

What's in a Grammar?

Variation in American English Negation

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Dialect Diversity & Overlapping Grammars

In contexts of **dialect diversity** (i.e., all contexts where human language is used!), with high levels of mutual intelligibility across dialects, **to what extent do grammars (not) overlap?**

Labov (1973: 43): “*Where do grammars stop?*”



What's (in) a grammar?

Grammars are “abstract descriptions of the representations built by the cognitive system” during language processing and production (Lewis & Phillips 2015: 30).



Chemist Lise Meitner talking with students
<https://www.flickr.com/photos/nrcgov/15422785493>

What's (in) a grammar?

Grammars are “abstract descriptions...”

- a *representation* of (some aspect of) reality, but not the reality itself

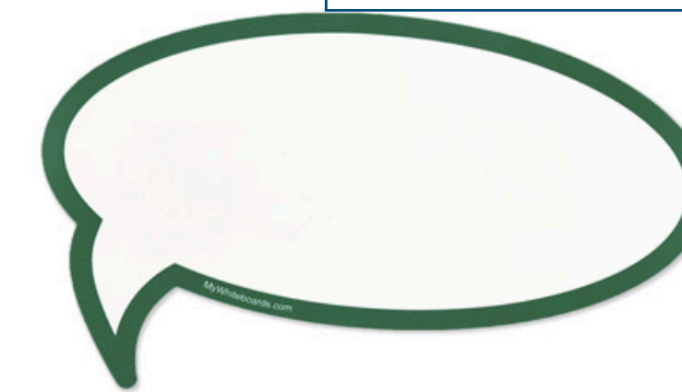
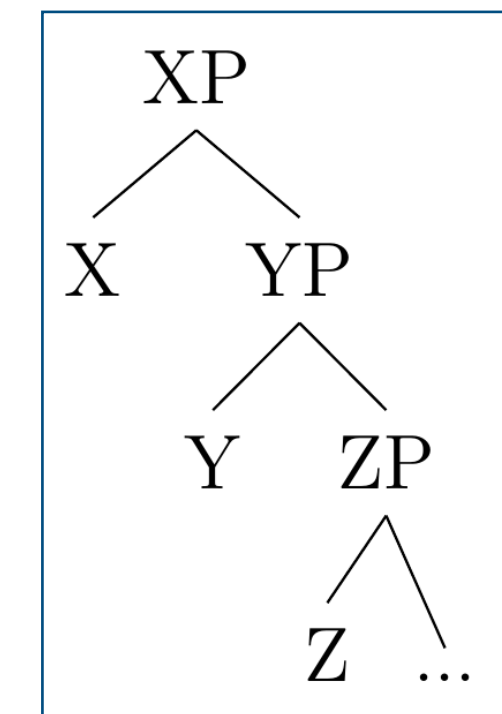
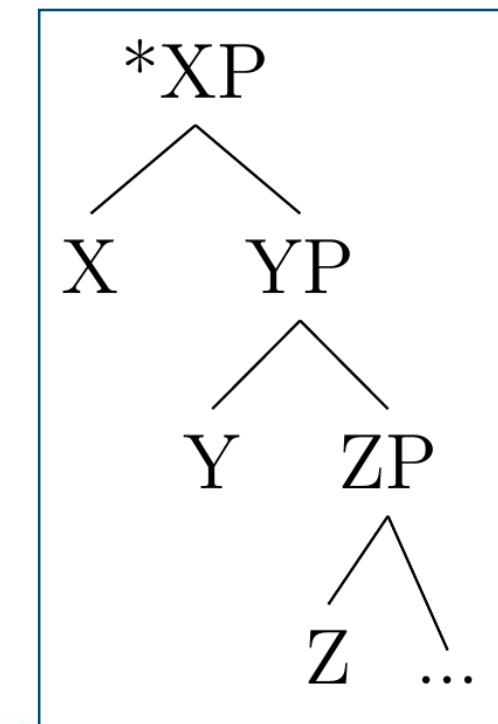


What's (in) a grammar?

Representations are [...] built by the cognitive system” during language processing and production

Inferences are drawn from systematically observing:

- (i) what people **say** (language production), and
- (ii) how they **behave/react** in response to linguistic stimuli (language perception/comprehension)



Dialect Diversity & Overlapping Grammars

What do we know about “overlapping grammars”?

Most previous research focused on this question in English appears to be limited to **mainstream speaker** knowledge of vernacular/non-mainstream features, e.g.:

- Labov (1973)—positive *anymore*, Negative Concord
- Wolfram (1982): mainstream judgments of *a*-prefixing and (lack of) comprehension of habitual *be*
- Squires (2014): mainstream processing of singular *don't*
- Blanchette (2015) *et seq.*—Negative Concord...



A Case Study: English Negative Concord

Negative Concord: Two or more syntactic negations contribute to a single semantic negation

- ‘I didn’t do anything’, ‘I did nothing’ (i.e., I didn’t commit the crime)

Double Negation: Each syntactic negation contributes a semantic negation

- ‘I did something’ (i.e., I committed the crime)

off the mark.com by Mark Parisi



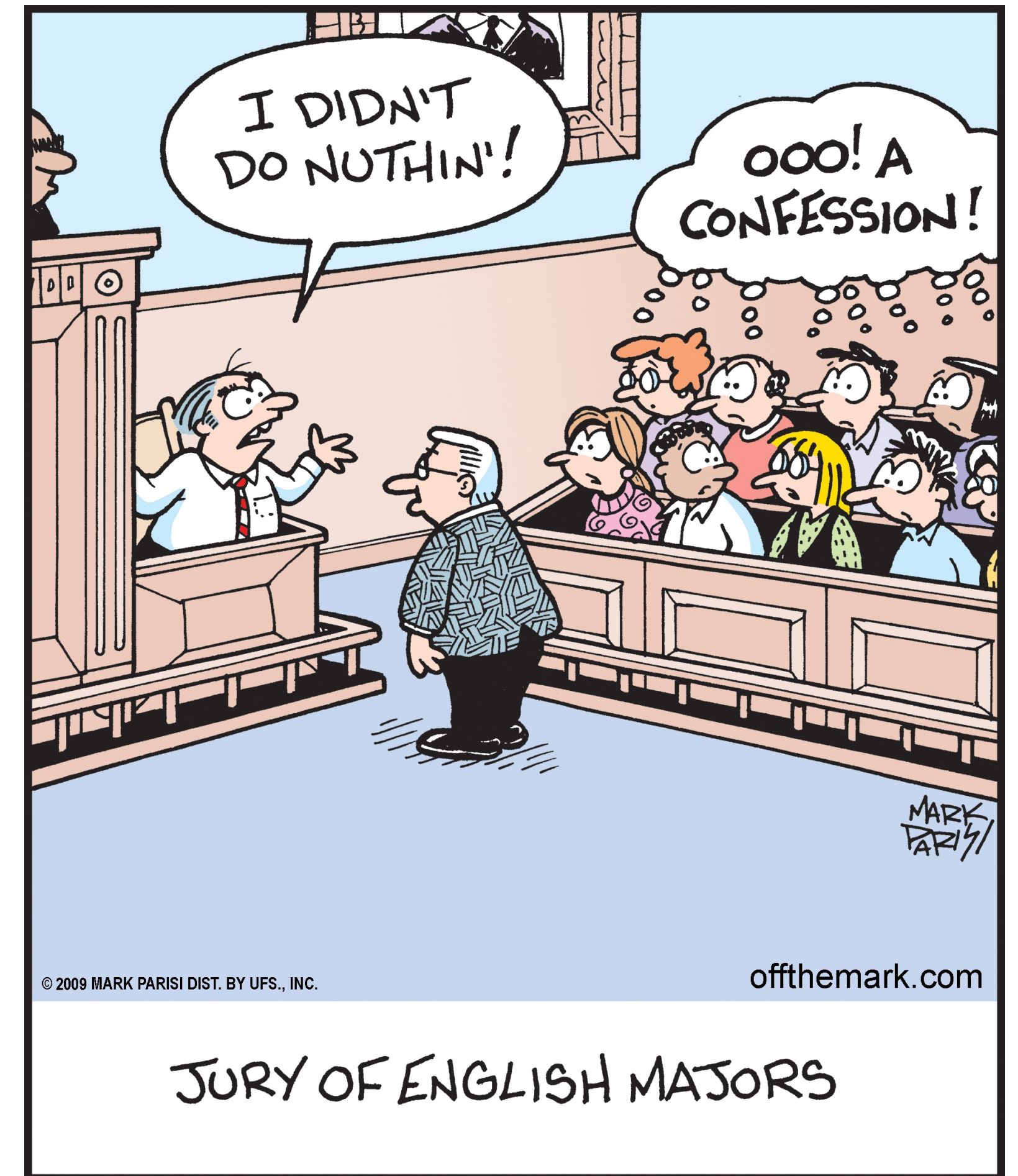
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A Case Study: English Negative Concord

Do the jury and the defendant (i.e., English “mainstream” vs. “vernacular” speakers) have **“different grammars”** with respect to NC?



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A Case Study: English Negative Concord

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- Challenging to investigate because NC is socially stigmatized!

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A Case Study: English Negative Concord

Do the jury and the defendant (i.e., English “mainstream” vs. “vernacular” speakers) have “**different grammars**” with respect to NC?



- Challenging to investigate because NC is socially stigmatized!
- One way to tackle this is to look more closely at **different NC structures...**

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Two Different (English) NC Structure Types

Non-subject NC: *I didn't do nothing*

- negative word/phrase follows a negative marker (English *n't*, *not*)
- most common NC structure type (Der Auwera & Alsenoy 2016; Smith 2001)

Two Different (English) NC Structure Types

Non-subject NC: *I didn't do nothing*

Preverbal Subject NC: *Nobody didn't listen*

- negative subject precedes a negative marker (English *n't*, *not*)
- well-attested in vernacular varieties like Appalachian and African American English but **less common than non-subject NC structures** (Der Auwera & Alsenoy 2016; Smith 2001)

Some Different (English) NC Structure Types

Non-subject NC: *I didn't do nothing*

Main focus for
experimental work

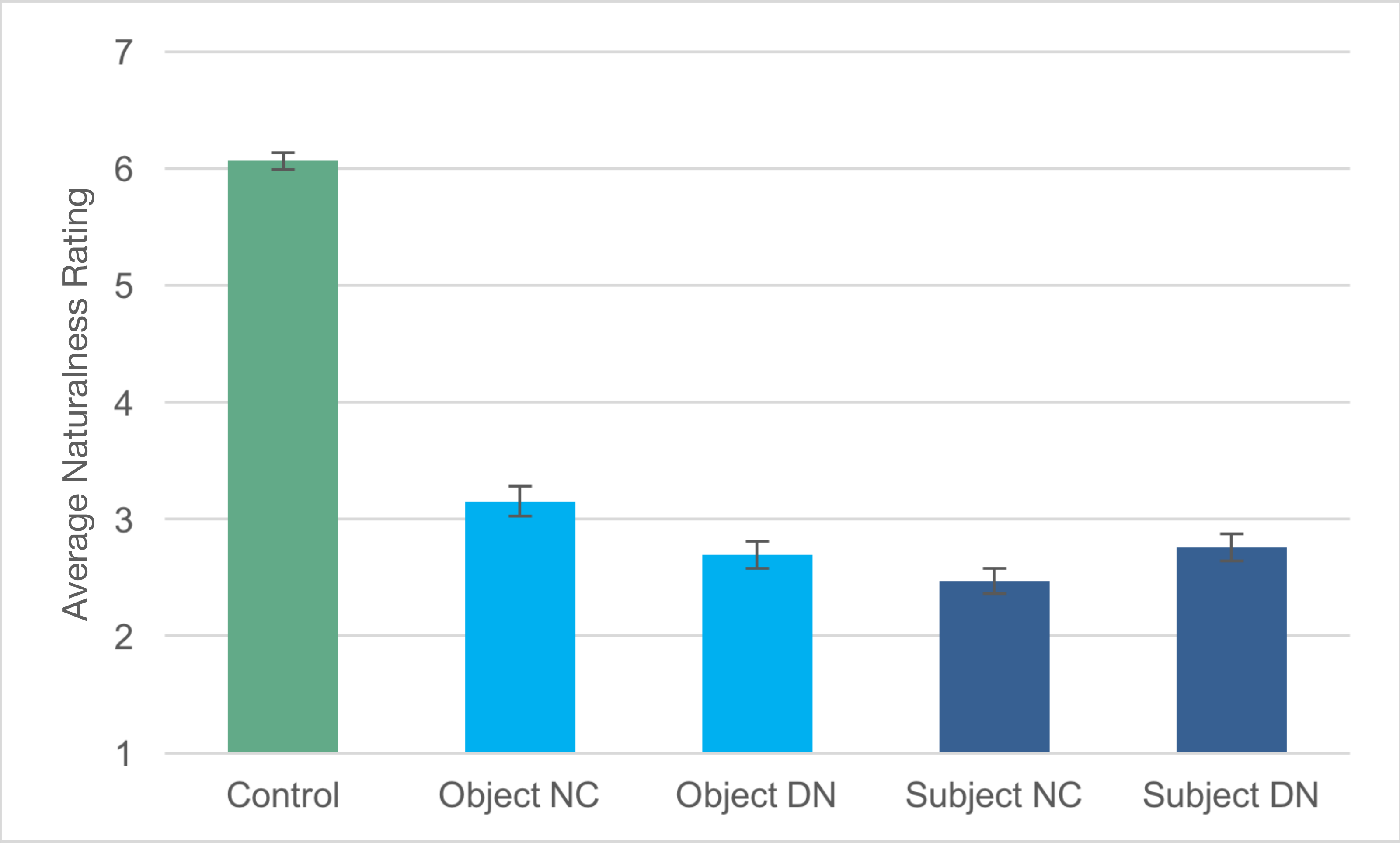
Preverbal Subject NC: *Nobody didn't listen*



“Mainstream” American English speakers like our jury of English majors do not systematically produce either of these, but does this mean neither structure is in their grammars?

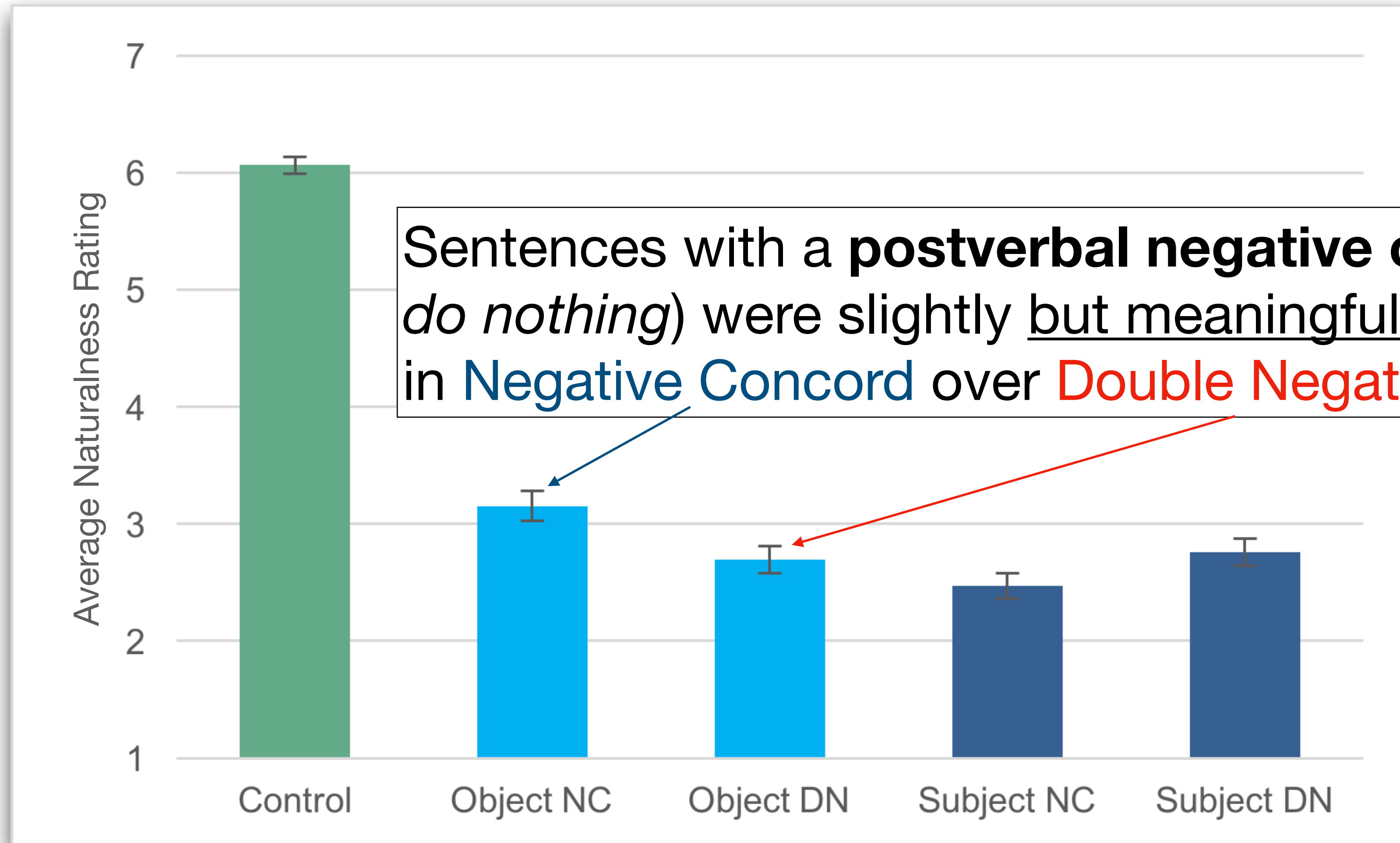
- Evidence that they handle the structures differently could suggest some level of abstract representation (i.e., grammar!)

Mainstream Speaker Naturalness Ratings



(Blanchette 2017)

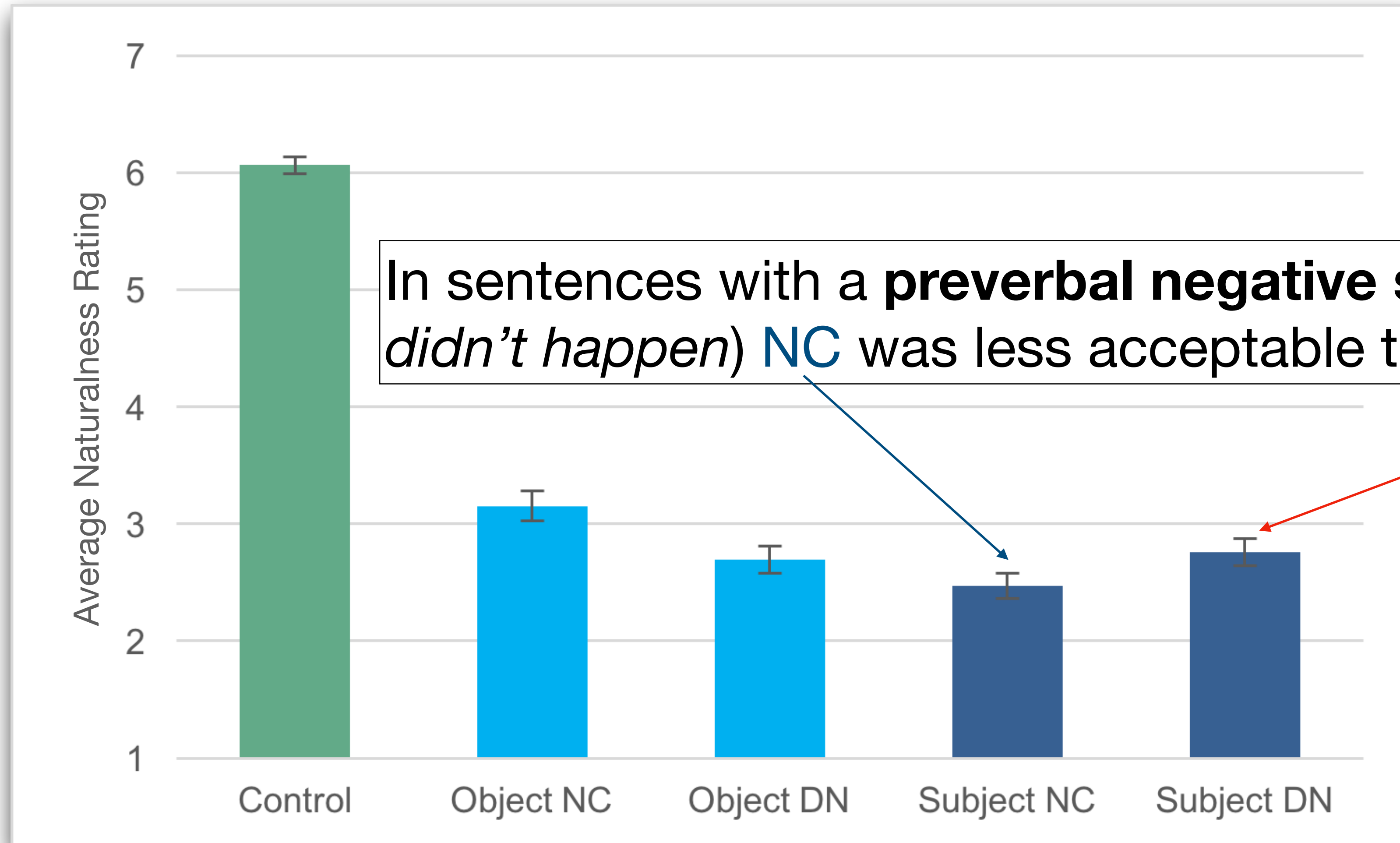
Mainstream Speaker Naturalness Ratings



Sentences with a **postverbal negative object** (e.g., *I didn't do nothing*) were slightly but meaningfully more acceptable in **Negative Concord** over **Double Negation** contexts

(Blanchette 2017)

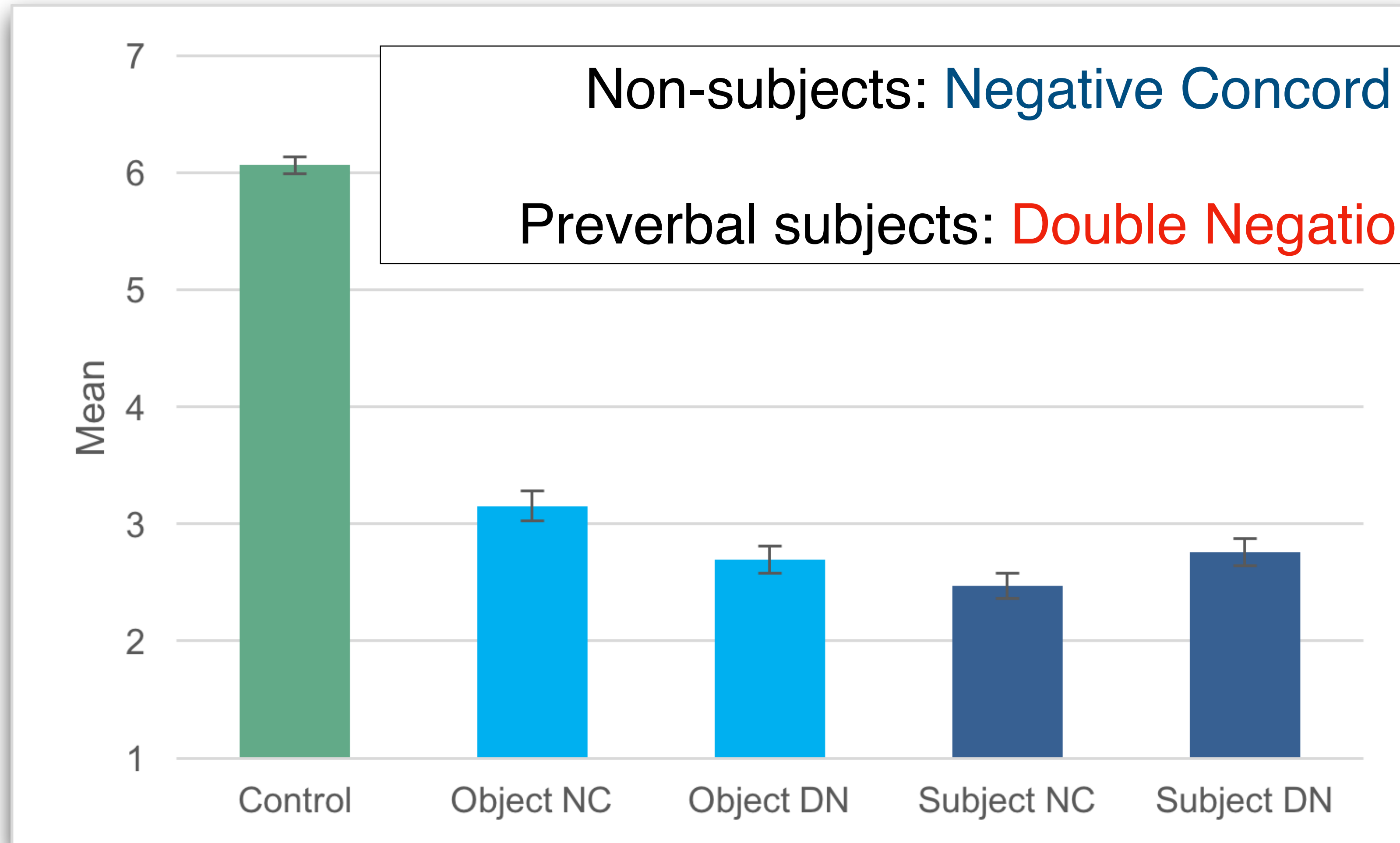
Mainstream Speaker Naturalness Ratings



In sentences with a **preverbal negative subject** (e.g., *nothing didn't happen*) **NC** was less acceptable than **Double Negation**

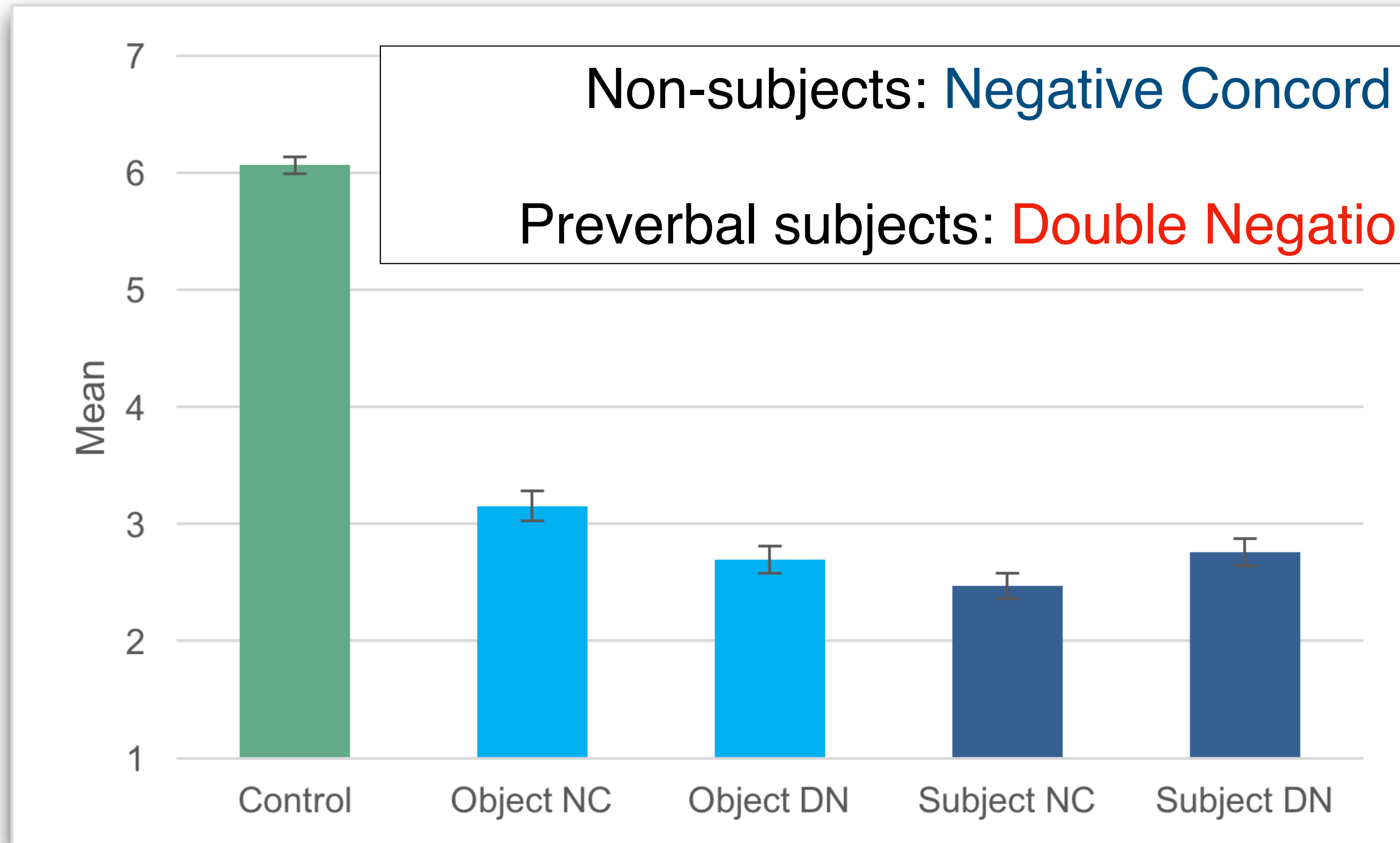
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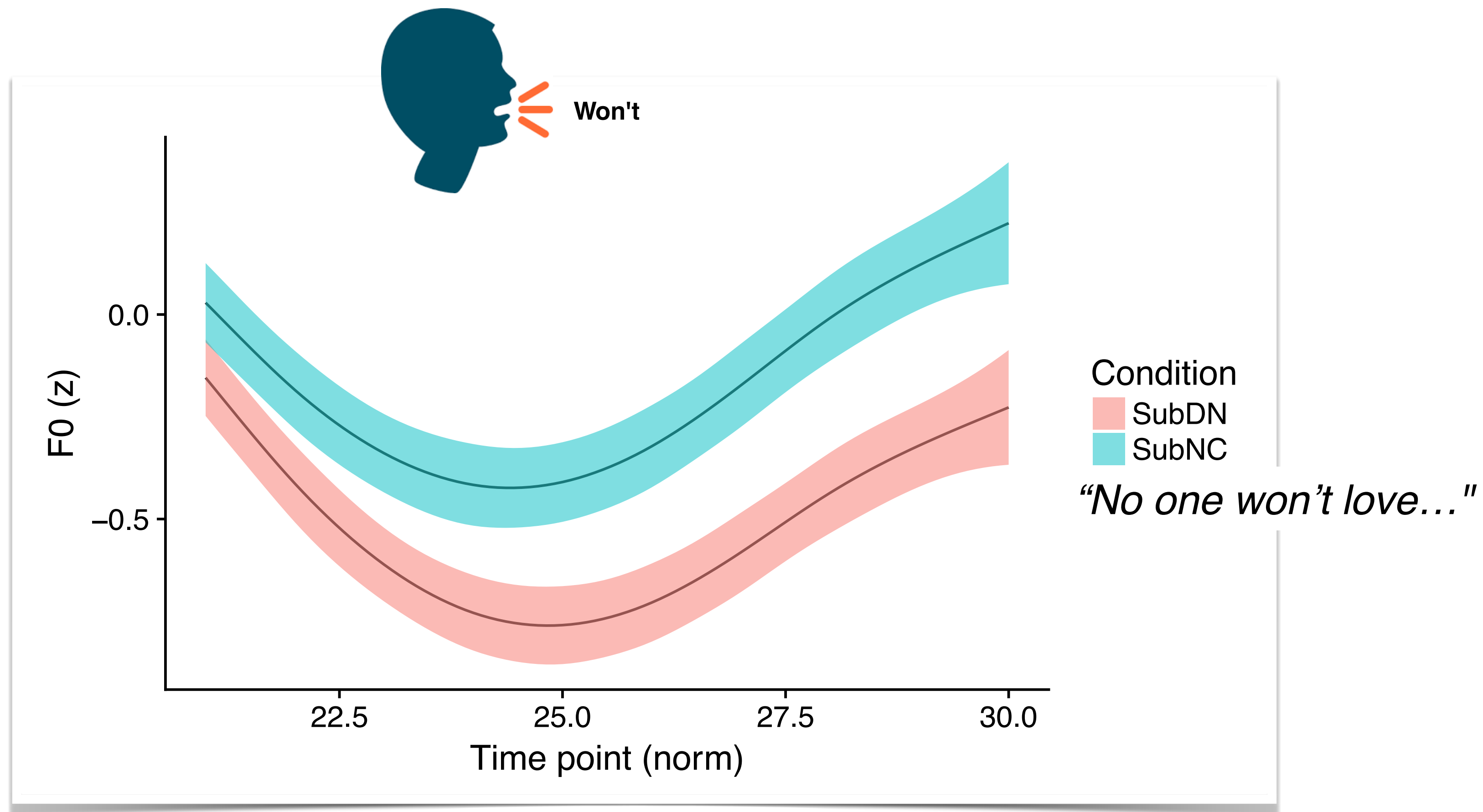


Non-subjects: Negative Concord > Double Negation
Preverbal subjects: Double Negation > Negative Concord

First evidence that mainstream speakers generate the defendant's (i.e., the NC) interpretation of *I didn't do nothing!*

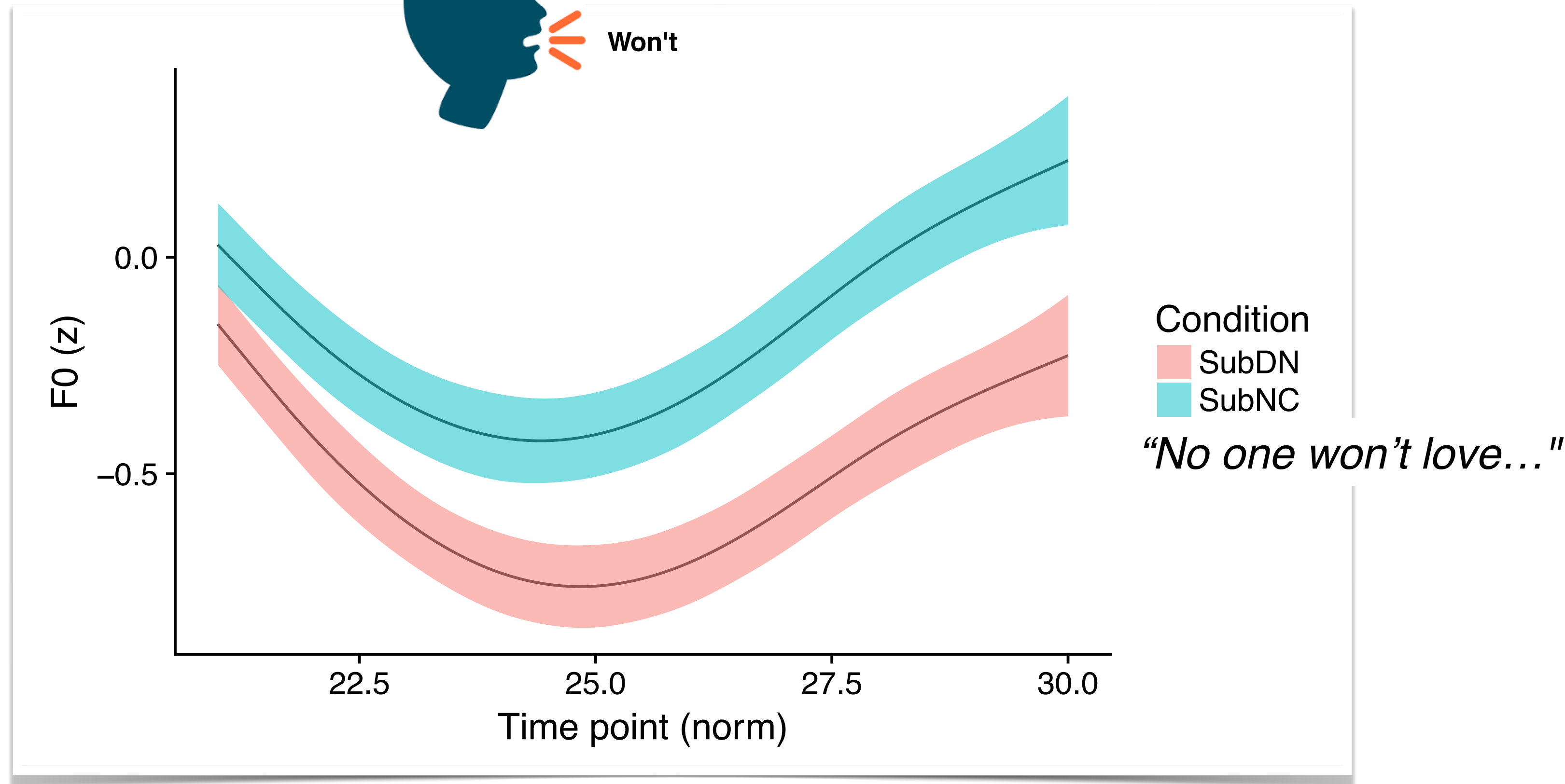
(Blanchette 2017)

Mainstream Speaker Speech Production



(Blanchette et al. 2018)

Mainstream Speaker Speech Production



Mainstream speakers systematically modulate their intonation to distinguish between **Negative Concord** and **Double Negation** meanings

(Blanchette et al. 2018)

Mainstream Listener Interpretation of Mainstream Speech

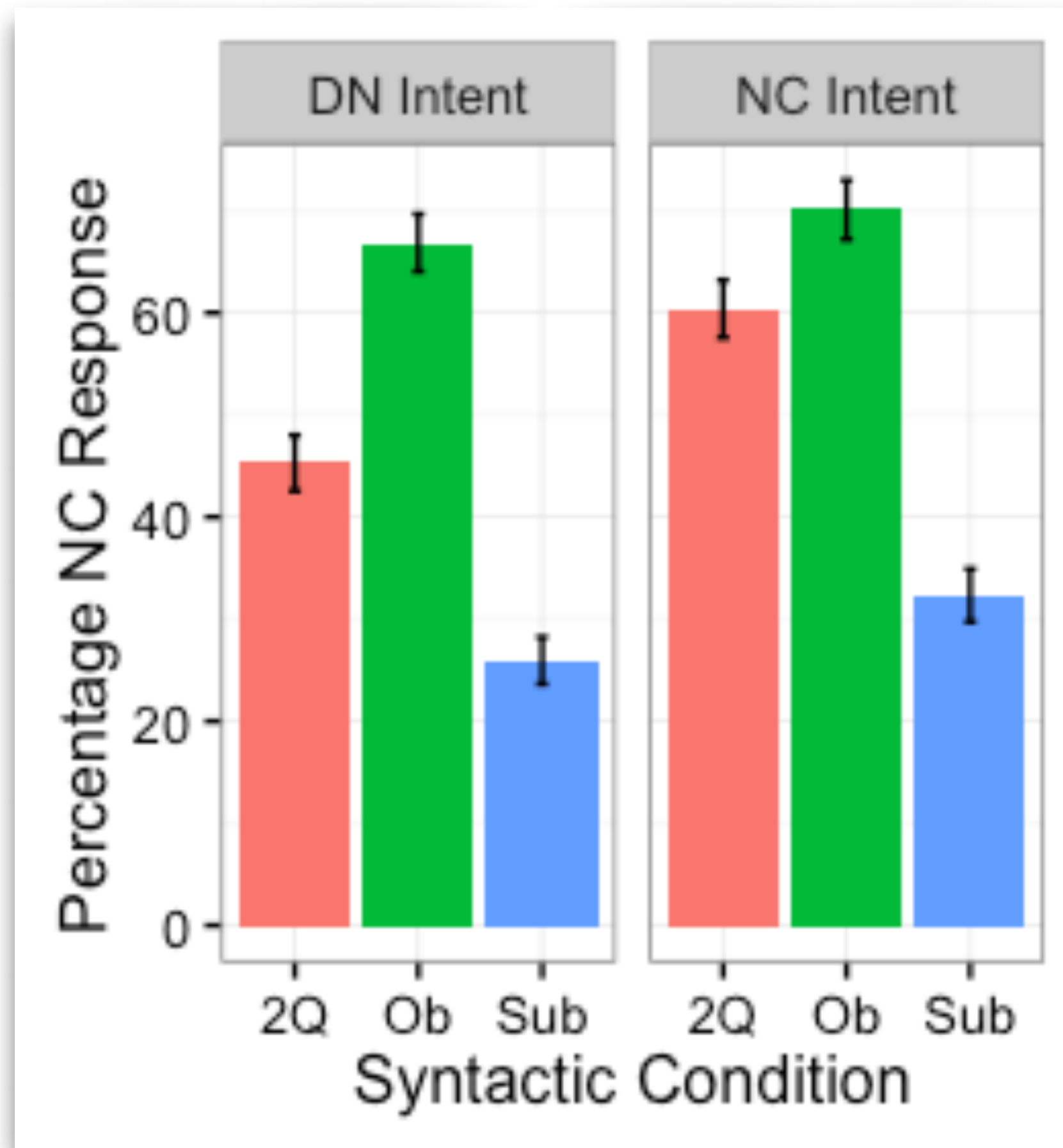


NC structure types:

2Q (two negative quantifiers): *No one will love nothing...*

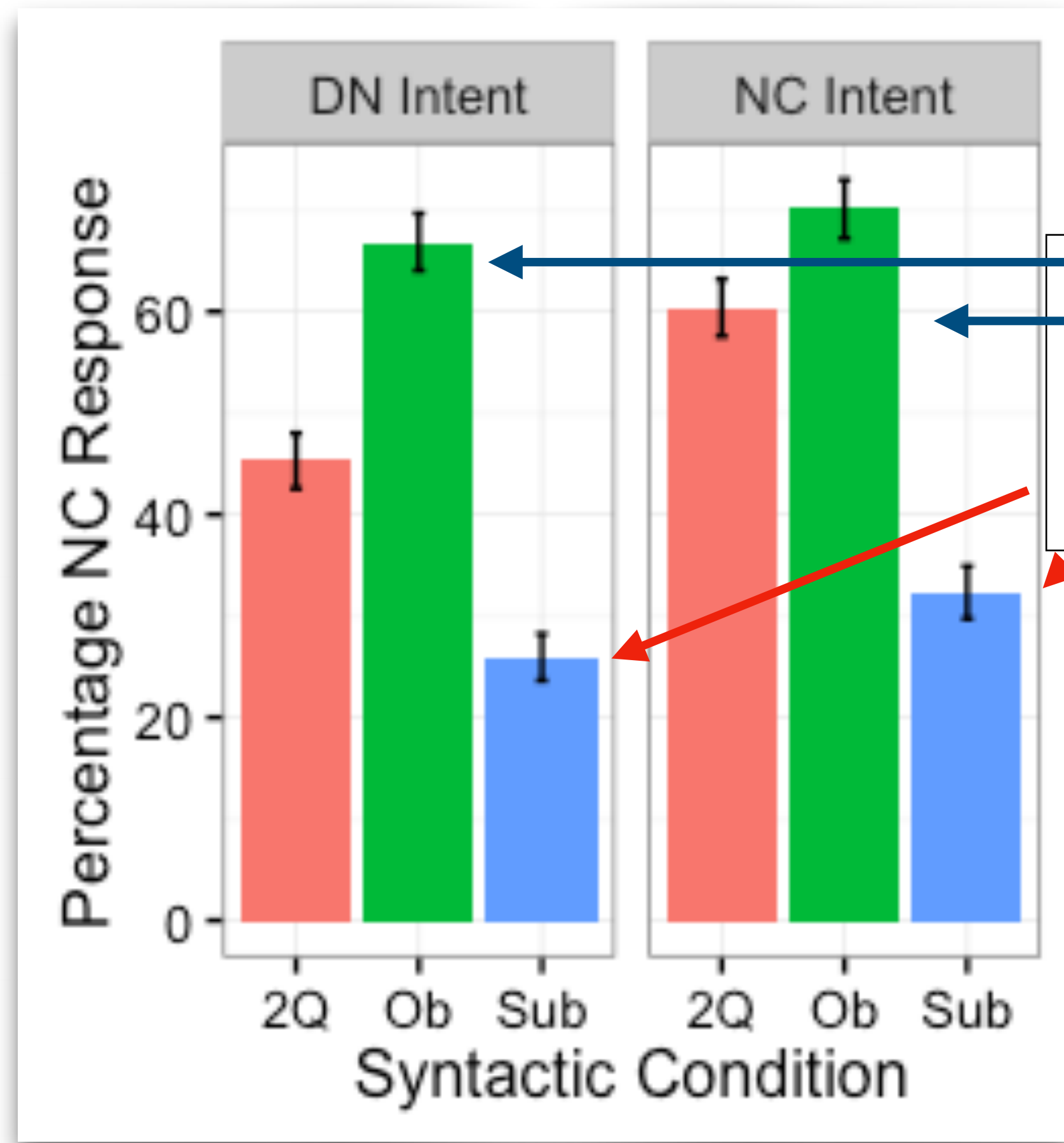
Ob (postverbal NC or DN): *Ronnie won't love nothing...*

Sub (preverbal NC or DN): *No one won't love nothing...*



(Blanchette et al. 2018)

Mainstream Listener Interpretation of Mainstream Speech

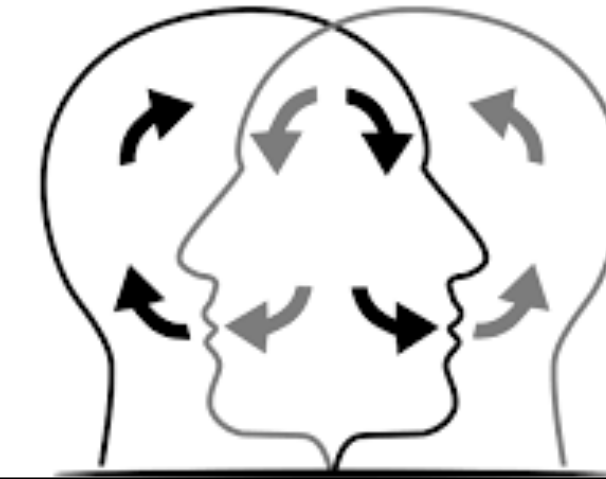
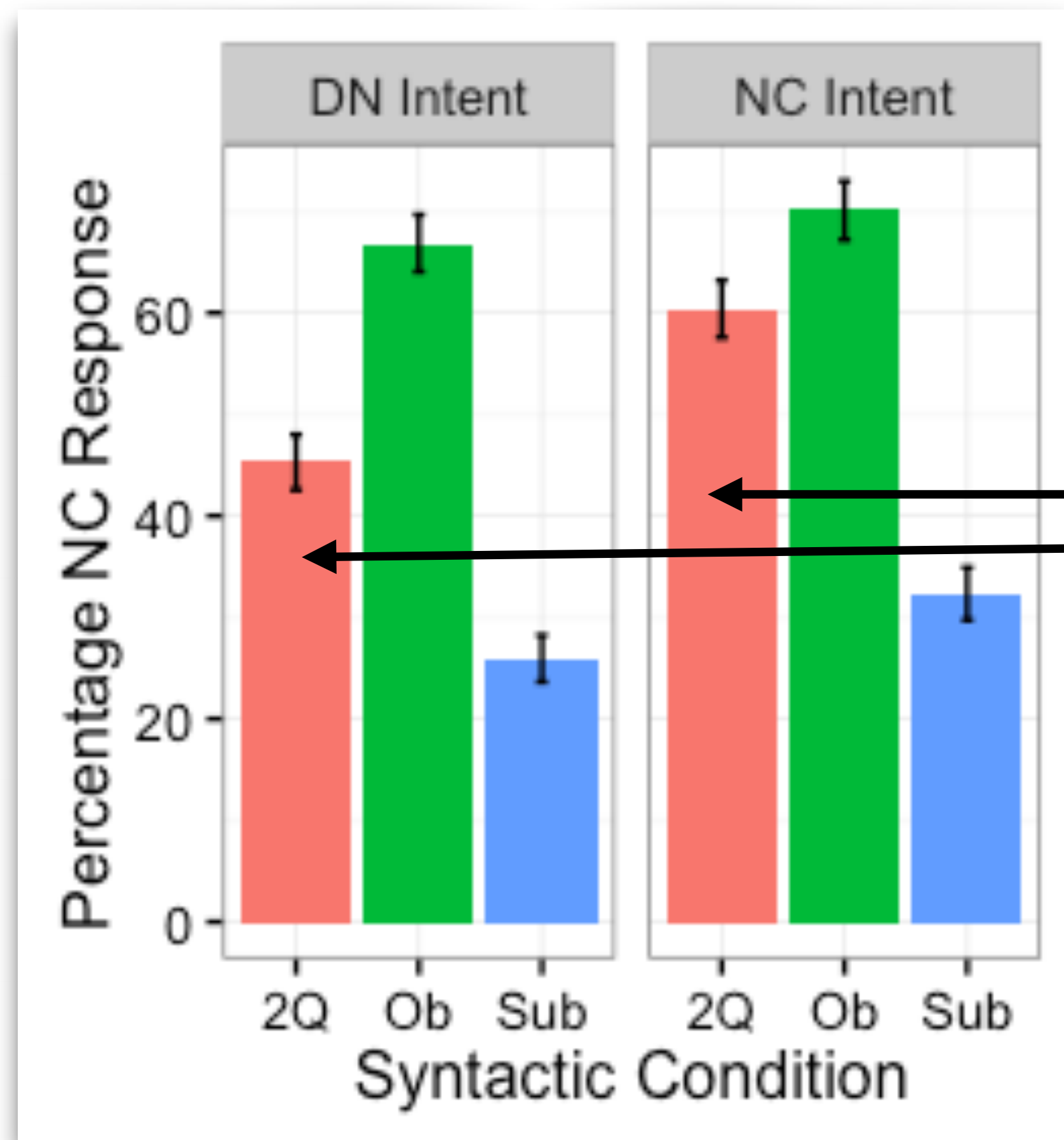


Non-subjects: Negative Concord > Double Negation

Preverbal subjects: Double Negation > Negative Concord

(Blanchette et al. 2018)

Mainstream Listener Interpretation of Mainstream Speech



Speaker intent had a significant influence on interpretation, which suggests highly nuanced levels of shared knowledge

(Blanchette et al. 2018)

Eye-Tracking While Reading with Mainstream Speakers

Janet woke up late and had to rush to get to work on time.

She didn't eat nothing for breakfast.

(Blanchette & Lukyanenko 2019a)

Eye-Tracking While Reading with Mainstream Speakers

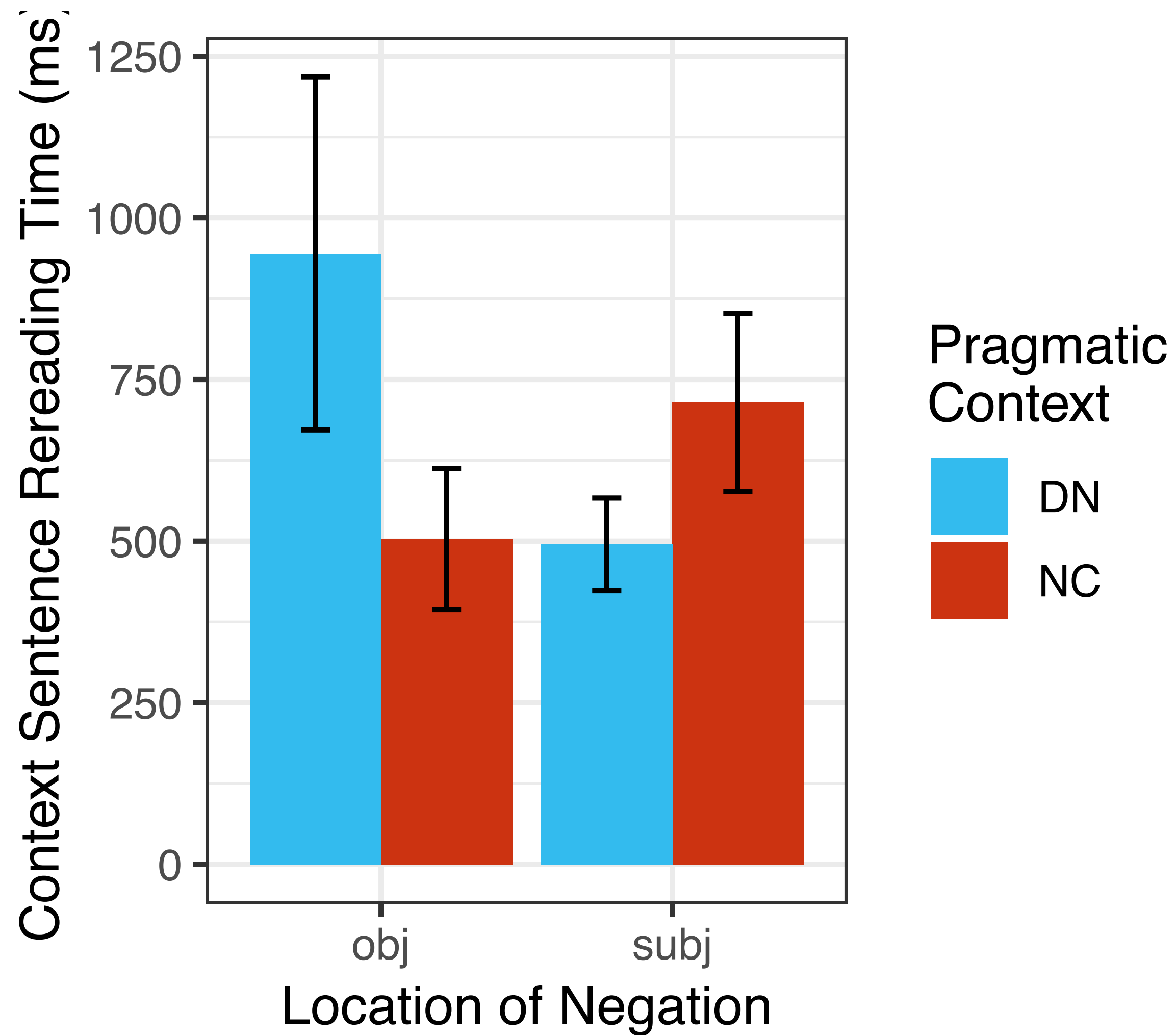
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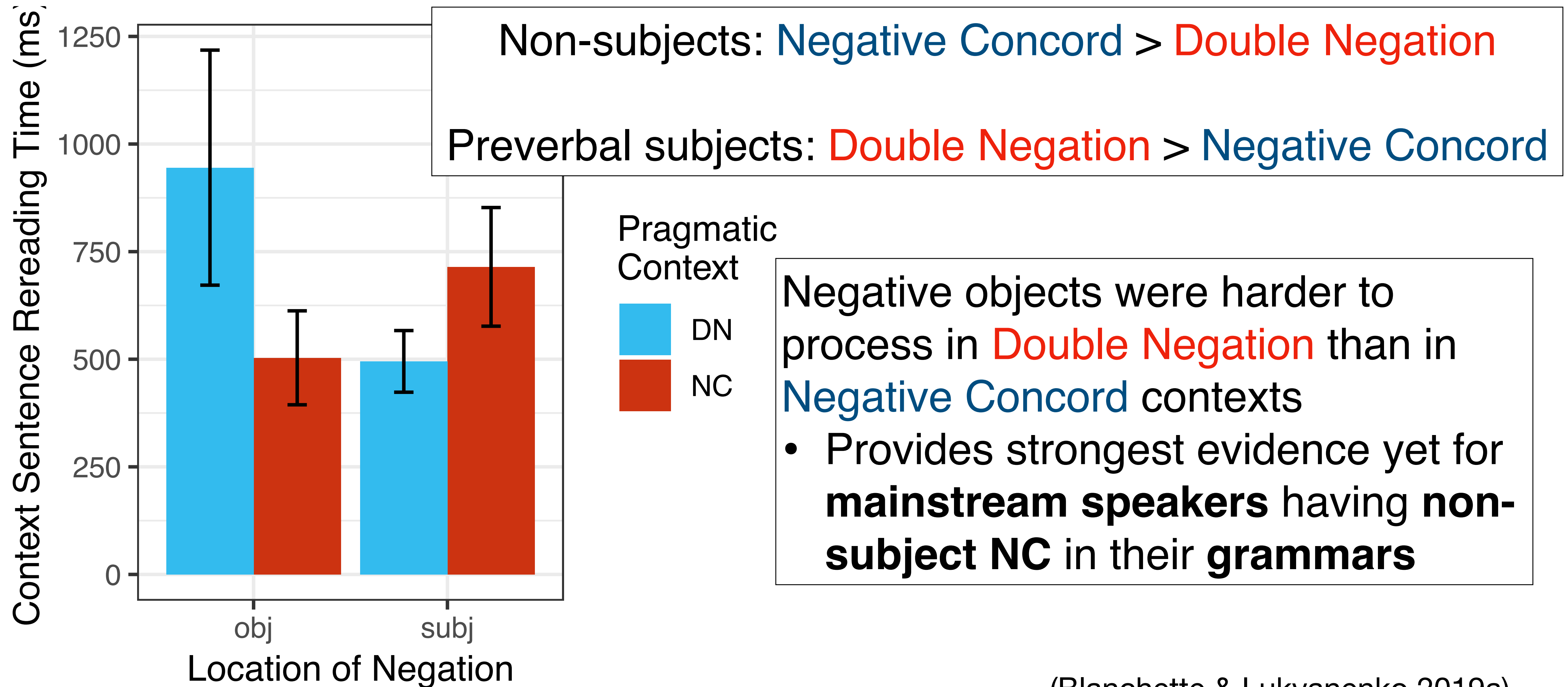
(Blanchette & Lukyanenko 2019a)

Eye-Tracking While Reading with Mainstream Speakers



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Eye-Tracking While Reading with Mainstream Speakers



(Blanchette & Lukyanenko 2019a)

Interim Summary: What We (Don't) Know

Suggestion from experimental work is that mainstream speakers have postverbal NC because they're handling it fine in experiments, but are they handling like vernacular speakers?



Different grammars?

Interim Summary: What We (Don't) Know

Suggestion from experimental work is that mainstream speakers have Object NC because they're handling it fine in experiments, but are they handling like vernacular speakers?

- We don't know because we have no comparable experimental data on vernacular speakers' comprehension and processing of NC!



Different grammars?

Interim Summary: What We (Don't) Know

Suggestion from experimental work is that mainstream speakers have Object NC because they're handling it fine in experiments, but are they handling like vernacular speakers?

- We don't know because we have no comparable experimental data on vernacular speakers' comprehension and processing of NC!

In addition, just because vernacular speakers use NC, this does not entail that their grammars are identical

- Indeed, corpus data suggest there may be some differences...



Different grammars?

Comparative Corpus Study

Audio-Aligned and Parsed Corpus of Appalachian English (AAPCAppeE), ~1 million words

- Southern Appalachia, vernacular (NC is used)

D.C. subcorpus of the Corpus of Regional African American Language (CORAAAL), ~1 million words

- Washington D.C., vernacular (NC is used)

(Also in progress: Corpus of Contemporary American English (COCA))

- a ~1 million word subcorpus, mainstream (no NC))

The Audio-Aligned and Parsed Corpus of Appalachian English (AAPCAppeE)

HOME PROJECT DESCRIPTION AAPCAPPE INTERVIEWS CITING THE AAPCAPPE NOTES ON THE PARSED PART
NOTES ON THE AUDIO-ALIGNED PART FUNDING ACKNOWLEDGMENTS OUTPUT AND ASSOCIATED PROJECTS



ORAAL Online Resources for African American Language

ORAAL Home About this Project About AAL Educational Resources Research Resources Glossary of Terms CORAAL

CORAAL

As a part of the ORAAL project, we have developed the first public corpus of AAL data, the **Corpus of Regional African American Language (CORAAL)**. CORAAL features recorded speech from regional varieties of AAL and includes the audio recordings along with time-aligned orthographic transcription.

CORAAL is a long-term corpus-building project conceived of in terms of several components. The first two components of CORAAL focus on AAL in Washington DC, the nation's capital, a city with a long-standing African American majority, and the site of much early research on AAL (e.g. Fasold 1972). In April 2018, the first additional component, CORAAL:PRV, was released, making available data for 16



Corpus of Contemporary American English SEARCH FREQUENCY CONTEXT OVERVIEW

List Chart Word Browse +
[input field] [POS]?
Find matching strings Reset
 Sections Texts/Virtual Sort/Limit Options

(HIDE HELP) NO LICENSE
Download the corpus (and corpus-based frequency data) for offline use
See randomly-selected words from the top 60,000 words
"Words of the Day": 20 words from 10 different frequency levels
DRC 2018/04/18 15:00:00

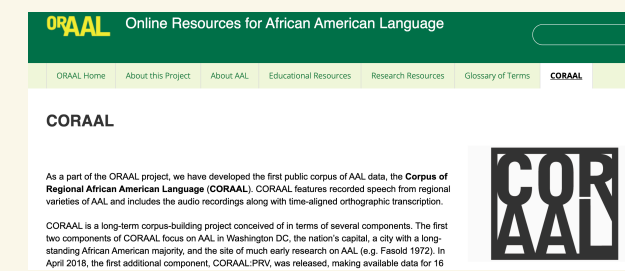
Negative Argument Sentences in Vernacular Speech

Sentence Type



AAPCAppE





CORAAL





Negative Argument Sentences in Vernacular Speech

Sentence Type	AAPCAppE 	CORAAL 
non-subject NC	I don't know nobody over there. (ALC-SD-1.130)	I didn't know nobody. (DCB_se2_ag4_f_05)



Negative Argument Sentences in Vernacular Speech

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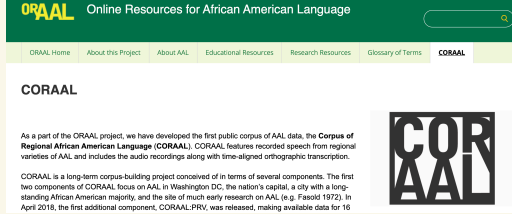
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Negative Argument Sentence in Vernacular Speech

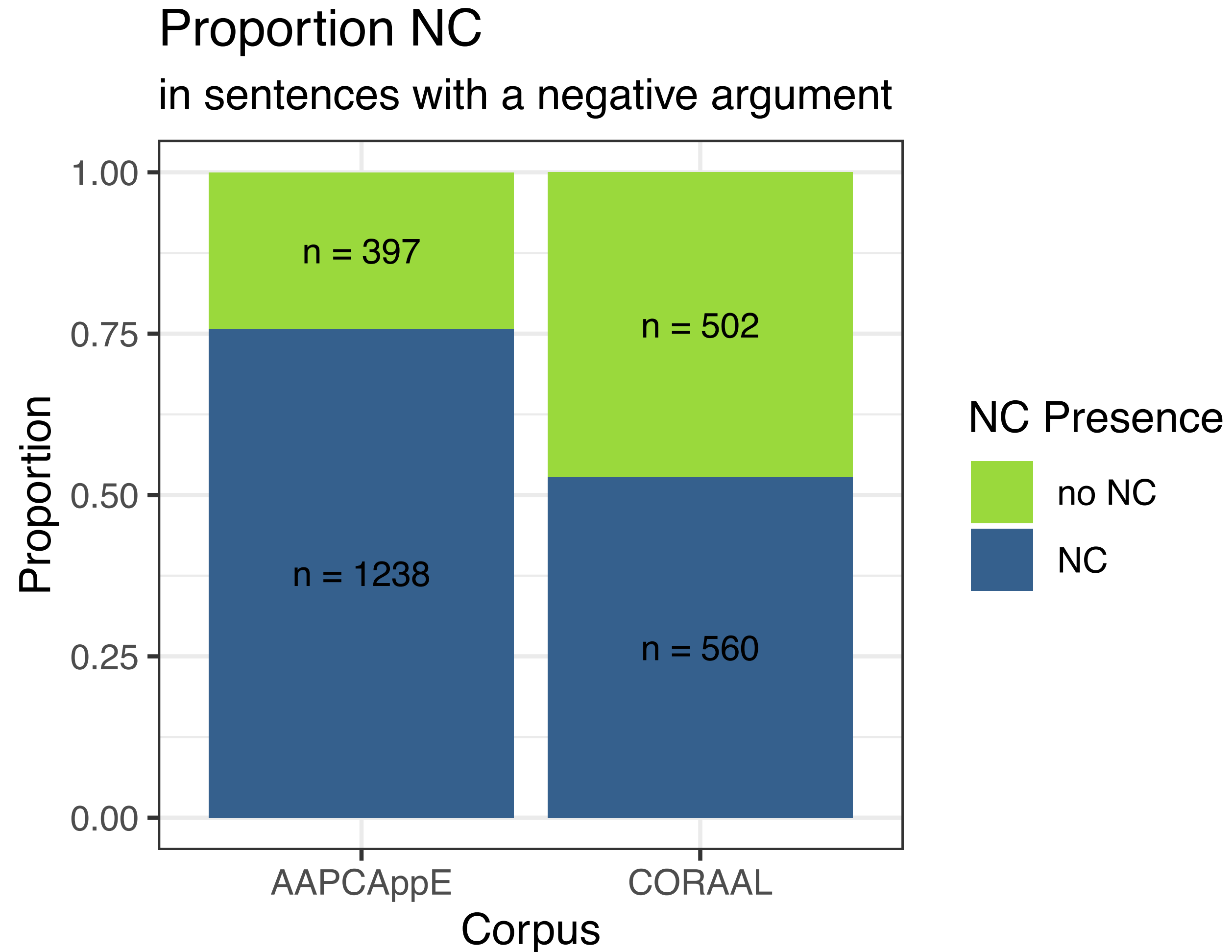
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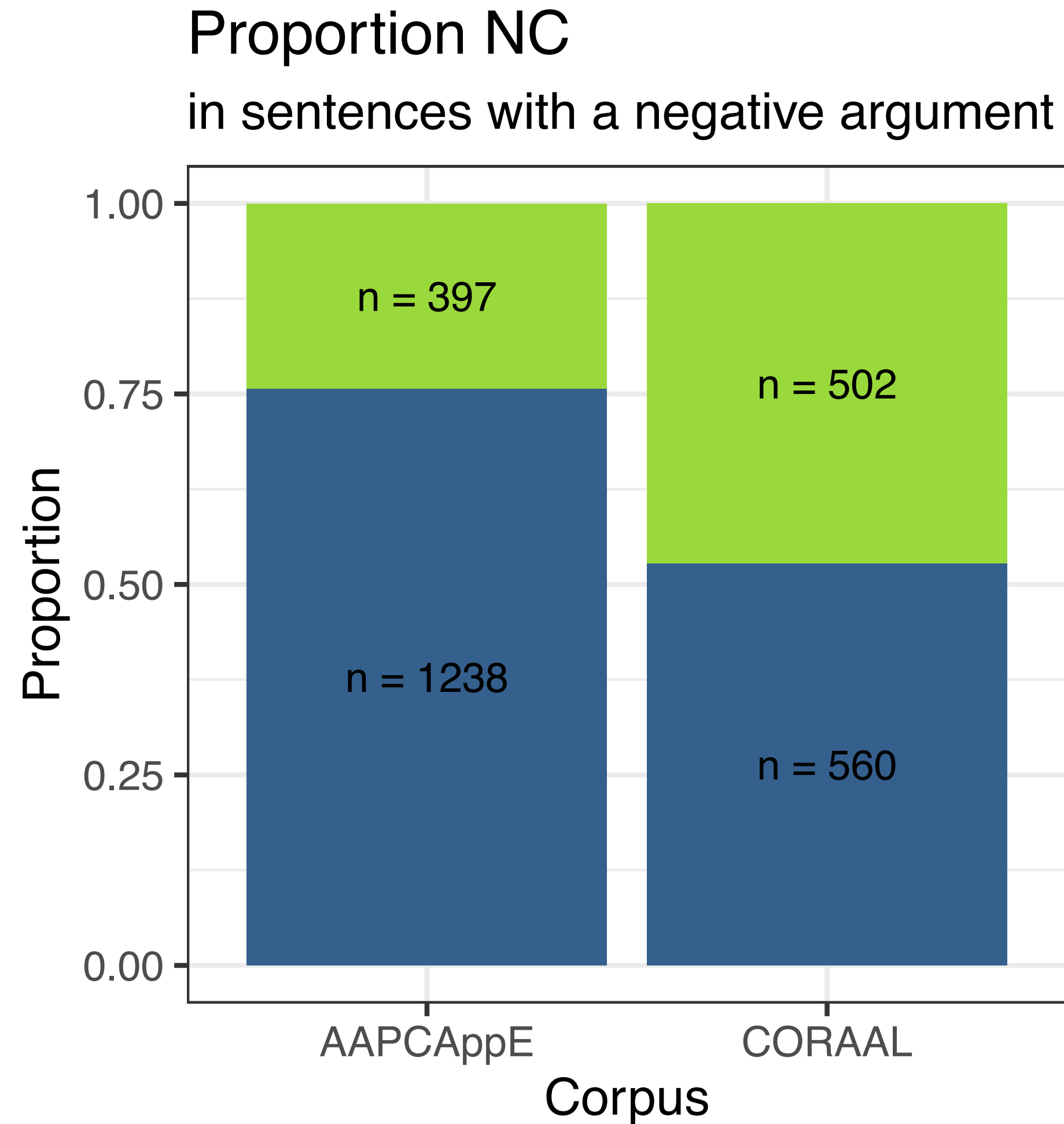
Different grammars?

Same sentence types suggests overlap, but intriguing frequency differences exist...

Negative Concord in Vernacular Speech



Negative Concord in Vernacular Speech



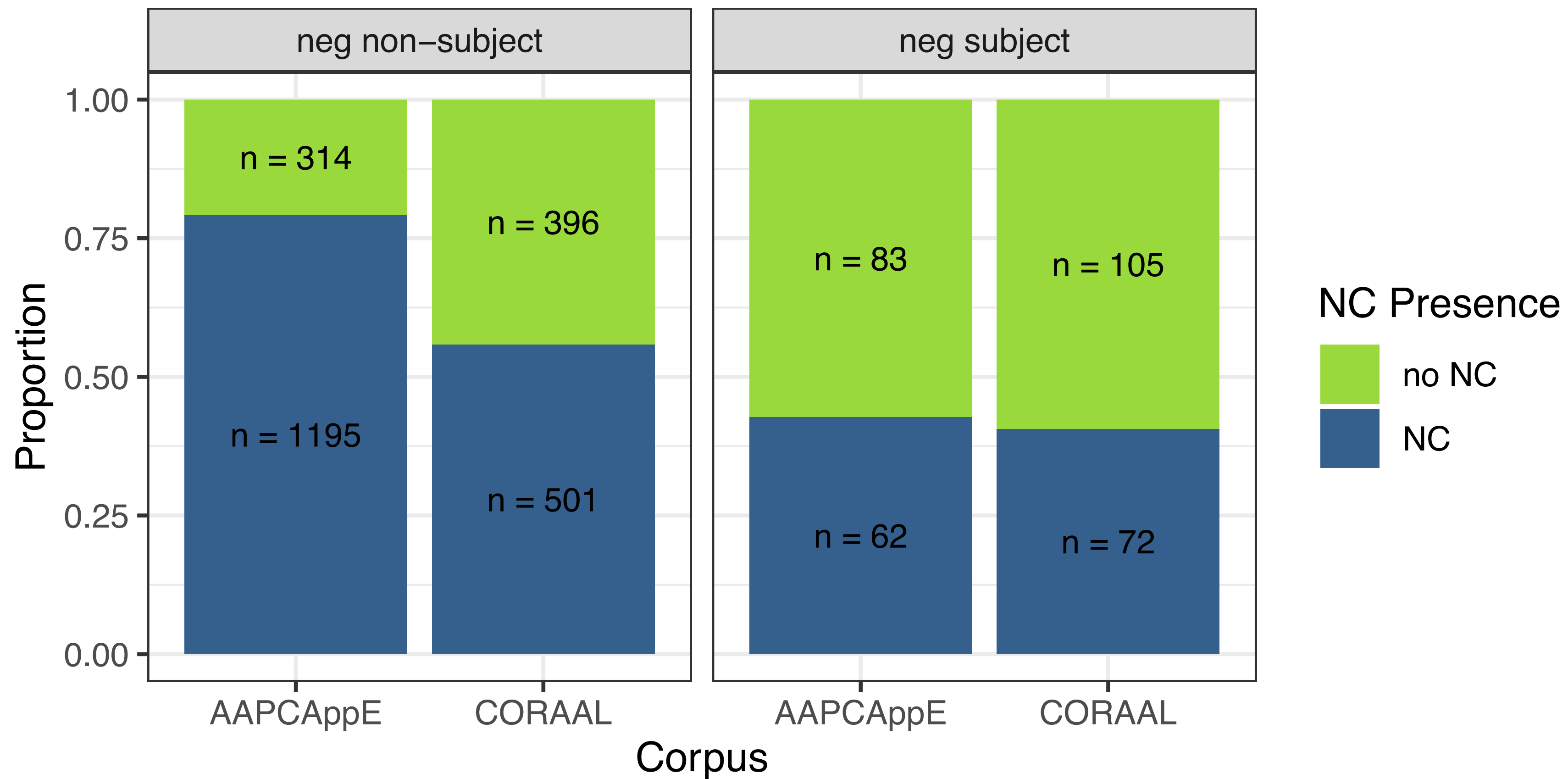
More NC overall in
AAPCAppE than in
CORAAL

NC Presence

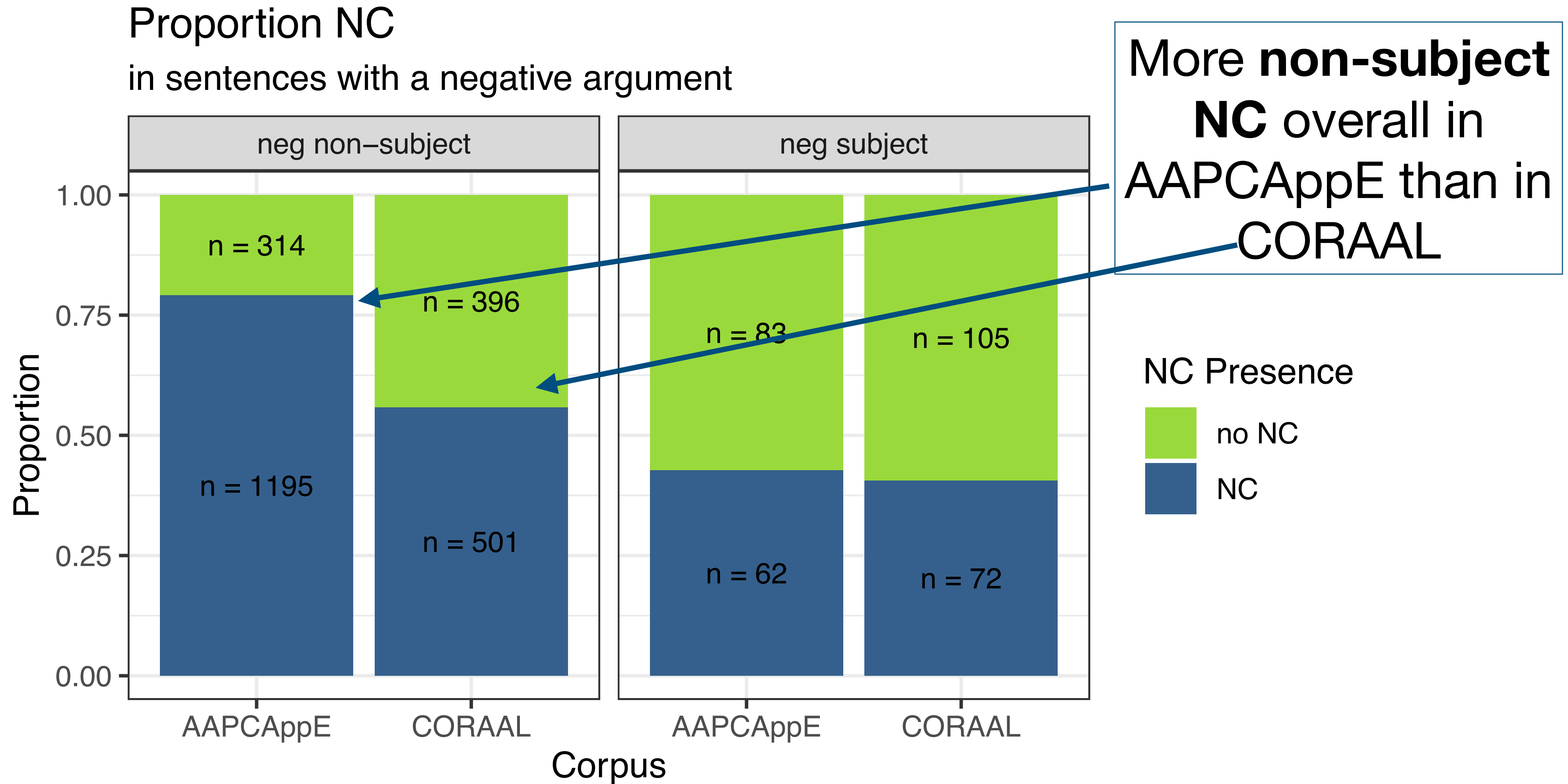


Negative Concord in Vernacular Speech

Proportion NC
in sentences with a negative argument

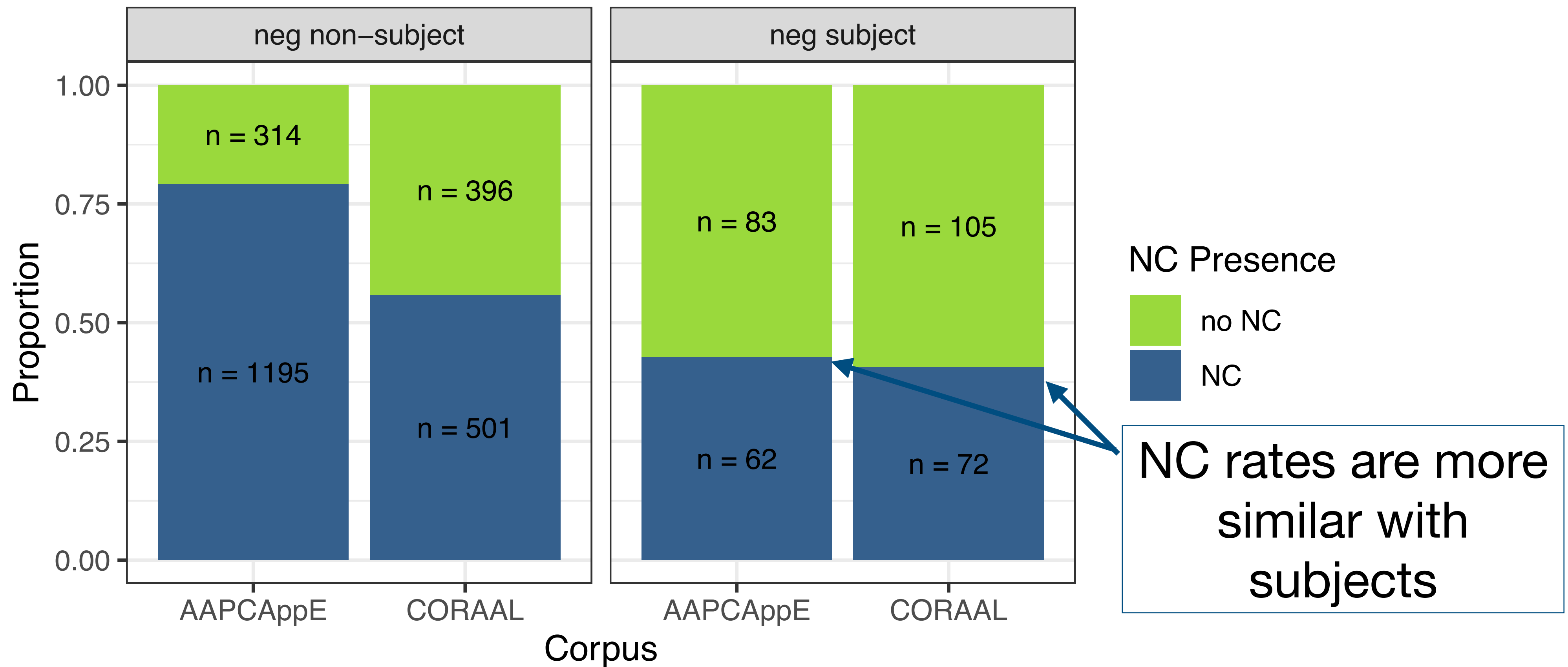


Negative Concord in Vernacular Speech

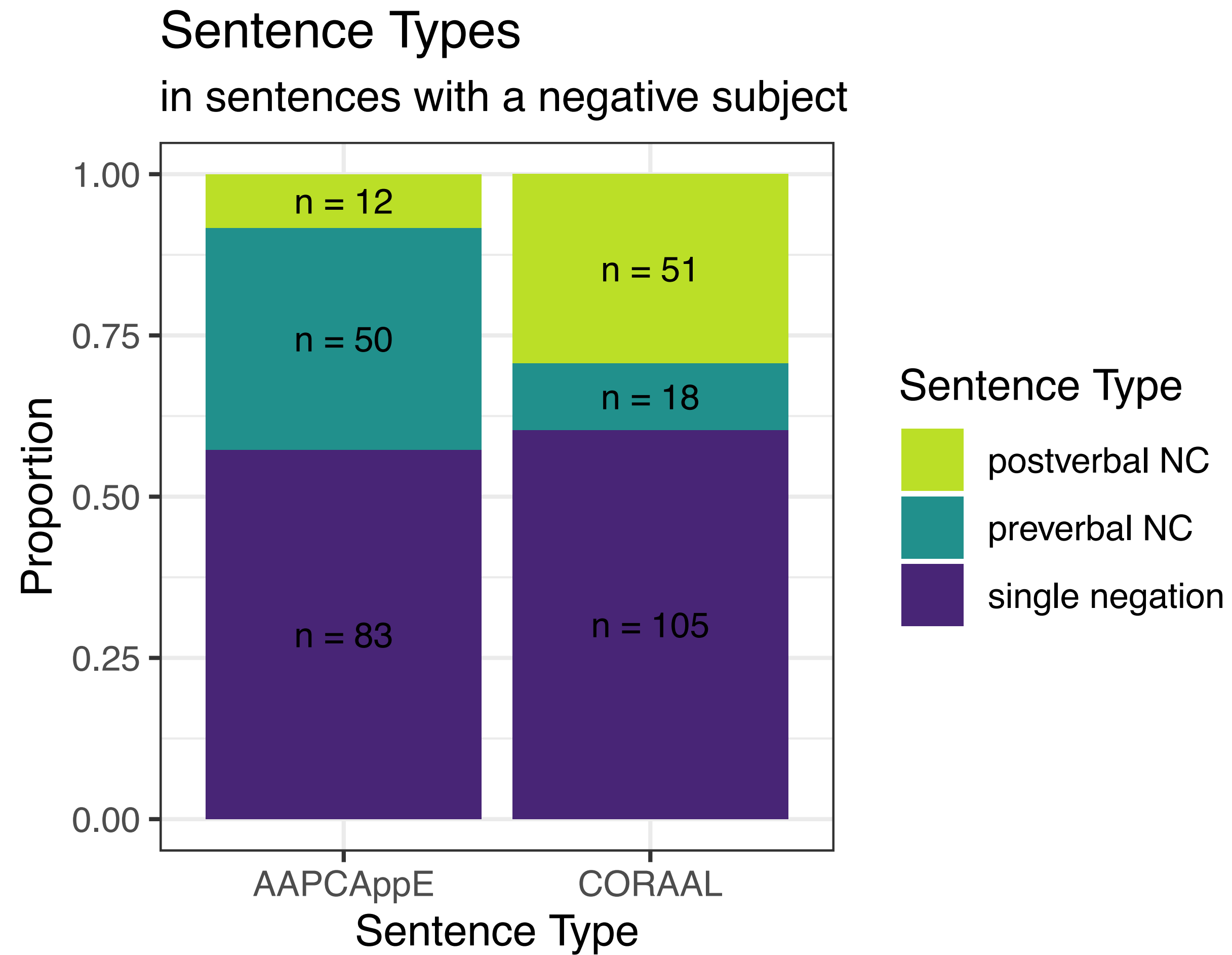


Negative Concord in Vernacular Speech

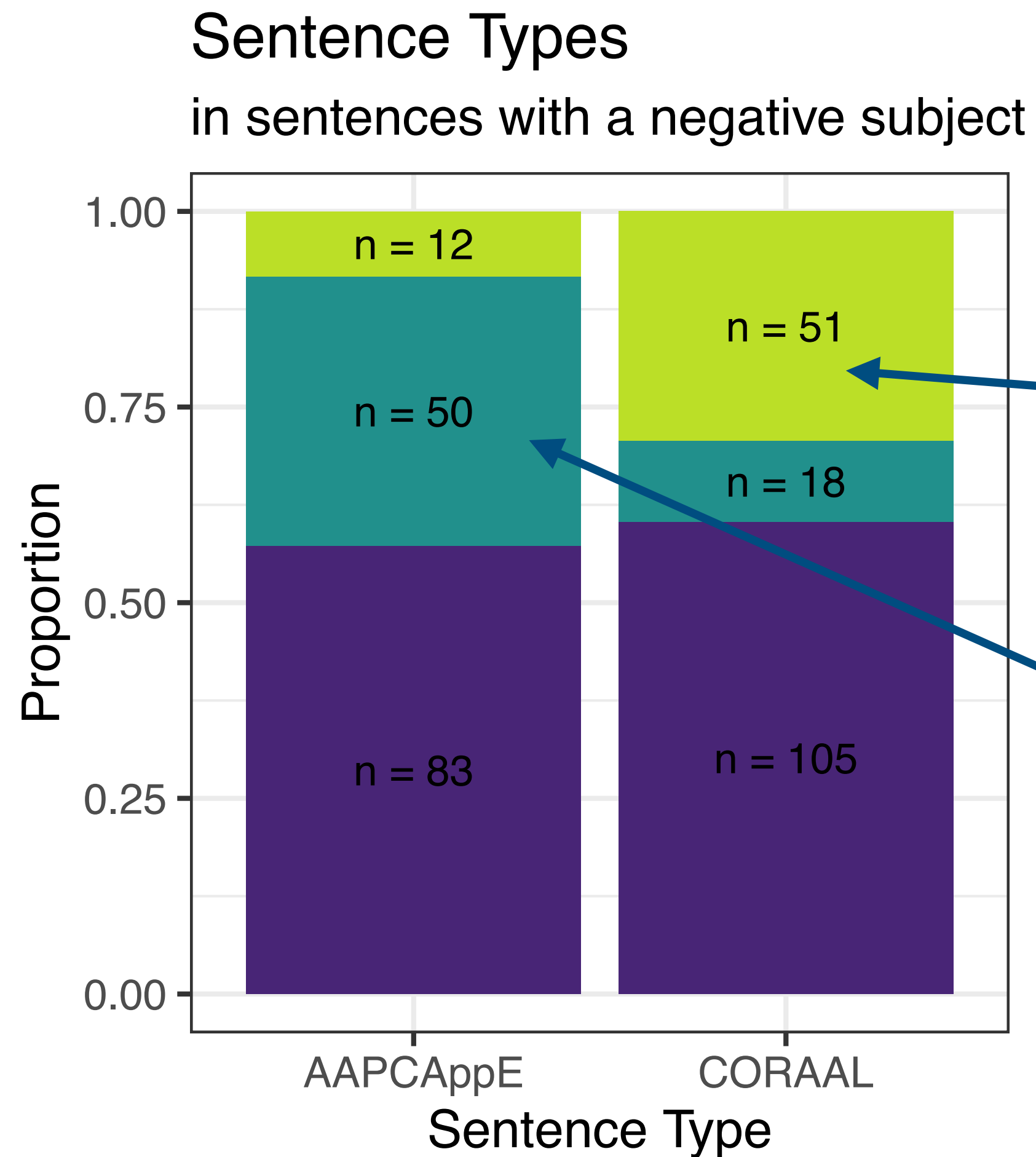
Proportion NC
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Negative Concord in Vernacular Speech



Negative Concord in Vernacular Speech



In NC sentences:

- CORAAL has more postverbal subjects
- AAPCAppE has more preverbal subjects

Summary: What We (Don't) Know

Vernacular speakers use NC with subjects (and non-subjects) to varying degrees

- Grammatical differences in NC may be not just in the vernacular vs. mainstream comparison, but also **between vernacular speaker groups**
- **Need information on processing and comprehension from vernacular speakers!**



Different grammars?

Perception Experiments (co-PIs J. Grieser and P. Reed)

Three speaker/participant groups:

- African American English (D.C.)
- Appalachian English (Tennessee)
- Mainstream American English (Pennsylvania)

Three experiments:

- Phoneme detection (auditory stimuli)
- Eye-tracking while reading (as in Blanchette & Lukyanenko 2019a)
- Sociolinguistic perception (eye-tracking—visual world paradigm)



NSF Award #2234039



Different grammars?

Benefits of a Triangulated Approach

- In the **absence of Mainstream production data**, we can use experimental methods to make direct comparisons across groups
- Processing patterns will allow us to draw **stronger inferences** about (the extent of) shared grammars



Different grammars?

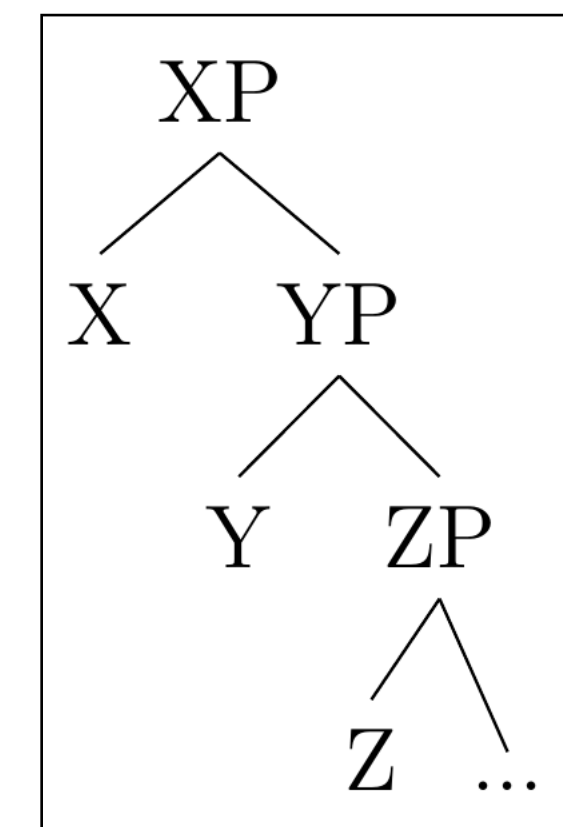
So, what's in a grammar



Conclusions thus far:

- Postverbal NC is probably part of Mainstream grammar (based on experiment data)
- Postverbal NC and some form of Subject NC are pretty clearly part of Appalachian and African American English grammars (based on production data)

Beyond this we're not ready to say!

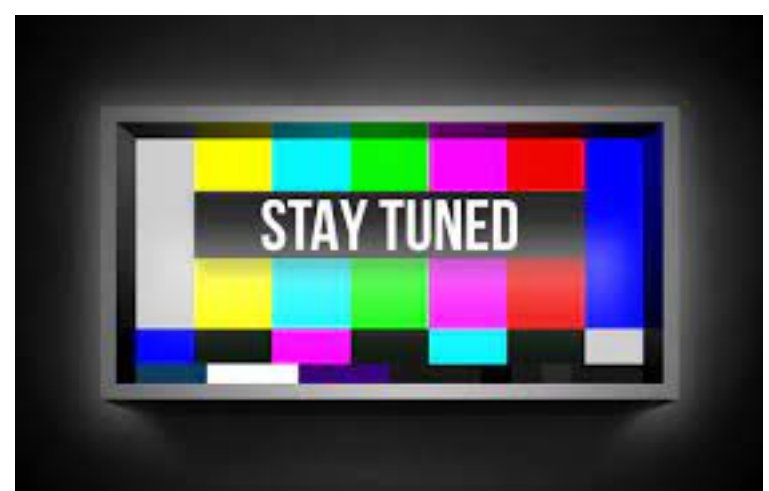


What's in a grammar

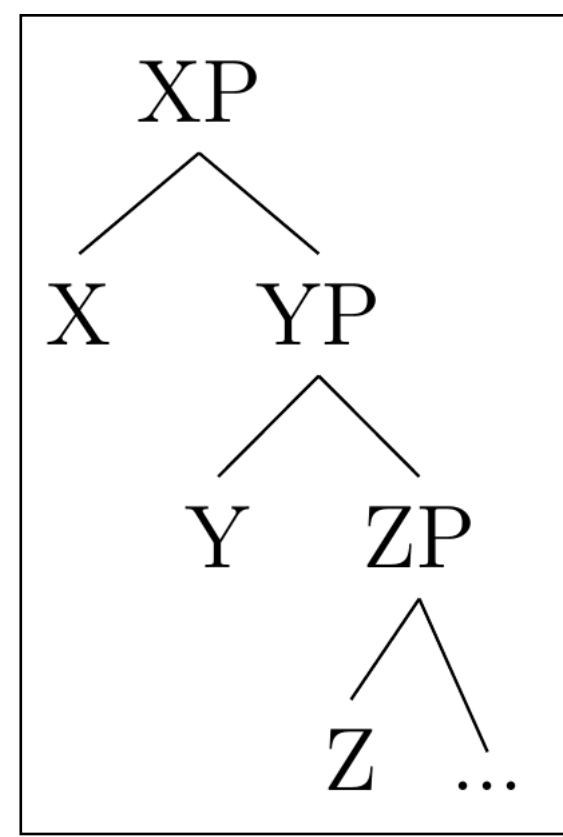


Comparable data sets will inform:

- theoretical models of English NC (and NC more generally)
- general questions about shared knowledge in contexts of dialect diversity, and methods for investigating it



Preliminary results coming soon



Thank you!



- Penn State Eberly College of Science and Center for Language Science

Center for Language Science

- Paul Reed



- Jessi Grieser

- Abigail Salem



- Benjamin Hunt



Selected references

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