Sloppy Identity with no Binding

Ezra Keshet, University of Michigan

Reinhart (1983) takes sloppy identity (Ross 1967) to be a definitive test for bound pronouns. Examples (1) – VP Ellipsis – and (2) – Deaccenting – have 'sloppy' readings indicating that Billy ate his own dinner, rather than Johnny's dinner. The first clause in each may have an LF structure like (3), where an operator/operation indicated by λ c-commands and 'binds' the pronoun *his* to its antecedent *Johnny*. Reinhart argues such bound readings require c-commanding antecedents, citing (4), which she claims lacks a sloppy reading. But (5) has a non-commanding antecedent and still allows a sloppy reading (Wescoat 1989, Hardt 1993, Hirschberg & Ward 1991). Example (6) shows that the names in (5) are in syntactic islands, ruling out covert movement. Tomioka (1999) suggests that *him* in (5) is an E-type pronoun (Evans 1980, Heim 1990) meaning "the person he arrested" where *he* is bound by *the officer*.

In my new cases (7)-(10), raising and E-type analyses are untenable, but sloppy identity is available. The names in (7)-(9) are in syntactic islands. Examples (7) and (8) are "backwards pronominalization" which do not support E-type anaphora (Tomioka 1999, ciiting Heim 1982). Example (9) also disallows E-type anaphora, since the relevant E-type meaning for *him* – "the person they were about" – cannot be bound by *the articles* in the first clause (cf. (11)). Last, (10) is a case where VP ellipsis is not available (there is no relevant VP) but deaccenting shows that *him* enables a sloppy reading. Here, the name cannot raise due to Weak Crossover (cf. (12)) and an E-type analysis is ruled out due to i-within-i constraints (cf. (13)).

My solution is that sloppy identity arises from several 'locally derived' pronoun readings; λ-binding is only one. Another one is tied instead to discourse function. Consider (14), adapted from (5), where the first *him* allows a sloppy reading and hence is locally derived. The VP in (14), *arrested him*, bears a contrastive focus relation with the relative clause *captured John* (cf. the **Contrast** relation of Kehler 2002). Rooth (1992) represents this relation with his ~ operator, whose argument (P_i in this case) enforces parallelism with a co-indexed phrase ($[\lambda x\ t_x$ *captured John*$]_i$ here). Only focussed items (like *arrested*$_F$) can vary between such phrases. I propose that ~ also affects the values of pronoun indices, just like λ does. The ~ changes the value of the index *j* in this case to refer to John, in order to maintain the contrastive focus relation.

Similar operators apply in sentences (7)-(10), all shown as **Disc** in (15)-(18). To maintain a **Violated Expectation** relation (Kehler 2002) between the relative clause (*x grew up there*) and the VP (*x thinks Los Angeles is scary*), a discourse operator similar to ~ applies to the relative clause, forcing the pronoun *there* to refer to Los Angeles. Examples (8)-(9) exhibit **Result** relations (Kehler) between clauses (*x has met him* vs. *x realizes Tom Selleck is tall* for (8); the two clauses for (9)) or a PP and a clause (*about him* and *upset Biden* for (10)). Again, a discourse operator enforces these relations, setting values for pronoun indices as needed.

The cases presented here are all ones where the pronoun with a locally derived reading refers to a single individual mentioned before. Future work will try to explore how such discourse

operations interact with more complex antecedents and quantifiers, as in (19) - (20).

(1) Johnny ate his dinner, and Billy did <>, too. [VP Ellipsis, indicated by <>]
(2) Johnny ate his dinner, and Billy (ate his dinner), too. [Deaccenting, indicated by ()]
(3) LF: Johnny λx ate his_x dinner.

(4) People from Los Angeles adore it and people from New York do <>, too.
(5) The officer who arrested John insulted him, and the one who arrested Bill did <>, too.
(6) *The officer who arrested [each protester]$_i$ insulted him_i.

(7) Even people who grew up $there_i$ think that Los $Angeles_i$ is scary.
Only people who DIDN'T <> / (grow up $there_j$) think that New $York_j$ is scary.
(8) Only people who've met him_i realize that Tom $Selleck_i$ is tall.
Only people who HAVEN'T <> / (met him_j) think that Tom $Cruise_j$ is tall.
(9) The articles about $Obama_i$ were flattering and people voted for him_i.
The ones about $Romney_j$ weren't and people DIDN'T <> / (vote for him_j).
(10) Rumors about him_i upset $Biden_i$. The TRUTH (about him_j) upsets $Ryan_j$.

(11) *Each $article_i$ flattered Obama and people trusted its_i author.
(12) *Rumors about him_i upset each $politician_i$.
(13) *[Rumors about the person $they_i$ upset]$_i$ upset Biden.

(14) The officer who captured $John_i$ arrested him_i
... but the one that captured BOB_j DIDN'T <> / (arrest him_j).

(15) The officer who [λx t_x captured John]$_i$ [[λx t_x $arrested_F$ him_j] ~P_i]
(16) People who [**Disc**(P_i)] [λx t_x have met him_j]] [λx t_x think Tom Selleck is tall]$_i$
(17) [The articles about Obama were flattering]$_i$ and [**Disc**(P_i) [people voted for him_j]]
(18) Rumors [**Disc**(P_i) [about him_j]] [upset Biden]$_i$

(19) [John λx t_x cashed his_x paycheck]$_i$. [[Bill λx t_x deposited it_j]~P_i]
(20) If a donkey λx [t_x is hungry]$_i$, [**Disc**(P_i) [it_j brays]]