

# Bare Noun (Pseudo-Incorporated) Antecedents and Anaphora: Preference for Singular Interpretation

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 ELM 1 – Experiments in Linguistic Meaning  
 Virtual Conference, September 16-18 2020, Philadelphia

## Pseudo-Incorporated Nominals (PINs)

- Massam 2001, 2009, 2017; Borik & Gehrke 2015
- Key properties:
  - Reduced syntactic structure
  - non-specific, number-neutral interpretation
- Example Bare noun objects in Persian:
 

*Sara sib-ra kharid.* *Sara yek sib kharid.* *IDF* *Sara sib kharid.* *PIN*  
 Sarah apple-OM bought Sarah one apple bought Sarah apple bought  
 'S. bought the apple.' 'S. bought an apple.' 'S. bought an apple/apples.'
- Theoretical proposals for the semantics of PINs:
  - refer to properties (McNally & van Geenhoven 1998)
  - do not fill but restrict argument slots (Chung & Ladusaw 2003)
  - refer to kinds (Aguilar-Guevara & Zwarts 2010 for weak definites)

## Anaphoric potential of PINs

- Common assumptions:
  - **O**: do **not** license anaphora (discourse-opaque): Dayal 1999, Asudeh & Mikkelsen 2000, Massam 2001, ...
  - **A**: license anaphora **fully** (disc.-transparent) (van Geenhoven 1998..)
  - **B**: license anaphora to **reduced/variant** degree (disc.-translucent) Farkas & de Swart 2003, Dayal 2011, Law & Syrett 2017
- **A\***: Modarresi 2014:
  - PINs introduce number-neutral discourse referents (DRs)

$x_1 \xi_2 \mid x_1 = \text{Sara, apple/s}(\xi_2), \text{bought}(x_1, \xi_2)$  DRT Representation  
 $\xi_2$ : number-neutral DR

- $\xi_2$  can be picked up by number-neutral anaphor, or singular / plural anaphora, if this is epistemically likely
- **B\***: Krifka & Modarresi (2016), cf. also Yanovich (2008)
- PINs introduce dependent definite within existential closure

$x_1 \mid x_1 = \text{Sara}, \exists e_2 x_3 \mid x_3 = \text{apple-of}(e_2), e_2: \text{bought}(x_1, x_3)$

- $x_3$  cannot be picked up directly, only after creation of DR via abstraction and summation (Kamp & Reyle 1993)

$x_1 \mid x_1 = \text{Sara}, \exists e_2 x_3 \mid x_3 = \text{apple-of}(e_2), e_2: \text{bought}(x_1, x_3)$   
 $x_4 \mid x_4 = \Sigma x_3 e_2 x_3 \mid x_3 = \text{apple-of}(e_2), e_2: \text{bought}(x_1, x_3)$

- Uptake of  $x_4$  relies on more complex procedure, anaphor predicted to be less salient.
- Uptake with singular or plural uptake possible, depending on whether  $\Sigma x_3 [\dots]$  anchors to one or more entities
- Possible preference for singular interpretation, as  $\Sigma x [x \dots]$  is cognitively simpler if  $[x \dots]$  can be anchored to only one entity

## Hypotheses supporting B\*

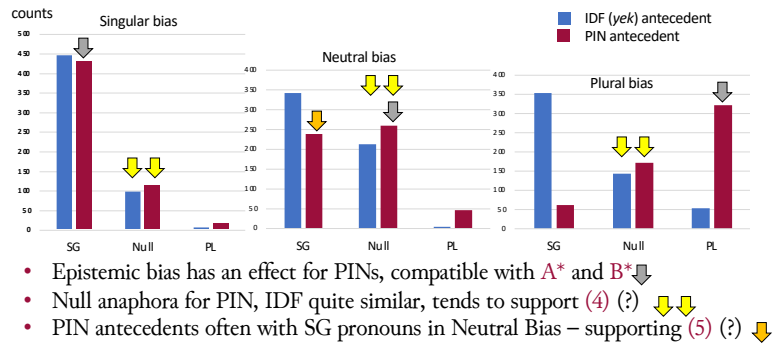
- (1) PINs can be picked up by pronouns (A/B against O)
- (2) PINs are picked less often than IDF's by pronouns (B against A).
- (3) PINs are not as good antecedents as IDF's (B against A)
- (4) PINs have no preference for null anaphora (B\* against A\*) in neutral epistemic contexts
- (5) PINs have a preference for singular interpretation, as summation  $\Sigma$  is cognitively simpler with just one instance (B\* against A\*)

## Experiment 1: Forced choice of anaphor

- Task: Read sentence, choose among given continuations
- Stimuli:
  - antecedent type: either **PIN** or **IDF** (yek-marked)
  - epistemic bias type: **singular**, **neutral** or **plural** interpretation
  - uptake with **singular**, **null** or **plural** anaphora

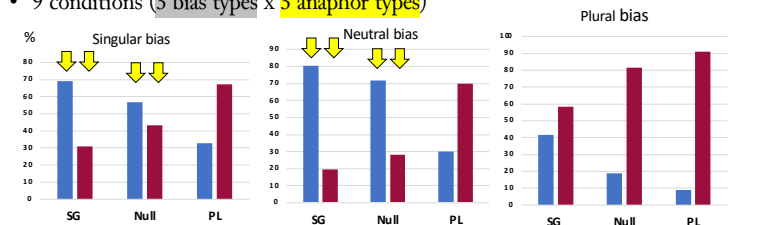
*Sara { yek / Ø } { television / ketāb / havij } kharid.*  
 Sara **IDF / PIN** TV book carrot bought  
*Baad tu-ye mashin □ gozasht-esh □ gozasht-Ø □ gozasht-esboon*  
 then in-EZ car put-it put-EZ-Ø put-them

- 6 conditions (3 bias types x 2 antecedent types)  
 36 items 8 fillers, randomized in 12 lists using Latin square design, 357 participants in an online experiment.

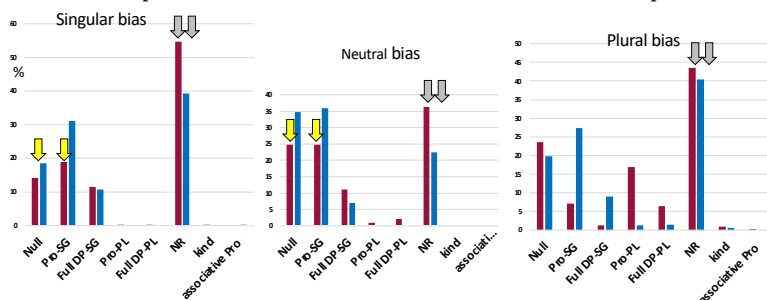


## Experiment 2: Forced choice of antecedent

- Same items and 357 participants as in Experiment 1, in 12 Lists
- Anaphor given, antecedent selected, here illustrated with *ketāb* (neutral bias)  
*Ali □ ketāb / □ yek ketāb kharid va gozasht-Ø / -esh / -esboon rooy-e-miz.*  
 Ali **PIN** book / **IDF** book bought and put-Ø / it / them on-EZ-table
- 9 conditions (3 bias types x 3 anaphor types)



- PINs not as good antecedents as IDFs except in plural bias, supporting (3).
- **Experiment 3: Free completion task**
- Free completion of a preceding sentence, a natural production task
- *Leila { yek / Ø } { television / ketāb / havij } kharid va baad \_\_\_\_\_*  
 Leila **IDF** **PIN** TV book carrot bought and then
- 6 conditions (3 bias types x 2 antecedent types)  
 252 native speakers, 36 items, 3 fillers, randomized in 8 lists, Latin square, online.



- PINs are less often picked up by anaphora than IDF, supporting (3) (NR in the graph: no anaphoric reference)
- PINs have no preference for null over singular (except plural bias), supp. (4)
- PINs are picked up quite often (> 50%), supporting (1) where Full DP uptake is similar to IDFs, no evidence for associative uptake
- Difference between Null/Pro-SG uptake is similar in singular / neutral bias, evidence for singular interpretation, supporting (5) (?)
- Unclear: Why less anaphoric uptake (NR) with SG and PL bias?

## Discussion

- PINs (bare object nominals in Persian) make good antecedents, they do not rely on indirect uptakes like associative anaphora (1)
- However, PINs make not quite as good antecedents as IDFs, they require a special anaphoric process (2), (3)
- There is no strong preference that PINs are picked up by null anaphora, contrary to Farkas & de Swart 2003, Modarresi 2015. (4)
- Effect of epistemic bias, contrary to Farkas & de Swart (2003)
- This supports abstraction & summation theory (Krifka & Modarresi 2016)
- Additional evidence for a preference for singular interpretation points to a cognitive preference for summation over one entity. (5)