WHICH LANGUAGE DO BILINGUALS SWEAR IN?[*]

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Swearing, as a linguistic and socio-communicative practice, has been investigated cross-linguistically and in connection with several variables such as age (e.g. McEnery and Xiao 2004, Schweinberger 2018), gender (e.g. Gauthier and Guille 2017, Murray 2012, Thelwall 2008), and bi- or multi-lingualism (e.g. Dewaele 2017, Horan 2013, Nelson 2014). Swearing is considered to be a socially contagious act that is spreadable, particularly on the internet, through textual mimicry (Kwon and Gruzd 2017). While swearing may be offensive and a device for expression of negative emotions (Beers Fägersten and Stapleton 2017, Rassin and Muris 2005), it may also occur in positive contexts to promote group bonding, to display identity, to express humor, solidarity, trust, and intimacy, or to simply function rhetorically and add emphasis to the message (see Bednarek 2019, Daly et al. 2004, Stapleton 2010).

Empirical evidence further suggests that the socio-cognitive effects of swearing may be unconscious. Cavazza and Guidetti (2014) note that profanity in political discourse enhances a politician's level of persuasiveness, particularly in male candidates. Although political voters self-report a lack of conscious preference for candidates that use swearwords, the effect of swearing on the voters' perception of persuasiveness is automatic and unconscious. Similarly, Kwon and Cho (2017) show that swearing enhances user's attention to and approval of online commentaries with political nature. Furthermore, Feldman et al. (2017) note that profanity in language may be indicative of honesty and integrity. In the same line, Rassin and Heijden (2005) show that swearing is unconsciously perceived as a sign of credibility in court testimonies.

The processing and perception of swearing is unconscious and at times may be inconsistent with what a person's conscious view of swearing is. Swearwords communicate nuances of emotions and thoughts, and the linguistic act of swearing is not separable from the psychological notion of 'emotion' (Aycicegi-Dinn and Caldwell-Harris 2009, Beers Fägersten and Stapleton 2017, Jay and Janschewitz 2008). On the one hand, the frequency of swearing is significantly increased with a state of heightened emotional activation (Stephens and Zile 2017), and on the other hand, swearwords, in comparison to neutral words, trigger heightened emotional response (Janschewitz 2008, Tomash and Reed 2013).

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1.   Emotions and linguistic encoding

In the present study, the notion of 'emotion' is defined within the dimensional model of emotion proposed by Russell and Mehrabian (1977). The body of research on emotion suggests that emotional experiences have at least two qualities, also known as dimensions: valence and arousal (Barrett 1998). Valence refers to the negativity or positivity of emotions. For example, *sadness* has a negative valence, while *happiness* has a positive valence. Emotions further differ in terms of physiological arousal or activation (Barrett and Russell 1999). For instance, while both *anger* and *sadness* are negative in valence, *anger* is characterized by a state of heightened arousal or activation and *sadness* is connected with low arousal or deactivation.

Much of evidence suggests that language can trigger emotional response, and linguistic items may be emotionally encoded and perceived along the affective dimensions (Calvo and Mac Kim 2013). Warriner et al. (2013) measured the emotional ratings of 13,915 English words and showed that swearwords such as *motherfucker* are at the extreme of arousal dimension, while words such as *sunshine* and *rejoice* have the highest ratings of valence. Consistent with these findings, evidence further suggests that heightened emotional response to certain linguistic items is also present in the second language. For example, emotional intensity of swearwords in comparison to neutral words is stronger in the second language (Aycicegi and Harris 2004).

Harris (2004) investigated the effect of taboo words, endearments, insults, and reprimands in Spanish-English bilinguals. The results of self-reported and electro-dermal data showed that a greater emotional response would occur in late second language learners when the emotion-laden linguistic expressions are presented in the first language. However, with those who are equally proficient in both languages, no significant difference is found in response to the presentation of emotional expressions in either the first language or the second language. Eilola, Havelka, and Sharma (2007) similarly demonstrated that in late Finnish-English bilinguals, the emotional response to negative and taboo words, which is manifested through interference with cognitive processing, is found in both languages and the effect is of equal size.

Although previous studies overwhelmingly support the fact that certain linguistic items prompt emotional response, the body of literature is generally inconclusive and only partially supportive of the view that emotional responses are similarly intense in the first and the second language. For instance, Eilola and Havelka (2011) examined skin conductance levels of monolingual English speakers and Greek-English bilinguals in response to taboo Stroop tasks and showed that monolingual speakers produce higher degrees of arousal to negative and taboo words. Similarly, Harris, Aycicegi, and Gleason (2003) examined the psycho-physiological responses to reprimands in Turkish-English bilingual speakers and showed that the presentation of reprimands results in a significant difference between the first and the second language, with the first language being stronger.

On the other hand, findings further suggest that affective experiences may directly impact linguistic processing and performance, including word recall and recognition. For example, Buchanan et al. (2006) showed that participants perform

better in remembering semantically related high-arousing swearwords in comparison to neutral or low-arousing emotional words. Ferré et al. (2015) further revealed that emotional words may even have an advantage in memory over neutral words regardless of their semantic relatedness. Aycicegi and Harris (2004) also report that emotional words, and especially swearwords, have processing advantages in the second language, and swearwords are better recalled and recognized in comparison to neutral words.

Similarly, Ferré et al. (2010) examined the memories for positive, negative, and neutral words in proficient bilinguals of Spanish-Catalan and Spanish-English and showed that recall for emotional words was superior and of the same magnitude in both the first and the second language. Ferré et al. (2010) argue that the age of onset, the context of second language learning, language dominance, or similarities between the first and second language do not affect the memory of emotional words in the second language. In other words, the influence of emotion on language seems to equally exist in the first and the second language, regardless of the context and language type.

Ample evidence suggests that emotions influence linguistic processing and performance, especially in the form of word recall and recognition. Even so, the extent to which each independent affective dimension influences language is a matter of contention. Jay, Caldwell-Harris, and King (2008) argue that emotional arousal, among other dimensions of emotional experience, influences the cognitive encoding of linguistic items more robustly. Jay et al. (2008) note that taboo words are remembered better in comparison to neutral words, and this memory enhancement is a function of the higher levels of arousal that taboo words evoke.

Similarly, Guillet and Arndt (2009) suggest that arousal plays a more discernable role than valence in cognitive encoding and retrieval of linguistic items. Guillet and Arndt (2009) show that the function of memory for peripheral words is enhanced in the presence of high-arousing items, such as taboo words, but not in the presence of items with negative valence only. In contrast, Kensinger and Corkin (2003) note that both emotional valence and arousal likely equally contribute to remembering linguistic information. According to Kensinger and Corkin (2003), the memory of words is enhanced for linguistic items with a negative valence compared to neutral items. This effect becomes greater when emotional arousal is involved in comparison to when the words only have valence.

2.   Swearing in a second language

The wider body of literature reveals that the bidirectional association between emotion and language exists in both the first language and the second language. Swearing is a sociolinguistic practice that is emotionally laden, and second language users, particularly in naturalistic and immersive contexts, are likely to acquire swearwords as an unconscious ingroup social strategy or as a mechanism for second language identity construction. In bilingual speakers, the type and frequency of swearwords not only depend on contextual variables but also are directly impacted by linguistic factors, such as the level of proficiency, second language confidence, and socio-pragmatic competence (Jay and Janschewitz 2008).

Dewaele (2004) investigated the effects of context of acquisition, age of onset of language learning, proficiency and language dominance, frequency of language use, and socio-demographic variables on the choice of language for swearing among 1,039 multilinguals. The results suggested that there is a positive relationship between frequent use of one language and its choice for swearing, while gender and educational level have no significant effect on the choice of language for swearing. Dewaele (2010: 220) argues that the first language is perceived as the language of greater emotional force in multilinguals, and second language is mainly the language of "distance and detachment."

Similarly, Colbeck and Bowers (2012) show that not only the first language is more emotional but also taboo and sexual words produce more emotional impact in the first language, even in contexts where the processing of words is quick and automatic. Further, Bond and Lai (1986) showed that Chinese speakers of English as a second language discuss embarrassing topics much longer and in more details in English. Bond and Lai (1986) argue that the second language drives less emotional arousal due to the fact that it is learned in neutral settings; thus, embarrassing topics are discussed easier in a second language in comparison to the first language.

With regard to the connection between emotion and language, it has been shown that the choice of language for swearing in bilingual and multilingual speakers is partially linked to valence. Past studies have also confirmed that emotion-laden words cause emotional arousal in both first and second language speakers. Conspicuously lacking from the body of literature on second language swearing is an effort to demarcate the dimensions of emotional experience and particularly investigate the influence of emotional arousal or emotional activation on triggering swearing in bilingual speakers.

Moreover, previous studies on bilingual swearing have primarily relied on self-reported data to examine the pattern and frequency of swearing in the first and second language. Self-reported data, however, may not be an entirely reliable source for investigating the speech behavior of swearing. On the one hand, socio-pragmatic skills, especially in a second language, may not be part of learners' metalinguistic awareness, and on the other hand, as previously discussed, the cognitive effects of swearing may be unconscious and in conflict with the speaker's conscious views of swearing (see Cavazza and Guidetti 2014, Rassin and Heijden 2005).

3.   Methodology

The present study primarily focuses on the pattern and frequency of swearing in the first and second language and in response to high-arousing and low-arousing affective situations. Given the fact that arousal is an influential part of emotional response, likely more than valence, the present study focuses on swearing in bilinguals and in connection with emotional scenarios that have a constant negative valence, yet produce emotions that are different on the dimension of arousal. More specifically, the study uses emotional stimuli which vary in the level of arousal (i.e., high-arousing versus low-arousing) to examine the frequency and function of swearing in bilingual speakers.

3.1   Participants

The data come from 34 speakers of English as a second language, with Persian (16), Portuguese (6), Spanish (6), and Arabic (6) as the first languages. Participants were instructed language learners who studied English as a second language at a college, university, or English program. The majority of participants were between 18 to 40 years of age with an average of 27.93 years old; 54% were male and 46% were female. All participants reported holding a college or university degree, with 54.5% holding a graduate degree and 36% having a bachelor's degree. 9.5% of participants reported "some college" as their current level of education. The reported length of stay in an English-speaking country was less than five years for the majority of participants (86.36%).

    The participants' level of proficiency in English, based on self-reported data, varied from intermediate to advanced. The participants were recruited from English speakers with proficiency levels of intermediate and advanced. The participants selected their level of proficiency from a five-point scale of proficiency levels, including lower-intermediate, intermediate, upper-intermediate, lower-advanced, or advanced. 27.3% of participants reported a proficiency level of intermediate, 31.8% were upper-intermediate, and 40.9% were advanced. Additionally, while the majority of participants (72.73%) reported that they use English on a daily and regular basis, 27.27% reported more frequent use of their first language and less frequent direct contact with English speakers.

3.2   Data collection

Data were collected through a web-based questionnaire with three consecutive sections. Questions in all sections were presented one at a time without time limits, and each question required a forced answer. Moreover, once participants answered a question and submitted their answer, they were not able to return and see or change their answers to the previous question(s). The first section of the questionnaire included an informed consent. Participants were informed that they had the right to withdraw at any time during the test, and as expected, not all participants completed all sections of the questionnaire. The next two sections of the questionnaire presented the participants with two task types: (i) video inputs followed by a question in both English and the respondent's first language, and (ii) open-ended questions about swearing preferences.

    In the second section, 14 short, multi-second emotion-evoking videos were selected as input in order to elicit linguistic data from participants in both their first and their second language. Half of the videos presented high-arousing affective situations, while the other half displayed low-arousing affective scenarios. To objectively assess the attribution of affective valence and arousal to each video scenario, two trained raters independently examined each video scenario and separately assigned an affective valence and an affective arousal to each scenario. Raters had received training on relevant constructs such as affective dimensions and prototypical emotions but were blind to the research hypotheses. Inter-rater agreement was substantial on both

dimensions (valence agreement was 100%; arousal agreement was 92.85% with $k=$ 0.858) indicating that the selected visual scenarios tend to evoke similar affective valence and arousal across different people.

Participants viewed each multi-second, mute, visual scenario. The scenarios were presented in random orders, and each scenario was immediately followed by a question in English and the same question in the participant's first language. The two questions were presented in the same row, next to each other, and within the same page as the arousal-inducing video. The questions in the first and second language typically asked participants to predict what the subject in each scenario may have said within the context. Participants responded to stimuli by typing in both English and their first language on a keyboard. The scenarios and accompanying questions were designed to elicit utterances containing swearwords.

The final part of the questionnaire contained questions which obtained the participants' socio-demographic data and further presented participants with structured open-ended questions about their swearing behavior and second language use. Questions in the third section were presented in English, but participants had the option to provide their answers either in English or in their first language. The open-ended questions about participants' sociolinguistic behaviors, including the use of swearwords and insults, intended to obtain data on participants' perceived effect of swearwords in the first and second language.

3.3   Data analysis

The linguistic data collected from responses to emotion-evoking video scenarios were pooled, and the total number of utterances that contained swearwords or insults in each category was tallied. To quantify the number of swearwords and insults, all utterances that contained at least one instance of swearing or insult were counted. Double or multiple occurrences of swearwords within one utterance were considered as one instance of swearing. For example, *you are a fucking piece of shit* was quantified as one instance of swearing. On the other hand, spelling errors or non-standard spellings that could be reasonably recovered as swearing, as well as partially censored responses, such as *f*** you,* were also counted as instances of swearing. The number of clean and swear-free utterances were separately counted.

To operationalize the concept of swearing, any utterance that contained a word having "the potential to be offensive, inappropriate, objectionable, or unacceptable" was counted as an instance of swearing (Beers Fägersten 2012: 3). This broad definition of swearing was essential because the concept of swearing in the present study is being investigated in multiple different languages and cultures. Pragmatic elements, particularly lexical items that do not have literal or conceptual meaning, such as swearwords, interjections, or discourse markers, may partially share their functional properties across different languages. However, language-specific situational use is an important factor that results in unique discourse-pragmatic functions of such elements in different languages (Aijmer 2004; Mohammadi 2019).

Consequently, swearwords, among other pragmatic elements, cannot be considered as universal. Swearing is a culture-dependent linguistic behavior. The degree of swearwords offensiveness and the specific socio-pragmatic purposes of swearing may not be shared among different languages and cultures. Therefore, it was essential to adopt a measure that would be consistent across multiple languages and cultures, particularly because some words may be considered extremely taboo in one language, while their translation in another language might be considered only mildly offensive. Therefore, regardless of their level of offensiveness, swearwords such as *damn* and *motherfucker* equally contributed to the frequency of swearing instances.

The study elicited a total of 745 utterances, 380 utterances in response to high-arousing scenarios and 365 utterances in response to low-arousing affective scenarios. The utterances were coded based on the language of utterance (i.e., English or first language), swear-positive or swear-free, as well as production in response to high-arousing or low-arousing situations. Group differences between the first and second language in connection with the level of emotional arousal were calculated using chi-squared test. Further, the data obtained from open-ended questions in the third section of the questionnaire were analyzed both quantitatively and qualitatively.

4.   Results

The present study offers a new and unique perspective on the association between affective arousal and swearing behavior in bilingual individuals. The following sections give an overview of the results in terms of how affective arousal impacts swearing in both the first and the second language, how other possible linguistic categories, such as interjections, may function similarly to swearwords in lexicalization of emotions in bilingual speakers, and how the perception of second language swearwords may shape the frequency and pattern of swearing in the first and the second language.

4.1   Language of swearing in bilingual speakers

High-arousing affective situations, in comparison with low-arousing situations, generally result in more frequent use of swearwords and insults in both the first and second language. The data further show that not only a state of heightened arousal evokes swearing in both languages but also the frequency of utterances that contain swearwords is not significantly different in the first and second language. In other words, speakers of English as a second language, in response to high-arousing affective situations, produce similar swearing patterns in the first and the second language. In contrast, low-arousing emotional scenarios evoke significantly higher levels of swearing in English.

Figure (1) illustrates the raw frequency of utterances in four different categories, including swearing positive utterances in English, swearing positive utterances in the first language, swear-free utterances in English, and swear-free utterances in the first language. The data are further classified into two groups of affective activation, including high arousal and low arousal scenarios.
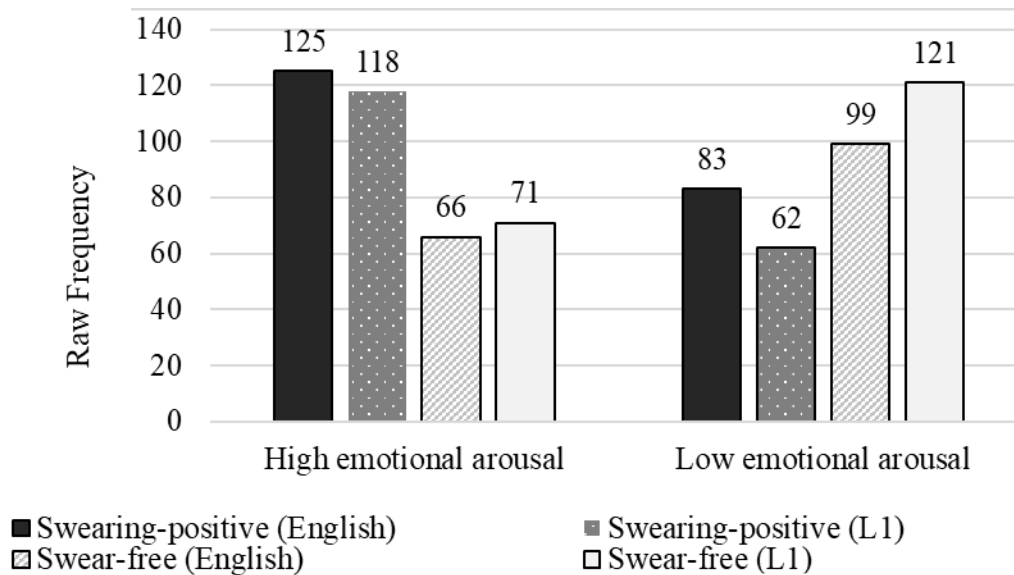
Figure 1. Utterances in high-arousing and low-arousing scenarios

As shown in Figure (1), the overall frequency of utterances that contain swearing is significantly higher in response to high-arousing emotional scenarios compared to low-arousing situations, X^2 (1, $N = 745$) = 43.77, $p < .05$. That is, speakers of English as a second language are more likely to swear, regardless of the language, in response to situations that relate to a state of heightened emotional activation (e.g. in response to anger, fear, or extreme pain). However, the frequency of swearing in response to high-arousing situations does not differ based on the language, X^2 (1, $N = 380$) = 0.37, $p < .05$. In other words, utterances produced in response to high-arousing scenarios contain equal sizes of swearing in English and respondents' first languages.

On the other hand, utterances that are produced in response to low-arousing emotional scenarios are more likely to contain swearing in English rather than in the respondent's first language, X^2 (1, $N = 365$) = 5.24, $p < .05$. That is to say, in low-arousing emotional situations, swearing in speakers of English as a second language is mostly associated with English, and swearing in the first language significantly reduces. The relationship between the affective qualities of an emotional situation and swearing behavior is complex. As will be discussed in Section 4.3, the preferred language for swearing in self-reported data does not necessarily match the actual occurrences of swearing in response to authentic affective situations.

4.2   The nature of swear-free utterances

As mentioned before, all video inputs used to collect linguistic data in the study had a negative valence; hence, an underlying emotional element existed in all video stimuli. Therefore, utterances produced in response to the stimuli are likely to contain some form of linguistic emotional reaction. However, half of the video scenarios depicted activating or high-arousing emotional situations, and the other half were associated

with deactivating or low-arousing emotions. Swearwords are not the only linguistic elements that result from emotions and are associated with affect. Interjections, among other linguistic and quasi-linguistic elements, play a crucial role as "overt signals of emotion and affect" across different languages (Aijmer 2004: 99).

Not surprisingly, the contexts within which swearwords are likely to occur also contribute to the appearance of certain interjections in utterances. In response to low-arousing emotional scenarios, utterances contained significantly more instances of swearing in English compared to the first language. The lower frequency of swearwords in the first language is, however, compensated by replacing swearwords with interjections. That is, the linguistic encoding of emotional experience is not necessarily abandoned in the first language; rather, the method of lexicalizing emotions differs in the first language. It is noteworthy that utterances may also have double encoding with both swearwords and interjections.

Moreover, speakers may adopt other possible ways of encoding emotions or signaling affect in speaking, such as loudness, intonation, and speed or length of the talk. Since participants in the current study produced utterances in writing, the emotional encoding of linguistic data further included formal features such as special use of punctuation (e.g. repeated use of several exclamation marks!!!!!), use of special spellings (e.g. ALL CAPITAL words), or repeating vowels in a word (e.g. *naaaaaa* 'no'). Put it differently, swear-free utterances in the first language do not necessarily lack emotional association. Rather, other forms of denoting emotional experience may be used to encode the first language.

The total raw frequency of interjections in high-arousing situations was 42 in English and 43 in the first languages, while in low-arousing scenarios, the number of interjections increased to 44 in English and 59 in the first languages. In other words, utterances in response to high-arousing scenarios showed roughly equal sizes of interjection use, while the difference between the number of interjections in English and the first language is more pronounced in utterances that are produced in response to low-arousing scenarios. Comparing the frequency of swearwords with the frequency of interjections in low-arousing situations further shows that where the frequency of swearwords decreases in response to emotional situations, other forms of encoding emotional association are adopted, one being the increased use of interjections.

Determining the frequency of interjections, similar to swearwords, was based on a basic yet broad definition of interjection. That is, interjections are generally short, monomorphemic lexical items that may be phonologically anomalous, may be semantically holophrastic, and may constitute an utterance on their own (Gehweiler 2010). The adoption of a broad definition of interjection helps maintaining the consistency of quantifications across different languages and cultures.

The data concerning the use of interjections conclusively demonstrate that in low-arousing scenarios where the frequency of swearwords reduces in the first language, interjections are more likely to be used, X^2 (1, $N = 248$) = 5.08, $p < .05$. In other words, the use of interjections in the first language counterbalances the lack of swearwords in response to low-arousing scenarios. The absence of swearwords in an utterance does not per se mean that the utterance lacks emotional associations. Rather,

similar to swearwords, interjections typically encode emotions and are "uttered as spontaneous, emotional reactions to a situation or to a sudden realization after internal reflection" (Gehweiler 2010: 316).

4.3   Perception of second language swearwords

The linguistic data elicited from participants showed that heightened emotional arousal evokes swearing in both the first and the second language, and the frequency of utterances that contain swearwords is not significantly different in the two languages; whereas, low-arousing emotional scenarios evoke significantly higher levels of swearing in English rather than in the first language. The results from self-reported swearing, however, is not consistent with the pattern found in elicited data. Figure (2) illustrates the results of self-reported language of choice in percentage points in three different hypothetical scenarios.
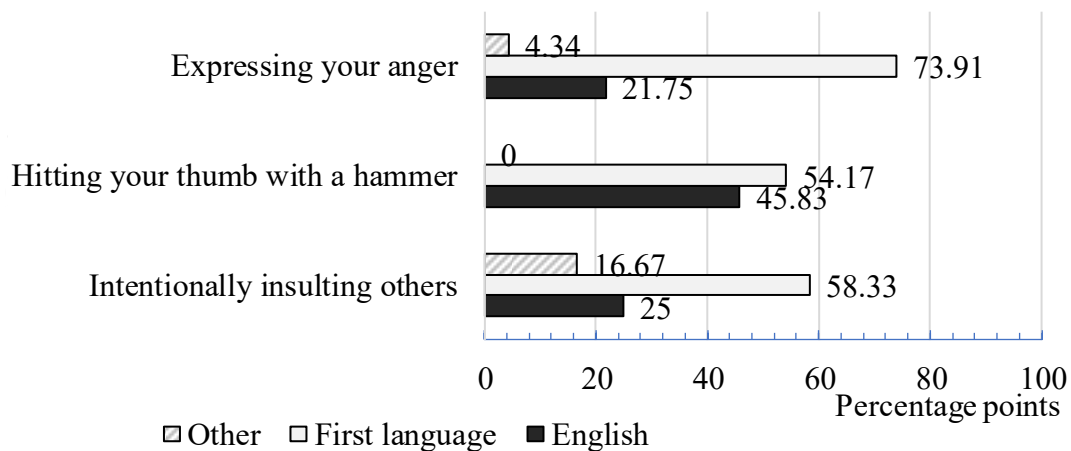

Figure 2. Self-reported language of choice for various linguistic activities

As shown in Figure (2), the results of self-reported data suggest that bilingual speakers of English have a notable preference for their first language as a means of expressing affect. Bilingual speakers who self-reported their first language as the preferred language for expression of anger or insult mainly argued that expressing emotions is easier and less restrictive in the first language. Some additionally reported that they choose their first language because supposedly in their first language a larger lexicon is available for self-expression. Moreover, participants believed that swearwords are perceptually more powerful in their first language in comparison with their English equivalents. That is to say, bilingual speakers perceive their first language as a richer source of expressing affect.

Those who expressed a preference for using English in emotional situations believed that English is not as face-threatening as their first language. Particularly, speakers of English as a second language perceive swearing in English as a hedging strategy in social and communicative contexts. Another argument for preferring

English to express emotions also relates to how bilingual speakers perceive their second language affordances. For example, a female participant, who identified as someone with the introvert personality, argued that "when I speak English [,] I tend to become more open and comfortable and I seem to express my emotions via English much easier." Therefore, bilingual speakers who choose the second language for the purpose of emotional expression, on the one hand, may regard the second language as a device that alleviates emotional intensity and renders a sense of comfort, and on the other hand, may perceive the second language swearwords as less face-threatening.

5.   Discussion

Swearing is a complex sociolinguistic practice whose communicative effect is determined by various contextual factors. The speech behavior of swearing may emerge as the linguistic manifestation of emotional state, and as Dynel (2012) notes, swearing may function with contradictory purposes. That is, some acts of swearing may denote an intentional display of impoliteness through verbal abuse and aggression, while other instances of swearing may serve to build solidarity, promote group inclusion, or create humor.

In bilinguals, swearing in the second language is part of the learner's socio-pragmatic repertoire and is primarily acquired through incidental learning rather than explicit classroom instruction, even in instructed language learners. Bilingual and multilingual speakers participate in multiple linguistic and cultural environments and acquire context-sensitive practices by getting involved with different social groups. This means that in bilingual speakers, the linguistic manifestation of emotional state can be deployed through different available repertoires. Bilingual speakers, therefore, select from and utilize available context-sensitive socio-pragmatic resources in order to achieve certain communicative goals.

Previous studies have shown that swearwords, among other negative lexical items, result in a state of heightened emotional arousal in both the first and the second language. However, how emotional arousal in return shapes the pattern and frequency of swearing in a second language was not fully understood. The present study revealed that utterances produced in response to high-arousing emotional scenarios contained swearing in both English and respondents' first languages, while scenarios associated with low-arousing emotions led to a significant general preference for swearing in the second language.

The results suggest that negative affect triggers a set of linguistic responses that enable the speaker to overcome socio-communicative needs. Moreover, linguistic response to negative emotions in both the first and the second language is further enhanced by affective arousal. High-arousing emotions amplify the emotional response in both the first and second language, while low-arousing emotions function as moderators that attenuate the effect of emotional response in the first language. Nevertheless, it is noteworthy that the representation of emotions in the first language outputs is created through other means of linguistic encoding, such as the use of interjections.

Different patterns of swearing in response to low-arousing and high-arousing emotional events may be explained based on the psychological underpinnings of heuristic-systematic information processing (see Chen and Chaiken 1999). As Lerner et al. (2015) note, affective experiences influence the depth of processing, and different affective situations are attended to through different processing modes. In high-arousing affective situations, such as anger, generally a more heuristic processing is rendered, while low-arousing scenarios, such as sadness, do not significantly differ from neutral moods and lead to systematic processing (Bodenhausen, Sheppard, and Kramer 1994). Bodenhausen (1993) attributes these different processing modes specifically to the different levels of arousal that emotions contain.

Heuristic information processing in response to emotional arousal is quick, effortless, and automatic, while systematic processing is deliberate, analytic, and comprehensive. As a result, systematic processing involves conscious information processing; whereas, heuristic processing is "less resource-demanding" in nature and may be conscious or unconscious (Chen and Chaiken 1999: 86). When valence is negative and emotional arousal is high, the heuristic nature of processing engenders automatic swearing in both the first and the second language regardless of the language.

In high-arousing scenarios, emotional intensity compels speakers to linguistically manifest their emotional state, and the expression of emotions is less restrained. As a result, the pronouncement of affect is not restricted to a certain language. Rather, the context triggers the language of choice and plays an essential role in evoking the selected language for expression of emotions. Consequently, English swearwords emerge in response to English questions, and swearwords in the first language are produced equally frequently in response to questions that are posed in the respondent's first language.

On the other hand, in low-arousing scenarios, a systematic approach to information processing leads the speaker to make use of previously learned judgmental rules that are stored in the learner's socio-pragmatic repertoire. As a result, the speakers may process the contextual situation in more depth and make socio-communicatively strategic decisions in responding to an emotion-evoking event. The preference for swearing in English in low-arousing situations may be in fact a conscious trade-off between communication of emotions and the adoption of face-saving strategies.

According to self-reported data, second language learners perceive second language swearwords as weaker and less offensive, and where the emotional association is less intense, the conscious strategic decision-making by the learner leads to using the second language swearwords more frequently due to their perceived lower offensiveness and mitigated social consequences. In other words, the fact that second language swearwords are perceived as the bearers of attenuated face-threatening effects makes them more appropriate than swearwords in the first language.

Importantly, the lower frequency of swearing in the first language in response to low-arousing emotional situations does not suppress the linguistic manifestation of emotions. Rather, emotions are encoded in the first language mainly through replacing swearwords with interjections. The deep and deliberate processing opportunities available in low-arousing emotional situations give the speaker enough time to make

strategically motivated choices regarding the manner in which emotions should be expressed. Ultimately, the comprehensive and analytic nature of systematic information processing in low-arousing situations results in the choice of interjections in lieu of swearwords for emotional expression.

6.   Conclusion

Previous examinations of bilingual swearing have primarily taken a valence-based approach. Valence alone, however, does not provide a full picture of how emotion-inducing events affect linguistic processing and sociolinguistic behavior. Therefore, a detailed framework with delineated affective dimensions is required to understand the relationship between emotion-inducing events and expression of swearwords in the first and the second language. Swearing in bilingual speakers is associated with a complex interplay among different aspects of emotion, including valence and arousal. Particularly, affective arousal plays a crucial role in shaping the frequency of swearing and the preferred language for swearing in bilinguals.

The present study drew on the dimensional model of emotion to enhance our understanding of the influence of emotions on linguistic choices and socio-pragmatic behaviors in bilingual individuals. The findings suggest that affective arousal is crucial in determining whether bilingual speakers engage in a systematic or heuristic information processing and consequently whether speakers swear in the first or second language. The findings further partially confirm previous claims about the first language *being perceived* more emotional than the second language in bilinguals. However, this perception does not fully shape the bilingual speaker's socio-communicative behaviors. Rather, the degree of emotional arousal influences the information processing mode and the language of swearing in bilinguals.

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