

Variation in Embodied Metaphors: A Contrastive Analysis of Taste Metaphors in Spanish and English¹

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Abstract. Whereas in the late 90s the universal character of many embodied conceptual metaphors was overemphasised, in the last years some authors have claimed that culture plays a crucial role in the motivation of all kinds of conceptual metaphors, including those grounded on universal bodily experiences. In order to shed some light on this issue, we carry out a contrastive analysis of conceptual metaphors with basic tastes as a source domain in Spanish and in English. To this end, we employ a mixed approach, combining data from dictionaries and linguistic corpora. Our analysis reveals that variation is higher at the level of linguistic expression and lower, but still significant, at the conceptual level. Although most taste metaphors are shared by Spanish and English, a few language-specific conceptual metaphors are also found, proving that food culture has an influence on the motivation of conceptual metaphors.

Keywords: Conceptual metaphor, cross-linguistic variation, taste descriptors, perception metaphors.

[es] Variación en las metáforas corporeizadas: un análisis contrastivo de las metáforas de los sabores en español e inglés

Resumen. Mientras que a finales de los 90 se sobreestimaba el carácter universal de muchas metáforas conceptuales corporeizadas, en los últimos años algunos autores han reivindicado que la cultura juega un papel crucial en la motivación de todo tipo de metáforas conceptuales, incluidas las que se basan en experiencias corporales universales. Para arrojar algo de luz sobre este asunto, llevamos a cabo un análisis contrastivo de metáforas conceptuales con sabores básicos como dominio fuente en español y en inglés. Para ello, empleamos un enfoque mixto, combinando datos provenientes de diccionarios y de corpus lingüísticos. Nuestro análisis revela que la variación es mayor en el nivel de la expresión lingüística y menor, pero aún significativa, en el nivel conceptual. Aunque la mayor parte de las metáforas de los sabores son compartidas por el español y el inglés, también encontramos unas pocas metáforas conceptuales específicas de cada lengua, lo que demuestra que la cultura alimentaria ejerce una influencia en la motivación de las metáforas conceptuales.

Palabras clave: metáfora conceptual, variación interlingüística, descriptores del sabor, metáforas de percepción.

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1. Introduction: Embodiment, culture and taste metaphors

Since George Lakoff and Mark Johnson published *Metaphors we live by* (1980), the study of conceptual metaphor has experienced a strong development. One important advance has occurred in the field of variation and diversity of conceptual metaphors. In the late 90s, cognitive linguists focused on the embodied nature of conceptual metaphors, that is, the sensory and motor experience determining the structure of concepts (Johnson 1987). However, the growing interest on embodiment made many authors leave aside the cultural dimension of conceptual metaphor (for an extensive review, see Ibarretxe-Antuñano 2013). An example of this is the success of the theory of primary metaphor (Grady 1997), which distinguishes between the so-called primary metaphors, that are grounded solely in basic bodily experiences, and complex metaphors, that derive both from our physical experience and from our culture. Thus, during the 90s and early 2000s, many authors

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tended to overemphasize the universal character of some embodied conceptual metaphors. For example, the conceptual metaphor UNDERSTANDING IS SEEING, which was classified as a primary metaphor (Grady 1997), was also considered universal, since sight is the main source of objective data for every human being (Sweetser 1990: 38-39). However, later works demonstrated that a significant number of languages from America and Oceania do not present this conceptual metaphor, but UNDERSTANDING IS HEARING (Evans & Wilkins 2000; Ibarretxe-Antuñano 2008).

In the 2000s, several cross-linguistic and contrastive studies on conceptual metaphors showed that culture plays an essential role in conceptual metaphors, even on those motivated by sensorimotor experience. Some well-studied conceptual metaphors across languages are those with body-part vocabulary as a source domain (Gutiérrez Pérez 2008; Yu 2009; Maalej & Yu 2011), perception verbs as a source domain (Ibarretxe-Antuñano 1999; Viberg 2008) and emotions as a target domain (Pavlenko 2002; Kövecses 2003; Soriano 2005). In the last years, the interest on variation of conceptual metaphors has increased, both across cultures (Ogarkova, Soriano & Gladkova 2016; Belkir 2019) and within cultures (Callies & Onysko 2017; Littlemore 2019). The new evidence has led up to claim that culture contributes to shape every conceptual metaphor. In this sense, Caballero and Ibarretxe-Antuñano (2009) coined the term *cultural sieve*, since they defend that culture models and validates the sensorimotor experience grounding conceptual metaphors. This model allows explaining the fact that universal bodily experiences can originate different conceptual metaphors across cultures, as in the case of UNDERSTANDING IS SEEING and UNDERSTANDING IS HEARING (Ibarretxe-Antuñano 2013).

Adopting a strong understanding of embodiment (Sweetser 1990; Grady 1997), conceptual metaphors with taste terms as a source domain might be a clear case of primary metaphor, since they are grounded on a given physical experience, which correlates directly with an emotional experience (Grady 1997: 89). From this perspective, taste metaphors are good candidates to be universal, because all human beings share the same physiological characteristics that allow us to taste (Bagli 2016). However, from a culture-defending point of view, as the one in Caballero and Ibarretxe-Antuñano (2009), the gastronomic experience in one culture might give rise to culture-specific conceptual metaphors. In order to shed some light to this debate, in this work we analyse the variation of conceptual metaphors and metaphorical expressions with taste descriptors as a source domain in Spanish and English. Although there is already a significant number of cross-linguistic studies on conceptual metaphors with perception-related terms, such as colours (Soto Nieto 2011), temperature terms (Valiulienė 2015) and perception verbs (Ibarretxe-Antuñano, 1999), the cross-linguistic variation of metaphors with taste descriptors as a source domain remains an under-explored area. It might be due to the fact that taste, as well as smell and touch, has been traditionally considered a “lower” sense (Speed & Majid 2019). However, there is currently an incipient interest on taste metaphors. Marco Bagli (2016; 2017) carries out an exhaustive analysis on taste metaphors in English, showing the intricate polysemy of taste descriptors and the difficulties to explain it systematically. To our knowledge, the only cross-linguistic study on taste metaphors is authored by Zawisławska and Falkowska (2018), who compare the metaphorical meanings of the basic taste adjectives in English and Polish, showing a certain degree of variation in the semantic frames in which metaphorical expressions are used. Inspired by Zawisławska and Falkowska, with this work we attempt to find out to what extent culture influences the conceptual metaphors with taste descriptors as a source domain in Spanish and English.

2. Levels of variation in conceptual metaphor

Since conceptual metaphors are complex cognitive associations showing hierarchic structures, contrastive analyses must consider the fact that variation can take place at different levels. However, variation does not occur similarly in every kind of conceptual metaphor, but asymmetrically, depending on the degree of specificity of the metaphorical mapping analysed. According to Onysko (2017), variation is expected to be lower in primary metaphors mapping basic and experienced concepts, while the degree of variation increases in complex metaphors and elaborations of conceptual metaphors. The maximum degree of variation is assumed to occur in the surface of language, in metaphorical expressions. Figure 1 shows the continuum of variation in conceptual metaphor, according to Onysko (2017).

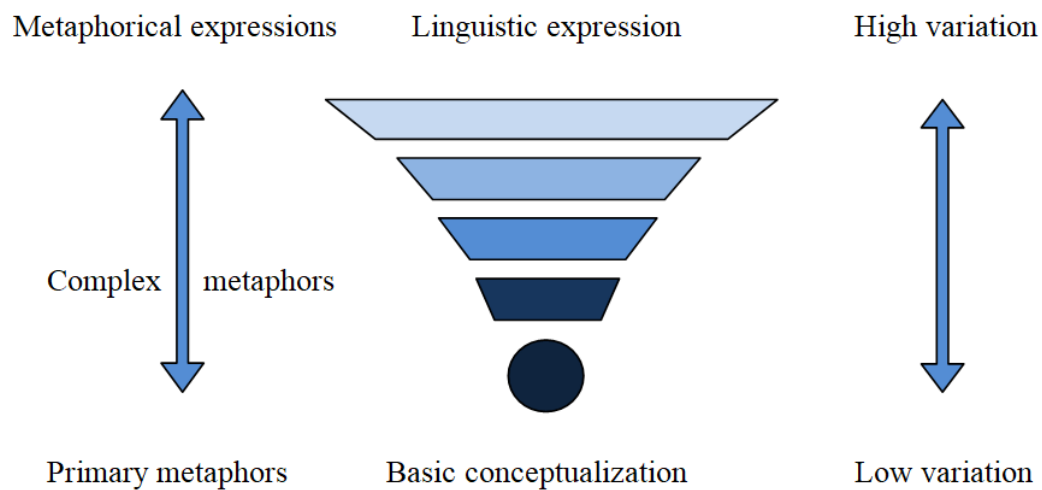


Figure 1. Continuum in variation of Conceptual Metaphor Theory (Onysko 2017: 13).

A set of parameters of variation of metaphorical language was first proposed by Barcelona (2001) and then developed by Soriano (2003) and Kövecses (2005: 117-162), who offers an extensive description of them. In our study, we cover variation both at the conceptual and at the linguistic level, in order to check if the variation of taste metaphors in Spanish and English fits in the model proposed by Onysko (2017). At the conceptual level, we consider 1) the existence or not of the same conceptual metaphor in both languages (Barcelona, 2001: 137) and 2) the saliency of conceptual metaphors, that is, the productivity of a given mapping in each language (Soriano 2003). At the linguistic level, we consider 3) the grammatical status and features of the metaphorical expressions of a given conceptual metaphor (Barcelona 2001: 138) and 4) the semantic frames in which metaphorical expressions are employed, which can be defined as chunks of knowledge structure (Fillmore 2006). In studies on conceptual metaphor, frames are considered more specific conceptual structures than cognitive domains (Dancygier & Sweetser 2014: 18-19). Thus, the use of frame semantics in our analysis pursues a deeper understanding of the use of metaphorical expressions and makes our results comparable to those in Zawislawska and Falkowska (2018).

3. Methodology

From the physiological point of view, taste is a so-called chemical sense that allows us to distinguish only a few stimuli, mainly sweet, salty, sour and bitter, although several authors have recently argued for the existence of other tastes, such as *umami* and *oleogust* (see Bagli 2018). However, when eating or drinking, human beings feel a multimodal experience, grounded on taste, smell, temperature, texture and spiciness. This is why, in this study, when we use the term *taste descriptors*, we refer to adjectives usually employed to speak about the general experience of savouring, without considering the different senses involved in this activity. Marco Bagli (2018) carries out an experimental study with a group of informants on the categorization of taste descriptors in English. In light of the results, he argues that the five basic taste terms in English are *sweet*, *salty*, *bitter*, *sour* and *spicy* (2016: 62). In our study, we decided to analyse these five lexical units, as well as their Spanish equivalents: *dulce*, *salado*, *amargo*, *agrio*, *ácido* and *picante*. While in English *sour* is the main adjective encoding one basic taste, in Spanish we find two equivalent adjectives: *ácido* and *agrio*, which have a similar meaning. In the absence of an experimental study similar to Bagli's on the Spanish language, we decided to cover both lexical units in our analysis.

Methodologically, this study uses a mixed approach combining corpus data and information from dictionaries, since it allows us to benefit from the advantages from both approaches (Kövecses et al. 2019). On one hand, we analysed 700 occurrences from the *Corpus of Contemporary American English* (COCA) and 800 occurrences from the *Corpus del Español del Siglo XXI* (CORPES XXI), concretely 100 occurrences of each selected taste descriptor. The two corpora contain synchronic texts of a variety of genres, all of which have been considered. On the other hand, 8 prestigious dictionaries have been examined. For the English language, we employed the *Oxford English Dictionary*, the *Cambridge English Dictionary*, the *Collins Online English Dictionary* and the *Macmillan English Dictionary*. For the Spanish language, we used the *Diccionario de la Lengua Española*, the *Diccionario de Uso del Español*, the *Diccionario del Español Actual* and the *Clave:*

Diccionario de Uso del Español Actual. Both the corpora and the dictionaries are referred at the end of this paper.

In the dictionary-based analysis, we attempted to identify the conceptual metaphors existing in Spanish and English, and we also took into account the information related to the varieties of use of the metaphorical meanings, such as register or dialect. In our corpus-based analysis, we classified and quantified the metaphorical expressions according to the conceptual metaphor to which they responded, and according to the semantic frame in which they were used. We also compared qualitatively some grammatical features of the metaphorical expressions in our corpora. In order to tag the occurrences as metaphorical or not, we applied the MIPVU procedure (Steen et al. 2010). By this procedure, we took into consideration the contextual meaning of the lexical unit and then checked if there was a more basic meaning (related to the senses, historically older, etc.).

4. Results

4.1. Sweet taste metaphors

Our data show that sweet taste is employed very frequently in metaphorical expressions both in Spanish and in English. Firstly, we present in table 1 the quantitative results of our corpus-based analysis of sweet taste metaphors. In other words, we show the number of occurrences corresponding to a conceptual metaphor, and we also quantify the occurrences of that given conceptual metaphor which are employed in a certain semantic frame.

Table 1. Quantitative corpus-based results of the analysis of the sweet taste as a source domain.

Sweet taste as a source domain	English	Spanish
PLEASURE IS SWEET TASTE (conceptual metaphor)	74	65
PEOPLE	34	16
EVENTS	13	6
COMMUNICATION	5	4
EMOTIONS	4	3
LOCALES	4	1
BODY PARTS / FACIAL EXPRESSIONS	3	10
SMELLS	3	3
SOUNDS	2	11
TIMESPANS	2	3
OBJECTS	2	0
ARTWORKS	1	3
MENTAL ACTIVITIES	1	3
COLOURS	0	1
WEATHER	0	1

All the metaphorical expressions identified in Spanish and in English respond to the conceptual metaphor PLEASURE IS SWEET TASTE, which links the sweet taste to likeable emotions and feelings. Although this conceptual metaphor is quite productive in both languages, our corpus analysis suggests that it might be slightly more salient in English than in Spanish, since we have identified 74 occurrences in our corpus in English and 65 occurrences in our corpus in Spanish.

At the linguistic level, the conceptual metaphor PLEASURE IS SWEET TASTE is most often employed in the semantic frame PEOPLE both in Spanish and in English, expressing the quality of having a kind character, e. g. *sweet boy / chico dulce*. However, according to our data, this is noticeably more frequent in American English (34 occurrences) than in Spanish (16 occurrences). We also noticed that, when referring to people, *sweet* is usually employed in English next to a noun in vocative statements, as shown in example 1, as well as in fixed expressions, e. g. *sweet Jesus!*, while in Spanish this seems to be rare, considering that we do not find any similar case in our corpus.

- (1) She held me close for moment. Then she said, “My sweet boy - I will miss you more than you know.”
2010 Caldwell, Bo: *City of Tranquil Light*.

Sweet taste is also employed metaphorically in other frames both in Spanish and in English, such as MENTAL ACTIVITIES, e. g. *sweet memories / recuerdos dulces* and COMMUNICATION, e. g. *sweet words / palabras dulces*, among others. However, even in those cases, the adjectives *sweet* and *dulce* do not always behave similarly, from the perspective of grammar. For example, both in English and Spanish, sweet taste is metaphorically used to describe EVENTS, e. g. *the victory was sweet / la victoria fue dulce*. In English the adjective *sweet* is often employed independently to describe an event which is happening in the situational context where the speech takes place, as shown in example 2, while in Spanish this does not seem to be possible.

- (2) -Take your finger off the trigger. -Yeah. Sweet! 2010: *The Book of Eli* (film).

Sweet taste metaphorical expressions are usually employed in a given frame more frequently in one language than in the other. An example is the case of BODY PARTS and FACIAL EXPRESSIONS, e. g. *sweet look / mirada dulce*, which seems to be more salient in Spanish (10 occurrences) than in English (3 occurrences). Moreover, our analysis reveals that sweet taste is metaphorically employed by Spanish speakers in some frames that English speakers do not, and vice versa. For example, while in Spanish it is frequent to use *dulce* to speak about the WEATHER, e. g. *clima dulce*, our data show that in contemporary English this is rare. Another case is the frame of MEDICAL INTERVENTIONS. Our dictionary-based analysis reveals that, in Spanish, *dulce* is employed to describe medical techniques, indicating that they are less harmful than conventional ones, as we can see in example 3, whereas in English *sweet* is not used similarly.

- (3) La acupuntura fue la primera técnica dulce extendida en occidente. Retrieved from: *Diccionario del español actual*.
Lit. ‘Acupuncture was the first sweet technique widespread in the Western world’.

4.2. Salty taste metaphors

According to our data, salty taste functions as a source domain in metaphorical expressions in Spanish and in English. However, compared to the rest of the tastes analysed, salty taste is much less productive in terms of metaphorical language. In order to illustrate this, in the table below, we show the quantitative data of our corpus-based analysis of salty taste metaphors.

Table 2. Quantitative corpus-based results of the analysis of the salty taste as a source domain.

Salty taste as a source domain	English	Spanish
ANGER IS SALTY TASTE (conceptual metaphor)	6	0
COMMUNICATION	4	0
PEOPLE	2	0
HILARITY IS SALTY TASTE (conceptual metaphor)	0	3
PEOPLE	0	2
COMMUNICATION	0	1

As we can see in table 2, we have found only 6 occurrences in English and 3 in Spanish in which the salty taste is employed in metaphorical expressions as a source domain, which is a very small amount in comparison to other tastes. All the metaphorical expressions found in our corpus in English respond to the conceptual metaphor ANGER IS SALTY TASTE, which allows us to speak about the emotion of anger, usually considered to be negative, by using gustatory terms. On the other hand, in all the metaphorical expressions identified in Spanish, salty taste refers metaphorically to hilarity, understood as a complex emotional phenomenon caused by humorous stimuli, thanks to the conceptual metaphor HILARITY IS SALTY TASTE. In this case, variation takes place at the conceptual level, giving rise to two culture-specific conceptual metaphors, even if none of them is particularly salient.

Our corpus analysis shows that, in English, ANGER IS SALTY TASTE is expressed linguistically in two semantic frames. The most frequent is the frame COMMUNICATION, e. g. *salty words*. In this case, *salty* indicates the quality of being rude or potentially offensive, and it usually refers to insults, as we can see in example 4. On the other hand, *salty* also appears in the frame PEOPLE, e. g. *salty character*, referring to someone’s irritated mood. The *Cambridge English Dictionary* (online) specifies that it is specially employed when the angry mood is unreasonable. In this sense, *salty* is usually preceded by *get* or *jump*, as we see in example 5, indicating the beginning of the angry mood.

- (4) And then he says Cabron, which is kind of a salty word in Spanish. 2010, *NPR TalkNat* (radio program).
 (5) He got salty with me because I wouldn't go out with him. Retrieved from: *Cambridge English Dictionary* (online).

Regarding the Spanish language, all the occurrences of the conceptual metaphor HILARITY IS SALTY TASTE in our corpus are located in Spain, so it is likely to be exclusive of the European Spanish, although the dictionaries do not indicate any geographical limitation. Most metaphorical expressions of HILARITY IS SALTY TASTE take place in the frame PEOPLE, e. g. *persona salada*, expressing the quality of being funny and amusing, as we can see in example 6. Another possibility is the frame COMMUNICATION, e. g. *comentario salado*. In this case, *salty* indicates that someone's intervention is funny, as in example 7.

- (6) Pedrita, que es una pulga muy salada a la que Gloria Fuertes acude a menudo, un buen día conoce al perro Picatoste y es feliz con él. 2010 Sáiz Ripoll, Anabel: *Espéculo*.
 Lit. 'Pedrita, who is a very salty flea to which Gloria Fuertes usually turns, one fine day meets the dog Picatostes and is very happy with him'.
 (7) En inglés queda más salado: The unstoppable Stoppard. 2010 Ordóñez, Marcos: "Babelia", *elpais.com*.
 Lit. 'In English it sounds saltier: The unstoppable Stoppard'.

4.3. Bitter taste metaphors

Both in Spanish and in English, metaphorical expressions with bitter taste as a source domain are very frequent, even more than sweet taste metaphorical expressions. In table 3, we show the quantitative results of our corpus-based analysis, that is, the number of occurrences responding to a conceptual metaphor and the quantity of occurrences that are employed in each frame.

Table 3. Quantitative corpus-based results of the analysis of the bitter taste as a source domain.

Bitter taste as a source domain	English	Spanish
AFFLICTION IS BITTER TASTE (conceptual metaphor)	86	68
EVENTS	29	19
PEOPLE	19	5
HOSTILE ENCOUNTERS	9	0
COMMUNICATION	9	9
EMOTIONS	8	14
WEATHER	4	0
MENTAL ACTIVITIES	3	7
SMELLS	2	1
BODY PARTS / FACIAL EXPRESSIONS	1	5
TIMESPANS	1	1
ARTWORKS	1	1
LIFE	0	3
LOCALES	0	3

Our analysis reveals that English and Spanish share the conceptual metaphor AFFLICTION IS BITTER TASTE, by means of which we conceptualise emotional suffering and, to a lesser extent, physical pain, in terms of a bitter gustatory perception. The high number of occurrences of AFFLICTION IS BITTER TASTE in our corpora shows that this conceptual metaphor is quite salient in both languages, although it is slightly more salient in English (86 occurrences) than in Spanish (68 occurrences).

However, there seems to be subtle differences in the target domain activated by the conceptual metaphor AFFLICTION IS BITTER TASTE in Spanish and in English. While in Spanish the target domain that we have called AFFLICTION is restricted to sadness, in English the target domain is wider, since *bitter* can be employed to speak about sadness, but also about resentment and even anger, whenever it is a deep emotion causing intense suffering. A representative metaphorical expression of AFFLICTION IS BITTER TASTE in Spanish is shown in example 7, in which the adjective *amarga* is employed to describe a sad life. Example 8 illustrates a similar use of *bitter* in English, since the adjective refers to a sad and disappointing moment in history. On the other hand, in example 9, the adjective *bitter* refers to a feeling of resentment and rage that is typical in revenge and that is shown through the character's aggressive intervention, whereas in Spanish we do not find similar examples.

- (7) Habría sido una vida como la de muchas otras personas en el mundo: algo amarga, tristona, pero una vida normal al fin y al cabo. 2010 Reverte, Javier: *Barrio Cero*.
Lit. 'It would have been a life like many other people in the world: somewhat bitter, sad, but a normal life after all'.
- (8) The computational linguistics fracas of 2009 will be remembered as another episode in a sometimes bitter history. 2010 Patel, Samir S.: *The Indus Enigma*.
- (9) The excruciating pain of grief and helplessness surged in his body, and despite all the years he'd spent rehabilitating himself [...], all Irish wanted now was bitter revenge. «You're dead!» he cried. 2010 Noire: *Unzipped: an urban erotic tale*.

We also observed similarities and differences on the combination of AFFLICTION IS BITTER TASTE with the conceptual metaphor ACCEPTING IS SWALLOWING. Both in Spanish and in English these conceptual metaphors are often combined, giving rise to the complex metaphor A DIFFICULT EXPERIENCE TO ACCEPT IS A BITTER SWALLOW. However, while Spanish speakers employ the general noun *trago* ('swallow') (3 occurrences), in English this metaphor is always concretised by the more specific term *pill* (5 occurrences). Examples 10 and 11 illustrate two metaphorical expressions of A DIFFICULT EXPERIENCE TO ACCEPT IS A BITTER SWALLOW in Spanish and in English, respectively.

- (10) Tal vez estemos buscando, inconscientemente, endulzar los "tragos amargos" que nos da la vida. 2010 Bueno, Mariano: *Del huerto a la despensa. Cómo conservar de forma natural tus frutas y hortalizas*.
Lit. 'Maybe we are unconsciously trying to sweeten the bitter swallows that life gives us'.
- (11) Not being able to tag him was a bitter pill to swallow. 2010: *OutdoorLife* (magazine).

Regarding the level of linguistic expression, our analysis shows that most frames in which bitter taste metaphorical expressions are employed are the same in both languages. For instance, the adjectives *amargo* and *bitter* are employed to describe EVENTS, e. g. *bitter experience / experiencia amarga*, which is the most frequent frame both in English (29 occurrences) and in Spanish (19 occurrences). In the case of the frame PEOPLE, e. g. *bitter man / hombre amargo*, we appreciate that it is significantly more frequent in English (19 occurrences) than in Spanish (5 occurrences), although it might be due to the existence in Spanish of the derivate form *amargado*, which we have not considered in this work. Our analysis also shows that bitter taste metaphorical expressions are employed in some frames only in English and not in Spanish, and vice versa. One example is the frame WEATHER, e. g. *bitter cold*, in which the adjective *bitter* indicates an extreme cold, whether in Spanish *amargo* is not used in such way. Another case is the frame HOSTILE ENCOUNTERS, e. g. *bitter fight*, which appears only in English, probably because in this frame bitter taste is associated to angry feelings, which is not conventional in Spanish.

Lastly, we found some metaphorical expressions which are typical of only one language. This is the case of *until the bitter end* (4 occurrences), which refers to the fact of standing an emotionally painful situation, but does not present any equivalents in Spanish. Another example is the metaphorical expression *dejar algo un sabor amargo en la boca* ('to leave something a bitter taste in the mouth'), which is relatively frequent in Spanish (4 occurrences), but is rare in English, according to our data.

4.4. Sour taste metaphors

For the analysis of source taste as a source domain, we have considered one adjective in English, *sour*, and two in Spanish, *ácido* y *agrio*, since both of them are frequently employed to describe the basic taste that in English is encoded by *sour*. Our analysis shows that these three adjectives are employed in metaphorical expressions, but not to the same extent. Table 4 contains the quantitative results of our corpus-based analysis.

Table 4. Quantitative corpus-based results of the analysis of the sour taste as a source domain.

Sour taste as a source domain	English	Spanish (ácido)	Spanish (agrio)
DISPLEASURE IS SOUR TASTE (conceptual metaphor)	34	36	73
EVENTS	8	0	10
PEOPLE	7	8	8
SMELLS	7	5	8
BODY PARTS / FACIAL EXPRESSIONS	4	0	3
ECONOMY	4	0	0
MENTAL ACTIVITIES	1	0	3

LOCALES	1	0	2
EMOTIONS	1	3	2
OBJECTS	1	0	0
COMMUNICATION	0	12	29
ARTWORKS	0	7	5
TIMESPAN	0	1	2
BODILY HARM	0	0	1

According to our data, all the metaphorical expressions with the sour taste as a source domain respond to the conceptual metaphor DISPLEASURE IS SOUR TASTE, since they express unpleasant emotions and feelings. In Spanish, *ácido* and *agrio* appear both in metaphorical expressions, but *ácido* is employed metaphorically more often (73 occurrences) than *agrio* (36 occurrences). In general terms, our corpus analysis suggests that DISPLEASURE IS SOUR TASTE is more salient in Spanish than in English (34 occurrences).

At the linguistic level, we can affirm that sour taste metaphors are employed in the same semantic frames in some cases, such as the frame PEOPLE, e. g. *sour man / hombre ácido / hombre agrio*, in which sour taste descriptors indicate a disagreeable mood or personality. However, there are also other frames that are exclusive of one language. It is the case of the frame ECONOMY, e. g. *sour economy*, in which *sour* indicates a time of economic depression, as we can see in example 12, while in economic-financial Spanish sour taste descriptors are not employed in a similar way. The case of the frame COMMUNICATION is also very relevant, e. g. *comentario ácido / comentario agrio* (lit.: *sour comment*), since in Spanish it appears very frequently in our corpus (12 occurrences of *ácido* and 29 occurrences of *agrio*), but we have not found any similar case in our corpus in English. In this frame, *ácido* usually refers to criticisms (5 occurrences) and jokes (3 occurrences) that can offend sensibilities, as we show in example 13, while *agrio* usually refers to arguments (9 cases) or debates (4 cases), as illustrated in example 14.

- (12) [...] voters wanted to punish Obama and the Washington Democrats because the economy was sour or because they spent too much. 2010 Podhoretz, John: *The Liberal Crisis*.
- (13) [...] era una *ácida crítica*, con mucho humor negro, al machismo. 2010 Dubatti, Jorge: *Artez*.
Lit. ‘It was a sour criticism, with a lot of black humor, of machismo’.
- (14) Eso mismo he preguntado yo, y nos hemos enzarzado en una discusión muy *agria*. No quiero entrar en detalles, pero te aseguro que la reunión ha sido muy desagradable. 2010 Bordas, Jordi: *Sin cobertura*.
Lit. ‘This is what I asked, and we got involved in a very sour argument. I do not want to go into any detail, but I assure you that the meeting was very disagreeable’.

There are also some differences on the combination of the sour taste descriptors with other lexical units in metaphorical expressions. In English, we can find very often the collocations *go sour* (5 occurrences) and, to a lesser extent, *turn sour* (1 occurrence), expressing the deterioration of a situation, as we illustrate in example 15. In Spanish, however, we only found one similar case, concretely *volverse ácido* (‘turn sour’), that we show in example 16, in which the collocation *volverse ácido* refers to the process of becoming an unkind person. The greater tendency of collocate with verbs of change in English might be due to the existence of the derivate verb *agriar* (‘become sour’) in Spanish, although this form is excluded of our work.

- (15) And that change can only be understood against the background of a peace process gone sour. 2010 Gordon, Evelyn: *Ransoming Gilad Shalit*.
- (16) ¿Me estaba volviendo *ácida*? ¿Lo criticaba todo porque mi padre estaba en el hospital hecho una completa mierda? 2010 Sierra i Fabra, Jordi: *Berta Mir detective: El caso del falso accidente*.
Lit.: ‘Was I turning sour? Was I criticizing everything because my father was shattered in the hospital?’.

4.5. Spicy taste metaphors

Spicy is the only flavour that cannot be considered a taste from the physiological point of view, since it is not perceived by the tongue. More concretely, it is an irritation of the mucosae (Bagli 2016: 27), so it can be classified as a kind of tactile perception. However, according to Bagli, *spicy* it is the fifth most salient taste descriptor in English (2016: 62), and it is linguistically encoded as a taste, as well as *sweet*, *salty*, *sour* and *bitter*. Therefore, for the purpose of this study, we refer to the spicy flavour as a taste. Our analysis reveals that spicy taste descriptors are employed as a source domain in metaphorical expressions both in Spanish and in English. Table 5 shows the quantitative results of our corpus analysis.

Table 5. Quantitative corpus-based results of the analysis of the spicy taste as a source domain.

Spicy taste as a source domain	English	Spanish
EXCITEMENT IS SPICY TASTE (conceptual metaphor)	8	37
SMELLS	4	4
EVENTS	2	5
PEOPLE	1	4
COMMUNICATION	1	12
ARTWORKS	0	11
OBJECTS	0	1
VULGARITY IS SPICY TASTE (conceptual metaphor)	0	2
PEOPLE	0	1
COMMUNICATION	0	1

Our analysis indicates that Spanish and English share the conceptual metaphor *EXCITEMENT IS SPICY TASTE*, by means of which spicy taste descriptors can express the quality of being somehow offensive or obscene and, for this reason, at the same time exciting or attractive. Although this conceptual metaphor was already identified by Bagli in the English language (2016: 89), our analysis reveals that it is significantly more salient in Spanish (37 occurrences) than in English (8 occurrences). On the other hand, our data suggests that only the Spanish language holds the conceptual metaphor *VULGARITY IS SPICY*, which is analysed at the end of this subsection.

Regarding the conceptual metaphor *EXCITEMENT IS SPICY TASTE*, there are similarities and differences in the way it is linguistically expressed in Spanish and in English. In both languages, the spicy taste descriptors are employed in synaesthetic metaphorical expressions to describe *SMELLS*, e. g. *spicy perfume / perfume picante*, indicating the quality of being provocative or exciting, as illustrated in examples 17 and 18 in English and in Spanish, respectively.

- (17) This scent is bold, spicy, and just the thing for your live-out-loud BFF. 2010: *Redbook*, 215(6), 33.
- (18) También se olía, a la distancia, el perfume picante que traía encima. El torso desnudo, siempre con el chaleco puesto, Ulises caminó hacia el sofá cama dando pasos sinuosos. 2010 Havelio, Iosi: *Estocolmo o La conclusión del sistema de las cosas*.
Lit. ‘You could also smell, in the distance, the spicy perfume that he was carrying. Naked torso, always wearing his vest, Ulises walked to the sofa bed taking sinuous steps’.

Spicy taste descriptors appear also in both languages in the frame *PEOPLE*, e. g. *spicy man / hombre picante*, and *COMMUNICATION*, e. g. *spicy words / palabras picantes*, among others. In those cases, spicy taste descriptors both in Spanish and in English usually indicate the quality of being exciting in a sexual sense, as in example 19, but sometimes also in the sense of being controversial and challenging, as in example 20. On the other hand, our analysis suggests that the Spanish taste descriptor *picante* is employed in some frames where the English *spicy* does not, such as *ARTWORKS* (11 occurrences), e. g. *película picante* (lit.: *spicy film*), and *OBJECTS* (1 occurrence), e. g. *coche picante* (lit.: *spicy car*).

- (19) Oh, my God! You look hot. Thanks, Ash. Cal? What do you think? I think you look... spicy. - Right? [...] Michael would never wear that. You asked for a surprise, and you got it. So enjoy your spicy hot out-and-proud man. 2010: *Greek* (serie de TV).
- (20) La originalidad puede ser un elemento atractivo en las entradas. Estos son algunos excelentes ejemplos de leads jocosos, picantes y retantes. 2011 Marrero Rivera, Omar: *Fundamentos del periodismo deportivo*.
Lit. ‘Originality can be an attractive element in leads. These are some great examples of humorous, spicy, and challenging leads’.

Regarding the conceptual metaphor *VULGARITY IS SPICY*, it is observable in two occurrences of our corpus, both from Chile, that we show in examples 21 and 22. Since the general dictionaries of Spanish do not contain any meaning of *picante* related to vulgarity, we consulted the *Diccionario del habla chilena*, where we found the following entry (Academia Chilena 1978: 169): “*Hombre grosero, vulgar, ordinario // Bohemio de ínfima clase // adj. fam. despec. Andrajoso, desaseado. U.t.c.s.*” (Rude, vulgar, ordinary man // Bohemian of the lowest class // Ragged, dirty. Also employed as a noun). In example 21, *picante* is employed in the frame *PEOPLE*, expressing contemptuously that someone is from a low social class or holds an ordinary kind of life. In

example 22, *picante* is used in the frame COMMUNICATION, indicating vulgar or rude kind of language. Therefore, we can affirm that VULGARITY IS SPICY is a conceptual metaphor typical of Chilean Spanish, whether in English there is not any similar conceptual metaphor.

- (21) [...] hago planes sobre qué vamos a hacer con la plata. Siempre, lo primero es el departamento. Y con calefacción central, ¡cueste lo que cueste! Después me imagino tomando aviones, nunca me he subido arriba de un avión, por la puta madre, cómo es posible, si hasta los más picantes compran paquetes pa Cancún. 2011 Serrano, Marcela: *Diez mujeres*.
Lit. '[...] I make plans about what we are going to do with the money. Always, the department comes first. And with central heating, whatever the cost! Then I imagine taking airplanes, I've never gotten on a plane, for the hell of it, how is it possible, if even the spiciest buy packages for Cancun'.
- (22) El futuro de Chile resultó una estafa disfrazada con iphones, twitters, espanglish picante y mucho aroma a simulacro. 2010 Contardo, Óscar: *El Mercurio*.
'Lit. The future of Chile was a scam disguised with iphones, twitters, spicy Spanglish and a lot of simulation aroma'.

5. Discussion

In our work, we have analysed the variation in several conceptual metaphors with specific tastes as source domain in English and Spanish. Most of them, concretely PLEASURE IS SWEET TASTE, ANGER IS SALTY TASTE, HILARITY IS SALTY TASTE, AFFLICTION IS BITTER TASTE, DISPLEASURE IS SOUR TASTE and EXCITEMENT IS SPICY TASTE respond to the generic-level conceptual metaphor EMOTIONS ARE TASTES. EMOTIONS ARE TASTES is a conceptual metaphor at the generic level, since it does not link particular cognitive domains, but abstract concepts that can show up on a variety of cognitive domains (Kövecses 2010: 44-45). Thus, we can affirm that taste metaphors in Spanish and English do not present variation at the generic level, given that EMOTIONS ARE TASTES is shared by both languages.

Moreover, most conceptual metaphors with specific tastes as a source domain show low variation at the conceptual level in Spanish and in English, since they are shared by both languages. It is the case of PLEASURE IS SWEET TASTE, DISPLEASURE IS SOUR TASTE and EXCITEMENT IS SPICY TASTE. This outcome is expected, since these metaphors are grounded directly on universal sensory experiences, which are determined by the physiological properties of the human body (at least in the case of sweet, salty, bitter and sour tastes), so they can be classified as primary metaphors, in Grady's terminology.

However, our analysis reveals that there are also some conceptual metaphors with specific tastes as a source domain that show a certain degree of variation at the conceptual level. In the case of the bitter taste, Spanish and English share the conceptual metaphor AFFLICTION IS BITTER TASTE, but we have showed that there is a slight difference on the scope of the target domain, which is wider in English. As regards the salty taste, we have proved that it gives rise to different conceptual metaphors, concretely ANGER IS SALTY TASTE in English and HILARITY IS SALTY TASTE in Spanish. Lastly, there are some differences on the saliency of the conceptual metaphors shared by English and Spanish, particularly in the case of EXCITEMENT IS SPICY TASTE, which is more salient in Spanish than in English. All these cases of variation at the conceptual level can be explained by the role of food culture in influencing conceptualization. The new evidence of variation in taste conceptual metaphors, which are motivated by universal sensory experiences, supports the idea that culture influences and shapes all kinds of conceptual metaphors, even on basic and embodied ones. This is consistent with the model proposed by Caballero and Ibarretxe-Antuñano (2009), who explain the role of culture as a sieve, which models and validates the sensorimotor experience giving rise to conceptual metaphors.

At the level of linguistic expression, the degree of variation in Spanish and in English increases. All the taste conceptual metaphors shared by Spanish and English present a certain degree of variation, which takes the form in several ways. One of them is the semantic frames in which a given conceptual metaphor is employed. We have seen that a given frame can be significantly more salient in one language than in the other, or even can be exclusive of one of them. It is the case of the conceptual metaphor DISPLEASURE IS SOUR TASTE, which is often employed in English in the frame ECONOMY, e. g. *sour recession*, but not in Spanish. Another way of variation at the linguistic level concerns the grammatical features of the metaphorical expressions. One example is the independent use of *sweet* qualifying an event that takes place at the moment of the speech, which is ungrammatical in Spanish. Another example is the regular combination of the adjective *sour* with the verbs of change *go* and *turn* in metaphorical expressions in English, while in Spanish it is much less frequent.

Considering the degree of variation of taste metaphors at the different levels, we can affirm that it fits in the model proposed by Onysko (2017), since variation is higher at the linguistic level and lower at the conceptual level. However, in our opinion, it can be improved by adding a new level of analysis, the generic level, in which there is no variation, at least in the case of the taste metaphors considered in this work in Spanish and in

English. Thus, in figure 2, we propose a new version of Onysko's model, illustrating the variation of AFFLICTION IS BITTER TASTE in Spanish and in English, as an example.

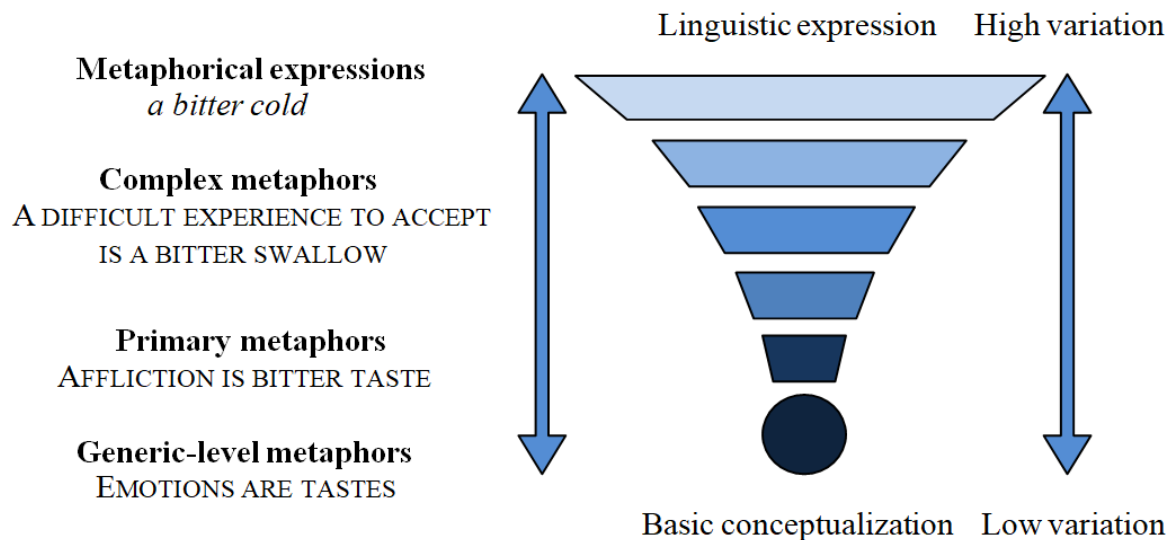


Figure 2. Continuum in variation of conceptual metaphors (extended model).

6. Conclusions

The contrastive study of conceptual metaphors with tastes as a source domain in Spanish and in English offers new evidence about the fact that variation can take place both at the conceptual and the linguistic level asymmetrically. The degree of variation is higher at the linguistic level, in which a variety of parameters can be considered. Cross-linguistic variation is lower, but still significant, at the conceptual level. This is particularly relevant in the study of taste metaphors, since they are grounded on universal embodied experiences determined by the sensory abilities of human beings. Therefore, our study shows that culture plays an important role in the motivation of embodied conceptual metaphors. Lastly, we have argued that most taste metaphors respond to the generic-level conceptual metaphor *EMOTIONS ARE TASTES*, which presents no variation in Spanish and in English. Thus, we have improved Onysko's model of variation in conceptual metaphor (2017: 13) by adding the generic-level metaphors stage, which shows the lowest degree of variation.

In our opinion, this study invites further cross-linguistic research on taste metaphors, because through them the way tension between sensory perception and food culture is resolved in the motivation of conceptual metaphors can be productively explored. Besides cross-linguistic research, we think that intralinguistic variation in taste metaphors deserves more attention, since we have found some interesting cases of variation at the conceptual level, such as the conceptual metaphor *HILARITY IS SALTY TASTE*, which seems to be typical of European Spanish, and the conceptual metaphor *VULGARITY IS SPICY TASTE*, which is only found in Chilean Spanish. These cases of variation might also be explained by cultural differences among Spanish-speaking territories. Lastly, in future studies on taste metaphors it would be interesting to include derivate forms, such as the Spanish words *amargado* ('embittered') or *agriar* ('make sour'), in order to have a broader perspective of the linguistic expression of taste metaphors.

Dictionaries and corpora employed

Academia Chilena (1978). *Diccionario del habla chilena*. Santiago de Chile: Editorial Universitaria.

Cambridge University Press. *Cambridge English Dictionary* (online version). <https://dictionary.cambridge.org/dictionary/english/>. [Date of query: 25/03/2020].

Davies, Mark. Database (online). *Corpus of Contemporary American English (COCA)*. <https://www.english-corpora.org/coca/>. [Date of query: 01/04/2020].

HarperCollins Publishers. *Collins English Dictionary* (online version). <https://www.collinsdictionary.com/dictionary/english/>. [Date of query: 25/03/2020].

Macmillan Education. *Macmillan English Dictionary* (online version). <https://www.macmillandictionary.com/>. [Date of query: 25/03/2020].

Maldonado González, Concepción, dir. *Clave. Diccionario de uso del español actual* (2^a ed.), (online version). <http://clave.smdiccionarios.com/app.php>. [Date of query: 25/03/2020].

Moliner Ruiz, María (2016). *Diccionario de Uso del Español* (3rd ed.). Madrid: Gredos.

- Real Academia Española. Database (online version 0.91). *Corpus del español del siglo XXI (CORPES XXI)*. <http://web.frl.es/CORPES/>. [Date of query: 01/04/2020].
- Real Academia Española. *Diccionario de la lengua española* (23th ed.), (online version 23.3). <https://dle.rae.es>. [Date of query: 15/02/2020].
- Seco Raymundo, Manuel, dir. (2011). *Diccionario del español actual* (2nd ed.). Madrid: Aguilar.
- Simpson, John y Edmund Weiner, eds. (1989). *Oxford English Dictionary* (2nd ed.). Oxford: Oxford University Press.

References

- Bagli, Marco (2016). *Tastes we've lived by: The Linguistic Conceptualization of the Sense of Taste in English* (Unpublished doctoral dissertation). Università degli Studi di Perugia.
- Bagli, Marco (2017). Tastes We've Lived By. Taste Metaphors in English. *Textus* 30, 1: 33-48.
- Bagli, Marco (2018). Defining Taste in English Informant Categorization. In Baicchi, Annalisa, Rémi Dignonnet & Jodi L. Sandford, eds., 155-175.
- Belkir, Sadia (2019). Animal-related Concepts Across Languages and Cultures from a Cognitive Linguistic Perspective. *Cognitive Linguistic Studies* 6, 2: 295-324.
- Barcelona, Antonio (2001). On the Systematic Contrastive Analysis of Conceptual Metaphors: Case Studies and Proposed Methodology. In Pütz, Martin, Susanne Niemeier & René Dirven, eds., 117-146.
- Caballero, Rosario & Iraide Ibarretxe-Antuñano (2009). Ways of Perceiving, Moving, and Thinking: Re-vindicating Culture in Conceptual Metaphor Research. *Cognitive Semiotics* 5, 1-2: 268-290.
- Callies, Marcus & Alexander Onysko (2017). Metaphor Variation in Englishes around the World: Introduction to the Special Issue. *Cognitive Linguistic Studies* 4, 1: 1-6.
- Dancygier, Barbara & Eve Sweetser (2014). *Figurative Language*. Cambridge: Cambridge University Press.
- Evans, Nicholas & David Wilkins (2000). In the Mind's Ear: The Semantic Extension of Perception Verbs in Australian Languages. *Language* 76, 3: 546-592.
- Fillmore, Charles J. (2006). Frame Semantics. In Geeraerts, Dirk, ed., 373-400.
- Grady, Joseph (1997). *Foundations of Meaning: Primary Metaphors and Primary Scenes* (Unpublished doctoral dissertation). University of California at Berkeley.
- Gutiérrez Pérez, Regina (2008). A Cross-cultural Analysis of Heart Metaphors. *Revista Alicantina de Estudios Ingleses* 21: 25-56. DOI: <https://doi.org/10.14198/raei.2008.21.03>
- Ibarretxe-Antuñano, Iraide (1999). *Polysemy and Metaphor in Perception Verbs: a Cross-linguistic Study* (Unpublished doctoral dissertation). University of Edinburgh.
- Ibarretxe-Antuñano, Iraide (2008). Vision Metaphors for the Intellect: Are They Really Cross-linguistic? *Atlantis* 30, 1: 15-33.
- Ibarretxe-Antuñano, Iraide (2013). The Relationship between Conceptual Metaphor and Culture. *Intercultural pragmatics* 10, 2: 315-339. DOI: <https://doi.org/10.1515/ip-2013-0014>
- Johnson, Mark (1987). *The Body in the Mind: The Bodily Basis of Meaning, Imagination, and Reason*. Chicago: The University of Chicago Press.
- Kövecses, Zoltán (2003). *Metaphor and Emotion: Language, Culture, and Body in Human Feeling*. Cambridge: Cambridge University Press.
- Kövecses, Zoltán (2005). *Metaphor in Culture: Universality and Variation*. Cambridge: Cambridge University Press.
- Kövecses, Zoltán (2010). *Metaphor: A Practical Introduction*. Oxford: Oxford University Press.
- Kövecses, Zoltán, Laura Ambrus, Dániel Hegedűs, Ren Imai & Anna Sobczak (2019). The Lexical vs. the Corpus-based Method in the Study of Metaphors. In Bolognesi, Marianna, Mario Brdar & Kristina Š. Despot, eds., 149-173.
- Lakoff, George & Mark Johnson (1980). *Metaphors We Live By*. Chicago: University of Chicago Press.
- Littlemore, Jeannette (2019). *Metaphors in the Mind: Sources of Variation in Embodied Metaphor*. Cambridge: Cambridge University Press. DOI: <https://doi.org/10.1017/9781108241441>
- Maalej, Zouhair & Ning Yu, eds. (2011). *Embodiment via Body Parts: Studies from Various Languages and Cultures*. Amsterdam /Philadelphia: John Benjamins Publishing Company.
- Ogarkova, Anna, Cristina Soriano & Anna Gladkova (2016). Methodological triangulation in the study of emotion. The case of 'anger' in three language groups. *Review of Cognitive Linguistics* 14, 1: 73-101.
- Onysko, Alexander (2017). Conceptual Metaphor Variation in Meaning Interpretation. Evidence from Speakers of New Zealand English. *Cognitive Linguistic Studies* 4, 1: 7-35.
- Pavlenko, Aneta (2002). Emotions and the Body in Russian and English. *Pragmatics and Cognition* 10, 1-2: 201-36.
- Soriano, Cristina (2003). Some Anger Metaphors in Spanish and English. A Contrastive Review. *International Journal of English Studies*, 3,2: 107-122.
- Soriano, Cristina (2003). Some Anger Metaphors in Spanish and English. A Contrastive Review. *International Journal of English Studies* 3, 2: 107-122.
- Soto Nieto, Almudena (2011). *La polisemia en los términos de color en inglés y español: un estudio basado en corpus* (Unpublished doctoral dissertation). University of Murcia.

- Speed, Laura J. & Asifa Majid (2019). Grounding Language in the Neglected Senses of Touch, Taste, and Smell. *Cognitive Neuropsychology* 36, 1-30. DOI: <https://doi.org/10.1080/02643294.2019.1623188>
- Steen, Gerard J., Aletta G. Dorst, J. Berenike Herrmann, Anna A. Kaal, Tina Krennmayr & Tryntje Pasma (2010). *A Method for Linguistic Metaphor Identification: From MIP to MIPVU*. Amsterdam / Philadelphia: John Benjamins Publishing Company.
- Sweetser, Eve (1990). *From Ethymology to Pragmatics: Metaphorical and Cultural Aspects of Semantic Structure*. Cambridge: Cambridge University Press.
- Valiulienė, Edita (2015). Temperature Metaphors in Lithuanian and English: Contrastive Analysis. *Verbum* 6, 207-219.
- Viberg, Åke (2008). Swedish Verbs of Perception from a Typological and Contrastive Perspective. In Gómez González, María de los Ángeles, J. Lachlan Mackenzie & Elsa M. González Álvarez, eds., 123-172.
- Yu, Ning (2009). *From Body to Meaning in Culture. Papers on Cognitive Semantic Studies of Chinese*. Amsterdam / Philadelphia: John Benjamins Publishing Company.
- Zawisławska, Magdalena Anna & Marta Helena Falkowska (2018). “All my sour-sweet days I will lament and love” – a Comparative Analysis of Metaphors with the Basic Taste Adjectives in Polish and English. *Cognitive Studies / Études cognitives* 18: 1-11. DOI: <https://doi.org/10.11649/cs.1675>