

## Introduction

- The reference of free, 3P pronouns sometimes depends on the specific prosodic pattern used.
- Two distinct mechanisms have been proposed: (1) **Accentual status** of a pronoun interacts directly with the strategy used to establish reference, (2) **prosodic patterns constrain the propositional content of an utterance by way of information structure.**
- Which mechanism better accounts for the relationship between prosody and pronominal reference in perception?

### Prosody and Pronominal Reference Interact

- (1) a. Jon hit Bob, and then DAN hit him. [him=Bob]  
           H\*                   L-L%
- b. Jon hit Bob, and then DAN hit HIM. [him=Jon]  
           H\*   L-   H\* L-L%
- (2) a. Jon kicked Bob. He was INjured. [he=Bob]  
           H\*   L-L%
- b. Jon kicked Bob. HE was injured. [he=Jon]  
           H\*                   L-L%

### Competing Approaches

#### Switching Approach

- Reference of an accented pronoun can be predicted from the reference of some unaccented counterpart
- **Blocking** of a default reference strategy (Solan 1983, Levinson 2000, Beaver 2004, Clark & Parikh 2006)
- Reordering of a transition preference in a Centering model (Kameyama 1999, Cahn 1995, Nakatani 1997)
- Key assumption: If default reference is known, accentual status is a direct predictor of reference

#### Information Structure (IS) Approach

- Effects follow from a general theory of the meaning of prosodic patterns over utterances
  - Contrastive focus presupposition (Rooth 1992)
  - Postnuclear constituents are Given (Schwarzschild 1999)
- Key assumption: Predictions for reference are *independent* of the notion of a default
- Venditti et al. (2001), de Hoop (2004), Kehler (2005), Jasinskaja & Mayer (2007), German (2009)

#### Issues

- Specialized interpretive principle for accents that occur specifically on pronouns?
- Prosody-reference interaction not limited to pronouns (Kehler 2005, Djalali et al. 2008)
- How locally are pitch accents interpreted?

## Methods

### Conflicting Predictions

- (3) i. At the check-in counter, Jon reminded Dan to ask for the ocean view.  
       ii. Later that night, he made a reQUEST.  
   H\* L-L%
- ii'. Later that night, HE made a request.  
   H\*                   L-L%

**Prediction (Switching):** If the preferred reference of unaccented *he* in (3ii) is for the matrix subject (i.e., *Jon*)\*, then accented *he* in (3ii') should show a preference for the embedded subject (i.e., *Dan*)

**Prediction (IS Approach):** Regardless of the preference associated with unaccented *he* in (3ii), the interpretation of the prosodic pattern in (3ii') constrains *he* to refer to the matrix subject of (3i)

### Schwarzschild (1999)

- The accent pattern in (3ii') is licensed only if:
  - (1)  $\exists x[x \text{ made a request}]$  is entailed by an element of the context\*, AND
  - (2)  $[he \text{ made a request}]$  is NOT entailed by an element of the context
- Condition (2) is satisfied only if *he* refers to the matrix subject (*Jon*)
- Effectively: the value of *he* must contrast with the value of a referring expression in some utterance with which (3ii') is being compared
- C.f., contrastive focus (Rooth 1992), relative Givenness (Wagner 2005)

### Assumptions

- (3i) contains a non-finite clause:  $[PRO \text{ ask for the ocean view}]$ , where *PRO* is coreferential with *Dan* (Hornstein 2000)
- $[Dan \text{ ask for the ocean view}]$  entails  $[Dan \text{ made a request}]$

### Baseline Comparison

- (4) i. At the check-in counter, Jon implored Dan to ask for the ocean view.  
       ii. Later that night, he made a reQUEST.  
   H\* L-L%
- ii'. Later that night, HE made a request.  
   H\*                   L-L%

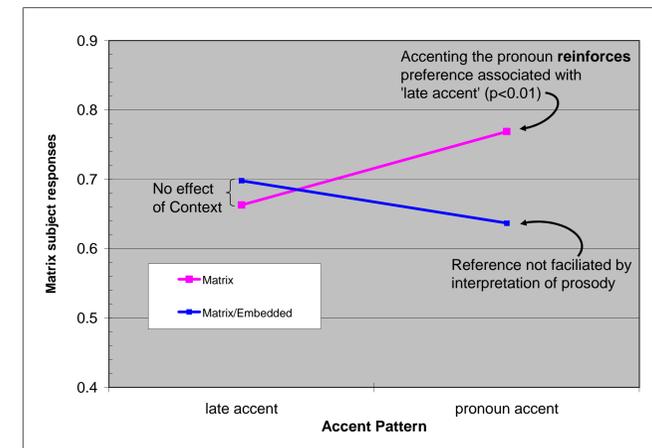
**Prediction (IS Approach):** The interpretation of the prosodic pattern in (4ii') cannot be satisfied by either available referent\*:

$[Dan \text{ ask for the ocean view}]$  entails  $[Dan \text{ made a request}]$   
 $[Jon \text{ implored...}]$  entails  $[Jon \text{ made a request}]$

### Perception Task

- 32 Northwestern undergraduate students (credit or pay)
- 32 item sets, each occurring in 4 matched conditions (128 items)
- 2 levels of PROSODY (*late*, *pronoun*)
- 2 levels of CONTEXT (*matrix*, *free*)
- Audio + text presentation
- Forced-choice response emphasizing *global* interpretation
- 40 filler items: distractors, basis for exclusion

## Results



- Overall preference for matrix subject in *late accent* conditions
- Effect of context only for *pronoun accent*
- Direction of effect of prosody depends on context
- Increase in matrix readings for *pronoun accent* not consistent with switch

### Follow-up: Quantitative Adequacy

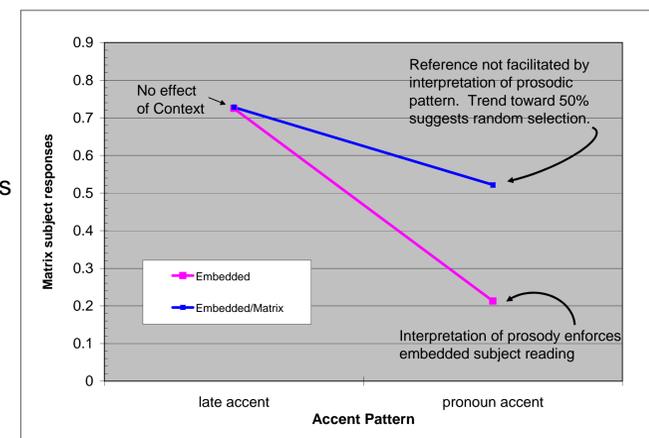
- (5) i. During the trial, Sue blackmailed Anna into admitting the affair.  
       i'. During the trial, Sue blackmailed Anna into lying under oath.  
       ii. After the trial, SHE broke the law.  
   H\*                   L-L%

### Prediction (IS):

Interpretation of the prosodic pattern in (5ii) constrains pronoun to refer to embedded subject of (5i), and leaves its reference unspecified in the context of (5i')

### Findings

- Robust difference in strength of effect of prosody not predicted by switching approach



## Conclusions

- Only the IS approach can account for the qualitative and quantitative effects of prosody on pronominal reference
- Pronominal reference not driven by local interpretation of pitch accents
- Proposed model (German 2009):
  - Pronouns not associated with a default reference, but are fundamentally flexible to discourse-level constraints (Kehler 2002)
  - Interpretation of prosody vis-à-vis information structure constrains the TC/propositional content of utterances, and thereby reference

## Selected References

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