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"Shaking off so good a wife and so sweet a lady": Shakespeare's use of taste words

Abstract: The sense of taste has been considered an "inferior" sense for a long time, both in philosophical and scientific fields of investigation (Cavalieri 2011. *Gusto: l'intelligenza del palato*. Bari: GLF editori Laterza). However, the recent growing interest in Cognitive Science has driven scholars to a reconsideration of the role of taste in human cognition. This paper intends to investigate such a role in a corpus of five Shakespearean plays. To do so, I conducted an analysis by looking at the occurrences of seven taste terms. The research aims at exploring the metaphorical occurrences of the lexicon of taste, i.e. concordances in which a taste word does not describe food or an actual taste sensation. I propose an idealised cognitive model to organise such occurrences that involves a central mapping from which others derive, in keeping with Kövecses (2010. *Metaphor: A Practical Introduction*. Oxford: Oxford University Press). Results are consistent in showing the role of taste in the motivation of metaphorical expression in Shakespeare's plays.

Keywords: taste, shakespeare, conceptual metaphor, cognitive stylistics, corpus analysis

1 Introduction

This paper investigates Shakespeare's use of taste metaphors, by means of a corpus analysis of five of his plays: *Titus Andronicus* (1593), *Richard III* (1592), *Romeo and Juliet* (1594), *All's well that ends well* (1602), and *The Winter's Tale* (1610). These plays have been selected from the entire corpus because they range from his early to late production, and each represents a different genre: history play, tragedy, comedy, and romance. The instances of taste words I am interested in are those where they do not describe food, i.e. are used metaphorically.

The sense of taste has been neglected in Western philosophy since ancient Greece. Socrates, in Plato's dialogue *Gorgias*, provides a classification of different

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types of art, by opposing it to *kolakeia,* a term which is often translated as *flattery.* While medicine is considered an art, because it knows what food is best for the body, gastronomy is considered flattery because it *claims* to know what food is best for the body. It is defined as "ugly" (as distinct from the other types of flattery) because it "aims at pleasure while taking no actual interest in the [human] benefits" (Gorgias, 464e, my translation[1]). Socrates argues that gastronomy is not rational because it "cannot explain the nature of its object nor of its tools, and it cannot explain the cause of anything: I cannot call art what in fact is an irrational activity" (Gorgias, 465a, my translation[2]).

From Plato on, the rational perspective of Western philosophy underestimated the sense of Taste until the first half of the 19th century, when Brillat-Savarin (2014 [1825]) published "The Physiology of taste", in which he explores the new science of cuisine and of well-eating. Recently, and concurrently with a renewed interest in Food Studies, many scholars have devoted their attention to an exploration of this infamous sensorial experience from several points of view. Cavalieri (2011) explores the link between taste and cognition, accounting for the ways in which our cognitive abilities organise these sensations. Furthermore, in her 2014 book, she traces the history of taste, by drawing a parallel with our closest relatives, the big apes, arguing however that the experience of tasting food, of food production and manipulation, is "an activity which reveals our humanity" (Cavalieri 2014: 100, my translation[3]). Holley (2006) provides a full account of the neural underpinnings of the gustatory experience, while Smith (2007) is editor of "Questions of Taste: The Philosophy of Wine", a book in which several scholars face different aspects of the tasting experience. Some studies have also looked into the language of taste. Notably, the work of Lehrer (1975, 1983, 2007) and Backhouse (1994) has shed light on how language describes taste. Sweetser (1990) mentions taste as being the sense that is used "to represent our personal likes and dislikes or 'tastes'" (1990:43). Ibarretxe-Antuñano ae: (1997a, 1997b) has concentrated more on metaphors involving Smell as Sourse Domain while to the best of my knowledge, there are no studies accounting for the conceptualisation of taste in language, i.e. the different tastes considered as Source Domains in conceptual metaphors.

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1 It.: "perché mira al piacere disinteressandosi del bene", translation from Ancient Greek by Zanetto (2007).

2 It.: "non sa spiegare razionalmente la natura del suo oggetto né dei suoi strumenti, e non sa indicare la causa di nulla: io non posso chiamare arte quella che è un'attività irrazionale", translation from Ancient Greek by Zanetto (2007).

3 It.: "un'attività rivelatrice della nostra umanità".

Throughout the paper I will follow these typographical conventions: when capitalised, the word taste refers to the physical sense or perception. I use SMALL CAPS for concepts and conceptual metaphors, while *italics* denote types in the corpus analysis.

2 Theoretical background

The sense of taste is a highly complex combination of different stimuli: not only do taste buds on our tongue concur with its perception, but so do Smell, palatal Touch, and even Sight (Cavalieri 2011). The extreme complexity of the tasting experience and its extreme volatility are characteristics that account for the poor consideration that taste has received in philosophical speculation. It is a very intimate sense, and a very personal one: to be activated, it requires the stimulus to be *physically* introduced into the body. Physiologists recognise five different transduction pathways from the taste buds to the brain: sweet, salt, sour, bitter, and umami. Each transduction has its own corresponding chemical, responsible for such a sensation. Two major models describe Taste perception. The more accepted is the basic tastes model. It is derived by the vertebrate auditory system, and "proposes that very few distinguishable tastes exist, and that each is quite separate from the others" (Halpern 1997: 87). The other major model is derived from the vertebrate colour vision system, thus emphasising a broad and overlapping competence of different receptors. Taste reception takes place on the taste buds, which are distributed throughout the oral cavity, from the tongue to the larynx. Three nerves innervate them: the facial nerve (VIIth), the glosso-pharingeal nerve (IXth), and the vagus nerve (Xth) (Smith and Vogt 1997). However, other nerves also transport what are later perceived as taste stimuli, the main one being the trigeminal (Vth) nerve, which innervates the soft palate and is responsible for the perception of stimuli such as spiciness, texture, and temperature of the food we ingest (Holley 2006).

An understanding of the inner workings of the human body in general and, for the aim of this study, of the physiology of taste is of particular relevance. This is especially the case in cognitive linguistics and semantics, where the theory of embodiment, as proposed by Varela and Rosch (1991), has had a foundational role. As Evans clarifies:

> The human mind and conceptual organisation are a function of the way in which our species-specific bodies interact with the environment we inhabit. In other words, the nature of concepts and the way they are structured and organised is constrained by the nature of our embodied experience (Evans 2007: 78).

Our bodies, which enable us to see certain colours as opposed to others and to perceive certain tastes as opposed to others, mediate the representation of knowledge in our thoughts. Such embodied cognition is also the basis of our processes of meaning creation. Conceptual Metaphor Theory proposed by Lakoff and Johnson (1980) argues that metaphor is not only a stylistic feature used in poetry, but is a cognitive device which human beings use to make sense of the world. Metaphor is a pervasive tool not only in language, but also in thought and action, to the extent that "our ordinary conceptual system [...] is fundamentally metaphorical in nature" (Lakoff and Johnson 1980:3).

Conceptual metaphors are motivated by our bodily experiences and embodied cognition, and thus they enable us to understand a Target Domain a in terms of a Source Domain в via a set of systematic correspondences between the constituent elements of both domains. These correspondences are defined as mappings. The following metaphorical expressions are motivated by the conceptual metaphor SOCIAL ORGANISATIONS ARE PLANTS (Kövecses 2010: 10):

(1)   He works for the local *branch* of the bank.

(2)   Our company is *growing*.

(3)   They had to *prune* their workforce.

(4)   The organisation was *rooted* in the old church.

(5)   There is now a *flourishing* black market in software there.

(6)   His business *blossomed* when the railways put his establishment within reach of a big city.

(7)   Employers *reaped* enormous benefits from cheap foreign labour.

These linguistic realisations are motivated by the following set of mappings:

Source Domain: PLANT		Target Domain: SOCIAL ORGANISATION
(a) the whole plant	→	the whole organisation
(b) a part of the plant	→	a part of the organisation
(c) growth of the plant	→	development of the organisation
(d) removing a part of the plant	→	reducing the organisation
(e) the root of the plant	→	the origin of the organisation
(f) the flowering	→	the best stage, the most successful stage
(g) the fruits or crops	→	the beneficial consequences

A conceptual metaphor can be a complex system of correspondences, with a single Source Domain that may map onto a number of different Target Domains. The range of possible Target Domains linked to a single Source Domain is referred to as the scope of metaphor. In a scope of metaphor, however, a single overarching metaphor can be identified: a general metaphor constituted by a central mapping, from which other mappings may be derived. Consider the following conceptual metaphors: SOCIAL ORGANISATIONS ARE PLANTS (1–7); BELIEFS ARE PLANTS; THEORIES ARE PLANTS; PEOPLE ARE PLANTS. The central mapping for these metaphors is COMPLEX SYSTEMS ARE PLANTS. Typically, a plant has well-grounded roots in the soil, it develops, grows and flourishes over time and has a number of interwoven branches. This central knowledge is metaphorically transferred to the various Target Domains via the central mapping, thus giving rise to a set of more specific metaphors. The notion of central mapping is crucial to the present study: I argue that each taste has a central mapping, which is at the basis of the motivation of other metaphorical instantiations.

Sweetser (1990) argues that semantic change occurs following certain patterns: from more concrete to more abstract domains, and from the external to the internal world. She elicits evidence from many Indo-European languages and provides the following mappings in the MIND AS BODY metaphor:

Source Domain: BODY		Target Domain: MIND
SIGHT	→	KNOWLEDGE
HEARING	→	HEED, OBEY
TOUCH	→	EMOTIONAL FEELINGS
SMELL	→	BAD CHARACTER, DISLIKEABLE CHARACTERISTICS (ENG)
TASTE	→	PERSONAL LIKES AND DISLIKES

Sight and Hearing are associated to more intellectual domains, and this correlation is mirrored in our culture and philosophy, while the other senses are given a more personal connotation. In particular, Sweetser advances the claim that "the sense of smell has few abstract or mental connotations", while taste "is a physical sense which seems universally to be linked with personal likes and dislikes in the mental world" (1990: 37). Ibarretxe-Antuñano (1997a, 1997b) expands the range of possible Target Domains for smell. In this paper, I intend to demonstrate a larger variety of Target Domains for the sense of taste, and to provide a cognitive model of different

mappings derived from a central one, which seems to be at the base of the other mappings. The data shown in the following section are elicited from Shakespeare's works: this produces a documentation of the role of the sense of taste in early 17th century England, at the birth of Modern English, in one of the largest corpuses of that period.

3 Results

3.1 Methodology

I conducted a corpus analysis in a restricted corpus made up of five works by William Shakespeare: *Titus Andronicus* (TA), *Richard III* (R3), *Romeo and Juliet* (RJ), *All's Well What Ends Well* (AW), *The Winter's Tale* (WT). I chose these works because each play represents a different genre and was written at a different stage in Shakespeare's production. The software I employed to carry out the analysis is available at www.opensourceshakespeare.org, and allows basic searches within the entire Shakespearean corpus, available at the same website. The tool I used is the "Advanced Search" option: with this tool, the researcher can retrieve occurrences of one or more word-roots, either in the entire corpus or filtered according to genre, play, character, years of production. The source text used for the Open Source Shakespeare project is the "Moby Shakespeare" collection, an "electronic reproduction of another set of texts for which the Electronic Text Center at the University of Virginia identifies the source as the Globe Shakespeare" (1864), by Clark and Wright (Open Source Shakespeare website, Introduction). The taste types I employed for the corpus analysis are: *bitter, salt, sour, spicy, sweet, tart, umami*. The word 'umami' is a loan word from Japanese, introduced in English in the 20th century, therefore, it was not surprising that it did not exist in the corpus. The other types I used for the corpus analysis refer to basic tastes in folk knowledge (*spicy, tart*). Words like *seasoned*, *flavourful*, *savoury*, etc. were excluded because they do not describe a specific taste, but refer to a more general level of the taste experience. The retrieval of occurrences that were clearly unrelated to the domain of TASTE are not taken in consideration and omitted from discussion, e.g. 'source' from the query "sour*", or 'start' from "tart*". Secondly, I classified all the occurrences of the taste terms, according to the underlying metaphorical mapping. Furthermore, I categorised them to

provide an account of the polysemy of Taste terms in the corpus. The results of these analyses are given in the following section.

3.2 *The* types *in* TASTE

Table 1 shows the general results of the occurrences of the types in the corpus. The type *spicy* did not produce any occurrence, even if according to etymonline. com it has been attested since 1560s. While there are occurrences for the base form *spice*, they have not been taken into account. This is because the word *spice* refers to the stimulant responsible for the Taste sensation; it does not account for the description of the related perception.

Table 1: Overall results for corpus analysis.

Type/Play	TA	R3	RJ	AW	WT	Totals
sweet*	39	24	43	20	23	149
bitter*	9	10	6	4	4	33
sour*	1	0	4	1	1	7
salt*	1	1	1	1	0	4
tart*	0	0	0	1	0	1
spicy	0	0	0	0	0	0
Totals	50	35	54	27	28	194

The most represented taste type is *sweet*, with 149 total occurrences in the corpus, followed by *bitter* (33 total occurrences), *sour* (7 total occurrences), *salt* (4 total occurrences), and *tart* (1 total occurrence). The play with the highest number of *sweet* occurrences is *Romeo and Juliet*, followed by *Titus Andronicus*. The highest number of *bitter* occurrences is to be found in *Richard III*, while *sour* mainly occurs in *Romeo and Juliet*.

Table 2 shows the occurrences in detail. The type *sweet* emerges both as an attribute and as a substantive, furthermore the query "sweet*" produced the highest number of morphological distinct results. There are occurrences for compounds (*sweetheart, sweetmeats; flattering-sweet, silver-sweet*), for the derived verb (*to sweeten*) and for the adverb (*sweetly*). Within the corpus, *Romeo and Juliet* is the play with the highest level of morphological variety for the type *sweet*.

The query "bitter*" is mainly present in its base form as an attribute, but there are occurrences of the substantive (*bitterness*) and also of the derived adverb (*bitterly*); *sour* is present as an attribute and as a verb in the past participle

Table 2: Types and tokens for each taste*. The queries for the corpus analysis are given in **bold**.

Sweet*	TA	R3	RJ	AW	WT
sweet (adj)	39	22	33	15	20
sweet (n.)	0	1	3	2	1
sweetly	0	1	1	1	0
sweet-heart	0	0	1	2	1
sweetmeats	0	0	1	0	0
flattering-sweet	0	0	1	0	0
silver-sweet	0	0	1	0	0
sweeting	0	0	1	0	0
sweeten	0	0	1	0	1
Bitter*					
bitter (adj.)	8	6	4	3	4
bitterness	1	1	0	1	0
bitterly	0	3	2	0	0
*Sour***					
sour (adj)	1	0	4	1	0
sour (v.)	0	0	0	0	1
Tart*					
tartness	0	0	0	1	0
Salt*					
salt	0	1	1	1	0
sea-salt	1	0	0	0	0

form (*sour'd*), while *tart* is only present as a substantive (*tartness*). The attribute form "salty" is not present in the corpus, but there are occurrences of the type *salt* and *sea-salt*. Although these words technically refer to the stimulant, they were taken into consideration because they were mainly used as an attribute.

Arguably, the high morphological variety in which *sweet* is found correlates with the frequency in the corpus and with its high degree of entrenchment. This correlation might be motivated by the importance of sugar and/or sweet substances in general for human diet and metabolism; as Orians notes "honey was a nutritional and energy bonanza, a precious fuel for our large hominid brains" (2015:2).

3.3 *The metaphors of* TASTE

The aim of this section is to present the metaphorical occurrences of the Taste terms within the corpus, and categorise them according to the metaphorical

mappings that motivate their meaning. Each Taste word is considered as the Source Domain in a Conceptual Metaphor, whose Target Domain is expressed in the tables. The numbers indicate the occurrences for each metaphor. The sections in this paragraph are arranged by type.

3.3.1 Sweet

The Source Domain SWEET is by far the most frequently represented taste category in the whole corpus. It is also the Taste descriptor that serves the highest number of Target Domains. The results are shown in Table 3. I argue that the conceptual metaphor at the basis of the polysemy of 'sweet' in the corpus is PLEASURE IS SWEET. I consider this conceptual metaphor as the central mapping from which other mappings develop. I identified the following categories: CHILDHOOD (n. 8 occurrences), 'epithet' (n. 58), LOVE (n. 12), 'multimodal' (n. 17), PLEASURE (n. 65), RECOVERY (n. 5), and 'literal' (n. 5). Some categories are further divided into subcategories. This is the case of 'epithet', which encompasses 'vocative' (n. 50); multimodal encompasses HEARING (n. 9), SMELL (n. 7), SIGHT (n. 1); and PLEASURE encompasses 'beauty' (n. 2), and 'sex' (n. 4).

Table 3: Mappings for the SWEET Source Domain. Categories are indicated in **bold**; Target Domains are in SMALL CAPS.

SWEET	TA	R3	RJ	AW	WT	tot.
CHILDHOOD	2	5	0	0	1	8
epithet	24	6	14	3	11	58
vocative	21	4	11	3	11	50
LOVE	0	0	8	3	2	13
multimodal	4	1	8	0	4	17
HEARING	3	1	4	0	1	9
SMELL	1	0	3	0	2	6
SIGHT	0	0	1	0	0	1
PLEASURE	8	10	9	13	4	64
beauty	1	1	0	0	0	2
sex	0	2	0	1	1	4
RECOVERY	1	2	2	0	0	5
literal	0	0	3	1	1	5

The occurrences in the category PLEASURE are those which pertain to a general level, as in (8) and (9), and therefore are the most numerous.

(8)   When holy and devout religious men/are at their beads, 'tis hard to draw them thence,/so sweet is zealous contemplation. (R3; 3.7.2301–03)

(9)   I will withdraw: but this intrusion shall now seeming sweet convert to bitter gall. (RJ; 1.5.717)

The two subcategories 'beauty' and 'sex' were considered as being part of the superordinate PLEASURE category because they contain occurrences in which the taste term is used as describing a sexual pleasure (10), or an aesthetic pleasure (11). In other words, the Source Domain of SWEET does not map onto the actual domain of SEX or BEAUTY.

(10)   So I might live one hour in your sweet bosom. (R3; 1.2.304)
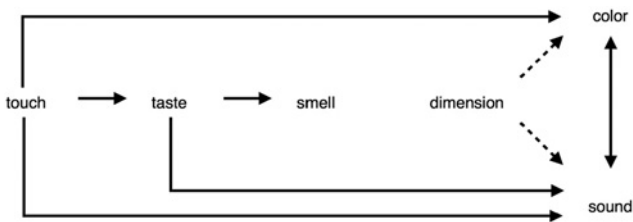
(11)   Those sweet ornaments. (TA; 2.4.1082)

Figure 1: Direction of metaphorical transfer across sensory modalities, adapted from Williams, 1976.

The category 'multimodal' comprises metaphors whose Target Domains is another sensory modality. I treated the usage of the lexeme *sweet* to describe a stimulus from another sense as a linguistic realisation of the PLEASURE IS SWEET metaphor. Nevertheless, I classified these metaphors in a category on their own based on their multimodality. Williams (1976) provides a model for metaphorical transfer between the senses, as illustrated in Figure 1.

    According to Williams, "if a lexeme metaphorically transfers from its earliest sensory meaning to another sensory modality, it will transfer according to the schedule shown in Figure 1" (1976: 463), which also represents a hierarchy of senses relative to the order in which semantic senses are transferred through modalities (Cacciari 2008). So, taste can receive a semantic sense from Touch,

and may lend its terms to other modalities, such as Smell, Sound and Vision. All occurrences in the corpus respect this hierarchy; the senses construed as SWEET are HEARING (12), SMELL (13), SIGHT (14):

(12)   Marry, sir, because silver hath a sweet sound. (RJ; 4.5.2789)

(13)   Gloves as sweet as damask roses. (WT; 4.4.2111)

(14)   Look thou but sweet/and I am proof against their enmity. (RJ; 2.2.922)

The occurrence reported in (13) was interpreted as belonging to the smell category, considering the 16th century fashion of perfuming garments (Nicholl 1992).

Another major category is 'epithets'. Under this class, there are occurrences in which *sweet* was used to describe the quality of a person, or of a personified entity. Even though Busse (2006) considers epithets as special kind of vocative constructions, in the cognitive model I present here I considered as epithets all those occurrences describing the quality of a person, following the definition of dictionary.com, according to which an epithet is "any word or phrase applied to a person or thing to describe an actual or attributed quality". A classic example is the one provided in (15):

(15)   A sweeter and a lovelier gentleman,/Framed in the prodigality of nature. (R3.1.2.436−37)

Indeed most epithets were used in a vocative construction. Busse defines vocative construction in Shakespeare as follows:

> vocatives are direct attitudinal adjunct-like forms of address. Realised as a nominal group or head alone, vocatives are optional in form, they may be introduced in Shakespeare by the morphological marker O, and their position may be either initial, middle or final in the clause. (2006: 29)

The occurrences classified under the category of epithets represent 39% of the overall occurrences, of which 86% are vocatives. An example of a vocative construction is (16):

(16)   O, my sweet lord, that you will stay behind us! (AW; 2.1.619)

Distinguishing what mapping is at the basis of each occurrence was the next step. The usage of the vocative construction is highly context dependent, where

context refers not solely to literary context, but also to the social one depicted in the plays. Thus, when for example Juliet uses a vocative to address Romeo (*Sweet Montague, be true*, 2.2.989), it would seem clear that the underlying conceptual metaphor is LOVE IS SWEET. However, the use of the same construction by Lavinia in Titus Andronicus (*Sweet lords, entreat her hear me but a word*, 2.3.876) does not elicit the same mapping. Duly, I deemed as a more salient characteristic of this group the usage as epithets, often in a vocative construction: therefore I classified them as such, disregarding of the underlying conceptual metaphor.

The domain of CHILDHOOD is especially present in Richard III. Infants are frequently described as 'sweet', as in (17) and (18). These occurrences were considered as disjoint from epithets, because they were consistent in describing children and potentially mapping onto the domain of innocence; however I did not retrieve enough data to consider such occurrences as separate realisations of the INNOCENCE IS SWEET metaphor.

(17)   Ah, my young princes! ah, my tender babes!/My unblown flowers, new-appearing sweets! (R3; 4.4.2801–02)

(18)   A mother only mock'd with two sweet babes. (R3; 4.4.2882)

The category of LOVE had 13 total occurrences, concentrated mainly in Romeo and Juliet. This is not surprising, considering the romantic subject of the play, and its literary inspiration in the Petrarchan poetical model:

(19)   And she steal love's sweet bait from fearful hooks. (RJ; 2.Prologue.787)

The last category is that of RECOVERY. The occurrences in this category conceptualise the activity of resting and sleeping as being 'sweet', as in (20):

(20)   The sweetest sleep, and fairest-boding dreams/That ever enter'd in a drowsy head,/Have I since your departure had, my lords. (R3; 5.3.3733–35)

This mapping is particularly relevant especially in the perspective of embodiment theory. Sweet substances in nature provide energy and sustenance; arguably, this is the core characteristic that motivates their association with positive domains. The biological motivation for RECOVERY IS SWEET metaphor may account for its definition as a Primary Metaphor, i.e. a conceptual metaphor whose Target Domains are correlated through direct experience (Grady 1997).

3.3.2 Bitter

The taste of bitter mainly structures the Target Domain of DISPLEASURE, thus giving rise to the conceptual metaphor DISPLEASURE IS BITTER. The details for the cognitive model of *bitter* are shown in Table 4. The central mapping is DISPLEASURE IS BITTER (n. 10 occurrences), which is further divided into 'disappointment' (n. 3) and 'revenge' (n. 2). The other major category is EVIL (n. 12), followed by SORROW (n. 7). The category 'vehemence' (n. 2) comprises those occurrences in which the adverb 'bitterly' is a synonym of 'extremely; very; exceedingly', as reported by dictionary.com. A complex mapping drives this semantic change, which is worth further discussion with more detailed data. It cognates with verbs derived from Latin such as 'exacerbate' and 'exasperate' which are derived from 'acerbus' and 'asper', the Latin words for 'unripe' and 'sour' respectively, thus denoting a confusion between the various Taste sensations. The discussion of this phenomenon however exceeds the aim of the present paper, and will be left for future analysis.

Table 4: Overall results for BITTER Source Domain. Categories are indicated in **bold**; Target Domains are in SMALL CAPS.

BITTER	TA	R3	RJ	AW	WT	tot.
DISPLEASURE	**0**	**3**	**3**	**2**	**2**	**10**
disappointment	0	1	0	2	0	3
revenge	0	0	0	0	2	2
EVIL	4	5	0	1	2	12
SORROW	5	1	0	2	0	8
vehemence	0	1	1	0	0	2
literal	0	0	2	0	0	2

I classified under the category of DISPLEASURE occurrences whose meaning is general, such as those in (21):

(21)   the consequence/Will prove as bitter, black, and tragical. (R3; 4.4.2798–99)

Within the 'disappointment' (22) and 'revenge' (23) category, I included occurrences that described these feelings, which were not used as Target Domains however.

(22)   Till I have no wife I have nothing in France./'Tis bitter. (AW; 3.2.1478–79)

(23) Not he alone shall suffer what wit can make heavy/and vengeance bitter. (WT; 4.4.2750–51)

The EVIL category encompasses the highest number of occurrences. An example is provided in (24):

(24) [That] thou hadst call'd me all these bitter names. (R3; 1.3.703)

The category of SORROW is represented by occurrences such as (25).

(25) And for these bitter tears, which now you see/Filling the aged wrinkles in my cheeks. (TA; 3.1.1131–32)

3.3.3 Sour

The taste descriptor 'sour' did not provide as many occurrences as the other types. A basic categorisation I developed is shown in Table 5. The central mapping for *sour* as Source Domain is DISPLEASURE IS SOUR (n. 3 occurrences). I classified the other mappings as: DANGER IS SOUR (n. 3), and SORROW IS SOUR (n. 1). There is also evidence for a multimodal realisation of a metaphor, and also a specific occurrence involving the sense of Sight.

Table 5: Overall occurrences for the SOUR Source Domain. Categories are indicated in **bold**; Target Domains are in SMALL CAPS.

SOUR	TA	R3	RJ	AW	WT	tot.
DANGER	0	0	1	1	1	3
DISPLEASURE	1	0	2	0	0	3
multimodal	1	0	0	0	0	1
SIGHT	1	0	0	0	0	1
SORROW	0	0	1	0	0	1

Again, the occurrences in the category DISPLEASURE have a general connotation and cannot be classified with further details:

(26) O, give me thy hand,/One writ with me in sour misfortune's book! (RJ; 5.3.3026–27)

The multimodal realisation in TA maps the Source Domain of sour onto the Target Domain of sight, thus motivated by the metonymy THE ACTION FOR THE RESULT, (A LOOK FOR CAUSE OF AN EMOTION) in (27):

(27)   Nor with sour looks afflict his gentle heart. (TA; 1.1.490)

The category of DANGER (28, 29) is particularly relevant from an embodiment theory perspective.

(28)   To the great sender turns a sour offence. (AW; 5.3.2741)

(29)   Too familiar/Is my dear son with such sour company. (RJ; 3.3.1877–78)

Steiner et al. (2001) measures the hedonic reactions to taste stimuli in human infants and other primates: "sour citric acid appeared to have a moderate but mostly aversive palatability, eliciting mixed reactions" (Steiner et al. 2001:60), and Cavalieri (2011) notes that sour (and bitter) substances in nature may be potentially dangerous and toxic. Linguistically, the taste of sour has a clearly negative connotation, thus suggesting that the mapping DANGER IS SOUR may be deemed a primary metaphor, in the same way that RECOVERY IS SWEET is.

The category of SORROW only contains one occurrence (30), but it was still classified on its own because it mirrors the same Target Domain structured by BITTER (25).

(30)   Or, if sour woe delights in fellowship. (RJ; 3.2.1840)

3.3.4 Salt

Salt had only literal occurrences, such as those in (31)

(31)   all the tears that thy poor eyes let fall/May run into that sink, and soaking in/Drown the lamenting fool in sea-salt tears. (TA; 3.2.1463–65)

3.3.5 Tart

The Taste term 'tart' only had one occurrence (32), which may be motivated by the HOSTILITY IS TART metaphor:

(32)   They cannot be too sweet for the king's tartness. (AW; 4.3.2170)

3.4 Discussion

In this section, I discuss the results of the corpus analysis in five Shakespearean plays. I conducted the analysis considering as types five different taste descriptors. The aim of the analysis was to retrieve the metaphorical occurrences in which these Taste terms were used as Source Domains, and to categorise them according to either their Target Domain or their mode of realisation (in the case of multimodality). Results show a high number of occurrences for *sweet* (77% of the total tastes occurrences), followed by *bitter* (17%) and *sour* (4%). I distinguished the central mappings for each taste as being PLEASURE IS SWEET and DISPLEASURE IS BITTER/SOUR. The central mapping for SWEET has a high number of sub-mappings. The category with the highest number of occurrences is the category of 'epithets', which is not characterised by a mapping nor a precise Target Domain. Within this group, I classified occurrences that describe a person as 'sweet'. Most of these are found in a vocative construction, i.e. a syntactic-functional construction in which a character directly addresses to another (Busse 2006).

Besides this category, another category that encompasses a relatively high number of occurrences is 'multimodality', characterised by the mode of realisation of these metaphors. It is noteworthy how perception vocabulary was already highly multimodal in 17th century England, using the sense of taste ('sweet' and 'sour') to describe other senses, mainly SMELL and HEARING. These occurrences represent 11% of the total occurrences for *sweet*, while there is just one occurrence for *sour*. In these cases, smell and hearing are conceptualised as having a taste, thus leading to the following chain of metaphors: SENSING IS TASTING, KNOWING IS SENSING, thus KNOWING IS SENCING. Further research will investigate further support for this assumption.

The two mappings with a negative connotation have a sub-mapping in common (SORROW IS BITTER/SOUR). Furthermore, BITTER maps onto the domain of EVIL, whereas SOUR maps onto the domain of DANGER. This last mapping SOUR IS DANGER is interesting because it can be associated with the RECOVERY IS SWEET mapping. I argue that both of them may be defined as primary metaphors, because they emerge directly from correlations in experience, even if such a relation is not necessarily experienced directly in everyday lives.

Another mapping that merits discussion is CHILDHOOD IS SWEET. It could be argued that it should have been included in the 'epithet' category. Nonetheless, I classified these occurrences as distinct from the others considering that they are

consistent in describing children. Another formulation of the same mapping could be INNOCENCE IS SWEET, although there are not many examples in this corpus to support this interpretation.

However instinctual and irrational the sense of taste may seem from a philosophical perspective, our language and cognition seem to make use of inputs coming from this perceptual path. The results of the present study, although limited, are consistent in showing how the Source Domains of SWEET and BITTER/SOUR help structure the Target Domains of PLEASURE and DISPLEASURE, respectively. They may also be classified as included in more general domains, such as GOOD (CHILDHOOD, LOVE, SENSING, PLEASURE, RECOVERY) and BAD (EVIL, DANGER, DISPLEASURE, SORROW), thus leading to the opponent metaphors GOOD IS SWEET, BAD IS BITTER/SOUR. These two superordinate domains motivate the positive and negative connotations attached to the linguistic conceptualisation of taste, which may be dictated by biological constraints: while sweet substances are essential to the human metabolism, a bitter or sour taste often denotes potential threats to the survival of the individual, especially in infants (Cavalieri 2011; Steiner et al. 2001).

4 Conclusions

This paper focuses on the metaphorical use of taste terms in five Shakespearean plays. By means of a corpus analysis conducted on the website opensourceshakespeare.org, I retrieved the occurrences for the following types: *sweet, bitter, sour, salty, umami, spicy, tart*. Results show a high number of occurrences for tokens related to *sweet*, while there are less of *bitter* or *sour*. *Salty*, *spicy,* or *umami* do not appear in the corpus; while there is one occurrence for the type *tartness* (AW).

The results are firstly discussed from a morphological and general point of view (§ 3.2) and then from a semantic perspective (§ 3.3). The high number of metaphorical occurrences retrieved may be attributed to the nature of the texts. Metaphor is the poetic device *par excellence*, and in this linguistic environment one may be led to treat such metaphorisations as mere rhetoric devices. Even if this were the case, "most poetic language is based on conventional, ordinary conceptual metaphors" (Kövecses 2010: 50), thus accounting for a creative use of natural language.

The aim of this paper is to organise the metaphorical occurrences of taste terms in an idealised cognitive model. This study represents a coherent model of our understanding of taste in English, despite it being based on a restricted

corpus. It motivates the positive value attached to the domain of SWEET and the negative value attached to BITTER and SOUR by suggesting that the central mapping for such sensations link to the domain of PLEASURE/DISPLEASURE. This relation may be further reduced to the domain of GOOD/BAD, as suggested for other perceptions, notably the sense of Sight (Sandford 2011, 2012, Forceville 2013, Bagli 2016). This motivation is given from a biological perspective, disregarding any personal preference. Many alimentary cultures have evolved to include bitter substances in the diet, in the same manner as European culture. The fundamental idea, however, is to look at taste words and how they are used in context as a Source Domain to describe a target. Therefore the words that were considered in this study do not refer to a personal perception, but rather to the prototypical cognitive reference point that is used to conceptualise each Target Domain. Further research is needed to assess the role of taste in contemporary English and in more natural settings, especially by means of more extensive research. Furthermore, it would be necessary to carry out similar research in other unrelated languages, so to potentially identify the consideration of this sense in general contemporary cognitive linguistic debate.

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