the mental lexicon that contains emotion words is much broader and varied than the mental lexicon that includes abstract words (ABM 246). In their studies, they measured imageability and association rates in order to contrast emotion words from abstract and concrete words, using word rating and word association tasks. They further claim that the higher rates of imageability of emotion words might have its cause in the fact that emotions are usually related to facial expressions (AMB 236) that might have a genetic basis (See Darwin’s theory of genetic determination of emotions in chapter 3.1). Another reason that could explain better imageability rates is that emotion words can be related to specific situations in which they are experienced (ABM 236, EMLD 144, HGBM 271) and are thus easier to recall. This context dependence was furthermore found to correlate with participants’ perceived language emotionality, which can be seen as an important factor of emotional language choice (EMP 147, PavBM 27, Puente 21). However, there was no proof that age of second language acquisition or language dominance had influence on L2 emotion word recall (Ferré et al. 776, DBM 125).

Altarriba (2006) quotes Fazio et al. (1986) and Spruyt et al. (2002), who found so-called primes and targets to match in valence. This means that two words have the same valency, for example both are rated positively or negatively (ABM 247f.). She further claims that her bilingual participants were also displaying significant priming effects in high and moderate arousal conditions. She concludes that for bilingual persons, the knowledge of a L2 might moderate the effect of arousal by affecting the processing in a “highly-implicit manner” (ABM 251). This would mean that the emotion perception in a L2 is influenced by information of the L1 (ABM 252) and leads to questions concerning the storage of emotions and the influence of other languages on it. Altarriba (2006) suggests that particularly emotion-related words are first encoded in the L1 and predicts that the assumption of L1 influence on L2 emotion processing is therefore true. Thus, emotion-related words form in her opinion a particular word class in memory in which the words are possibly represented differently across bilingual’s two lexicons (ABM 252, Sutton 1086f.) and are coded attributing language specific ‘tags’, which aid encoding the emotion word information (ABM 241). Moreover, they are said to be “stored at a deeper level of representation than their L2 counterparts because the L1 emotion words have been experienced in many more contexts and have been applied in varying ways” (ILYD 1759f., EMLD 143, 147). There is, moreover, research that suggests the “difference between emotion words and other words” to be “that the affective valence of an emotion word is encoded in its semantic representation, and impacts its processing” (Fazioet al. 1986; Hermans et al. 1994 in WFM et al. 72f.).

Dewaele (2010) argues in regard to this research that he and his colleagues have claimed that the “knowledge of the emotionality of a word and of its affective valence is just as important as … [the] word’s grammatical class, or its gender” and see in this the cause why foreign language learners often struggle with learning emotion words or emotion-laden words (EMLD 6f.). He demands further research that contrasts bilingual emotion representation to monolingual one (EMLD 27). In his study, he investigated if feelings are expressed more probable in the first or second language. His findings indicate that it is very probable for bilinguals to use their L1 to express feelings, whereas it is less probable for them to use their L2 to do so (EMLD 88). This is supported by findings that bilinguals’ perception of the phrase ‘I love you’ is more emotional in their first language (ILYD 1773). Dewaele points out that this could be influenced by the fact that the expression of emotions is usually hard for foreign language learners describes the potential loss of face to speaker as well as interlocutor (ILYD 1758). According to the previous findings of an emotionally stronger L1 perception in comparison to a L2 perception, Harris (2004) quotes findings by Schrauf (2000) that indicate memories of immigrant children to be easier remembered in their first language (HBSP 224, HGBM 262, 270). Schrauf (2006) however argues that looking for emotion words in order to measure emotions scientifically is not sufficient, as emotions are often expressed by the use of circumlocutions as for example ‘I was boiling’ instead of ‘I was furious’ (SDBM 291). Thus, only searching for the word ‘furious’ in people’s utterances would not lead to appropriate results. Therefore, he did a study that investigated immigrant’s recall (comparable to Anooshian and Hertel’s 2004 studies). His bilingual participants felt they could remember some events better in one language than in another (SDBM 296, AltarribaAcquisition et al. 447), which he explains by the suggestion that “both the ‘feel of a memory and the language of a memory are in part experienced and in part inferred”. Therefrom he concludes that if the language of encoding and the language of retrieval do match, the remembered emotion will be recalled more intense (SDBM 306, Marian 196). He states:

“When a bilingual recalls a particular memory, he or she engages (albeit below awareness) in the mental reconstruction of some event that was originally encoded into memory in a particular place and time in a determined sociocultural and linguistic environment. The emotional tone of the experience and perhaps some explicitly remembered words or phrases from the event are encoded as well, necessarily in an L1 or L2 or mixed language context in the moment of recalling the memory, these various bits of information are reintegrated into the whole narratively structured memory again, and some of them are vividly re-experienced, while others are almost or merely conceptual in status (much of this depends on the sociocultural and linguistic context of retrieval).” (SDBM 307)

All in all, there seems to be strong evidence, that the first language is more emotional than later learned languages and that bilinguals favor one language to express emotions (EMP 140). This phenomenon can possibly partly explained by findings by Bloom et al. (1987, 1989), who postulated a close relationship between infantile emotion expression and early language development. Thus, experiencing emotions at an early age, this is in the native language, might tie them, as well as emotion-related terms, very strong to the L1 (AHCE et al. 505, ABM 239, ILYD 1759ff., Ervin-Tripp 7, Puente 27, EMLD 103). Dewaele (2004) supports this, uttering that there are indications that growing neuronal connections in the brain during early and middle childhood are connected with emotion socialization and the acquisition of emotion expression in childhood (STD 207). Moreover, apart from individual factors, social or psychological factors might be influencing children to naturally favor one language over the other when raised bilingually (Field 35). Despite the already quoted supposedly higher emotionality of the first language, some authors do not fully agree with this assumption. In Grosjean’s () opinion, for instance, it is a myth that emotion expression by bilinguals has to be in the first language. He argues that many factors, as for instance childhood experiences, can influence the decision whether to express emotions in the first, or rather second language (Grosjean, EMP 141, ACLC 301). Although it is stated that women generally perceive themselves to be more emotional than men, there were no effects found for factors as gender or age (EMLD 26, STD 219).

A factor being likely to influence if the interlocutor prefers emotion expression in the native language or a foreign language is attitude, which is said to be dependent on the social status of each language and, hence, can even have an impact on the proficiency level of a foreign language (Ervin-Tripp 1ff., EMP 38). Field (2011) ads that attitude, as well as motivation, are particularly key features for immigrants’ integration efforts, as both factors are commonly known to simplify language learning and, thus, socialization into a new culture (Field 61, EMP 31). Attitudes towards other languages and cultures can, however, often also be ambivalent and highly depend on geopolitical and sociopolitical factors, for instance if a language has a high or rather low prestige in a society (EMLD 135, EMP 32). The role of media, which simplifies the worldwide understanding of Anglo emotions, being transferred through popular movies and TV series, should in this context not be underestimated. Moreover, it has to be considered that attitude does always depend on subjective factors, as for instance the sound of a language (EMLD 136f.). Another subjective factor might be the interlocutor with which the emotion-expressing person communicates. Participants of several studies uttered that the language they use does highly depend on the interlocutor they speak with. Some report for instance a “unique private interlanguage to communicate their feelings with their partner” (EMLD 100, 131, EMP 27, 82). Dewaele (2010) quotes Grosjean (2008), who calls this the Complementarity Principle, meaning that some bilinguals divide their languages into the categories ‘emotional-topic related’ and ‘not emotional-topic related’ (EMLD 103, DBM 128, EMP 146).

## 4.2) Expression and Perception of Negative Emotions: Swear and Taboo Words & Childhood Reprimands

As has been seen in the previous chapter, research found that emotions were described to be perceived more often in the first language and also remembered more likely in the language they had been experienced. This assumption is, however, not very concrete. Therefore, research started to investigate if some types of emotions elicited for instance higher recall rates. Ayçiçegi and Harris (2004) for instance found this to be especially true for negative emotion words in the second language (WFM et al. 73, Merten 29, HGBM 270) when testing Turkish-English (L1/L2) bilinguals. These so-called “anxiety-arousing stimuli” included swearwords, childhood reprimands, and taboo words as for example sexual references (Gonzalez-Regiosa, 1976; Harris, Ayçiçegi and Gleason, 2003; Dewaele, 2004 a, b in ACLC 291). As Jay and Janschewitz (2008) claim: "The main purpose of swearing is to express emotions, especially anger and frustration. Swear words are well suited to express emotion as their primary meanings are connotative". Thus, the emotional impact of swearing can be described as being highly variable and to be linked to an individual's experience, as well as with cultural language conventions (EMLD 104, 107, 165, DBM 126, EMP 186). Moreover, a high amount of studies found a correlation between frequency of use of the language and socialization into the target culture (EMLD 26, 29, 76, 96, 105f., 118, 130, Veltkamp 498, Eilola et al. 1071, EMP 96, 146, 237, WFM et al. 73, ILYD 1759, DBM 124f., 146f., LEBBH 25, BEP 72), which makes sense if one considers that foreign language learning does significantly depend on whether the learner interacts with native speakers in the target culture, or not.

Moreover, “the use of S-T words is also a linguistic device used to affirm in-group membership and establish boundaries and social norms for language use” (Drescher 2000, Rayson et al. 1997, Stenstrom 1995, 1999 in STD 205). Dewaele (2004) thus equates swearwords with nitroglycerine, which he sees as a factor for native speakers to refuse to use them. This, however, seems not to be the case for non-native speakers. Moreover, he points out the importance of the study of swear and taboo words as an interdisciplinary research that comprises the fields of psychology, pragmatics, SLA and emotions (STD 204). Pavlenko (2007) supports this, claiming that taboo words reflect a singular connection between feelings and behaviors, causing a multitude of affective associations, memories and imagery (EMP 169).

It is, however, important to point out that higher recall rates in the L2 have only been found with reprimands, but not with swear words or taboo words (ACLC 292, EMP 173, HGBM 259, 269, HBSP 237f.). Ayçiçegi et al. (2009) argue that one reason for their bilinguals to perceive those words to be more emotionally laden in their second language could be explained by the assumption that the participants might not be familiar with the English reprimands, as many showed amusement when being confronted to them. It is, additionally, possible that participants translated the terms into Turkish without being noticed by the researchers (ACLC 292). Pavlenko (2007) quotes in this context Lemendena (1977b) and Jay (2000, 2003) who have uttered that “taboo words constitute a nexus where language and emotions come together in an unprecedented manner.” As those words activate the amygdala and thus elicit arousal, this can be easily examined by using skin conductance response tests (SCR), which measure the sweating of palms and fingertips, hence, the physiological aspect of emotional experience (EMP 168f., HGBM 260), as for instance done by Harris et al. (2006), who found taboo words to elicit the highest skin conductance responses in comparison with reprimands, negative words, positive words and neutral words (HGBM 260ff., HBSP 236). Schrauf and Sanchez’s (2004) findings, supporting Larson and Diener (1987) as well as Schimmack and Diener (1997), also described that in a free-recall task negative emotion words were remembered more often in the second compared to the first language (SDBM 290, WFM et al. 73). Bond and Lai (1986) consistently reported bilinguals to use swear and taboo words “more freely” in a second language (in Veltkamp 498). This is also stated by Grosjean (Fußnote), who points out that this is especially true for late bilinguals (Grosjean, PavBM 22, HGBM 264). Hence, to present swear and taboo words in the second language seems to result “in similar activation of threat-response mechanisms” as to present them in the L2 (Eilola et al. 1071). This was also supported by Marian et al. (2008), who found in a study that investigated bilinguals’ immigration stories that more negative emotion words were uttered in comparison to positive emotion words. As possible explanation was suggested that the immigration experience was often a traumatic event and, thus, connected more with negative emotion words. This is supported by the fact that an earlier age of arrival was connected with a decrease of use of negative emotion words, as persons who immigrate into a country as a child are supposed to integrate easier in comparison with persons who did so as an adult (WFM 75, 81).

Dewaele (2004) and Harris (2004, 2014), however, found taboo words to be judged as stronger when perceived in the first language (EMP 186, HBSP 227, Veltkamp 498, HGBM 270) and to produce greater arousal (Gonzalez-Reigosa 1976, Javier 1989 in AHCE et al. 504, HBSP 223f., STD 212, EMP 173). He argues that they are not only perceived stronger in the first language, but also states an utterance preference for the L1, as the interlocutor knows about their strength and emotional weight(STD 213). Furthermore, it is argued that a lack of instruction in foreign language teaching makes it challenging for L2 learners to confidently be emotional in a language not being their mother tongue, as swearing and cursing does especially infer a certain loss of control over the emotions and L2 speakers often lack the appropriate vocabulary (also DBM 125). Moreover, he argues that foreign language learners did indeed have the language awareness being necessary to understand that there is a high risk of misunderstandings when using swear and taboo words, although they often belong to the first L2 words learned outside the classroom (EMLD 105f., 107, STD 205). This is also reflected in the findings of his research, which show that instructed learners do swear less often in comparison with naturalistic and mixed learners (EMLD 93, 114f., 130, DBM 126, 146f., LEBBH 25, EMP 146, 237). However, Dewaele’s (2010) findings do not contradict Ayçiçegi’s, Harris’s, Schrauf’s or Sanchez’s findings. As he points out, some participants showed the opposite effect regarding L1 swearing, which can be explained by the fact that some religions or cultures do not permit swearing. Hence, for participants from those cultures (for example Arabic or Kurdish), swearing would be a taboo that could not be broken (EMLD 110, 130, 164f., STD 214). A further factor seems to be the age of second language acquisition and order of acquisition, as emotion perception and expression was found to be more difficult if learned later in life (STD 207f., EMP 157, 172f., 185, HBSP 223f., EMLD 103, ILYD 1759, DBM 146f., LEBBH 16).

Finally it must be said, that there is also criticism regarding the investigation of swear words, taboo words, and childhood reprimands. Eilola et al. (2007) for instance, claims that there is still no database for taboo words (Eilola et al. 1068). This, however, means that researchers have to work with their own database, which in turn makes it more difficult to compare the findings of different researchers in the same field. A common database for the research of taboo and swear words should therefore be a main goal in the future. Pavlenko (2008) criticizes furthermore that taboo and swearwords may be context-dependent as well as culturally laden. This means that some words in some cultures or context might be perceived as offensive whereas the same words might not be considered offensive at all in a different context (PavB08 148).

## 4.3) Expression and Perception of Positive Emotions: Love and Humor

In the previous chapter it has been stated that negative emotions and especially swear words, taboo words and (childhood) reprimands have been identified to evoke a high arousal in bilingual persons. Thus, an urgent question has to be if this is also true for positive emotions and if so, for which ones. A view on the literature on positive emotions and bilingualism shows that in comparison with research on negative emotions and bilingualism there is rather sparse research in this field. However, there are findings concerning the feeling of love and bilingualism or humor and bilingualism, which will be introduced in the following paragraphs.

As to love and bilingualism, Dewaele in his article “The emotional weight of ‘I love you’ in multilinguals’ languages” (2008) quotes Altarriba (2003) and Derné (1994) claiming that love “is one of a series of emotions that all humans share but it may resist exact linguistic translation because of the uniqueness of the specific verbal and non-verbal manifestations and expressions across languages and cultures (EMLD 12).” Moreover, he points out that, as the case with swearwords, it is in particular challenging for foreign language learners to master the communication and recognition of love, as love is in many cases not expressed directly through verbal communication, but rather through non-verbal signals (EMLD 12). In his study he found that almost 50% of the (624) participants found the sentence ‘I love you’ to have a higher emotional weight in their first language compared to their second language. Approximately 30% deemed the sentence to have a comparable emotional weight in both their L1 and L2 and only 25% considered it to be more emotional in a second or further foreign language (ILYD 1764). Dewaele (2008) concludes, hence, that the phrase ‘I love you’ seems likely to be connected to a high amount of sociocultural and linguistic factors, to the participants’ individual linguistic history, as well as the frequency of the sentence usage (ILYD 1767).

Jyotsna Vaid elaborates in her article “Joking Across Languages: Perspectives on Humor, Emotion, and Bilingualism” (2006) on how humor is perceived by bilingual speakers, in particular in the case of jokes. She defines humor as “a pervasive element of social interaction, [which] expresses and elicits a variety of emotional states from joy and surprise to sarcasm and hostility” and remarks the scarcity of research concerning humor and bilingualism, even though in her opinion this would be crucial in order to better understand bilingualism and humor, respectively (Vaid 2000, 2003 in VBM 152). She appeals to characterize humor as a mode of discourse and states that although humor seems to lack some sort of seriousness prima facie, it was historically seen important for human kind in order to cope with ambiguities, absurdities and paradoxes, which can be seen as substantial part of humorous conversation (VBM 153). Furthermore, Vaid claims that humor generally can be subdivided into at least 5 categories: jests, quips, gags, humorous anecdotes and jokes. The joke is in her opinion the most suitable to analyze, as it is “structured in such a way that they establish certain expectations in the listener's mind and then abruptly thwart those expectations with the presentation of the punchline (Attardo, 1994; Koestler, 1964) (…) Violation of expectations is, thus, a key ingredient of joke structure” (VBM 154). An important aspect she points out is that while humor usually makes the interlocutors feel amused or joyful, the emotions that elicit humor do not necessarily be positive. It is argued that humor often contains negative events or negative experiences that should normally elicit emotions as fear, anger or shame in the interlocutor. Not only does the interlocutor usually not feel negative emotions, but normally is able to laugh about them, which shows that the listener was able to build a certain distance and to change perspective to some point (VBM 154). Vaid claims that the intention of jokes is, hence, to change the emotions of other people. She further characterizes it to be dependent on culture, context, setting, timing and persons involved (VBM 155). Dewaele’s statements concerning foreign learner’s difficulties of expressing emotions (see above) are supported by Vaid, who claims humor to be particularly hard to express for non-native speakers (VBM 155). She furthermore argues that errors committed by foreign language learners might not be actual errors, but result from L1 “semantic extensions”, as for instance when ambiguous words are translated wrongly into the first language (VBM 156f.). In her study, she aimed to find out if bilinguals react differently depending on the language it is represented (VBM 162). She hypothesized that bilinguals that claim to keep the two cultures of both languages apart would differentiate humor more language and, thus, culture-dependent then those participants who saw themselves more integrated into both cultures (VBM 169). This hypothesis, however, was later falsified, as t-tests “yielded no significant differences between Integrated and Separated groups” (VBM 170). Nonetheless, it was found that nearly two thirds of the ‘Integrated’ respondents did not prefer to express sarcasm or to retell humorous stories in any specific language, while only one third of the ‘Separated’ participants did so (VBM 171). Moreover, her findings indicate that more than the half of participants consented to the statement that their bilingualism has enlarged their sense of funny subject matters (VBM 173). Vaid concludes, hence, that the variation of the perception of humor is affected by cultural identification and the humor of the corresponding culture the language is spoken in (VBM 174f.). A further elaboration of the role of culture will be presented in the next chapter.

## 4.4) The Role of Culture and The Untranslatability of Cultural Concepts

Apart from the questions of how to define emotions or bilingualism, one major discourse concerns the role of culture as possible factor that influences the perception and expression of emotions by bilingual speakers. Many researchers point to the difference of cultures, elaborating on how emotion lexicons of different languages differ in size. For instance, Pavlenko (2007) describes that Chewong, a language spoken in Malaysia has only seven emotion words, while English is said to have more than 2000 such words (EMP 88, PavB08 147). This, in turn raises the question if “some languages are simply ‘more emotional’ than other languages” (ABM 253). However, the numbers concerning the languages’ emotion words are not clear-cut: In contrast to Pavlenko’s numbers, Schrauf and Durazo (2006) for instance quote Storm and Storm (1987), who claim that English has 577 emotion words (SDBM 292). Nevertheless, it is possible that Pavlenko has had access to newer research than Schrauf and Durazo and, thus, found more emotion words.

Dewaele (2004, 2006, 2008, 2010), who specialized in the investigation of positive and negative emotions (see chapter 4.2 and 4.3), writes that the communication of emotions in a foreign language is particularly difficult, as the non-native speaker mostly has to translate. In his opinion, feelings, or culturally laden emotion terms might sometimes even not be translatable at all (see further down). He furthermore points out, that there is a notable contrast between Asian and Western cultures when it comes to express emotions. In particular with swearing and communicating love, it seems that L1 emotional expression is harder for some Asian participants (EMLD 86, ILYD 1754). A Japanese participant is quoted, uttering that scolding in the second language (English) is perceived to be easier, as the language not being the mother tongue creates a distance between the scolder and the scolded person (EMLD 120). As to swearing, it was also claimed by some participants, that swearing was taboo in the culture of their first language (see chapter 4.2). These participants, however, claimed to be able to mildly swear in English, which was their second language (EMLD 122). Harris (2004), who also investigated negative emotions, but in in the form of childhood reprimands, found a harsh contrast between Turkish and US college students, the latter not significantly responding to reprimands. She considers this to be caused by cultural differences, as Turks might be influenced by different discipline patterns by their parents (HBSP 228). If the Turkish culture can be considered as Asian culture, this does furthermore support Dewaele’s (2010) hypothesis that contrasts Asian to Western cultures (see above).

Veltkamp et al. (2013) support the cultural influence on bilingualism, quoting Sapir (1949), Whorf (1956) and Slobin (1996), who claimed that language was a determining factor for the perception and expression of emotions and self. They furthermore claim that its has been observed that persons behave differently, depending on the culture of the language they are speaking (Veltkamp 496f., PavB08, BBW 94, Marian 190), which could be caused by foreign language learning factors, as this is said to be connected to the incorporation of cultural norms and values that are part of the language (Veltkamp 496f.). They conclude that multilinguist persons internalize “multiple cultural meaning systems and can switch between [them] (…) accordingly” (Veltkamp 497). To test if this was true, they investigated late German-Spanish second-language learners using NEO-FFI[[3]](#footnote-3), hypothesizing that the participants would perform culture or language dependent. Their results showed that the participants had higher scores on Agreeability when the test was in German, but higher scores on Neuroticism and Extraversion when the test was in Spanish (Veltkamp 501). However, their Spanish participants were mostly students, a group not being homogenous enough in terms of origin to compare their study with other studies, thus, they concluded that they cannot validate their findings and that it, hence, should be a topic for future research (Veltkamp 502).

Aneta Pavlenko (2006) quotes research that used so-called TATs (Thematic Apperception Tests). In this tests Japanese participants should tell a story based on a picture they were shown and were told to imagine the same situation to happen in a Japanese culture and then in an Anglo culture. It was found that they told more emotional stories in Japanese in comparison with those told in English (PavBM 14). She concludes that bilingual persons might in some contexts base what they expect from themselves or others distinctly depending on the language they or others use (PavBM 16). This could be caused by experiences made, as changing the language can result in a change in memories activated by that language (PavBM 16). Many participants are aware of this fact, and point to the importance of language proficiency in this context, as a higher proficiency in the second language was perceived to “(liberate) from the taboos and constraints of the mother tongue” (PavBM 21). It is, however, crucial to consider that the findings might be limited to participants who have acquired two languages in two distinct cultures and who use them mostly in monolingual contexts. Participants who, in contrast, live in multilingual contexts are said to have a much broader understanding of linguistic and cultural boundaries (PavBM 18).

In a similar study conducted by Marian et al. (2004), they quote research with Chinese-English bilinguals indicating that depending on the language participants used to recall memories, differences in self-esteem, self-description and cultural view could be measured (Ross, Xun, & Wilson 2002 in Marian 191). The research group tried to validate those results, predicting that their bilingual participants’ narratives would be more individualistic when they narrated in a language that was associated with individualism, as for instance Anglo cultures, and more collectivistic when narrated in a culture more associated with collectivism, as for instance eastern cultures (Marian 191). They moreover quote research by Basabe et al. (2002), who found individualism to cause subjectively positive emotions and predict, hence, that “memories associated with a collectivist culture would be more negative than memories associated with an individualistic culture” (Marian 191f.). Their results supported the findings of Anooshian and Hertel (1994, see chapter 4.1) that participants’ narratives were more emotional when the language of retrieval was the same as the language of encoding (Marian 196). Their main findings, investigating Russian-English bilinguals’ individualistic versus collectivistic narratives showed that more personal pronouns were used when they spoke English, but more group pronouns were used when they spoke Russian. They conclude that this might be an indicator of a distinctive self-perception and perception of cultural values that depends on the language bilinguals speak, and see, thus, “language as a vehicle for culture with cultural differences seeping into language and potentially influencing cognitive styles and the self” (Marian 197).

Wierzbicka (2004) utters that cultural-based misunderstandings between bilingual persons are probably common, as a bilingual’s perception was likely to contain not only an objective semantic analysis, but also subjective insights from experiences made (BBW 95f.). She argues, thus, that the expression of feelings does indeed depend on the language the interlocutor uses (BBW 103). Furthermore, it is stated that one reason for bilingual speakers to change language might be that a word wanted to be expressed has a shift in meaning in the other language (BBW 102). This leads us to the topic of the untranslatability of cultural concepts, as those are particularly difficult to express, if even possible. Pavlenko (2008) describes three possible relations of concepts in two languages. First, two concepts are identical or similar, second the two concepts overlap wholly or partially, or third one of the languages has a concept which does not exist in the other language (PavB08 151). Cultural concepts do not only include words with distinct meanings, but also culture-specific interjections (BBW 102). One example for this is given by Altarriba (2006), who describes the Spanish word ‘cariño’ to be a combination between the English emotions ‘liking’ and ‘affection’ “with a dash of familial or relational quality”. However, she states that she would never characterize the feelings for her students to be ‘liking’, as liking a color or a car, nor would she do so to be ‘affection’, as she would not love her students, either (ABM 239). Similarly, Besemeres (2006), stated that culturally-dependent emotion words sometimes even are register-dependent, as with the English ‘anxious’, being part of an adult register in contrast to the polish ‘bojg sig’, which could also be used by a child (BBM 40). In addition, she points out that the Polish do usually express emotions by adding a syllable (BBM 47, BBW 100). This is obviously also true for many Romance languages that use diminutives to show affection in every-day language. In English, in contrast, emotions are usually expressed through adjectives (PavB08 148, Besemeres 35).

Pavlenko (2007) sees the cause for this issue in a so-called “affective socialization”, which is said to be “intrinsic part of the language socialization process, with language focusing children’s attention on (…) [culture-related] phenomena” (EMP 80, 227). She also points out that the degree of acculturation, can be a factor (EMP 71). Research has shown that the comprehension of certain concepts, often not existent in the foreign language learners’ culture, can only be revealed through a long process of socialization in the target culture (EMP 85f.). Moreover, a harsh contrast between Western cultures and non-Western cultures is claimed, the first being cultures, whose emotion words’ function was to indicate the relationship between two persons, while the latter were cultures, whose emotion words’ function was to indicate a person’s mood (Lutz 1986 in EMP 87). Stephanova and Coley (2006) add that in their opinion “[c]ross-linguistic variability of emotion terms” might be the cause why persons of different cultures might have “distinct conceptual representations of emotions” (SCBM 209). Although one might expect that two words that refer to the same emotion would similarly do so in two languages, investigations with Russian-English speakers indicate that this is not the case (SCBM 210). While in (American) English the term jealous can be used both to express jealousy as well as envy, in Russian the corresponding terms ‘zaviduet’ and ‘revnuet’ are used in two absolutely different contexts (SCBM 210, 221). This was found out by using so-called envy stories in which the bilingual speakers had to rate the appropriateness of the corresponding term. Russian speakers considered the term ‘zaviduet’ as much more appropriate than ‘revnuet’, while English speakers considered both envy and jealousy to be appropriate to describe the emotion of envy in the stories (SCBM 214). Interestingly, the same study was repeated with bilingual participants. Those participants, who were tested in Russian, rated similarly to Russian monolinguals, while those tested in English rated emotion words rather like English monolinguals, although both groups had Russian as L1 and rated their proficiency in both languages to be similar (SCBM 217). Stepanova and Coley (2006) conclude, referring to Romney et al. (1997) that only a small percentage of emotion terms were culture-specific models and that most had a model in common (SCBM 224).

Dewaele (2006) points out that this subject matter is discussed so controversially, as it is difficult to determine which factors concerning the expression of emotion are individual and which are cultural or social factors (DBM 121, BBM 36). Moreover, as Anglo speaker and in a Western culture socialized individual one should be aware of the fact that even the term ‘emotion’ itself is an cultural-laden term, which might not even have corresponding terms in other languages. (BBW 97), and that this topic, thus, “reflects a language-specific Anglo perspective” (BBW 98). Moreover, it should be considered that culture its effects not only on the verbal level, but also on the non-verbal one, which means that for instance ‘silence’ is interpreted culturally-dependent (EMLD 52). Finally, he points out that in his research field of emotion words, they are often subject to the culture they are stated in. A Chinese person, for instance claimed that the use of affection affection-related gestures would make her feel uncomfortable in public (BBM 52). Many of Dewaeles’ participants claimed that swearing depends highly on culture (STD 214). This is supported by Pavlenko, who states that “African-American English, Balinese, Cypriot Greek, Hebrew, Turkish, and Yoruba, have a salient genre of verbal dueling that includes ritual insults and serves to reinforce interpersonal bonds (EMP 121). Pavlenko (2007) did investigations concerning the valuation of emotion words of Chinese-English bilingual speakers. Her findings indicate that the term ‘xian mu’, for instance, was considered to be more pleasant for Chinese bilinguals than the respective English term ‘envy’. She derives from these findings that in comparison with monolingual persons, bilinguals have different spaces for the emotion domains of their first and second language (EMP 97f.).

## 4.5) A Neurological Approach

A last question to be asked might be as to whether there is any proof from the field of neuroscience that emotions might be represented differently in the brain depending as to whether a monolingual or bilingual speaker experiences and perceives them.

Bourne (2010) states that it is still unclear how emotions are lateralized in the brain (905). However, generally two different scientific approaches attempt to explain the cerebral organization of how humans perceive emotions. The first approach advances the hypothesis that “all emotions are lateralized to the right brain hemisphere” (for example Kucharska-Pietura and David 2003 in Bourne 904, RFS 130, Moscovitch 69, Manual Dupont et al. in Punte 21f.), whereas the second approach claims that emotions are not lateralized in any specific hemisphere, but according to valence, suggesting a dominance of the left hemisphere in processing positive emotions and a right-hemispheric dominance in processing negative emotions. He furthermore describes that in his study, “all emotions showed significant lateralisation to the right hemisphere”, but also that “differences in strength of lateralisation within the right hemisphere were found.” (903 f.) Moreover, positive emotions and emotions of higher intensity were found to evoke stronger patterns in the right hemisphere. However, his results suggest that the organization of different types of emotions might be variable within the right hemisphere. When for instance categorizing emotions according to valence or intensity, different strengths of lateralization in the right hemisphere could be found (908). Dewaele (2010) claims that research (Panksepp 2000; Dalgleish et al., 2009; Goldberg, 2006; LeDoux, 1996 and Rosenthal, 2002) identified several parts of the subcortex, especially the hippocampus, the thalamus, the hypothalamus, and the amygdala to be involved in emotion processing. The two amygdalae seem further to be responsible to judge facial and vocal emotions[[4]](#footnote-4) (17, HBSP 225, EMP 154). If the hypothesis of right-hemispheric dominance is true, this is especially interesting, as there is also proof of the influence of the right hemisphere on verbal memory and on the pragmatic, communicative use of language (Moscovitch 57). This could lead to the deduction that emotions are lateralized in the same areas as language-learning related content. Additionally, recent neurological research has found that already newborn children have the ability to recognize and process emotions through facial expressions (Huotilainen 95), which underlines dramatically the importance of emotions for human communication purposes as well as the existence of the genetic determined ability to recognize and experience emotions as a human being, though some researchers state that the left hemisphere was specialized for language (Perecman 83). Hamann’s (2012) research is the most recent that was found on this subject matter. He states that neuroimaging analyses have identified some cerebral regions to correlate with several basic emotions, which could lead to predictions as to which regions are more probable to be triggered by a certain emotion. This was, however, found to be more difficult, as cerebral regions are in some cases responsible for more than one emotion. This lack of a ‘one to one’ correspondence between cerebral regions and emotions has initiated a theoretical shift with the result that recent investigation focuses more on network-level emotion representations, which are said to supply more appropriate and more sensitive results for the prediction of emotion models in the brain (Hamann 464).

To find research that deals with how emotions are lateralized in bilingual brains is rather difficult. Field (2011) reports in his work on ‘Bilingualism in the USA’: “there is continuing debate about how language systems are represented in the mind of the bilingual, whether the bilingual (…) has one unitary language system that essentially controls both languages, or two separate systems, one for each language.” Research on this topic has, however, come to ambiguous results (42, RFS 122). I urge, therefore, that research in this area should to be expanded. This is today also simplified by non-invasive, high-resolution methods, such as magnetic resonance imaging (MRI), that have been developed in recent decades and allow to ‘observing’ the processing brain (RFS 120).

# 5) Analysis: How Does Research Use the Different Approaches/Definitions of Bilingualism/Emotions?

Altarriba (2006) talks about emotion words and emotion-related words, characterizing both by giving examples. She refers to former research conducted by herself in 1999, where she had created a list of more than 300 English words. The majority (155) were abstract words, 100 concrete words and 71 emotion words. However, it was not dealt with the independent concept of emotion. This is also true for her work with Basnight-Brown (Altarriba & Basnight-Brown 2012), where monolingual English speakers had to learn Spanish vocabulary, thus, become bilingual and were then engaged in a Stroop color-word task. Regarding the concept of bilingualism, Altarriba (2006) does at one instance in the essay refer to former research of 2003 where she had investigated ‘fluent’ Spanish-English bilinguals. Mostly, however, she does only speak about bilinguals in general, without further distinction.

Anooshian and Hertel (1994) use the word ‘emotion’ in many contexts as ‘emotion materials’, ‘emotional experiences’, ‘emotional words’, ‘emotional concepts’. Moreover, their participants rated words in a 7-point scale from ‘unemotional’ to ‘emotional’ and they, hence, determine a mean rating for emotionality, but do not further refer to their understanding of emotions or their theoretical emotion framework. As to the concept of bilingualism, Anooshian and Hertel have a clear characterization of their bilingual participants. They demonstrate that their participants had acquired their second language after early childhood, and are, thus, characterized as late bilinguals. Remarkably, even the acquisition age is given, recording that all bilinguals acquired their second language after the age of eight.

Ayçiçeği-Dinn and Caldwell-Harris’ (2009) essay about Emotion-memory effects in bilingual speakers also perform emotional intensity ratings in order to determine those effects. They furthermore refer to the fact that the first language is usually preferred for emotional topics, but do not clearly define what emotional topics are for them. This is also valid for their usage of the term emotional phrase. It is not further explained what the constituencies are which makes a phrase for them emotional. As to bilingualism, Ayçiçeği-Dinn and Caldwell-Harris clearly define that their participants were Turkish-English bilinguals, who had arrived in the United States after age 17 and had Turkish as their superior language. Moreover, they claim that their participants had in average lived in the United States for five years. Thus, although not using terms as ‘Turkish-dominant late bilinguals’ it is absolute clear which preconditions would have to be reconsidered if other researchers would like to repeat the investigation.

Besemeres (2006) questions in her essay how emotional experience differs in distinct languages. Therefore she describes emotion words as concepts that are used to describe feelings. Before starting her analysis, she writes that emotions in her topic ‘autobiographical works’ are understood to be placed between social constructionism and a traditional psychological view of emotions, thus, emotions are mostly experienced as interior phenomena, and not in a social domain. Moreover, in her approach, emotions are shaped culturally as well as individually. This concretization of emotions shows that the author examined the dichotomy extensively and was able to decide for one of many possible emotion approaches. As to bilingualism, Besemeres refers to bilingual writers, who narrate from a bilingual perspective, she talks about the experiences of bilingual immigrants and concludes that the emotional dimension of bilingual life narratives offers an astounding perspective on the interdependence of language and emotions. A specific concretization or further characterization of the type of bilingualism of the writers she describes can, however, not be found.

In Dewaele’s first cited essay (2004), he investigated the differences in the perception of the emotional force of S-T words several languages of multilinguals. A concretization of emotion concepts or approaches can, nevertheless, not be found. As to bilingualism, on the other side, he characterizes the participants appropriately to have learnt both languages from birth, thus being early equilingual bilinguals, though not using the term. In his essay concerning the expression of anger in different languages, Dewaele (2006) does already define his approach of emotions in the introduction. He presents several approaches, for instance a neuroscientistic approach, where emotions underlie chemical mechanisms and Panksepp’s (2000) approach that argues for genetically encoded basic emotions located in subcortical parts of the brain. He concludes, hence, that in his study he assumes the existence of basic emotions, which have physiological relations to the language that codes and communicates them. With regard to bilingualism, Dewaele (2006) for instance cites Harris (2004), who investigated early bilinguals’ reaction to reprimands. As in his former work, however, he himself does not have any subcategories when speaking about bilinguals. In his work about the emotional weight of the phrase ‘I love you’ in different languages, Dewaele (2008) writes that he decided for Averill’s (1982) socioconstructivist framework of emotions, which situates emotions within the behavioral system. He infers, hence, that emotions can be analyzed according to social, psychological and biological systems. This is a very clear approach that even refers to one specific definition by a professor of psychology. As to the different categories of bilingualism he cites several works, as Grabois’ (1999) study, who has worked with late English-Spanish bilinguals, or Marian and Kaushanskaya (2004) who investigated bicultural adult Russian–English bilinguals who had emigrated to the US as teenagers, in his own study, however, he does not have any subcategorizations of bilingualism. This might have to do with the fact that his study focuses more on the differences between bilinguals, trilinguals, and further languages. This should, however, not have prevented him from defining bilingual speakers more specifically. In his work on emotions in multiple languages (2010), he defines emotions as neurologically based, and coined through communication. Moreover, he claims that an extensive range of cultural, linguistic, situational and individual variables shaped their expression, which can be seen as a very clear approach. His book has a particular chapter concerning independent variables, where he discusses in detail which factors influence the expression and perception of emotions in multilingual speakers. There he also approaches the categories presented in chapter 2.4: order of acquisition, context of acquisition, and language proficiency in some contexts. This shows that he extensively dealt with the fact that bilingualism is a broad term which includes several subtopics.

Eilola et al. (2007) investigated Finnish-English bilinguals, using an adapted Stroop paradigm. They report using four lists with 20 words, either being positive, negative, neutral, or taboo words, thus emotion words. Any further approach of the emotion controversy or an attempt to define emotions cannot be found in their essay. On the other side, Eilola et al. do indeed record an appropriate characterization of their Finnish-English bilingual participants, describing them to be late and unbalanced bilinguals with proficient knowledge of English, who started to learn English between the ages of seven to thirteen.

One of Ervin-Tripp’s early works (n.d.[[5]](#footnote-5)), having the title ‘Emotions in Bilingualism’ depicts several factors as attitude, motives, symbolism, and personal identity to be related to bilingualism. Nevertheless, she does not depict the topic of the difficulty of emotion definition. This, could, however, be related to the fact that it is only a short and assumedly early paper of hers. She does on the other hand define bilinguals, writing that in her understanding every learner who knows two languages is a bilingual. Unfortunately, she does not approach topics such as context of acquisition or order of acquisition in her paper.

Ferré et al. (2010), who examined if words have the same emotional intensity in the first and in the second language, investigated the factors that caused emotionally charged words to be typically better remembered than neutral words. They criticize that emotional words cannot be taken from one existing source, but researchers have to generate them by themselves or obtain them from participants’ judgments, concluding that it is necessary for the future to distinguish between different types of emotional words. Regrettably, this criticism is not applied to the concept of emotion. As to bilingualism, Ferré et al. do differentiate between several subcategorizations, for instance claiming that proficient bilinguals who acquire their language in early childhood and in an immersion context do not show differences in intensity of emotional words in the first and second language.

Harris (2004), using skin conductance response tests with Spanish-English bilinguals, argues for a brain-based perspective on the emotional experience of language, as this should permit to make more complex hypotheses than claiming that the L1 is generally experienced to be more emotional. She does, however, not discuss what in her opinion constitutes emotionality or discuss emotion concepts or definitions. Nonetheless, Harris characterizes her participants according to the bilingual subcategories, differentiating between Spanish-English early bilinguals and Spanish-English late bilinguals that had not lived in the United States during their childhood and were exposed to English in their middle childhood for the first time. Harris et al. (2006) studies concerning psychophysiological evidence of emotional fist language dominance from bilingual speakers, critically analyze the reasons why the scientific study of emotions has been rejected for a long time and investigations of emotions and language have conventionally even been assumed to lie outside the scope of scientific research. Moreover, they criticize that cognitive science has for a long time neglected bilingualism in their research, usually focusing on monolingual participants. In their study, Harris et al. used skin conductance amplitudes to measure the intensity of emotion words in participants’ first and second language. Therefrom they develop an ‘emotional context of learning theory’, claiming for instance that languages learned in naturalistic contexts are experienced as more emotional than those acquired in educational contexts. They do, however, not explain their definitory approach of emotionality, or what they suppose to comprise emotionality. In contrast, Harris et al. are very specific in the description of their bilingual participants, reporting to having divided them up into three groups. The first group consisted of sequential bilinguals, who immersed firstly when moving to North America in order to attend university or take a job and have mostly had a formal English instruction, thus, being late, sequential bilinguals who learned their language in an educational or instructed context. The second group was described to also be sequential bilinguals, but to have immigrated to North America at an early age, hence, being early, sequential bilinguals. Also the participants of the third group were sequential bilinguals. They differed from the two former group in that the were born in the United States and had acquired English as a second language from family, peers and in schools at ages four to six, thus, being early, sequential bilinguals that learned English in a mixed context.

Marian and Kaushanskaya (2004) compared in their essay Russian-English bicultural bilinguals’ autobiographically retrieved memories. Additionally, the effect of individualism–collectivism on emotional valence in bicultural bilinguals was examined. Although they claim the measurement of emotions to be operationally defined by emotional intensity and emotional valence of the memory, they do not discuss the variability of emotion definitions. The participants were described as being Russian-English bicultural bilinguals, who were born in the former Soviet Union, immigrated to the United States in their teens and were students at an American university at the time of testing. Although they do not use terms as early, sequential bilinguals and mostly refer to them as ‘bilinguals’, I would claim that the categorization of their participants’ bilingualism can be considered as valid. In their essay titled ‘Words, feelings, and bilingualism’ (2008), Marian and Kaushanskaya investigated cross-linguistic differences in emotionality of bilinguals’ autobiographical memories, asking them to recount their immigration experiences either in Russian or in English. Although they controversially discuss the topic of emotion words and finally define them as words that describe positive or negative feelings, again do not clarify how they define emotions. Their participants had all in common that they had moved from the former Soviet Union to the United States, however, at different ages. Therefore, age of acquisition was not into account, but immigration age, which can be seen as equivalent factor. Furthermore, participants were subcategorized into Russian-dominant, English-dominant and balanced bilinguals, which shows that the authors made an effort to properly characterize their participants according to the existing categories.

Alexia Panayiotou’s (2006) essay concerning the cultural concept of guilt in different languages does offer a very extensive emotion approach. In her introductory section she states that her study is based on a constructionist framework that investigates emotional concepts in a bilingual setting. Shame, which is one of the two emotion concepts, is characterized as social emotion as it was related to automatic bodily signals (184). Moreover, Panayiotou claims that the social constructionist approach assumes emotion theories to comprise linguistic and social components, with a focus lying on the use of emotional vocabulary to indicate emotions. She states that in her paper, emotions are considered to be language dependent and have to be filtered through a cultural meaning system, while language constructs emotions. Acknowledging that her approach is different from other theories of emotions, she finally defines emotions to be “a subcategory of feelings that help organize thoughts, behavior and meaning systems (…) are biologically generated (…) [and must] be enriched by meanings before becoming emotional experiences.” (187) As to her approach of bilingualism, it is important to mention that Panayiotou’s study is a qualitative investigation, as she interviews a heterogeneous group of bilingual individuals and does not have the intention to generalize her results. However, she does include in the descriptions of her participants factors as context of acquisition. Unfortunately, the factor of order of acquisition or age of acquisition is not mentioned.

Pavlenko is one of the researchers who published most on the topic of bilingualism and emotions and is also frequently recited in works of many other authors in the field. In her essay ‘Bilingualism and emotions’ (2002), her aim is to investigate the discursive construction of emotions in Russian-English bilinguals. She criticizes scholars, who often take a separatist perspective on emotions and consider them as independent from language. On the other side, she reports that cognitivist and constructivist scholars take an inclusive approach, considering emotions as phenomena that are constructed through discourse (46). Moreover, she argues that emotions are not only constructed linguistically and culturally, but also locally and claims that emotional judgments are not only culturally-dependent, but also individually and context-dependent (51). Additionally, participants’ ratings concerning emotions are presented, stating that bilinguals frequently conceived emotions not as activities, but as states. However, she does not offer an extended and personal approach or definition of emotions. As to bilingualism and the description of bilingual participants, Pavlenko does indeed offer an exact description. She characterizes her bilingual participants as Russian-English students, who learnt English post pubertal between 13 and 19 through ESL classes and naturalistic exposure. Moreover, they are said to have spent between three and eight years in the United States and to communicate in both languages on a quotidian basis. Their proficiency was describes as being “fluent enough to be enrolled in regular undergraduate and graduate classes” (58f.). Thus, they can be described as proficient, sequential, early Russian-English bilinguals, who learnt their second language in an educational context and through naturalistic exposure.

In her essay ‘Bilingual Selves’, also being the first chapter of her book ‘Bilingual Minds’, Pavlenko (2006) aims to figure out bilinguals meaning making systems, trying out to explore her participants’ view of concepts as bilingualism, emotion and self. This is also the reason, why she does “not espouse a single theoretical perspective on bilingualism, emotions, or self“ (8). As she took her data from the questionnaire she and Jean-Mark Dewaele had collected from 2001 to 2003, she had a set of more than 1.000 participants, who for instance ranged in age from sixteen to sixty years. Moreover, only 14% of the participants were ‘bilingual only’, the greater part learned more than two languages and was characterized as multilinguals (6f.). Obviously, such a huge pool of heterogeneous participants makes a unique characterization as proposed in chapter 2.4, almost impossible. In her work ‘Emotions and Multilingualism’ (2008), a book with eight chapters on the topic, she criticizes that in the field of bilingualism, the role of emotions is considerably undertheorized and that research focuses on ‘languages and emotions’ and not on ‘languages of emotions’. She declares that in her book she does not offer one definition of emotion, as every chapter the relationship between language and emotions is analyzed from a distinct perspective and can, thus be read independently. Hence, she states that “emotions (…) appear in some chapters as states, in others as representations, and yet in others as processes or relationships.” Moreover, she points out that in her analysis she will not incorporate an extended discussion on theoretical positions and, thus, not offer different approaches of emotion definitions, as these could plentifully be found in the literature on emotions (42). As to the different approaches of bilingualism, Pavlenko quotes Grosjean, stating that “theoretical models of bilingual[ism] (…) have not been sufficiently elaborated, and conceptual notions and [that] definitions show a great deal of variability.” She concludes that research often produces conflicting results and is many times not clear in its methodological considerations. Therefore, she defines a bilingual person, if not characterized further, simply as a speaker of two languages (5). Pavlenko furthermore points out that in contrast to an amateur, who might define a bilingual person as someone, who is proficient in two languages learnt from birth, researchers in the field usually define bilingual speakers as persons, who use two languages or dialects on a quotidian basis without characterizing them through proficiency (6). Later, Pavlenko explains to the reader in great detail the factors that x the subcategories discussed in chapter 2.4; age of acquisition, context of acquisition and language dominance, the latter being a less controversial and better measurable factor as language proficiency (8). Finally, Pavlenko’s essay ‘Emotion and emotion-laden words in the bilingual lexicon’ (2008) concerns the differences of both concepts: emotion words, and emotion-laden words. Later, she defines emotion concepts, quoting Russell (1991), who sees emotions as “prototypical scripts that are formed as a result of repeated experiences and involve causal antecedents, appraisals, physiological reactions, consequences, (…) means of regulation and display, [who] (…) are embedded within larger systems of beliefs” (150). With regard to bilingualism, she states that the essay’s aim is to investigate if bilinguals’ representations differ from monolingual ones (147). Her bilingual speakers are characterized as being majorly adult or late bilinguals, who learned their second language as a teenager or as an adult.

The essay ‘Bilingualism and Its Impact on Psychological Assessment’ by Antonio E. Puente et al. (2013) has to be considered as a special case in this analysis, as they investigate a very specific group of bilinguals, namely only Spanish-English Hispanics, who live in the United States. They state that this group is particularly interesting for investigation purposes, as most of them are bilingual and bicultural, though Hispanics should not be considered as a homogenous group. They criticize that the phenomenon of bilingualism was for a long time neglected in the United States and has been seen as unnecessary. This can be seen as a cause, why in their opinion the majority of Americans are not ‘true bilinguals’. They define a ‘true bilingual’ in this context as a person who masters two languages equally in all areas of languages and was formally instructed before reaching the age of ten years (17f.). Although it can be seen as a fact that many Americans are not raised bilingually, a controversial discussion whether there is such a phenomenon as ‘true’ bilingualism would have been desirable. However, later in the essay, the factor ‘proficiency’ is discussed critically. Furthermore, they present the factors that influence bilingualism and list amongst other things age, sequence, method, and context of acquisition (compare chapter 2.4) and give an extended view on the subcategories that exist in this approach (18ff.). Participants of the studies he presents are appropriately characterized according to the indicated categories. As to emotions, Puente et al. claim that the investigation as to whether emotions are expressed more likely in one language than another is supportive, as they have been shown to vary language-dependent (24). In their conclusion, moreover, it is stated that Spanish was more descriptive of emotional and social issues, while English was more descriptive of technical ones (28). The difficulties of a possible definition of emotions are, however, not approached.

Schrauf and Durazo (2006) examined bilingual autobiographical memory and emotion, dedicating a whole chapter on their approach of emotions. In this cognitive theory of emotions, these are assumed to be elicited by anterior events in a sociocultural environment. Events are defined as for instance insults, a bereavement, or success in a competition, and are complemented by a physiological reaction and emotion behavior. Thus, an exact and appropriate definition of emotions for Schrauf and Durazo’s  
investigation can be confirmed in this analysis. As to bilinguals this is, however, not the case, as they are in mostly referred to as ‘bilingual’ without further differentiation. In some cases, age is indicated, for instance by characterizing bilinguals as ‘adult’ or being ‘older’. Only once, Schrauf and Durazo characterize bilinguals as Ladino-Turkish from the Jewish community in Istanbul, ranging from ages 39 to 88, and to have learnt both languages simultaneously by four years of age. However, a consistent and appropriate characterization including not only age, but at least also context of acquisition would have been desirable.

Stepanova Sachs and Coley (2006) investigated envy and jealousy in Russian-English bilinguals. At the beginning they discuss the problematic of emotion terms that exist in some languages, but do not in other ones, characterizing emotions as an abstract term, which is hardly describable. Moreover, they quote Russel (1991), who pointed out that emotions have mostly to be characterized through words, as “researchers have to resort to [them] in the absence of Munsell chips” (209), thus they do approach the problematic situation that emotions are hard to define. In their investigation they focus on two specific emotions, namely ‘jealousy’ and ‘envy’, providing the reader with definitions of both concepts. While jealousy is defined as “a situation where a person fears losing an important relationship with another person to a rival” envy is defined as “a situation where a person lacks another's superior quality, achievement, opportunity, or possession and either desires it or wishes that the other lacked it.” It is, moreover, stated that these definitions resemble those of English and Russian dictionaries (210). Stepanova and Sachs, thus, advance the problematic of emotion definition and give definitions for those emotion terms they use for their investigatory purposes. Their bilingual participants are characterized as aged between 19 and 28. As they recruited bilinguals as well in Russia as in the United States, there were two different groups of bilinguals. Russian bilinguals were “either English majors in local universities, or worked at a workplace where English was the dominant language, or had spent a considerable amount of time in the United States.” American bilinguals are described to have grown up speaking Russian and to have learned English as a teen in the context of immigration from Russia to the United States. It is furthermore stated that no differences have been found in self-assessed knowledge of English or length of speaking English (212). However, it seems as if the different contexts of acquisition between both groups were not taken into account.

The essay titled ‘The automatic access of emotion: Emotional Stroop effects in Spanish-English bilingual speakers’ by Sutton et al. (2007) aims to provide information gained through participants’ selective attention to emotions. In contrast to the original Stroop Task, the emotional Stroop Task confronts participants with emotion words, as ‘anger’, or ‘fear’, and neutral words, as ‘boat’, or ‘car’. Participants were then asked to respond to the color of the word presented. However, neither a critical attitude towards the usage of emotion words nor a discussion concerning the difficulties of defining emotions or a specific emotion approach can be found in their essay. Their bilingual participants are described as Spanish-English bilinguals, recruited at the University of New York. They had to complete a language history questionnaire (LHQ), which provided information as self-perceived language proficiency in both languages, onset of acquisition subcategorized into speaking and reading, and a percentage of the daily usage. Regrettably, the context of acquisition was not taken into account or is, at least, not reported in the essay.

Jytsna Vaid (2006) investigates in her essay bilingual perspectives on humor and emotion. She concerns extensively the concept of humor and even provides a definition (see chapter 4.3). Although giving examples of emotions, as ‘fear’, ‘anger’, or ‘grief’ and stating that humor functions as management for emotions (154), a discussion with regard to the question if emotions can be defined at all and the problematic of measuring emotions cannot be found. Her participants were characterized as English-Spanish bilingual Mexican-Americans and Anglo-Americans, who ranged from age 18 to 23 and have been recruited at Texas A&M University. Proficiency was measured through self-perceived language knowledge on the basis of a brief questionnaire. A more detailed questionnaire, completed by one half of the students indicated that they were mostly born in the United States. There is no reason given, why only half of the students had to complete the detailed questionnaire. Moreover, context of acquisition was not taken into account, which would have been desirable in order to have an appropriate characterization of her bilingual participants.

Veltkamp et al. (2013) investigated the differences in displays of emotion in Spanish-English bilinguals in their essay ‘Is personality modulated by language?’ They point out that in their view language plays a key role in the expression of emotions. Moreover, it is stated that languages differ in carrying distinct emotional tones. A further approach on emotions or a discussion concerning the indicated difficulties can, however, not be found. Their bilingual participants consisted of Spanish-German bilinguals, who were recruited at the Freie Universität Berlin in Germany, and who had acquired their second language after the age of 12. Context of acquisition is, however, not indicated.

Lastly, Wiertzbicka concerns in her essay “Bilingual Lives, Bilingual Experiences” (2004) the experiences she and bilingual persons she knows had when speaking about an emotional topic in a distinct language. She points out that emotion is “a construct which depends on the contemporary English language, and that many other languages do not have words corresponding exactly to the English word emotion.” Moreover, she agrees with Dixon (2006), who stated that emotions are a psychological category, which formerly were described as passions, affections, or sentiments. She, thus, underlines that definitions of the emotion concept are not static, but dynamic and change over time (97f.). Her essay is not a quantitative, but rather a qualitative study and does, hence, not have bilingual ‘participants’ in the original sense. As she concerns a relatively broad perspective on how bilinguals differ in comparison to monolinguals in emotion expression, I would argue, that a further distinction is not absolutely necessary here.

# 6) Conclusion

The first part of this paper aimed to present a theoretical framework of the concepts of bilingualism and emotions and to further discuss the underlying problems researchers of the filed have. The field of bilingualism was found to be divided into four major categories, namely context of acquisition, order of acquisition, type of acquisition and grade of proficiency. Contexts of acquisition were for example educational, non-educational, or mixed contexts. A further question was if bilingualism was only part of the individual or a societal phenomenon. The order of acquisition could be subdivided into early or late bilingualism. Another factor was, if the languages had been learnt synchronic or diachronic and if the languages learnt were more similar or less. The third field, type of acquisition was found to be a rather controversial one, as it subdivides bilingualism into additive and substractive. The theory behind this differentiation assumes that languages are either added to a linguistic repertoire or substracted, which means that the learning of one language causes at least some kind of a partial loss of another already learnt language. Also controversial discussed is the fourth category, grade of proficiency. This category subdivides into speakers with a same degree of proficiency in two languages, ‘perfect’ speakers of two languages and speakers with some kind of an ‘insufficient’ degree of language knowledge. Moroever, bilinguals are can be categorized to be productive bilinguals or perceptive ones. It was, however, claimed that the measurement of proficiency with scientific methods is considerably hard, as there are no methods that would guarantee scientific results and researchers still argue about the factors that constitute proficiency.

Similarly problematic has been the attempt to define emotions. It was stated that this is caused by the fact that there is no clear-cut definition, but many differing definitions which depend on several factors, as the field in which the researcher work, or the researcher himself. There are, however, attempts to have a consensual definition, a so-called working definition, which includes only those features that all emotion researchers can agree on. As has been analyzed, this kind of definition has the disadvantage of being considerably imprecise. Its advantage, however, is that it aids with the differentiation of emotions from similar or related phenomena as moods or sentiments. It was stated that those differ for instance in their object-relation and duration. Moreover, it was found that emotions can be differentiated into four dimensions, namely valence, arousal, potential, and intensity. Another debate in the field of emotion research is the question if basic emotions that are shared by all humans do exist or not. Some research findings indicate their existence, but some researchers reject the idea, arguing that emotions are culture-specific. Because of their individuality and subjectivity, emotions are hard to measure scientifically. One way is to measure physiological changes of the body, another is to work with so-called emotion words or emotion-laden words. Eventually, it was argued that an uncritical utilization of these is however, highly unscientifically and can cause ambiguous and misleading results.

In the second part of the paper, factors that were found by researchers to influence the perception and or expression of bilingual speakers were presented in five chapters. First, Anooshian and Hertels (1994) findings were presented, indicating that emotion words were remembered more frequently in the first than in the second language. This could be explained by several factors. It was, for instance argued by Altarriba (2006) that emotion words were easier to imagine as they showed a high relation with facial expressions. Another factor that was found was the connection of emotion words with the event they have been experienced in. It was argued that emotions were usually experienced in a specific language context and thus, when recalled in this specific language, strongly connected. Context dependence is furthermore connected to the perceived language emotionally, which is another factor. Context dependence, however, may indicate storage at a deeper level of representation. Schrauf and Durazio (2006) claimed that this has to do with the fact that not only the content of an emotional experience are encoded, but also the tone and some explicitly remembered words or phrases. Moreover, it was argued by Anooshian et al. (1994) that the experience of emotions at a young age relates strongly with early language development, which could also be a reason why emotions are often perceived more strongly in the first language. Harris (2004) supported this, arguing, that memories of immigrant children were also easier remembered in their first language. Dewaele (2004) pointed in this context to the fact that neuronal connections were increasing strongly in early and middle childhood. Moreover, children seem to naturally favor one language over another, which can either be influenced socially or psychologically. Ferré et al. (2010) pointed out that neither age of second language acquisition, nor language dominance had any influence on recall for L2 emotion words. Grosjean () however, claimed that it was a myth that bilinguals express their emotions in their first language exclusively. He pointed out that many more factors influence bilingual’s emotion expression, which can also lead a bilingual to prefer expressing emotions in the second language. Interestingly, although women perceived themselves to be more emotional, effects for gender or age could not be found.

However, attitude and motivation were two factors that influenced particularly immigrants’ emotional language choice, as well as their chances to integrate into a new society, as both factors were found to have an impact on the foreign language’s proficiency level. Attitude was nonetheless claimed to be a rather ambivalent, as it was highly dependent on sociopolitical and geopolitical factors, as the prestige of the language in the target culture. Moreover, attitude usually depends on subjective factors, as the sound of a language. Interlocutor dependence could be considered as another subjective factor that influences emotional language expression. One example was a private interlanguage some participants claimed to use in order to express feelings towards their partners, others claimed to use some languages to refer to emotional topics while refusing other languages to do so.

Second, the results of the study of swearwords, taboo words and reprimands indicate that several independent variables were a determining factor concerning the perception of such words. The first study presented was Ayçiçegi and Harris’ (2004) study that revealed that negative emotion words elicited higher recall rates in the second language. The Study of Harris et al. 2006 pointed out that this is particularly true for late bilinguals. This was also supported by Marian et al. (2008), who found in a study that investigated bilinguals’ immigration stories that more negative emotion words were uttered in comparison to positive emotion words. One possible explanation could the traumatic nature of immigration experiences. This is supported by the fact that an earlier age of arrival was connected with a decrease of use of negative emotion words. Another factor that was found was language preference, as amore negative emotion words were used when the immigration experience was told in the preferred language. They conclude, thus, that regarding the emotion lexicon language preference might be more determining than language proficiency. Dewaele (2004) pointed out that the emotional impact of swearing is determined by many factors, as the individual’s linguistic history and frequency of use of the language, as well as cultural conventions. Frequency, as well as proficiency are mostly linked with socialization in a language, as well as with the amount of authentic interactions in the target language, which makes it in turn more likely to be familiar with swear and taboo words and to have a more sensible contextual knowledge. This was found to be also valid for positive emotions, as the expression of love. Low proficiency rates were furthermore linked to difficulties to interpret emotions in other languages.

Ayçiçegi et al. (2009) found higher recall rates only with reprimands, but not with swear words or taboo words. This could be explained, as especially reprimands occur mostly in childhood contexts and might elicit stronger recalling, as childhood experiences are strongly related with early language development (see above). Some of Dewaele’s (2004) participants report in this context some sort of psychological barrier, which was built in their childhood and prevents them from swearing. He, moreover, argued that a lack of instruction in L2 swearwords for most foreign learners would cause that they did also not have the vocabulary they would need to express themselves emotionally. Many participants seemed to be aware of the high risk of using swear and taboo words in a non-native language as they can easily lead to misunderstandings when used in inappropriate contexts. Thus, language awareness can be seen as a further/additional factor that influences bilinguals’ emotional speech. This was also found to be true for the context of acquisition, as instructed learners for instance were found to swear less often in comparison with naturalistic or mixed learners. This is supported by research by Ferré et al. (2010), who investigated proficient simultaneous bilinguals using a memory task. They showed no difference in emotion expression regarding their first or second language. A further factor seems to be the age of second language acquisition and order of acquisition, as emotion perception and expression was found to be more difficult if learned later in life. That culture does also influence bilingual speakers’ swearing habits can be seen by the fact that some of Dewaele’s participants stressed that swearing is for them restricted, as their religion or culture did not allow them to swear.

Third, as to positive emotion expression and perception and in particular to love and humor, similar factors as those which influence swear and taboo words seem also to influence bilinguals’ speech behavior. Thus, Dewaele (2008) found the phrase ‘I love you’ to be expressed more likely in the first language and supposes factors as the non-verbality of love expression, sociocultural factors, age and order of acquisition, the participants linguistic history and frequency of language use.

Fourth, the chapter on the role of culture and the untranslatability of cultural concepts aimed to investigate the influence of sociocultural factors on emotion perception and expression, asking if some languages and cultures are genuinely more emotional than others. It was stated in this context that feelings, or culturally laden emotion terms might sometimes even not be translatable at all. Cultural concepts were found in some cultures to be expressed through interjection or diminutives, in other cultures through adjectives. Thus in some cultures cultural concepts are expressed through a specific word class, while in other culture they are expressed through morphemes. Moreover, bilinguals’ emotion perception seems to be influenced as to whether they have been socialized in an Asian or a Western culture. Bilingual Turkish-English participants who were confronted with childhood reprimands did for instance not respond if they were in English. It was argued that this could be further influenced by their parents’ culture-based discipline patterns. According to Veltkamp (2013), who quoted Sapir and Whorf’s famous hypothesis that language determines emotional perception and expression, persons behave depending on the culture and, thus, language they speak. He argues that this could be caused by foreign language learning factors, especially the acquisition of cultural norms and values. This was supported by research conducted by Pavlenko (2006), who found English-Japanese bilinguals’ stories to be more emotional when told in Japanese, hence, concluding that bilinguals base their self-expectations on the language they use. Marian’s (2004) similar study came to the same conclusion. As to the influence of culture on bilinguals’ emotion perception and expression, the factor of duration seems to be significant. As Wierzbicka (2004) pointed out, cultural-based misunderstandings between bilingual persons likely, as both include experienced-based subjective insights. Moreoever, the comprehension of cultural concepts, was found to be only acquired through a long process of socialization into the target culture. Regarding culture-specific emotion words, there was no common ground found. Stepanova and Coley (2006), for instance, claimed that only a small percentage of emotion terms were culture-specific models. Dewaele (2006) pointed out that this subject matter is discussed so controversially, as it is difficult to determine which factors concerning the expression of emotion are individual and which are cultural or social factors, that even the term ‘emotion’ itself is an cultural-laden term, which might not even have corresponding terms in other languages and, thus, reflects a language-specific Anglo perspective. Pavlenko, who stated that many cultures have ritual insults to enforce interpersonal relationships, supports this.

The fifth chapter aimed to find proof from the field of neuroscience as to whether how emotions are lateralized in the brain, and if there are any indications that they are lateralized differently in bilingual brains compared to monolingual ones. It was found that recently there are two approaches. While the first approach argues that all emotions are lateralized in the right part of the brain, the so-called right hemisphere, the second approach claims that emotions are not lateralized in any hemisphere, but according to their valence, meaning that positive emotions are said to be lateralized in the left part of the brain and negative emotions in the right one. Moreover, research was quoted, that discovered several parts of the brain to be involved in emotion processing, especially hippocampus, thalamus, hypothalamus and the amygdala. It was claimed, however, to be difficult to have a one-to-one correspondence between a specific emotion and a specific cerebral region, as some regions were found to be responsible for multiple emotions. As to bilingual cerebral emotion procedure, there are unfortunately no clear results. Research still debates as to whether emotions are represented in one language system or if bilinguals possess two separate language systems with each being responsible for one specific language.

The last chapter analyzed those 28 studies that were taken into account in this essay and concerned the interface between bilingualism and emotions in an alphabetical order. Their publication dates ranged from 1994 to 2014 and, thus, embraces a high amount of what has been written on the topic. The analysis has produced that out of all 28 investigations only three had both a discussion on the difficulties to define emotion and/or a theoretical scaffold work definition of emotions for their investigation purposes and provided a characterization of their bilinguals which are similar to those indicated in chapter 2.4. in that they included at least the factors context of acquisition, age of acquisition and order of acquisition. Thirteen studies did only characterize their participants appropriately, but did not provide an approach or a discussion concerning the topic of emotions. Five studies on the other side defined emotions for their investigation purposes or discussed the topic of emotions controversially, but lacked one or more factors when describing their bilingual participants.

Outlook

Merten (22) comments that in his opinion the analysis of emotion words reflects rather the structure of the analyzed language than the structure of emotions, which leads to adulterated results.

# Appendix

Appendix 1: Percentage of spontaneous utterances of emotion words in seven different countries

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Britain | Holland | Belgium | France | | Switzerland | Italy | Canada |
| Sadness | 82 | 59 | 81 | 75 | | 63 | 64 | 68 |
| Pleasure | 32 | 64 | 87 | 83 | | 69 | 79 | 41 |
| Anger | 72 | 49 | 46 | 55 | | 63 | 55 | 75 |
| Fear | 24 | | 76 | 68 | 60 | 63 | 75 | 48 |
| Luck | 90 | | 31 | 32 | 26 | 14 | 65 | 76 |
| Love | 53 | | 31 | 24 | 14 | 25 | 55 | 62 |
| Hate | 53 | | 17 | 12 | 17 | 11 | 44 | 44 |

According to Meyer et al. 2001, p.27 (translated)

Appendix 2: Emotion word rating in English and Turkish (extract taken from Ayçiçegi and Harris 2009)

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1. [↑](#footnote-ref-1)
2. See categorization according to Meyer et al. (2001) and Merten (2003) in chapter 3.1 [↑](#footnote-ref-2)
3. The NEO Five-Factor Inventory, is a psychological personality inventory with a 60-item measure of five personality traits: Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience [↑](#footnote-ref-3)
4. see chapter 3.1 [↑](#footnote-ref-4)
5. The essay appears in her bibliography on the oficial homepage of XXX University. However, the works seems to be an essay of her time as a student, which was not published. [↑](#footnote-ref-5)