

# Processing of Noun Complement Complex NPs with Subject and Object pro in Korean

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## Research Question

What causes difficulty in processing Noun Complement Complex NPs with a silent pronoun?

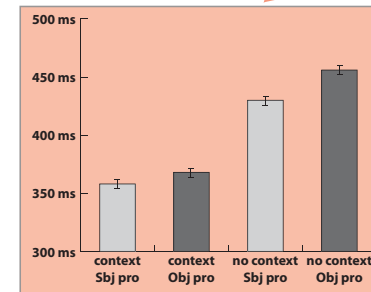
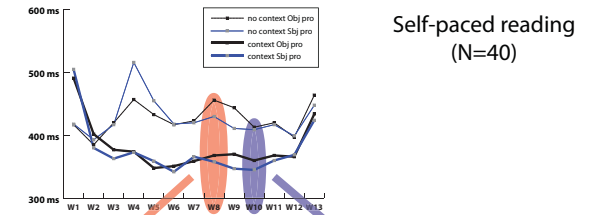
### NCCNPs with subject *pro*

W1 W2 W3 W4 W5 W6 W7 W8 W9 W10 W11 W12 W13  
 지난 달 *pro* 편집장을 뇌물 수수 혐의로 협박한 **사실이** 밝혀지자 **총장은** 즉각 기자회견을 열었다.  
 Last month *he*, editor-ACC bribe taking suspicion-with threaten-ADN **fact-NOM** was.revealed-as **chancellor-TOP** immediately press.conference-ACC held  
 'The chancellor, immediately held a press conference as the fact that he, threatened the editor for taking a bribe last month was revealed.'

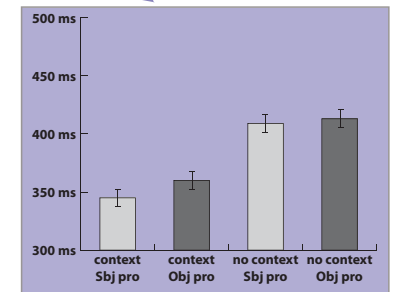
### NCCNPs with object *pro*

W1 W2 W3 W4 W5 W6 W7 W8 W9 W10 W11 W12 W13  
 지난 달 편집장이 *pro* 뇌물 수수 혐의로 협박한 **사실이** 밝혀지자 **총장은** 즉각 기자회견을 열었다.  
 Last month editor-NOM **him**, bribe taking suspicion-with threaten-ADN **fact-NOM** was.revealed-as **chancellor-TOP** immediately press.conference-ACC held  
 'The chancellor, immediately held a press conference as the fact that the editor threatened him, for taking a bribe last month was revealed.'

## Experimental Observation



Object disadvantage at W8 (p<.007)



No effect of pro type at W10

## Two Classes of Answers

### 1. Memory-inspired theories

: Connecting elements in a long-dependency causes processing difficulty.

#### Dependency Locality Theory (Gibson 1998)

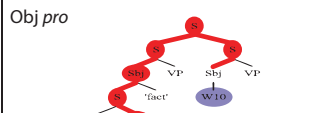


NCCNPs with Sbj-*pro* have more intervening elements between *pro* and its antecedent at W10

Prediction:

**Subject disadvantage at W10**

#### Structural Distance Theory (O'Grady 1997)



NCCNPs with Obj-*pro* have more intervening nodes between *pro* and its antecedent at W10

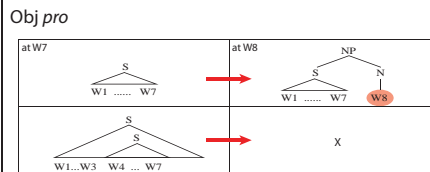
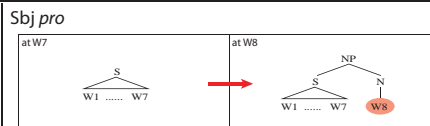
Prediction:

**Object disadvantage at W10**

### 2. Disambiguation-inspired theories

: Reducing uncertainty about future derivations causes processing difficulty.

#### Entropy Reduction Hypothesis (Hale 2006)



NCCNPs with Obj-*pro* is temporarily more ambiguous before W8 is encountered (Yun et al. 2010)

Prediction:

**Object disadvantage at W8**

## Conclusion

Korean NCCNP comprehension implicates a **disambiguation-inspired theory** (Hale 2006).

## References

- Gibson, Edward. 1998. Linguistic complexity: Locality of syntactic dependencies. *Cognition* 68. 1-76.  
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 O'Grady, William. 1997. *Syntactic Development*. Chicago, IL: University of Chicago Press.  
 Yun, Jiwon, John Whitman, & John Hale. 2010. Subject-Object Asymmetries in Korean Sentence Comprehension. *Proceedings of CogSci* 2010.