

The Uniqueness Restriction on E-type Pronouns

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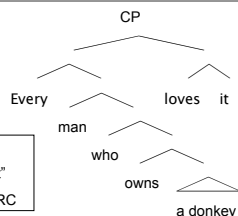


THEORETICAL BACKGROUND

Donkey Sentences & E-type Pronouns

(1a) [Every man [who owns a donkey]] loves it.
= [Every man [who owns a donkey]] loves his donkey.

(1b) [[If a man owns a donkey], he loves it].
= [[If a man owns a donkey], he loves his donkey].
adapted from Geach (1962), Heim (1982:44)



Intended Reading:
John loves John's donkey
Bill loves Bill's donkey
George loves George's donkey
...

The problem:
"a donkey" doesn't c-command "it"
"a donkey" cannot QR out of the RC

Previous Theoretical Analyses

E-type pronouns as definite descriptions, cf Evans (1977), Cooper (1979); example (2) illustrates the version from Heim & Kratzer (1998):

(2) [Every man₇ who owns a donkey] loves it.

... the pronoun *it* is expanded to a definite description *the R(x₇)*

\Rightarrow_{LF} [Every man₇ who owns a donkey] loves *the R(x₇)*

... *R* is a relational variable (of type $\langle e, \langle e, t \rangle \rangle$) filled in by the pragmatics

$\Rightarrow_{assignment}$ [Every man₇ who owns a donkey] loves *the donkey-owned-by(x₇)*

Syntactic & Pragmatic Restrictions on E-type Pronouns

Syntactic: The Formal Link Condition

- (i) An E-type pronoun requires an overt referent: (ii) The overt antecedent must not be a subpart of a word:
(3) ?? Every married man kissed her. (4) ?? Every donkey-owner loves it.
Every man who has a wife kissed her. Every man who owns a donkey loves it.
(after Heim 1990, Elbourne 2002) (Heim 1982, Chierchia 1992)

Pragmatic Conditions

- (iii) Sentences involving e-type pronouns also have to satisfy certain pragmatic conditions (e.g. presuppositions)
(5) ?? If a man doesn't have a car, Paul has it.
If a man doesn't have a car anymore, Paul generally has it.

E-type Pronouns Cross-linguistically

Kutchi Gujarati (native speaker intuitions)

(5a) batha pathi pro bak bharavyu
every husband hug make.pfv.n.sg
"Every husband hugged his wife"

(5b)* batha bhai pro bak bharavyu
every brother hug make.pfv.n.sg
"Every brother hugged his sibling(s)"

Urdu (native speaker intuitions)

(6a) har sakhs-ne pro chuuma
every husband-erg kissed
"Every husband kissed his wife"

(6b) ?? har bhai-ne pro chuuma
every brother-erg kissed
"Every brother kissed his sibling(s)"

Uniqueness

The Indo-Aryan examples show that 'husband' makes salient a relation to interpret a null E-type pronoun *pro*. In contrast, 'brother' does not seem to achieve this. Possible solution: *Uniqueness*

"husband-of" is (usually) a one-to-one relation: Every husband has exactly one (i.e. a unique) wife.

"brother-of" can be a one-to-many relation: A brother can have many siblings.

The experiment: Investigate whether this observation carries over to English

EXPERIMENT

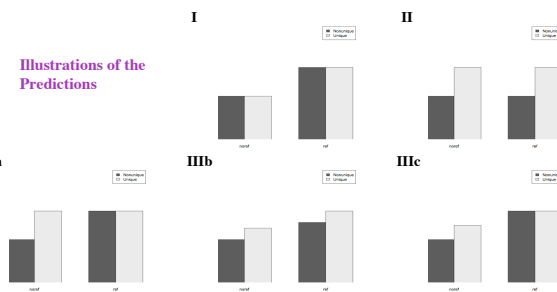
Design & Materials

- Off-line rating study 1-7 naturalness scale
- Design - 2 x 2 (Overt referent / No overt referent and Unique / Nonunique)
- 32 participants for the rating study
- 24 items (12 items contained *N-less* constructions, e.g. *who was carless*;
12 items contained *N-owner* constructions, e.g. *who was a credit-card-owner*)
- 72 fillers
- Statistical analysis used: Logistic regression with random intercepts for participants and items

- a. *Non-unique referent for the pronoun; no overt NP antecedent:*
Every citizen who was carless had lost it during the recession.
Unique referent for the pronoun; no overt NP antecedent:
Every citizen who was houseless had lost it during the recession.
- b. *Non-unique referent for the pronoun; overt NP antecedent:*
Every citizen who was without a car had lost it during the recession.
Unique referent for the pronoun; overt NP antecedent:
Every citizen who was without a house had lost it during the recession.

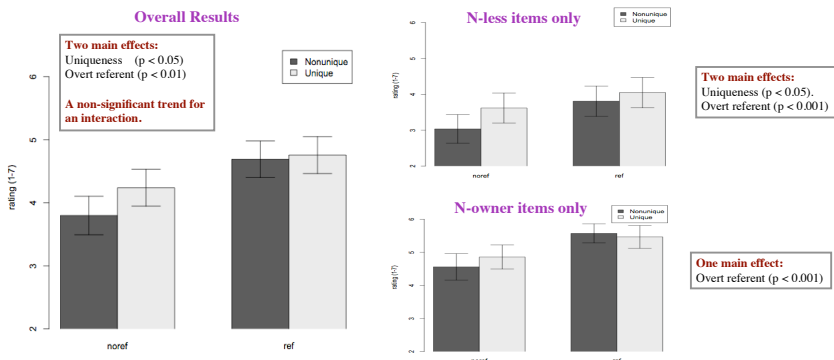
Hypotheses

- (I) **The Structural Hypothesis:** E-type pronouns require a structural overt referent, cf. Heim (1990), Chierchia (1992)
Prediction: Main effect of overt referent only.
- (II) **The Pragmatic Hypothesis:** E-type pronouns are licensed if and only if certain pragmatic conditions are met (e.g. uniqueness, as in *husband* vs. *brother*).
Prediction: Main effect of uniqueness only.
- (III) **The Compromise Hypothesis:** E-type pronouns are licensed by an overt NP antecedent; if there is none, pragmatic conditions (e.g. uniqueness) can license them.
- (IIIa) **Version 1:** Both uniqueness and overt referent condition are deterministic.
Prediction: An interaction between overt referent and uniqueness.
- (IIIb) **Version 2:** Both uniqueness and overt referent condition are probabilistic.
Prediction: Main effect of overt referent and main effect of uniqueness.
- (IIIc) **Version 3:** Uniqueness is probabilistic, but overt referent condition deterministic.
Prediction: Main effect of referent and interaction



RESULTS AND CONCLUSIONS

Results



Summary & Conclusions

The results of this study support the **Compromise Hypothesis** (although we cannot definitely decide between **Version 2** and **Version 3**). We find a main effect of the presence of an overt antecedent (confirming the existence of a formal link, as proposed e.g. by Heim 1990 and Chierchia 1992); however, there is also a main effect of uniqueness, which plays a role especially in the absence of an overt antecedent.

FUTURE WORK

- Set up an analogous experiment, investigating differences between *pre-nominal* vs. *post-nominal* modification (e.g. A fatherless child vs. A child who was fatherless).
- Investigate cases where the referent is *not a part of the word* (e.g. Every woman who was a *widow* had lost him in the war).
- Investigate the factor of *lexical Integrity*, particularly differences in data patterns between the *N-less* items and the *N-owner* items. Given the discussion on lexical integrity in the literature, we might expect the *N-owner* items to act more like the "*overt NP referent*" cases when compared to the *N-less* items.
- Carry out *cross-linguistic* testing on Kutchi Gujarati and Urdu. These languages will require a slightly different design, as they are pro-drop languages; e.g. an additional condition, null vs. overt pronoun will be required.