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Non-neutral relatives: A case for intensional *see*

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Background

Perceptual reports containing *see* + DP complement are typically characterized as:

- Extensional & veridical (Higginbotham 1983)
- Epistemically neutral – the perceiver need not be committed to the description in the DP (Moulton 2009)

(1) Mary saw the robber. (→ *Mary may or may not be aware that the person she saw was the robber.*)

This contrasts with perception verbs with finite clause complements, which are always epistemically non-neutral.

(2) Mary saw that a robbery had happened. (→ *Mary knows that a robbery happened.*)

However, some uses of *see* + DP complement cannot be analyzed as extensional, veridical, or epistemically non-neutral.

(3) Mary saw the inkblot as a bird. (→ *Mary believes that the inkblot she saw was shaped like a bird.*)

(4) Mary saw a ghost. (→ *Mary believes that she saw a ghost.*)

New Data

Non-neutral relatives: DP complements of *see*-type verbs containing relative clauses that report non-neutral perceptions, misperceptions or (potentially false) beliefs.

(5) When she looked at the man jiggling the door handle, Mary saw someone who was breaking into the neighbor's house.

(6) In Jack, Diane sees a person who is fundamentally dishonest.

Non-neutral relatives further demonstrate that DP complements of *see* are not always epistemically neutral.

Non-neutral relatives contrast with Romance "pseudo-relatives" (Cinque 1995, Moulton & Grillo 2015), where perception verbs combine with relative structures in an epistemically neutral way.

Proposal

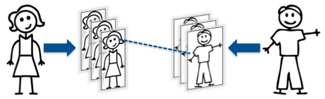
- **How can non-neutral readings for (3-6) be derived while allowing for extensional treatment of examples like (1)?**
- **How to account for elements in non-neutral relatives that are optional, but help drive non-neutral interpretations?**

Three key ingredients in analysis of non-neutral relatives (NNRs):

- *See*-type perception verbs (Levin 1993) should be analyzed as intensional transitive verbs relating individuals and properties (Zimmerman 1993).
- Intensional *see* can explain how relative clauses provide properties that are not directly witnessable.
- Indefinite relative clause acts as a singleton indefinite (Schwarzchild 2002), leading to non-neutral interpretation accommodated by an intensional analysis.

Analysis

Intensional transitive *see*



- Neo-Carlsonian account, similar to Jaeger (2001).
  - Perception is a relation between stages of individuals.
- *see* combines with a stage-level property; an indefinite complement can achieve that type via a Partee-style type-shift.
- Denotation incorporates a set of worlds compatible with an individual's perceptions, which may or may not be veridical.

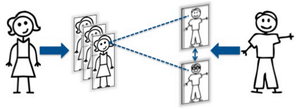
(7) $[\![\text{see}]\!]^{w,g} = \lambda P^{s}_{<e,st>}.\lambda y^{i}_{e}.\lambda x^{i}_{e}.\lambda w_{s}.\exists z^{s}_{e}.\exists v^{s}_{e}.\mathit{stage\text{-}of}(y,z) \wedge \mathit{stage\text{-}of}(x,v) \wedge \mathit{see}'(w,v,z) \wedge \forall w' \in \mathit{Perc}(w,x): P(w')(z)$

- DP complement typically supplies both *P* and *y*, with *P* being a property of a stage of *y*.
- In NNRs, DP + RC complement forms a single constituent (like Romance pseudo-relatives), supplying content of *P*; *y* can be supplied by the adjunct.

(8) $[\![\text{someone who was breaking into...}]\!] = \lambda s_{e}.\lambda w_{s}.[\text{someone who was breaking into ...}(s)(w)]$

$[\![(5)]\!]^{w,g} = \lambda w_{s}.\exists z^{s}_{e}.\exists v^{s}_{e}.\mathit{stage\text{-}of}(\text{man},z) \wedge \mathit{stage\text{-}of}(\text{Mary},v) \wedge \mathit{see}'(w,v,z) \wedge \forall w' \in \mathit{Perc}(w,\text{Mary}): [\text{someone who was breaking into ...}](w')(z)$

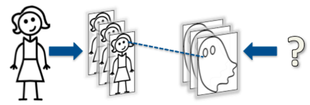
Features of intensional analysis of *see*



- *see* is epistemically non-neutral by default.
  - *P* is assumed to hold in all accessible *w*'s and in *w*, but does not have to.
- Other readings of *see* + DP are pragmatically triggered and/or contextually conditioned.
  - Non-veridical reports: *P* holds only in accessible *w*'s; *y* may be unspecified, with complement supplying content of *P* only.

(9) $[\![\text{a ghost}]\!] = \lambda s_{e}.\lambda w_{s}.[\text{ghost}(s)(w)]$

$[\![(4)]\!]^{w,g} = \lambda y^{i}_{e}.\lambda w_{s}.\exists z^{s}_{e}.\exists v^{s}_{e}.\mathit{stage\text{-}of}(y,z) \wedge \mathit{stage\text{-}of}(\text{Mary},v) \wedge \mathit{see}'(w,v,z) \wedge \forall w' \in \mathit{Perc}(w,\text{Mary}): [\text{ghost}](w')(z)$



- Neutral reports: discourse or context must explicitly indicate that the description in the DP may not hold in *w*'

Contribution of singleton indefinites in NNRs

- Singleton reading of the indefinite subject of the relative clause is forced by the subject being already specified by an adjunct or discourse context.
- Singleton indefinite provides incomplete information and is highly marked, leading to inferences about why that description was chosen.
  - Suggests speaker is not willing to commit to whether *P* holds in *w*, just that it holds in *w*'.
  - Allows NNRs to report non-perceivable properties that hold only in *w*'.

Descriptions of non-perceivable properties

Intensional treatment of *see* accommodates NNRs' ability to describe non-perceivable or inferred properties.

- Possible for *P* to hold of an individual only in perceptually accessible *w*'s, not in actual world *w*.
- When *P* is a non-perceivable property, implies that *P* holds only in *w*', since *P* cannot come from (direct) perception in *w*.

Conclusions

- **Analyzing *see* as an intensional transitive verb that delivers epistemically non-neutral perceptual reports can explain the range of available interpretations for *see* complements, including non-neutral relatives.**
- This account contributes to developing a unified semantic analysis of *see*-type verbs and their complements.

Remaining questions:

- Does the lexical entry for *see* need to make explicit the default assumption that *P* holds in both *w*' and *w*?
- Does machinery for accommodating 'atypical' uses of *see* (i.e., non-veridical or neutral perceptual reports) need to be part of the denotation for *see*, or can this be handled another way?

References

Carlson, G. N. 1977. References to kinds in English. Doctoral dissertation, University of Massachusetts, Amherst.

Cinque, G. 1995. *Italian syntax and universal grammar.* No. 77. Cambridge University Press.

Higginbotham, J. 1983. The Logic of Perceptual Reports: An Extensional Alternative to Situation Semantics. *Journal of Philosophy*, 80: 100–127.

Jaeger, G. 2001. On the semantics of *as* and *be*. A neo-Carlsonian account. In *Proceedings of NELS* 31.

Levin, B. 1993. *English Verb Classes and Alternations*. Chicago: University of Chicago Press.

Moulton, K. 2009. Natural selection and the syntax of clausal complementation. Doctoral dissertation, University of Massachusetts, Amherst.

Moulton, K., & Grillo, N. 2015. Pseudo-Relatives: Big and Direct. In *Proceedings of NELS 45*.

Schwarzschild, R. 2002. Singleton Indefinites. *Journal of Semantics*, 19(3): 289-314.

Zimmerman, T. E. 1993. On the proper treatment of opacity in certain verbs. *Natural Language Semantics,* 1(2): 149-179.

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