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The language of the senses

CONVENORS

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The overall objective of this thematic session is to present new research and discuss how different cultures and communities sense the world by paying attention to one of its more accessible manifestations: language. We bring together scholars who work on various aspects of how sensory perceptions are verbally manifested and use different methodologies, from experimental to discourse-based. The general questions addressed in the workshop are the following:

- How do we talk or write about sight, taste, smell, touch and sound (lexical and grammatical resources)?
- What are the concepts and figurative mechanisms that are most often used in describing these sensory experiences?
- How do cultural and disciplinary factors influence the way we describe sensory perceptions in text and discourse?

The contributions listed below cover the aforementioned questions by paying attention to a wide range of languages (English, Spanish, Italian, French, etc.), some using corpus tools (Winter, Caballero, Hartman & Paradis) and others approaching the topic using experimental methods (Branchini et al, Soriano), and most of them bringing the notion of genre into the study of how language is used to communicate sensory information. In order to discuss sensory language, some papers offer a general view and explore the verbal constructions used to express sensory events (Caballero) as well as the—frequent—mixture of sensation and emotion (Hartman & Paradis) or the—also frequent—metaphorical use of sensory language (Soriano), while others approach the topic from a more specific context, situating their discussion in such a multi-sensory context as wine discourse (Branchini et al, Suárez-Toste), or focus on such a paramount cross-sensory phenomenon as synaesthesia (Striek-Lievers, Winter).

CONTRIBUTORS

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Using opposites to describe the wine testing experience: the naïve versus the expert dimensions

It has been mentioned many times that opposites (antonyms) play an important role in natural languages (Cruse, 1986; Fellbaum, 1998; Jones, 2002; Murphy, 2003) and in perceptual organization (Bianchi & Savardi, 2008; 2012; Bianchi, Savardi, Kubovy, 2011; Kelso & Engstrøm, 2009). While some opposites are strongly conventionalized (e.g. good as opposed to bad), other opposites are more dependent on context (Paradis, Willners & Jones, 2009).

Our research focuses on the perceptual/sensorial characteristics of wine. Expert

sommeliers use a conventionalized set of scales to evaluate wine, and, with the exception of the color scale, these all have an oppositional structure, e.g. Veiled-Brilliant/Bright (Visual Limpidity); Lacking in aroma-Very intense aroma (Olfactory analysis of Intensity), Coarse-Excellent (Olfactory analysis of Quality), Sharp-Velvety (Olfactory-Taste analysis of Softness). We considered it would be useful to ascertain how different these *expert scales* are from the primal dimensions that non-experts have in mind as the *basic dimensions characterizing their experience of wine*, both for the purposes of research and for any potential applications.

An initial analysis was conducted to establish a list of 63 adjectives (in Italian). The corpus included the sensorial terms listed in the production specifications of 31 types of Italian wine with a protected designation of origin, the 309 corresponding descriptions in seven well-known Italian wine guidebooks and the terms used in the official tasting scales of the Italian Sommelier Association. Two studies will be carried out. In both studies participants will be asked to focus either on red or white wines (between-subjects design) and to identify (free production) what they consider to be the *opposite* of each of the target properties presented. In study 1, the target properties will be the list of 63 adjectives previously collected. In study 2, the target terms used will be the most frequent responses produced by the participants in study 1. Ad hoc software will be used for data collection via smartphone and pc (LimeSurvey CE, stable version: 3.4.2, <http://www.limesurvey.org>). The results will allow us: 1) to identify which opposites describe meaningful *dimensions of wine* for non-experts in relation to red and white wines respectively; 2) to test bidirectionality, i.e., the extent to which one of the individual elements of an oppositional pair is elicited by the other element (e.g. sweet as opposed to dry and dry as opposed to sweet) and 3) to measure the match between opposites pertaining to expert scales and those pertaining to non-expert dimensions, both in terms of how many non-expert scales correspond to one of the expert scales and in terms of their similarity. We will also ascertain whether there are any cases of false correspondence, i.e., the same term used by experts and non-experts to indicate two radically different aspects.

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Rosario Caballero (Universidad de Castilla-La Mancha)

Exploring sensory verbs in English and Spanish: Typology and genre

In this talk, I provide a preliminary exploration of the verbal constructions used in such typologically different languages as English and Spanish for expressing actions related to sensory perception and involving the five senses, e.g. *smell*, *cast a glance*, *graze*, *oir*, *apercibirse*, *cosquillear*, *paladear*. The study belongs to an ongoing research project where we study the verbal expression of actions related to verbal interaction, sensory perception, the physical response to emotions and the manipulation of objects and, more specifically, the way English and Spanish express the component of manner (project MAP(h)AS)¹ where we focus on four experiential domains little explored by typological research and approach them from the vantage point of the genres where the strategies are used, typically narrative and instructive genres.

The study draws upon research on motion events after Leonard Talmy's work (Slobin 1996; Talmy 2000) and applications of this research to the expression of verbal events showing a slightly different picture of English and Spanish (Caballero 2015, 2016; Caballero & Paradis 2015, 2018), and addresses the following two questions from the general ones in the main project:

1. How do English and Spanish speakers express events related to the five senses?
2. Is manner important in sensory perception events? If so, how is it expressed in each language?
3. What does this use reveal about these languages and their typological characterization in Cognitive Semantics?

This small piece of research focuses on a topic that remains underexplored both in typological studies (typically concerned with motion events) and in research on the senses (which, as illustrated by the talks in this session, usually focuses on domains where ineffability is an issue, as in wine discourse). It also approaches it from the vantage point of genre, i.e. a rich context that goes beyond lexical availability and which may help explain how and why some strategies are used across different languages.

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Jenny Hartman & Carita Paradis (Lund University)

Ways of simulating sensations and emotions through language

In this study, we explore how speakers make use of language to mediate their sensations and emotions through language. The data used are authentic disorder narratives by people

with Obsessive Compulsive Disorder (OCD), Attention Deficit Hyperactivity Disorder (ADHD), and Tourette Syndrome (TS). The study is part of a series of investigations of how speakers make use of language resources to talk about sensory/emotive experiences and what kinds of construals they use to get those experiences across to the addressees (Caballero & Díaz Vera, 2013; Caballero & Paradis, 2015; Paradis 2015a; Hartman 2017a, b). The basic premise is that wordings are cues that evoke meaning structures in conceptual space (Zwaan, 2004; Paradis, 2005, 2015b; Gärdenfors 2014). While comparative construal (metaphorization) and individual words such as *angry*, *sad*, *sour* (Gentsch et al., 2017; Majid & Burenhult, 2014; Scherer & Meuleman, 2013) have been the subject of considerable research in linguistics, psychology, and cognitive science, very little attention has been paid to the role of comparison more broadly for sensory/emotive simulation (Thagard & Shelley 2006: 27; Hartman & Paradis, 2018).

The study makes use of a corpus of 600,000 words, evenly distributed across the three disorders. Experiential comparisons were identified through manual read-throughs in combination with directed seed word searches (e.g., *feel like*, *imagine*, *picture*, *as though*). Our data indicate that speakers show a preference for comparative construal for the mediation of sensory/emotive meanings to trigger corresponding vicarious experiential simulations, as in (1) and (2) (italics added).

- (1) Another urge which overtook me was to momentarily shake my head. It was *as if* I was tossing my hair back --- except that I had short hair. (OCD)
- (2) But I can't and I really mean can't filter out just one sound. It's what makes teaching difficult. *Imagine* someone constantly clapping their hands in front of your face and trying to hold onto a conversation with the other person. It's the dripping tap that keeps you up all night. But I can't find a plumber. I can get very frustrated and overloaded very quickly. (ADHD)

Some comparative construals are similes, as in (1), which conveys an explicit comparison between a source (the way people toss their hair back to get rid of it) and a target (the writer's compulsive headshake). Other construals take the form of a request, as in (2), where the reader is asked to imagine a noisy and frustrating situation very similar emotively and sensorially to the writer's experience of ADHD. Two different ways of achieving sensory/emotive simulation and vicarious experience in a reader can be discerned in our data; one is descriptive–epistemic, as in example (1), and the other is imperative–deontic, as in (2). Linguistically and conceptually, these two routes to sensory/emotive simulation exhibit both similarities and differences.

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Cristina Soriano (Université de Genève)

Figurative meanings of sensory verbs across languages

The language of the senses is notoriously figurative (e.g., Ibarretxe-Antuñano 2002; Haser 2000), being used to describe sensorial perception as well as other areas of human experience, like cognition and affect (cf. MIND-AS-BODY metaphor, Sweetser 1990). These figurative meanings can be fruitfully described in a continuum between metonymy and metaphor. Some of these figurative meanings (e.g. “smelling” as “suspecting”) have also been studied in experimental psychology (Lee & Schwartz 2012) giving rise to a body of research illustrating one of the ways in which linguistic meaning is embodied (cf. Ackerman et al 2010, Citron & Goldberg 2014, Landau et al 2010, or Schaefer et al 2014 inter alia for experimental research on sensorial metaphors). Yet, embodied experience is not necessarily universal experience. In this study we investigate sensory verbs (e.g., see, hear, touch, smell, taste) in over 10 languages from different language families to address the question of which, if any, of their figurative meanings are universal. Previous literature, dictionaries, corpora and questionnaires are used to identify the pertinent mappings and assess their cross-lingual applicability. Results are discussed in terms of universality and language-specificity (e.g., modality variation in the expression of particular meanings) and the mechanisms behind these meaning extensions.

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Francesca Strik Lievers (University of Genova, Italy)

Figures as a key to language and the senses

Research on human perception, besides describing the functioning of the individual senses (vision, audition, olfaction, etc.), suggests that most of our perceptual experiences are multisensory, and that the senses often interact and influence each other. Together with describing how the individual senses are encoded in the lexicon of language(s), linguistic research investigates how concepts related to different senses interact in and through language. Sensory interaction can be observed in figurative uses of language, and in particular in synaesthesia, the "figure of the senses" par excellence that, for instance, allows us to use a tactile adjective to describe a sound, as in *soft voice*.

In this talk, I propose that different types of figures, different types of synaesthesia, and different types of texts "play" with the senses in different ways. More specifically, I will address the following questions:

- *Do synaesthetic metaphors tell us something about (multi)sensory perception?*

Many studies have shown that there are preferences as to which senses are combined with which other senses in synaesthesia (e.g., taste adjectives are often used to qualify smell nouns, as in *sweet smell*). Though many factors must be taken into account (Strik Lievers 2015; Winter 2016), such preferences may at least in part be seen as reflecting the way the senses interact in actual perception (e.g., taste and smell are closely connected in perceptual experience as well). I will show that this whole discussion, however, is only relevant for conventional synaesthetic expressions such as *sweet smell*, while living and creative synaesthetic metaphors display a much higher degree of freedom and can associate conflicting concepts, which highlights the creative power of language (Prandi 2017).

- *Are other figures also relevant for the discussion of sensory interactions in language?*

Other figures (e.g., metonymy, simile) may co-occur with synaesthesia, and are sometimes mistaken for synaesthesia in the literature (Strik Lievers 2017), but the analysis of several examples shows that synaesthesia is the only figure through which concepts of different senses can interact.

- *Is text genre a relevant feature for the discussion of perception-related figures?*

I will analyse cases of “sensory” domain-specific languages in which concepts that in other types of texts would be conflicting form a network of genre-specific consistent metaphorical concepts (e.g., wine is consistently viewed as a person within winespeak, cf. Caballero & Suárez-Toste 2010; Paradis & Eeg-Olofsson 2013).

Based on the discussion of the above issues, the main idea I would like to convey is that figurative language can function as a lens through which we may see more clearly aspects of the functioning of (multi)sensory perception, as reflected in language, as well as aspects of the functioning of language and its creative power.

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Ernesto Suárez-Toste (Universidad de Castilla-La Mancha)

Fine aromas of paper and glass: The senses and the bottle-as-metonym in wine advertising

Considering that a closed bottle of wine may reveal very little about it even to a wine expert, too many wine adverts limit themselves to the reproduction of the label or bottle, foregrounding photographic technique and treating the bottle as an objet d’art. To our delight, many others resort to metaphor and synesthesia.

In wine advertising, very little wine is actually seen, as the beverage itself looks perfectly anonymous. Instead, bottles with labels are shown to the point they become synonymous with wine as the target. This conditions advertising quite seriously in different ways, as adverts for appellations should not show specific labels and adverts for wineries cannot afford to forego the labels or logos. Whereas Forceville warns that “the emphasis on the ABSTRACT A IS CONCRETE B has caused a blind spot for manifestations of the CONCRETE A IS CONCRETE B variety,” here we find that the—very concrete—target is almost exclusively represented visually by a metonym, and even when images of wine are explicitly shown they are insufficient unless the metonym is present as well.

Wine appreciation is such a comprehensive sensory experience that the realization that wine is advertised by relying exclusively on SIGHT seems pathetically poor at communicating aromas and textures. In fact, what many do is synesthetically reduce a plethora of sensory impressions to SIGHT. Naturally, cross modal transfers that use the visual to suggest aromas and textures can only promote complicated downward mappings, which collides with the directionality principle defended by Ullman and others. Regarding sensory discourse and cross-sensory mappings, quite a few things can be achieved visually or through the felicitous combination of words and images.

The wine adverts used for this study were drawn from the major specialized periodicals published in 2015 and 2016 in the UK (*Decanter*), the USA (*Wine Enthusiast*, *Wine Spectator*, *Food & Wine*) and France (*Revue du Vin de France*) totaling 104 issues and roughly amounting to 12,700 magazine pages. The total number of *unique* adverts (not counting repetitions) is ~1,100. In this corpus, promotional campaigns for appellations prove perhaps even more interesting than those for private companies. This presentation compares both scenarios and their respective use of metonymy, metaphor, and synesthesia.

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Bodo Winter (University of Birmingham, UK)

Does linguistic ineffability "explain away" the hierarchy of the senses in synesthetic metaphors?

Speakers of English and other languages frequently use sensory words in a flexible fashion. For example, the sensory adjective *sweet*, which seems to be predominantly about taste, can readily be applied to the noun *fragrance*, which is more smell-related. Such expressions have been called "synesthetic metaphors", and various researchers have observed asymmetries in what senses act as common sources, and what senses act as common targets, for example, *sweet fragrance* (taste-to-smell) is more frequently attested than *fragrant sweetness* (smell-to-taste) (Ullmann, 1959; Shen, 1997; Strik Lievers, 2015). To account for asymmetries such as these, researchers have proposed a "hierarchy of the senses", touch > taste > smell > sight/sound (e.g., Williams, 1976; Shen, 1997).

In this talk, I start out by presenting what seemingly looks like new evidence for the hierarchy of the senses. Using a set of words rated by native speakers for how much they correspond to certain senses (Lynott & Connell, 2009) and 150 million adjective-noun pairs gleaned from the Corpus of Contemporary American English (Davies, 2008), I show that 80% of the cases observed in the corpus appear to match the hierarchy, in line with what has been found in the previous literature. For example, I find that touch adjectives are much likely to modify sound concepts (e.g., *rough sound*, *smooth melody*), more so than the other way round.

However, just counting up the total number of mappings ignores the fact that certain senses are more lexically differentiated than others to begin with (see Buck, 1949; Strik Lievers & Winter, 2017), something which Levinson and Majid (2014) call the “differential ineffability of the senses”. For example, there are more touch words than sound words in the English language, as well as more taste words than smell words (Strik Lievers & Winter, 2017). In addition, touch words have higher token frequencies in corpora, and so do taste words over smell words (Winter, Perlman & Majid, in press). Could it be that the hierarchy of the senses in synesthetic metaphor is actually explained by these asymmetries in these type and token frequencies? As a proof-of-concept, I demonstrate that randomly pairing adjectives and noun types from the Lynott and Connell (2009) database yields an impressively high match to the hierarchy of the senses, which is almost exactly 80%. Moreover, I show that adjectives which overall have more currency in the language (increased frequency) are also more likely to occur in synesthetic metaphors. Together, these two results clearly demonstrate that both type and token frequencies influence metaphorical asymmetries, and they suggest that perhaps, the hierarchy of synesthetic metaphors could be reduced to pre-existing frequency asymmetries.

These findings have important implications for our understanding of sensory language, but also for how we deal with metaphor and corpus data in general.

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