

## Understanding perception: *see-* and *hear-*verbs against embedded negation

**The puzzle.** According to Viberg's (1984) hierarchy of the five senses, visual perception is at the top, with auditory perception a close second. This is supported, according to him, by the facts that (i) these two modes allow for a lexical distinction for [+/- INTENTIONAL] (*see* vs. *watch*, *hear* vs. *listen*), and (ii) they allow for a 'cognitive' reading as well as a 'strict perception' reading. Adding to the similarities between the two perception-types, Sweetser (1990) points out that visual and auditory perception are the only two that are stimuli-focused (and not perceiver-focused). Considering these similarities, and if one assumes that conceptual complexity is encoded in the syntax (Givón 1980), one might expect the verbs encoding each type (*see*-verbs and *hear*-verbs) to behave in a similar fashion with respect to their complements. However, we observe that the two verb types behave differently w.r.t. embedded negation. It has been observed by Fabregas & Gonzalez (2022) that the Exceptional Case Marking (ECM) construction with Spanish *ver* 'to see' licenses embedded negation. This is not unexpected, since these constructions are biclausal (Sheehan 2020, a.o).

- (1) Vi        a        Juan no        bailar.  
       see.PF DOM Juan NEG        dance.INF  
       'I saw Juan not dance.'

However, one runs into an issue when replacing *ver* with *oír*, also realising ECM complements:

- (2) #Oí        a        Juan no        cantar.  
       hear.PF DOM Juan NEG        sing.INF  
       'I heard Juan not sing.'

What makes this contrast more striking is the unavailability of sentences like (2) across several Romance languages all licensing embedded negation in *see*-ECM contexts (4):

- (3) a. #Ouvi        o        João não        cantar.        **Brazilian Portuguese (BP)**  
       hear.PF-1SG the Joao NEG sing.INF  
       b. #Ho        sentito        Gianni non        cantare.        **Italian**  
       have.PS.1SG hear.PTCP Gianni NEG sing.INF  
       c. #J'ai        entendu        Jean ne pas        chanter.        **French**  
       i-have hear.PTCP Jean NEG sing.INF  
       INTENDED: 'I heard John not sing.'

- (4) a. Vi        o        João não        dançar.        **Brazilian Portuguese**  
       see.PF the João NEG dance.INF  
       b. Ho        visto        Gianni non ballare.        **Italian**  
       Have see.PF Gianni NEG dance.INF  
       c. J'ai        vu        Jean ne pas danser.        **French**  
       I-have see.PTCP Jean NEG dance.INF  
       'I saw João/Gianni/Jean not dance.'

This means that the issue is not a syntactic one; it is a semantic/ontological one. We propose that the contrast between (1) and (2) is due to the difference in *modes of perception*: while visual perception picks up an event, auditory perception requires a product.

**Some background.** Let us then take a closer look at the semantics of *ver*+NEG like (1). F&G highlight that this embedded negation should not be treated as simple sentential negation; instead, they propose that the eventuality denoted by the embedded VP ought to be understood as an *inhibited eventuality*, i.e. "negative events" that denote the absence of an otherwise expected event' (F&G, building upon Stockwell 1975).

- (5) J'ai        vu        Pierre ne pas        manger.

i-have see.PTCP      Pierre NEG      eat.INF

‘I saw Pierre not eat.’

⇒ It happened that Pierre did not eat, and I saw it.

F&G propose that negation operates on the descriptive content of the event, its hallmark being the non-dynamicity and stativity of the complement. Hence, according to the authors, inhibited eventualities cannot combine with adverbs such as *lentamente* ‘slow’, since they modify the way in which a process takes place, and consequently (6), in the reading in which negation does not take narrow scope over the adverb. However, this restriction does not apply when the perception verb is *ouvir* in Brazilian Portuguese, as in (7).

(6) \*#Vi a      María no      cerrar la puerta lentamente.

saw DOM María NEG close the door slowly

INTENDED: ‘I saw that María did not close the door slowly.’

(7) Ouvi a      Maria não      fechar a      porta lentamente.

hear the María NEG close the door quickly

‘I heard Maria not close the door quickly.’

All of this shows that (i) *see*-verbs select eventualities, and (ii) the differences between *ver* and *ouvir* in inhibited eventualities goes beyond syntax.

**Our proposal.** In this paper, we explore an alternative analysis that accounts for the differences pointed out above. We propose that visual and auditory perception differ more than they appear to. Indeed, visual perception, when direct, requires the occurrence of an event performed by an Agent. Conversely, auditory perception requires a product (i.e. the result of an event). This proposal is supported by the following contrast:

(8) \*Je      vois      danser.

I      see.PS      dance.INF

‘I see dancing.’

(9) J’entends      chanter.

I-hear.PS      sing.INF

‘I hear singing.’

The sentence in (8) is infelicitous because one cannot *see* ‘a dancing’; instead, one needs to see *someone* perform a dance. Conversely, (9) is perfectly acceptable because *hearing* is a cognitive process: what is heard is a song, which is the product of *someone*’s singing, but it does not matter who. This view is supported by Enghels (2012:30), who argues that auditory perception is more of a mental than a physical act, as it does not involve bodily movement but rather a cognitive effort to attend to stimuli. In contrast to visual perception, which arises passively from the mere presence of an entity, auditory perception depends on the effect produced by the presence of the auditory stimulus. Interestingly, this contrast holds in English, which leads us to believe this is an important ontological distinction. In sum, this paper demonstrates that perception verbs associated with different sensory modalities exhibit distinct behaviors with respect to embedded negation and inhibited eventualities, even though they share similar morphosyntactic properties. We interpret this as evidence that *see*-verbs and *hear*-verbs select different kinds of semantic complements (specifically, events for the former and products for the latter). More broadly, these findings contribute to our ontology of perception by shedding light on fundamental distinctions between different types of perceptual experiences.

**References.** Enghels, R. (2012). *Les modalités de perception visuelle et auditive: différences conceptuelles et répercussions sémantico-syntaxiques en espagnol et en français* (Vol. 339). Walter de Gruyter. • Fábregas, A., & González Rodríguez, R. (2020). On inhibited eventualities. *Natural Language & Linguistic Theory*, 38, 729-773. • Givón, T. (1980). The binding hierarchy and the typology of complements. *Studies in Language. International Journal sponsored by the Foundation “Foundations of Language”*, 4(3), 333-377. • Sheehan, M. (2020). The development of Exceptional Case Marking in Romance with a particular focus on French. *Probus*, 32(2), 367-400. • Sweetser, E. (1990). *From etymology to pragmatics: Metaphorical and cultural aspects of semantic structure* (Vol. 54). Cambridge University Press. • Viberg, A. (1984). The Verbs of perception: a typological study in Explanations for Language Universals. *Linguistics. An Interdisciplinary Journal of the Language Sciences La Haye*, 21(263), 123-162.