Describing Sensory Experience: The Genre of Wine Reviews

Paradis, Carita; Eeg-Olofsson, Mats

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Describing sensory experience

The genre of wine reviews*

Carita Paradis & Mats Eeg-Olofsson
Lund University

Abstract
The purpose of the article is to shed light on how experiences of sensory perceptions in the domains of VISION, SMELL, TASTE and TOUCH are recast into text and discourse in the genre of wine reviews. Because of the alleged paucity of sensory vocabularies, in particular in the olfactory domain, it is of particular interest to investigate what resources language has to offer in order to describe those experiences. We show that the main resources are, on the one hand, words evoking properties that are applicable cross-modally and properties of objects that range over more than one domain, and on the other, vivid imagery that compares the characteristics of the wine with people, building, animals and the hustle and bustle of market places and other events. The second goal is to account for the construals of the meanings of the expressions used in the recontextualization into written discourse in the light of their apparent flexibility across the descriptions of the sensory experiences. In contrast to a large body of the literature on sensory meanings in language, we argue that the descriptors of properties such as *sharp, soft, lemon* and *cherry* used to describe a wine's qualities across the sensory domains are not polysemous synesthetic metaphors, but monosemous synesthetic metonymizations, more precisely zone activations. With regard to the imagery used, the construals represented cover both similes, metaphorizations and metonymizations proper.

1. Introduction

With the exception of visual experiences, most people find it very hard to provide adequate and intelligible descriptions of sensory experience. There are various different reasons for that. One important reason is the very recontextualization and transformation of the experience of sensory perceptions into descriptions of knowledge representations through language. Another reason is the paucity of sensory vocabularies in the languages of the world (Sweetser 1990; Vanhove et al. 2010; Burenhult & Majid 2011).

This article has two goals: (i) to give an account of what language has to offer in terms of describing sensory perceptions, and (ii) to explain the nature of such descriptions within the framework of Cognitive Linguistics, more specifically within *Lexical meanings as ontologies and construals* (Paradis 2005). The data used in this investigation are from our corpus of wine reviews from the American wine magazine *Wine Advocate*, run by world

* We are grateful to the editors for comments on an earlier draft.

famous wine critic Robert Parker.[1] There are several reasons for choosing the genre of wine reviewing as our source of information about sensory perceptions and their description. Firstly, almost all of the reviews in the corpus provide descriptions of four sensory experiences, namely VISION, SMELL, TASTE and TOUCH, individually, and, in addition, they provide holistic remarks on the percipience of the experience of the wine on the basis of all four. Secondly, since we are in the possession of a corpus of wine reviews, we are able to provide an account of sensory descriptions using computational techniques across a large number of texts instead of relying on more *ad hoc* data collection methods whereby we as analysts collect examples as and when we encounter them. The third motivation is the enormous impact that the reviews by Robert Parker have engendered in the wine world, among connoisseurs as well as among producers and retailers. His rhetorical and explanatory talents are exceptional and in the words of Hommerberg (2011: 9) his reviews can be said to have achieved "the desired outcome of an intentional persuasive activity".

A wine review is a type of text in which the wine critic both describes and evaluates wines. Typically, in the middle of the review, there is an iconic description of the tasting procedure from the taster's inspection of the wine's visual appearance through smelling, tasting and feeling its texture.

(1) This great St.-Estephe estate has turned out a succession of brilliant wines. The 2005, a blend of 60% Cabernet Sauvignon and 40% Merlot, has put on weight over the last year. An opaque ruby/purple hue is accompanied by a sweet nose of earth, smoke, cassis, and cherries as well as a textured, full-bodied mouthfeel. While the tannin is high, there is beautifully sweet fruit underlying the wine's structure. It will require 8-10 years of cellaring after release, and should drink well for three decades. (*Wine Advocate* 170, April 2007)

The perceptual description in (1) starts with a general statement about the maturation status of the wine in the form of a human body metaphor *has put on weight.* The visual appearance of the wine is described in terms of its clarity (*opaque*) and color (*ruby/purple*). While taste and touch are rendered through various gustatory and tactile properties (*high* (*tannin*), *sweet* (*fruit*), *textured, full-bodied*), the olfactory perceptions are primarily described as concrete objects (*earth, smoke, cassis and cherries*), but also in terms of what is often referred to as a gustatory property (*sweet*).

In this article, we explore the perceptual descriptions of wines using computational methods across many reviews with focus on the different types of descriptors and the way their meanings are construed in the reviews, through metonymization, metaphorization and similes. We offer a Cognitive Linguistic account for the use of what we refer to as synesthetic metonymies (e.g. *earth, smoke, cassis, cherries*), to descriptions traditionally referred to as synesthetic metaphors (e.g. *sweet nose*) and similes (e.g. *smells like an old hippy haven*) (Paradis 2004/2011, 2005, 2010). We also expound on the lack of words for SMELL and the dependence on descriptors from other modalities, e.g. VISION (*earth, smoke, cassis, cherries*) and TASTE (*sweet nose*) and argue that the absence of words for SMELL and the ontological cross-over of sensory modalities are to be considered symptoms of real synesthesia in the wine tasting event (Morrot *et al.* 2001), but, more importantly from our point of view, monosemy at the conceptual level and syncretism in language. We argue for a monosemy approach to descriptors across the various sensory experiences.

[1] We are very grateful to Mr Robert Parker for providing the data in machine-readable form which facilitated our work immensely (http://www.erobertparker.com/members/home.asp).

Assuming that the success of the wine critic hinges on how pertinent, expressive, convincing and trustworthy the descriptions are, it may be said that we view the perceptual descriptors in the light of how they might have contributed to the enormous impact of Robert Parker's reviews in the wine world. The questions under investigation are as follows.

- How are the different sensory perceptions described through language?
- How are the meanings of the expression representing the sensory expressions construed?
- How are the transitions from one sensory modality to another expressed?

The article starts with a description of the tasting practice that precedes the critic's descriptions and evaluations of the wine in writing. Section 3 describes the corpus and the methods for retrieval of data. Section 4 describes the theoretical framework. In Section 5 we give an account of the descriptors denoting properties and objects, and we discuss construals of metonymization, metaphors and similes. Finally, we sum up our observations and analyses in Section 6.

2. The tasting event and its recontextualization

The *sine qua non* of all wine reviewing is the preceding experience of the wine by the critic. This indispensible part activates his or her sensorium. The tasting practice starts with the visual inspection of the wine through its smell, taste and touch and aftertaste or vaporization, resulting in the direct feeling of pleasure or displeasure. Gluck (2003: 109) describes the tasting practice as follows.

> You pour out the wine. You regard its colour. You sniff around it. You agitate the glass to release the esters of the perfume and so better to appreciate the aromas, the nuances of the bouquet. You inhale those odoriferous pleasantries, or unpleasantries, through the chimney of the taste, the nostrils (the only access to the brain open to the air) and then you taste. You swill the liquid around the mouth and breathe in air so that this liquid is aerated and experienced by up to ten thousand taste buds. The taste buds are arranged in sectors of differently oriented cohesion: one designed to recognize salinity, another alkalinity, another sweetness and so on. They connect with the brain which in turn provides the sensory data, memory based, to form the critic's view of what s/he is drinking. Some of the wine is permitted to contact the back of the throat, but only a small amount is permitted to proceed down the gullet, so that the finish of the wine can be studied. Then the wine is ejected and several seconds are left to elapse whilst all these sensations are studied and written up as the impression the wine has left is mulled over.

While activations of sensorial experiences are considered to be of crucial importance for symbolization generally (Oakley 2009:125), they play an absolutely crucial role in descriptions of wine in tasting notes (Caballero 2007, 2009, Suárez 2007, Lehrer 2009, Paradis 2010). After the wine critic has completed the tasting procedure, it is his or her task to transform the sensory perceptions into language, i.e. to recontextualize the actual sensory perceptions into language, and to write up a review that both describes and evaluates the experience. The ability to transform the experience of the wine into language is the challenge that the professional wine critic is confronted with. This ability is what distinguishes professionals from wine lovers more generally.

As shown by the wine review (1) in the Introduction the description of the wine follows the tasting event as such closely. The first component is the visual description of the clarity and the color of the wine (*opaque ruby/purple*), followed by its olfactory characteristics (*sweet nose of earth, smoke, cassis, and cherries*) and then its touch and taste described as intertwined (*textured, full-bodied mouthfeel* […] *tannin is high, there is beautifully sweet fruit underlying the wine's structure*). While this particular review has no comment on the vaporization of the wine, it holds two more holistic comments, namely *has put on weight over the last year*, indicating expedient maturation. The stage of maturation is further specified in the recommendation of the prime drinking time for the wine (*It will require 8-10 years of cellaring after release, and should drink well for three decades*).[2] In most of the reviews all the four sensory perceptions are described one at a time in a terminological and analytical way (Herdenstam 2004: 65–80). Also, there are general synthetic or holistic judgments, either before or after or both.

3. The corpus and the methods

As already mentioned, the source of data used in this investigation is the American wine magazine, the *Wine Advocate*. The corpus contains 84,864 wine reviews published 1989 – 2006. The total number of words used is 8,332,666 and the number of different words is 46,000 (for more information about the corpus as such and an interactive information visualization (InfoViz) tool to be used to retrieve different kinds of information about the wines reviewed, both linguistic information and metadata, see Kerren, Kyusakova & Paradis forthcoming). The original corpus is stored as an Access database, where each record, in addition to the review text as a whole, contains information about origin, vintage, color, dryness, grape type, rating, and price, among other things. The searches reported on here were performed in an auxiliary corpus, containing only the wine review texts. Each text was split up into words and sentences and tagged for word class using the Penn Treebank tagset.

To start with, we carried out a detailed manual analysis of a set of randomly selected reviews from the database (some 200 review texts). On the basis of those data we established that the reviewers transform their experiences to language through (i) words evoking properties and objects, and through (ii) construals evoking imagery and dynamic events. The patterns that have been searched for in the corpus can be described as sequences of word patterns. Each word pattern is either an elementary word pattern or a disjunction of such patterns. An elementary word pattern is either a graphic word form or a word class designation. For example, the three-word pattern *As/as*+Adjective+*as* consists of the disjunction of the graphic words *As* and *as*, followed by a word class pattern describing adjectives (in the present tagset, tags beginning with JJ), and another instance of the word *as*.

4. The theoretical approach

Our model *Lexical meaning as ontologies and construals* (LOC) assumes that the way we perceive the world is the way we conceive of it (e.g. Langacker 1987, Gibbs 1994, Talmy 2000, Barsalou 2008, Lacey, Stilla & Sathian 2012). It assumes that concepts are embodied and grounded in perception. Recent neurobiological research indicate that conceptual representations consist of multiple levels of abstraction from sensory, motor and affective input, and activation of these modalities is influenced by factors such as contextual demands, frequency and familiarity (Binder & Desai 2011). Concepts are mental entities that are

[2] For more details on the rhetorical structure of wine reviews see Caballero 2007, Paradis 2009, 2010 and Hommerberg 2011.

activated when one encounters speech or written texts. LOC does *not* assume that meanings are inherent in words as such; rather they are evoked by words. Meanings of words are always context-dependent, negotiated and get their final readings in the specific communicative situations and discourses where they are used (Paradis 2005, 2010, 2011). Knowledge of the meaning of a word involves the coupling of a form and a concept. For instance, the meaning potential of WINE itself is a complex web of related conceptual stuctures in different domains of knowledge, not only VISION, SMELL, TASTE and TOUCH, but its domain matrix comprises knowledge structures such as VINEYARD, FOOD, GRAPE, CELLARING, AGRICULTURE, WINE SHOP, GLASS, SPAIN, OENOLOGY, ALCOHOL, TERROIR, VITICULTURE, PRICE, CONSUMER, PRODUCER, NUTRITION and so on and so forth. The relative salience of the domains depends on the context of use. For instance, in the case of wine reviews the relative salience of the meaning structures differ in the various parts of the texts. While vineyards and grapes are the focus of attention in the part concerned with the production of the wine, color, smell, taste and touch are important in the description of the wine and cellaring and maturation in the recommendation part.

The task of the model of lexical meaning is to relate lexical resources of a given language to their meanings. It comprises (i) the ontological structures involved, which in the context of this investigation of wine reviews concern VISION, SMELL, TASTE and TOUCH, and (ii) the construal mechanisms responsible for the matching and the profiling of the linguistic expressions on their occurrence of use in discourse. LOC consists of a set up of contentful and configurational structures at pre-meaning level and a system of construals which operates on the meaning structures in the construals of the discursive meanings. Consider Table 1:

Table 1. Ontologies and cognitive processes in meaning construction, adapted from Paradis (2005)

Ontologies (conceptual structures)		**Cognitive processes**
Contentful structures	**Configurational structures**	**Construals**
Pre-meanings relating to concrete spatial matters, to temporal events, processes and states, e.g. COLOR, SMELL, TASTE, TOUCH, WINE, GRAPE	*Pre-meanings of an image-schematic type which combine with the contentful structures,* e.g. SCALE, PART-WHOLE	*Operations acting on the pre-meanings at the time of use, e.g. Gestalt formation, salience, comparison*

Paradis (2004/2011, 2005) demonstrates that nominal meanings, and in particular concrete nominal meanings such as 'wine', are construed with the focus of attention either on CONSTITUTION or on FUNCTION, which are two main ways of profiling nominal meanings of entities.

WINE

(i) CONSTITUTION: 'concrete object', 'liquid', 'alcoholic', 'red', 'grape' etc.
(ii) FUNCTION: 'produced by wineries' 'consumed for pleasure' etc.

CONSTITUTION, in association with 'wine', involves static aspects such as an entity as an object. For instance, WINE is OBJECT, WINE is LIQUID, WINE has COLOR and so on. In an expression such as *red wine,* the constitutional role profiled is COLOR. FUNCTION on the other hand, involves aspects related to the production of wine, i.e. how an entity such as wine came into being or how wine is used. FUNCTION may profile either a telic or an agentive perspective. The telic perspective involves the parts of the meaning structure of *wine* that are related to its use. For instance, wine is a consumable, and wine is an aesthetic product, e.g. *a wine to be*

enjoyed well chilled, where the use of wine as a beverage is made salient. The agentive profiling evokes aspects of meaning related to how it came about, e.g. *a garagiste wine.* The activation of either CONSTITUTION or FUNCTION is essentially a PART-WHOLE construal, which does not involve different senses but different zones *within* a sense.

The final profiling of the meaning of a lexical item in human communication in discourse is carried out by the system of construals that operate on the conceptual structure at the time of use, in which case the profiling of a specific part of the whole meaning potential of, say, *wine* is brought about through a construal of focus and salience as in zone activations and metonymizations and/or through a construal of comparison in the different types of similes and metaphors. We will return to these construals in the subsequent sections.

5. Descriptors and imagery

This section presents the main recontextualization strategies for the description of the sensory perceptions in our corpus. They are descriptions through expressions of properties of the sensory modalities and properties of objects, Section 5.1, and imagery, including metaphors as well as similes, Section 5.2.

5.1. Properties of sensory modalities and objects

This section starts with a presentation of examples of commonly used descriptors in the corpus, see Table 2. The sensory modalities are broken down into vision, smell, and taste/touch. The reason for the conflation of the taste and touch is that they are often very difficult to tease apart in the reviews.

Table 2. The sensory modalities and examples of descriptors expressing properties

Sensory modality	Examples of descriptors
VISION	*purple, ruby, straw, gold, light, dark*
SMELL	*fruity, floral, spicy, smoky, weak*
TASTE & TOUCH	*flabby, soft, heavy, thin, long, crisp*

As indicated by the examples in Table 2, some of the descriptors for visual experiences are expressed through lexical items that are common core expressions in the domain of sight in language more generally (*light, dark*), while some others are more specific and also more clearly associated with objects, though used as modifiers of nouns in our data (*ruby, straw, gold*). While smell may also be described through general dimensional property words such as *weak*, it is mainly described through derivations of terms referring to objects, such as *fruity, floral, spicy*, and *smoky.* Finally, the modalities of taste and touch are mainly expressed by both general and more specific property words. One of our main concerns in this article is the fact that many of the descriptors are expressive of properties that span more than one sensory experience, such as *soft* and *sharp* in (2)–(9) from the corpus.

(2) …cinnamon, and white raisins can be found in the zesty **sharp aromas** of the 2001 Riesling Eiswein…

(3) …a medium-bodied wine with gorgeously proportioned, **razor sharp flavors**…

(4) …the high acidity levels give the wine a compressed **sharp feel on the palate…**

(5) …a pervasive weedy, earthy character in its flavors and a **sharp finish.**

(6) Its medium ruby color is accompanied by a **soft nose** of expresso, chocolate, and jammy berries.

(7) …oaky bouquet, medium-bodied, **soft flavors**,…

(8) It displays spiced pear flavors, a **soft mouth-feel**, and a lengthy, candied white fruit-filled finish.

(9) …a fine saturated color, big, perfumed nose, and ripe, **soft finish**.

Corpus excerpts (2)–(5) are examples of *sharp* used to describe smell, taste, touch and finish (or aftertaste), and (6)–(9) show the use of *soft* as a qualifier within the same sensory domains. In the event of the experiences of consumables, be they beverages or food, we activate all senses at the same time, which is likely to have an impact on the transitional nature of the application of words to different sensory domains.

In order to see what the most common types of descriptors are, we made searches using words from the four sensory perceptions. Table 3 shows the types (lemmas) of premodifying descriptors of *color, aroma/s, nose, scent/smell, flavor/s, taste, body, palate* and *texture*. The figures in this table are based on a sample of 40% (33,947) of the wine reviews (the ones from 1989–1993 and from 2004–2006). All premodifying descriptors were extracted, not only the ones immediately before the above descriptors. Again, taste and touch are conflated since *palate* may refer to both.

Table 3. List of number of different premodifier descriptors of nominal descriptors associated with different sensory modalities.

Descriptors of sensory modalities	**N**	**N of types across domains**
color	132	132 (VISION)
aroma/s	318	
nose	405	
scent/smell	21	744 (SMELL)
flavor/s	334	
taste	22	
palate	93	
body	34	
texture	120	603 (TASTE & TOUCH)

What is clear from Table 3 is that smell is the domain that attracts most descriptor types (744) in contrast to color the fewest (132). This discrepancy may to some extent be due to the fact the number of seed words for smell, taste and touch in comparison to color. Table 4 takes a closer look at the most common premodifying descriptors for three seed words, *color, aroma/s* and *palate* within the different domains of VISION, SMELL and TASTE & TOUCH.

Table 4. List of examples of different descriptors of *color*, *aroma/s* and *palate*

color	***aroma/s***	***palate***
black, blue, amber, crimson, garnet, deep-ruby, green, purple, plum, red, white	*apricot, earthy, floral, game-like, oaky, Oriental, musty, spice-box, perfumed, almond, apple, blackberry, rose, nut, peach*	*austere, big, chewy, dense, dry, deep, fat, pure, rich, ripe, supple, sweet, long*
…	...	...
dark, deep, soft, solid, shallow, bright, dense, brilliant, full, strong, weak, young, thick	*animal-like, caramel-infused, chocolate-drenched, cassis-scented*	*textured, creamy-textured, silken-textured, concentrated, multi-dimensional, sustained, oily*
...	…	...
	deep, dusty, focused, full, huge, expansive, thin, tight	
	...	

As Table 4 shows, the descriptors of *color* are basically of two types: color terms, such as *black* and *crimson*, which are not used about the other modalities, and terms, such as *dark* and *deep* which apply cross-modally. The modifiers of *aroma/s* are objects of different kind, such as *apricot* and *cassis-scented*, and cross-modal descriptors such as *deep* and *thin*. Interestingly, also color descriptors that directly modify aroma as in (10)

(10) The Abruzzo might seem rather far south for Chardonnay, but the mountains of the interior cool down temperatures during the evening and night, and the 2001 Chardonnay Marina Cvetic, in addition to its ripe lemon and **white aromas** and subtle oak spices, manages to combine a tonic acidity to the volume and viscosity of the flavors.

The descriptors for *palate* apply to both taste and texture. They are both cross-modal such as *dry* and *deep* and modality specific such as *textured* and *oily*. It is of particular interest to note that all the three seed words are modified by descriptors that denote properties; only *aroma* and *aromas* are modified by object descriptors.

We then also carried out a search in the reverse direction in order to identify the use of property words (adjectives) as seed words, instead of nouns, as shown in Table 5. We selected a number of the most common property modifiers in the entire corpus and identified the nouns that followed in order to find out whether they apply to one or more than one sensory modality.

Table 5 shows a selection of common adjective seed words and combining nominals

Seed word	**N**	**Modified nouns**
rich	7614	*aromas, finish, flavors, palate, nose, texture*
black	7324	*fruits, cherries, chocolate, raspberry/s, currants*
long	4688	*flavors, taste, palate, mouthfeel*
deep	4122	*colors, nose, flavors, mouthfeel*
white	3960	*flowers, peaches, pepper, fruit, currants*
dry	2261	*flavors, finish, tannins*

Table 5 shows a selection of modifying seed words denoting properties, their total number of occurrences in the corpus and examples of nouns modified by the seed words. The seed words are ordered by frequency. *Rich, long, deep* and *dry* tend to modify words for the different sensory perceptions, such as *aromas, finish, flavors, palate, nose,* and *texture*. *Deep* is used to modify both color, smell, taste and touch, *rich* is used as specifications for the latter three, *long* and *dry* for taste and touch. *Black* and *white* differ from those in that the former are used to specify the olfactory descriptors, which are all objects. It deserves to be stressed again that these descriptors are associated with COLOR in the sense that dark things are used to describe red wines, while light things are used about white wines, see Table 7. The division of labor between color terms and other property items is worth noting.

In his *Remarks on Colour*, Wittgenstein (1977: § 102) points out that there is a natural explanation for the use of objects when we talk about color.

> "When we're asked "What do 'red', 'blue', 'black', 'white', mean?" we can, of course, immediately point to things which have these colours, – but that's all we can do: our ability to explain their meaning goes no further."

Wittgenstein's observation about color descriptions is not only true in the domain of color, but much more so in the domain of smell. Moving from properties to object descriptors, we notice that many of the objects, in particular those associated with smell, are word-meaning pairings from the vegetal, chemical or geological spheres, and these concrete objects are used to evoke contingent properties that the objects produce. The objects are used to name the source of the odors. These descriptions are construed through metonymization, making one aspect of the object salient. They are WHOLE FOR PART configurations. Examples of descriptors and their ontological domains are given in Table 6.

Table 6. Ontological domains of object descriptors and examples

Ontological domains	**Examples of descriptors**
FRUIT	*apple, lemon*
HERBS and SPICES	*vanilla, nutmeg*
FLOWERS and PLANTS	*violet, cedar*
SWEETS	*chocolate, jam*
BEVERAGES	*coffee, tea*
MINERALS	*chalk, earth*
HUMAN BEINGS	*body, backbone, nose*

Although most of the object descriptors in Table 6 are mainly employed to describe olfactory characteristics, it is important to note that, as we just pointed out for properties, these objects also provide visual as well as gustatory and tactile information. It is worth noting that in daily life, the latter modalities are the modalities that most people most readily associate these objects in the first place, both in the genre of wine and in everyday language use. The use of descriptors from such domains as fruit, minerals and spices are necessary due to the relative lack of vocabulary resources, in particular in the domain of smell (Rouby et al. 2002; Paradis 2010; Caballero & Paradis forthcoming). Such construals of meaning are taken to be motivated by the fact that concrete word meanings, in contrast to abstract ones, elicit qualitatively different processing in the form of mental images in that they evoke rich sensory experiences which are intimately tied up with our experiences in life (Huang et al. 2010).

In wine reviewing, the experiences of smell, taste and touch receive more attention in terms of the sheer number of descriptors than visual perceptions in most wine reviews. There are only very short statements about the color of the wine, such as *a dense ruby/purple color*, or an *opaque and pitch black colored*. Descriptions of smell are generally longer and more elaborate involving rich and complex meanings. The description in (11) is a typical example where the color of the wine is described as *beautiful dark ruby/purple color* and the smell of the wine as *nose of blueberry liqueur, spring flowers, melted licorice, raspberries, and crushed rocks*.

(11) While no one will confuse the 2005 with this estate's prodigious 1990, it is an outstanding effort from one of St.-Emilion's finest terroirs. In terms of potential, the vineyard is exceeded only by Ausone, Pavie and Belair for micro-climate and exposition. A *beautiful dark ruby/purple color* is accompanied by an ethereal *nose of blueberry liqueur, spring flowers, melted licorice, raspberries, and crushed rocks*. Medium-bodied with good acidity, sweet but high tannin, a broad mouthfeel, and admirable elegance as well as freshness, this beauty should age easily for 25+ years. Anticipated maturity: 2015-2035. (*Wine Advocate*, April 2008)

This state of things does not, however, mean that visual stimuli are less important than the stimuli from the other senses when talking about wine. On the contrary it seems as if the visual experience is very important for the evaluation of the wine. Morrot et al (2001) show that visual stimuli are capable of hi-jacking all other sensual perceptions to the degree that even professionals in the field may be taken in, starting to describe white wines, dyed red, using descriptors that are normally used for white wines only, see Table 7.

Table 7. Common object descriptors for reds and whites: dark objects and light objects respectively

Red wines	**White wines**
cassis, spice, cherry, currant, licorice, blackberry raspberries, mineral, black-cherry, chocolate, plum, pepper, blueberry, wood, oak, tar …	*apple, pear, peach, flower, honey, oil, sugar, butter, orange, herb, spice, honeysuckle, pineapple, melon, vanilla, apricot, grapefruit, almond, hazelnut, salt …*

We searched our corpus for olfactory descriptors of red wines and wines. The results of the searches are shown in Table 7. The smell of red wines is above all described through "darkish" objects, such as *licorice, blackberry, tar* and *chocolate,* while white wines are mostly rendered through light-colored objects, such as *honey, peach, melon* and *grapefruit*. Some of the descriptors for reds and whites are the same, e.g. *spice*, but as one descriptor among several others in descriptions, the actual spices referred to may differ. Consider the contexts for *spices* for a red and a white wine in (12) and (13), respectively.

(12) It possesses enthralling aromas of black raspberries, dark cherries, beef blood, and Asian **spices** that give way to an oily-textured, magnificently concentrated, highly-refined, and very focused personality.

(13) This decadent offering is studded with lychees, yellow plums, roses, assorted white flowers, and **spices** whose effects linger in its extensive finish.

In (12) *spices* in the description of the red wine is surrounded by dark objects, which is not the case in the description of the white wine (13) where *spices* is surrounded by lychees, yellow plums, roses, assorted white flowers, i.e. light-colored objects. The embedding contexts give rise to different associations of the type of spices.

The impact of color for the other modalities is indeed very strong. The absence of words for smell and the ontological cross-over of sensory modalities are taken to be symptoms of real synesthesia in the wine tasting event by Morrot et al. (2001). Yet, in spite of the sensory power of vision as a point of departure for the experience, expressions of vision do not dominate the descriptions in the reviews and the sensory importance of appreciation of the wine drinking event as such.

5.2 Imagery

In spite of the large number of descriptors of states described in Section 5.1, wine reviews also include vivid imagery descriptions of wines, a large part of which involve personifications of the wine itself (Caballero 2007, 2009, Suárez 2007). In the recontextualization of the tasting event into a textual description, the wines tend to take on animate and agentive properties that bring life and activity into the descriptions. In order to identify imagery in the descriptions, a number of different searches were performed. The first step was to identify potential activities and for that purpose we extracted a list of all verbs in the corpus and we carried out searches using trigger words such as *true, veritable, this* in search for metaphors and *like, as if, as though, impression,* and *remind* for similes, which are expected to tune in on imagery.

On the basis of those verbs, we then selected verbs expressing some sort of action. It should be noted, however, that the vast majority of the verbs in the corpus are not action verbs but verbs expressing states, such as different forms of 'being', 'possessing', followed by the property and object descriptors. For instance *is* is used 121,295 times and *has* 24,024 times. Table 8 shows the most common verbs expressing dynamic situations from the entire corpus.

Table 8. The most commonly used dynamic verbs in the corpus

Dynamic verbs	Total number in the corpus
boasts	2,746
put	865
bursting	438
explodes	399
buttressed	226
allow	211
demonstrates	211

The parts of the descriptions where verbs such as the above are used often profile the wine as a conscious agent. Presenting the wine itself as the agent has the effect of backgrounding the voice, and the opinion, of the critic and let the wine plead its own case, as in (14)–(19) below. The verbs are in bold for the sake of convenience of the reader.

(14) it **boast[s]** an opaque purple color

(15) it **begs** for attention

(16) it **caresses** the palate

(17) yet the wine **refuses** to fade

(18) it **screams** out for a grilled steak

(19) its rich, vanilla-laced, spicy scents **explode** from the glass

In spite of the fact that the neuter pronoun *it* is used about the wines in all the examples, they are profiled as willful human beings capable of making conscious decision and acting intentionally. In (19) the profiled zone is not the wine as such but only an aspect of the wine, namely its scents.

(20) This ambitious wine **reveals** good smoky cassis fruit in its nose, a lush, medium to full-bodied texture, a fleshy mid-section, and a round, generous finish.

The wine in (20) is capable of revealing its secrets in what comes across as a conscious act performed by the wine. Also, it is described by the reviewer as an ambitious wine. This personification is evoked through a construal of metonymization of the agentive function of the wine, namely the producer side of the domain matrix of WINE, which does not make it a metonym proper, but zone activation within the meaning structure of WINE. The way of profiling the wine is engendered by *ambitious*, which is an evaluative description of the wine, or more precisely of the talents of wine makers. The personification is kept all through the description primarily through *full-bodied, fleshy*, *round* and *generous*. Another similar expression which is very frequently used about the wine in the reviews is *effort*, which like *ambitious wine* is a representation engendered through a construal of metonymization, evoked through the skills of the winemaker, as in (21). However in the case of *effort* we are confronted with metonymization proper, since, according to the definition of metonyms proper, *effort* has no conventionalized link to wine. Out of context, effort is not likely to evoke 'wine'. For a discussion of this see Paradis (2004/2011).

(21) This beautifully pure, finely etched, stylish **effort** requires 2-3 more years of bottle

The construal of a wine as an actor is not only found in the description of the wine proper but also in the production part and in the recommendation of its prime drinking time (22) and (23).

(22) This beauty should **drink** well for 10–12 years.

(23) Drink this **crowd-pleaser** during its first 8–9 years of life.

Although in different ways, the wine is depicted as an actor in both (22) and (23). In both of the examples the critic has zoomed out of the picture and the wine has taken on properties that make it capable of both drinking and pleasing. The focalized role of the subject in the middle construction in (22) highlights the FUNCTION facet (Paradis 2009) invoked by *drink*, which

presupposes an active agent and this is also the reason why the wine is interpreted as actor-like. It is a PART FOR WHOLE construal in which the telic aspect of the focus of attention on the FUNCTION way of viewing WINE is made salient, i.e. the enjoyable *use* of WINE as a consumable and hedonistic experience. *Beauty* is the lexical item used to profile this meaning structure, which adds to the personification of the wine. In (23) the wine is presented as an undergoer of the drink act, albeit with agentive powers of pleasing the crowds.

In addition to the searches performed on verbs, we also made searches using trigger words, such as *true, veritable*, and *this*, as in (24)–(26), and this way managed to capture many of the images of wines within different domains.

(24) This is a **true thoroughbred** in terms of both quality and aging potential.

(25) a **veritable** avalanche of rocks and minerals, along with a salty, citric cling that you'll need a tooth brush to remove

(26) One might call **this a whore of a wine**, but its full-bodied decadence and ostentatious, flamboyant character make for a delicious glassful of thick, juicy, ripe Chardonnay fruit.

Through *this* as a seed word, we retrieved metaphors in various different domains such as: *this baby, this beast, this behemoth, this bruiser, this "diamond in the rough", this ballerina, this powerhouse, this bucking bronco, this mammoth, this Zinfandel on steroids, this liquid satin, this liquid mineral, this locomotive, this showboat, this strand of pearls* and so on and so forth.

We followed the same procedure of using search words in order to identify similes in the data. We used: *like, as if, as though, impression,* and *remind*. The vast majority of the 2453 constructions with *like* are pure comparisons with other wines, vintages and wine districts, such as in (27)–(28).

(27) If Chateau Latour were produced in Rioja, it might taste **like** this.

(28) It tasted **like** a richer sibling of the 1985.

While some readers, no doubt, may find the comparisons in (27) and (28) very enlightening and helpful, they are most likely informationally vacuous to many not-so-experienced readers because they certainly demand a great deal of knowledge and experience on behalf of the readers. Our searches also returned hits for similes across domains. Similes were found in all sensory modalities: VISION (only few examples in the corpus), SMELL, TASTE and TOUCH. Consider (29)–(36).

(29) These wines look **lik**e motor oil, but they possess superb underlying acidity, freshness and purity.

(30) It smells **like** a new horse saddle.

(31) The 1985 Zinfandel smells **like** a stale ashtray.

(32) Smelling **like** a concoction whipped up by a deranged monk who spent too much time in solitary confinement,

(33) The 1996 Chateauneuf du Pape smells **like** an old hippy haven with its incense, smoky, roasted herbs, and fleshy, overripe black cherry fruit.

(34) This wine tasted **like** an iron fist in a velvet glove.

(35) The tannins are sweet and soft, and the **impression** the wine leaves in the mouth is **like** having a skyscraper of exotic, plumy fruit cascading over the palate.

(36) A wine of superb purity and perfect, seamless harmony, with incredibly well-concealed tannin, alcohol, acidity, and wood, this blockbuster reminds me of Mohammed Ali - It floats **like** a butterfly and stings **like** a bee.

In (29) the sight of the wine is that it looks like motor oil. The subsequent examples (30)–(32) are similes about the smell of the wines. Examples (33) appears in many different versions in the corpus, where the image of the hippy haven appears as *Moroccan market, outdoor marketplace, Asian fruit market, Provencal market place, Mediterranean fruit and spice market*. Furthermore, (34) is about taste, and in (35) the finish is likened to a skyscraper. Finally (36) describes the touch of the wine.

(37) I felt **as though** I had a piece of tree bark in my mouth when I tasted it.

(38) There is almost an iron taste **as if** it were a vitamin supplement.

Example (37) describes the texture of the wine and (38) the taste. Like most of the similes with *as if* and *as tough* in the data communicate a negative experience.

6 The landscape of sensory perceptions in the reviews

As shown in the previous sections, most of the descriptors span over more than one of the sensory modalities, and their use in those different sensory domains does not give rise to ambiguities or infelicities in language, which, had that been the case, would be suggestive of sense distinctions. Many of the descriptors are actually explicitly used for descriptions of more than one modality, e.g. *soft color, soft smell, soft taste* and *soft textures* and so are the properties of the objects, e.g. *lemon, vanilla, blackberry*, which may primarily be descriptors of smell, but in that capacity they also range over the other modalities. Most of the descriptors which, for instance, are used in the part of the text describing smell, are clearly crucial for our understanding of color, taste and touch. In spite of the differences of application due to the sensory domain evoked on a given occasion, it is our contention that monosemy obtains, which reveals something about the nature of the conceptual representation of sensory perception and their descriptions in comparison to say descriptors of objects in the world, where we see clear ambiguities in sentences such as *Both the wine and the towel are dry*, where the profiled domains are WINE and TOWEL and not the individual sensory domains.

It has been argued in the literature, that descriptions of perceptions are characterized by synesthesia from lower to higher modalities. In his pioneering work on synesthesia in poetry, Ullman (1945) proposes a hierarchy and a directional principle of sensory perceptions in metaphors from lower to higher sense modalities, i.e. from TOUCH > TASTE > SMELL to SOUND and VISION. His proposal has been recognized and developed in different areas of research by a number of scholars including historical linguists, e.g. Williams (1976), Lehrer (1978), Viberg (1984), Sweetser (1990), Shen (1997), Popova (2003, 2005), Plümacher and

Holz (2007), Shen & Gadir (2009). On the basis of Ullman's proposed hierarchy and directional principle, Shen (1997) and Shen & Gadir (2009) formulate a *Conceptual Preference Principle* according to which the preferred direction of mappings in what they refer to as synesthetic metaphorization is from the lower modalities of touch and taste, which require direct contact with the perceiver, to the higher modalities of vision and sound, which do not require direct contact with the perceiver (see Traugott and Dasher 2005: 72 Figure 2.4).[3] The extended or metaphorical senses are different from the source sense.[4] Shen (1997) and Shen & Gadir (2009) argue that *soft light* (TOUCH to VISION) and *caressing music* (TOUCH to SOUND), which both involve mappings from the lower and more accessible source domain of touch to the target domains of vision and sound, respectively are both felicitous, while the reverse directions are not, as in *light softness* (VISION to TOUCH) and *musical caressing* (SOUND to TOUCH).[5] It is important to note that proposals of the above kind assume (mostly tacitly) that there is a basic, or literal meaning and an extended meaning. In the case of *soft light* (TOUCH to VISION) and *caressing music* (SOUND to TOUCH), the idea is that the literal meanings of *soft* and *caressing* are touch. In the context of 'light' and 'music' *soft* and *caressing* take on new senses in the domains of vision and sound through synesthetic metaphorization. In spite of its importance for the proposal of unidirectionality of semantic change through meaning extensions, none of the scholars make attempts at demonstrating that the property words in fact are polysemous. We concur with Rakova (2003: 111) in her remark that it is not clear what the value of these observations are since it is unlikely that the initial vocabulary consisted of words for physical objects and events only.

In the wine reviews under investigation in this article, there does not seem to be a clear conceptual preference pattern in the use of the descriptors. Property words do not extend from a source but instead receive their interpretations on the same conditions in the various different sensory domains. This applies both to properties of the sensory perceptions and properties of objects used to describe the sensory perceptions. For instance, *cherry* evokes the concept of CHERRY. However, in its discursive context in wine reviews, it is used to evoke the smell of a wine. Through the use of a dark object we know that the wine described is a red wine and the taste of such a wine is likely to be a rich and opulent. *Sweet* may be used about both smell and taste, as in (38) and (39).

(38) sweet fruit underlying the wine's structure (TASTE)

(39) a sweet nose of earth, smoke cassis, and cherries (SMELL)

This means that our wine descriptions do not confirm a hierarchy model as the one proposed by the Conceptual Preference Principle, since the source domain of the descriptors seem to go in both directions and cover the whole range from higher visual modalities to lower modalities of taste.

Instead of a polysemy approach, we propose a monosemy approach across the uses of adjectives (*sweet*) and the uses of the nominal descriptors (*earth, smoke, cassis, cherries*). In the same way as property words are used cross-modally, words denoting objects such as

[3] Also, some other spatial meanings such as also span across modalities and thus share these characteristics with the ones used for sensory perceptions in descriptions of them, which we also saw in our data.

[4] From a historical developmental point of view (Williams 1976), it has been argued that some uses appeared earlier that some other uses and in that respect the latter may be considered extended, but that does not mean that they are different senses. Diachronic shifts do not necessarily involve the development of new meaning. It may just be an extension to a new domain — a new use (Paradis 2011).

[5] It is important to note that there might be other reasons than purely semantic for combination to be infelicitous. For instance, there might be collocational restrictions such us *blind drunk* but not *blind dead.* Also, from the point of view of meaning, both of these examples would be perfectly normal in, say, poetry.

cherry are monosemous and used with the focus on the constitutional zone of what they look like (color) or their smell or taste. It is not the case that the objects take on a new meaning in the wine descriptions. They are just used with the focus on one or the other of the sensory perceptions through a process of synesthetic metonymization, a construal of salience, which makes use of WHOLE FOR PART configuration. In the light of our model of meaning, the entity evoked is 'cherry', the configuration is one of WHOLE FOR PART and the mechanism is focus of attention on a salient part of the meaning structure, more precisely zone activation within a sense (for extended discussion of metonymization, see Paradis 2004/2011, 2010, 2011).

As pointed out by Rakova (2003: 49), similarities due to perceptual equivalence, rather than conceptual analogies have been extensively studied. Those studies confirm that the perceptions of cross-modal similarities is universal, systematic and present in early childhood. What these results suggest then is that transitions across sensory domains in human language and understanding are monosemous and syncretic rather than metaphorical and polysemous. Rakova (2003: 142) claims that one may think of concepts suc h as BRIGHT, SHARP and COLD as primitive concepts spanning all domains of sensory experience. They may be thought of as neural configurations responsive to certain stimuli. The question of why some words came to be regarded as more accessible or more primitive in the literature on the extended meaning approach has not received a convincing explanation. One important reason for that may be that some experiences are more important than others in our daily lives in a given situation, and as has been pointed out by typologists and anthropologist, the differences across cultures may be greater than we think due to a paucity of research on these things in cultures other than Western cultures (Howes 2003; Majid & Levinson 2011)

We call into question the metaphorical approach to words denoting sensory perceptions offered by Shen (1997) and Shen & Gadir (2009) which states that conceptual mappings from lower and more accessible concepts onto higher and less accessible are more natural than the other way round. They define conceptual accessibility through the directness of contact between the type of sensory perception and the object of experience. This explanation is dubious in many ways. Firstly, the notions of lower and higher modalities are not defined or agreed upon in the literature. In what sense is touch more accessible than smell and taste and why is vision not the most accessible modality? In stark contrast to the Conceptual Preference Principle of Shen (1997) and Shen & Gadir (2009) is the *Reliability Hierarchy of Evidentiality*, which concerns speakers' assessment of the reliability of the evidence of sensory perception in communication. The *Reliability Hierarchy of Evidentiality* states that in contrast to the relatively objective and stable nature of visual elements in the world, the perceptions of smell, taste and touch are highly subjective and variable across human beings (Chafe & Nichols 1986, Viberg 1984, Dubois 2007). This state of affairs affects the extent to which language users can agree on the meanings of such expressions. The reliability of the linguistic representations of the perceptual evidence evoked by words and expressions of sensory perceptions form a hierarchy from more intersubjectively reliable evidence based on VISION to less intersubjectively reliable, inferred meanings in the perception modalities of SMELL, TASTE and TOUCH.

7. Conclusion

In spite of all the challenges, it is the job of professional wine reviewers to give a persuasive and understandable account of the experience of a wine, and to frame the descriptions so that they appeal to the reader's sensorium. It is the task of the wine reviewer to recontextualize the tasting event and present the event as a description in text. As stated at the beginning of the article, sensory perceptions are paradoxical in that they are very concrete bodily experiences and extremely abstract and transient at the same time. The corpus of wine reviews provides us

with large numbers of recurrent patterns of descriptions of the different sensory modalities, and it thereby provides a window into how human beings turn sensory perceptions into descriptions that can be understood by other human beings. We have shown that language is a flexible instrument when it comes to describing transient and subjective experiences of consumables. True, there is a paucity of words only designated for descriptions of, say, smell in the English language, which is the language under investigation in this article. Instead of making use of a specifically designated vocabulary, the language user makes use of conventional ways of construing language in order to be able to describe the nuances of the sensory experiences.

The article identifies two main types of descriptions of the sensory perceptions. The first type of descriptions is through words for properties in the different sensory modal domains as well as properties of objects. The second type is the use of imagery including both metaphorization and similes. The former type is stative, while the latter type tend to be more dynamic and lively. The study has shown that the individual descriptors for properties and objects are applicable across the sensory modalities and construed through synesthetic metonymizations. We have argued for a monosemy view of the meanings of those descriptors, which means that, while the type of construal is one of metonymization (a salience phenomenon), they are not metonyms proper but rather zone activations within senses. We thus argue against the standard approach stating that there is one more basic sense, or literal sense, and all the other constructions have to be treated as figurative.

There is no support for the notion of conceptual primacy of one of the meanings of the descriptors in terms of violations of conceptual domains as reflected in language. This does not mean that we fail to acknowledge the physiological differences between the various specific sensory modalities, but what we do acknowledge is that, at the conceptual level and at the level of the transformation of sensory perceptions into conceptual structure and subsequently into language, there is the flexibility of the uses of the descriptors. Conceptual structure in the domain of sensory perceptions seems to be supramodal representations, expressed through syncretic word forms, that do not pertain to a single modality of experience but to an overarching representation capable of capturing modal convergences and similarity structures that define categories, such as properties of objects and imagery (Binder & Desai 2011).

Our view of the descriptors is a monosemy view where synesthetically flexible notions map onto the same primitive concepts for the different sensory perceptions, or put differently, no conceptual primacy exists in the realm of sensory perceptions. Our contention is that it is not the case that SHARP smell is primarily a notion of touch. *Sharp* spans the experiences of sharp of the sensory perceptions of VISION, SMELL, TASTE and TOUCH. This said, we the conceptual preference hierarchy into question and thereby also the primacy of earlier uses of the words as an argument for primacy. We suggest that the lexical syncretism is grounded in how the conceptualization of our sensorium works. We cannot taste something without smelling something and we cannot taste something without feeling something and over and above everything is the sight of something.

In addition to the descriptors, the wine critic makes use of imagery of concrete objects in the worlds, such as people, animals, plants, buildings, etc. In particular, personification of the wines is striking in the descriptions. In the cases of imagery, including both metonymization proper (This beautifully pure, finely etched, stylish *effort* requires 2-3 more years of bottle), metaphors ([the wine] *caresses* the palate) and similes (The 1985 Zinfandel smells *like a stale ashtray*), we are dealing with mapping across domains, i.e. mappings from the sensory experiences of the wines to the wine itself in all its complexity. Metaphors and similes share the above characteristics, but they also differ in one important respect and that is

that the vast majority of the similes are not comparisons across domains but simply comparisons with other wines from different wine districts or from different vintages.

Professor Carita Paradis
Centre for Languages and Literature
Lund University
Box201
221 00 Lund
Sweden
carita.paradis@englund.lu.se

Dr Mats-Eeg Olofsson
Centre for Languages and Literature
Lund University
Box 201
221 00 Lund
Sweden
mats.eeg-olofsson@ling.lu.se

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