

E-TYPE READINGS OF QUANTIFIERS UNDER ELLIPSIS

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THE Q-READING VS. THE E-TYPE READING

■ **The broad question:** what is the correct formulation of the condition under which a constituent XP_E counts as 'sufficiently similar' to a discourse antecedent XP_A , such that it can successfully go missing? We argue that (1) has significant consequences.

- (1) **Our claim:** when XP_A contains a Quantified Noun Phrase (QuNP),
- XP_E may contain an identical QuNP (**Q reading**); or
 - XP_E may contain a definite NP anaphoric to the QuNP (**E-type reading**)

SLUICING

■ **Romero 2003, Chung et al 2011:** the E-type reading is *obligatory* with sluicing.

■ **Our claim:** both Q and E-type readings are available under sluicing, modulo discourse factors.

SPROUTING WITH WHY

- (2) John applied to five graduate schools.
I don't know why (John applied to **five graduate schools**) *Q reading*
(John applied to **them/the five graduate schools**) *E-type reading*

■ *Q reading* \approx I don't know why John applied to so many graduate schools.
■ *E-type reading* \approx I don't know why John applied to these ones, and not others.

DONKEY ANAPHORA

- (3) If John asks me how a mathematical theorem was proved, I will also tell him by whom
- (#a mathematical theorem was proved) *Q reading*
 - (it/the mathematical theorem was proved) *E-type reading*

VP ELLIPSIS

■ **Romero 2003, Chung et al 2011:** the E-type reading is *unavailable* with VPE.

- (4) John proved two important theorems,
and Bill did (prove **two important theorems**) *Q reading*
(*prove **them/the two important theorems**) *E-type reading*

■ **Our claim:** the lack of an E-type reading of (4) is due to *discourse coherence*, rather than the grammar per se; both Q and E-type readings are available under VPE.

DONKEY ANAPHORA

- (5) Whenever Prof. Jones is working on a paper,
the postdocs cannot (work on a paper) *Q reading*
(work on **it/the paper**) *E-type reading*

REASON CLAUSES

- (6) John applied to five graduate schools, because they were high in the league tables.
Why else would he (#apply to **five graduate schools**) *Q reading*
(apply to **them**) *E-type reading*
- (7) John applied to five graduate schools, because he was anxious,
Why else would he (apply to **five graduate schools**) *Q reading*
(#apply to **them**) *E-type reading*

DISCOURSE COHERENCE

■ **A problem:** we don't explain why (4) nonetheless lacks an E-type reading.
■ Typically, VPE appears in a context where two sentences are part of an answer to the same (possibly implicit) question. For (4), the question is *Who proved two important theorems?*

DISCOURSE COHERENCE CONT.

■ Questions constrain the focus structure of their felicitous answers.

- (8) **The Question-Answer Congruence Condition**
A declarative sentence A is *congruent* to a question Q iff $\|A\| = \llbracket Q \rrbracket$. ($\| \alpha \|$ is the focus semantic value of α in the sense of Rooth 1985)

■ For (4) the Q reading, but not the E-type reading, satisfies the QAC condition.

- (9) *Q reading*
 $\| \text{BILL DIDN'T prove two important theorems} \| =$
 $\llbracket \text{Who proved two important theorems?} \rrbracket$

- (10) *E-type reading*
 $\| \text{BILL DIDN'T prove two important theorems} \| \neq$
 $\llbracket \text{Who proved two important theorems?} \rrbracket$

- (11) **Generalization:** An E-type interpretation of XP_E is unavailable if the clause containing XP_A and the clause containing XP_E are (sub)answers to the same (possibly implicit) question.

■ This also applies to sluicing (cf. Romero 2003).

- (12) (*Do you know which students like most of the professors?*)
I know which **BOY** likes most of the professors. But I don't know which **GIRL**.
- (t_{wh} likes **most of the professors**) *Q reading*
 - (* t_{wh} likes **them/the professors**) *E-type reading*

CONSEQUENCES FOR EXISTING THEORIES OF ELLIPSIS IDENTITY

■ **Romero 2003 and Chung et al 2011:** tailor-made to block Q reading in sluicing and E-type reading in VPE; untenable in light of our data.

■ **Other theories:** many recent theories of ellipsis identity simply don't derive the E-type reading. See, e.g., AnderBois 2011 and Barker 2013 (details suppressed). Merchant's (1999, 2001) e-GIVENNESS does a little better.

E-GIVENNESS

- (13) **Focus condition on ellipsis**
An XP α can be deleted only if α is e-GIVEN. (Merchant 2001, p. 38)

■ XP_E is e-GIVEN if $F\text{-clo}(XP_E)$ and $F\text{-clo}(XP_A)$ entail each other. $F\text{-clo}(XP)$ is the result of replacing F-marked parts of XP with \exists -bound variables of the appropriate type.

MERCHANT ON THE E-TYPE READING

- (14) five graduate schools $\lambda 1$ $\overbrace{\text{John applied to } t_1}^{XP_A}$, but I don't know why John applied to $\overbrace{\text{them}_1}^{XP_E}$.
- (15) $XP_E = XP_A = F\text{-clo}(XP_A) = F\text{-clo}(XP_E) = \text{John applied to } g(1)$.
 XP_A entails $F\text{-clo}(XP_E)$, and XP_E entails $F\text{-clo}(XP_A)$, so XP_E is e-GIVEN.

■ **Problem 1:** index identity fails to guarantee that the pronoun in XP_E is anaphoric on the quantifier in XP_A .

■ **Problem 2:** Predicts that E-type reading to be absent when quantifier in XP_A is trapped in a scope island.

- (16) John claimed that most students in the room cheated,
but I don't know why (he claimed that **most students** in the room cheated)
(he claimed that **they/these students** cheated)

■ **Problem 3:** For Merchant, the trace of *wh*-movement must be existentially bound, to account for examples like *John bought something, but I don't know what*. This overgenerates Q readings: *I know what John bought at the OUP bookstore, but I don't know why *(he bought something)*.

TOWARDS A DYNAMIC ACCOUNT

■ We adopt Heim's (1982) *File Change Semantics* for concreteness.

■ Declarative sentences denote *File Change Potentials* (i.e. functions from files to files).

■ A file F is a set of pairs consisting of a possible world w and an assignment a from file cards x_i to individuals.

- (17) **Novelty-Familiarity Condition:** Indefinites are variables referring to novel file cards; definites refer to old file cards.

■ Following Heim 1991, we assume that the Novelty Condition on indefinites is pragmatic, whereas the Familiarity Condition on definites is a presupposition.

- (18) **d-GIVENNESS** **our identity condition**
 XP_E and XP_A must dynamically entail each other.

- (19) ϕ **dynamically entails** ψ iff whenever there is a non-empty file F' s.t. $F + \phi = F'$, there is a non-empty file F'' s.t. $F' + \psi = F''$.

- (20) a. John applied to [five graduate schools]₁
b. John applied to [the five graduate schools]₁

■ Under the E-type reading, XP_E contains a definite description that is anaphoric to the quantifier in XP_A .

- (21) $F + \text{John applied to [five graduate schools]}_1$
 $= \left\{ \langle w, a \rangle \in F \mid \begin{array}{l} a(x_1) \text{ consists of five graduate schools in } w \\ \text{and John applied to (each atomic part of) } a(x_1) \text{ in } w \end{array} \right\}$

- (22) $F + \text{John applied to [the five graduate schools]}_1$
a. is defined only if for each $\langle w, a \rangle \in F$, x_1 is an old file card such that $a(x_1)$ consists of five graduate schools in w .
b. whenever defined, $= \{ \langle w, a \rangle \in F \mid \text{John applied to } a(x_1) \text{ in } w \}$.

■ If the DPs are not co-indexed, the dynamic account fails to hold; anaphora is crucial!

ASYMMETRIC LICENSING

■ **The problem:** XP_A containing a definite description does not license an ellipsis of XP_E containing an indefinite.

- (23) (I show you a list of [five graduate schools]₁)
John applied to [the(se) five graduate schools]₁
Do you know why (John applied to **them**)₁?
(*John applied to [five graduate schools]₁)?

■ **Our claim:** (23) is ruled out independently by the Novelty Condition on the indefinite. Importantly, the Q reading is still ruled in with contra-indexation (co-indexation here is ruled out by the Novelty Condition).

■ For our account to work out, the definite in XP_E under the E-type reading must be a *definite description*, rather than a pronoun, on the assumption that pronouns simply denote variables.

■ this move is not necessary if we adopt a theory of pronouns according to which they are simply reduced definite descriptions (Elbourne 2001, 2015).

■ Relatedly, our account requires that *traces* be analyzed as definite descriptions. This has been suggested by Sauerland 1998 and Fox 1999 (among others).

SELECTED REFERENCES

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