

Timing and (mis)interpretation of NPI illusions

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Background

- Susceptibility to linguistic illusions depends on precise linguistic details, providing important clues to how parsing and interpretation mechanisms operate
- NPI illusions are extremely selective, but in different ways than illusions like agreement attraction
- NPIs are licensed by the meanings of entire constituents, not individual words. We argue that NPI illusions reflect delayed inhibition of those meanings.

Basics

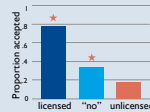
NPI Basics:

NPIs = Negative polarity items, e.g. *ever, any, and lift a finger*. They are only grammatical in negative (or similar) environments:
 (1) I don't think John has ever been to Paris.
 (2) * I think John has ever been to Paris.

The negative word must be in a structurally higher position:
 (3) * The boy [Mary doesn't like] has ever been to Paris.

The NPI Illusion:

Comprehenders are disproportionately likely to accept a sentence with an unlicensed NPI when an irrelevant negative quantifier is present.



The authors [that **no** critics recommended] have **ever** written a best-selling novel.

Drenhaus, Saddy, & Frisch 2005; Vasishth, Brussow, Lewis, & Drenhaus 2008; Xiang, Dillon, & Phillips 2009; among others

Key take aways

- Experiment 1: Interpretations built prior to the NPI are fine
 → NPI illusions aren't caused by early misinterpretation (e.g. exceptional scope)
- Experiment 2: NPI illusions arise when the NPI is close to a licensing environment, not close to a negative word
 → NPI illusions may be caused by "semantic spillover" from the nearby licensing environment

Properties of the memory architecture?

Hypothesis 1: NPI illusions arise because of properties of the memory architecture. NPI licensing is assumed to operate via parallel cue-based activation of a licensor at the point of the NPI

Vasishth, Brussow, Lewis, & Drenhaus 2008

Two key findings challenge this account

The Distance Effect:

NPI illusions do not arise when the NPI is sufficiently far from the relative clause containing the intrusive licensor.

The authors that **no** critics recommended for the assignment [thought that the readers would **ever** understand the complicated situation.

Parker & Phillips 2016

The Licensor Effect:

NPI illusions do not arise when the intrusive licensor is sentential negation, instead of a negative quantifier.

The authors [that the critics **haven't** recommended] have **ever** written a best-selling novel.

De Dios Flores, Muller, & Phillips 2017

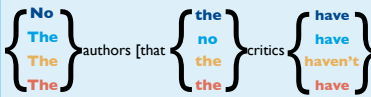
Conclusion: Hypothesis 1 cannot account for the specificity of the illusion

Problems encoding quantifier scope?

Hypothesis 2: NPI illusions arise because of problems encoding the scope of the negative quantifier. If an illicit wide-scope interpretation is established prior to the NPI, the NPI will be licensed by it.

Method:

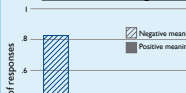
Participants judged both acceptability and meaning of each sentence. We look at the interpretations for only those trials that were accepted



recommended] have **(ever)** written a best-selling novel.

Did the authors write best-selling novels? Yes/No

Sentences containing "ever"



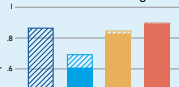
Prediction:

Participants should perceive NPI illusion sentences as having globally negative meanings (i.e. the answer to the comprehension question is "no")

Findings:

NPI illusion sentences are often interpreted as if they were globally negative

Sentences not containing "ever"



Prediction:

Contexts that give rise to illusions should be interpreted as globally negative at least as often as those contexts yield illusions.

Findings:

Contexts that give rise to NPI illusions are typically (correctly) interpreted as affirmative when the NPI is not present

Conclusion: Hypothesis 2 predicts that globally negative interpretations of contexts that give rise to illusions, but we see that negative interpretations arise only as a consequence of encountering the main clause NPI

RC meaning mistaken for local context?

Hypothesis 3: NPIs are licensed by specific semantic properties of entire constituents (e.g. downward entailment), not by individual negative words. Illusions arise when those semantic properties are not inhibited fast enough at the end of a constituent.

Prediction:

What matters for previously observed distance effects is the distance from the end of the licensing constituent, not the distance from the negative word

Short distance

The posters [that **no** librarians put up] have **ever** stayed up longer than a week.

Long no → NPI distance

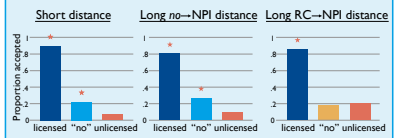
The posters [that **no** librarians put up to convey progress] have **ever** stayed up longer than a week.

Long RC → NPI distance

The posters [that **no** librarians put up] have conveyed **any** progress to the patrons who visited.

Findings:

NPI illusions disappear when the RC is farther away from the NPI, but are unaffected by the position of the licensor within the RC



Conclusion: Hypothesis 3 accurately predicts that short distances between the end of the RC and the appearance of the NPI are necessary for illusions to occur, but the distance between the licensor and the NPI is not relevant

Acknowledgements & References

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