Intensionality, contrast and ellipsis

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1 Introduction: ellipsis and identity

- Ellipsis might seem to radically undermine form-meaning mapping: meaning without form.
- Identity conditions enable recovery of elided content, drawing on an antecedent.
- Two kinds of elliptical sentences that bear on the issue of identity from opposite directions:
- Participant switching verb phrase ellipsis (VPE) (Stockwell, 2017)
  - ellipsis licensed despite apparent non-identity (~~unpronounced elided structure~~)

(1) John$_1$ wanted to dance with Mary$_2$, but she$_2$ didn't want to ~~dance with him$_1$~~.

- Ellipsis in tautologous conditionals (Stockwell, 2018) and free relatives
  - ellipsis not licensed despite apparent identity

(2) * If John$_j$ is wrong, then he$_j$ is ~~wrong~~.

(3) * John$_j$ eats what he$_j$ does ~~eat~~.

- Semantic identity condition (Rooth, 1992b), plus 'proper' contrast (Rooth, 1992a; Griffiths, 2019), for which intensionality counts:

(4) * John$_1$ danced with Mary$_2$, but she$_2$ didn't ~~dance with him$_1$~~.

(5) If John$_j$ believes he$_j$ is wrong, then he$_j$ is ~~wrong~~.

(6) Mary believes that John$_j$ eats what he$_j$ does ~~eat~~.

- Outline:

2. The contrast condition and triviality
3. Ellipsis in tautologous free relatives
4. Participant switching VPE
5. Contrasting intensionality
6. Negation
7. So-called MaxElide effects
8. Utterances of agreement
9. Conclusion

2 The contrast condition and triviality

- Focus membership, a.k.a semantic parallelism, as the identity condition on ellipsis (following the letter of Rooth 1992b):[1]

  (7) For ε to be elided, ε must be inside a phrase E that has an antecedent A such that: $[\![A]\!] \in$ F(E) — the focus membership condition

- Doubly correct prediction for simple cases of VPE like (8) (Rooth 1992b: exx. 22, 23; 32):
  - main clauses as parallelism domain (a), focus membership satisfied substantively: John leaving is a member of the alternatives to BILL leaving
  - VPs as parallelism domain (b), focus membership satisfied vacuously: *leave'* is the only member of the degenerate singleton $\{leave'\}$

  (8) John left, and BILL$_F$ did ~~leave~~, too. ε = left

  a. E = BILL$_F$ left $[\![E]\!] = leave'(b)$ F(E) = $\{leave'(x) \mid x \in D_e\}$
     A = John left $[\![A]\!] = leave'(j)$ $[\![A]\!] \in$ F(E)

  b. E = left $[\![E]\!] = leave'$ F(E) = $\{leave'\}$
     A = left $[\![A]\!] = leave'$ $[\![A]\!] \in$ F(E)

- Focus membership alone makes incorrect predictions with respect to (9):
  - we can say trivial things, like the tautologous conditional in (a)
  - but not the same sentence with ellipsis in (b)

  (9) a. If John$_j$ is wrong, then he$_j$ is wrong.
  b. * If John$_j$ is wrong, then he$_j$ is ~~wrong~~. = (2)

[1] And following Rooth (1992b): Heim (1997), Fox (1999), Fox (2000: 85, ex. 16), Takahashi and Fox (2005).

- F-marking on *is* introduces polar focus alternatives, satisfying focus membership:

(10) ✗ If John$_1$ is wrong, then he$_1$ is$_F$ ~~wrong~~. ε = wrong
E = he$_1$ is$_F$ wrong A = John$_1$ is wrong
$[\![E]\!] = wrong'(j)$ $[\![A]\!] = wrong'(j)$
F(E) = $\{wrong'(j), not\text{-}wrong'(j)\}$ $[\![A]\!] \in$ F(E)

- More stringently, 'proper' contrast between A and E (following the spirit of Rooth 1992b)[2]

(11) For ε to be elided, ε must be inside a phrase E that has an antecedent A such that:
(i) $[\![A]\!] \in$ F(E) — the focus membership condition; and
(ii) $[\![A]\!] \neq [\![E]\!]$ — the contrast condition.

- Ellipsis in tautologous conditionals (9b) as contrast failure (Stockwell, 2018):
  - too identical — too much of a good thing

(12) * If John$_1$ is wrong, then he$_1$ is$_F$ ~~wrong~~.
$[\![A]\!] \in$ F(E), but $[\![A]\!] = [\![E]\!]$

- The contrast condition rules out the degenerate singleton (b) option for (8); must be some F-marking in E in order for focus membership to be satisfied substantively under option (a).

- What counts as 'not equal' for the contrast condition?
  - Alternative individuals:

(13) If John is wrong, then BILL$_F$ is ~~wrong~~. cf. (12)

  - Worlds count too:

(14) If John$_j$ believes he$_j$ is wrong, then he$_j$ is ~~wrong~~. = (5)

[2]Following Rooth 1992a: 90, 93 for focus. See also Griffiths (2019) on so-called MaxElide effects in section 7.

3 Ellipsis in tautologous free relatives

- Ellipsis contrasts in tautologous free relatives (cf. Horn, 1981, 326):

(15) a. John$_j$ eats what he$_j$ eats.

b. * John$_j$ eats what he$_j$ does ~~eat~~. = (3)

c. Mary believes that John$_j$ eats what he$_j$ eats.

d. Mary believes that John$_j$ eats what he$_j$ does ~~eat~~. = (6)

- Ellipsis is ruled out in (15b) as a contrast failure:

(16) [$_{DP}$ what 4 he$_1$ does ~~eat t_4~~] 3 John$_1$ eats t_3
E = 4 he$_1$ does eat t_4 A = 3 John$_1$ eats t_3
$[\![A]\!] = [\![E]\!] = \lambda x.eats'(x)(j)$

- However, we incorrectly predict (15d) to be ungrammatical for the same reason.

- The contrast condition is sensitive to intensionality (17):
  - syntactic structure (a), LF (b), antecedent A (c)
  - *de dicto* reading (d) (Mary believes a tautology) not available — no contrast
  - *de re* reading (e) (Mary is correct about John's eating habits) available — contrast between what John eats *in Mary's belief worlds* and what he eats *in the actual world*
  - *DOES* realises focus on the world pronoun, satisfying focus membership (f)

(17) a. Mary believes that John eats what$_k$ he DOES$_F$ ~~eat t_k~~.

b. Mary believes 7 that [what 4 [he$_1$ does eat t$_4$] w$_{0F}$/*w$_{7F}$] 3 [John$_1$ eats t$_3$] w$_7$

c. A = 3 [John$_1$ eats t$_3$] w$_7$ $[\![A]\!] = \lambda x.eats'(x)(j)(w_7)$

d. E$_{de\ dicto}$ = 4 [he$_1$ eats t$_4$] w$_{7F}$
$[\![E_{de\ dicto}]\!] = \lambda x.eats'(x)(j)(w_7)$ $[\![A]\!] = [\![E_{de\ dicto}]\!]$

e. E$_{de\ re}$ = 4 [he$_1$ eats t$_4$] w$_{0F}$
$[\![E_{de\ re}]\!] = \lambda x.eats'(x)(j)(@)$ $[\![A]\!] \neq [\![E_{de\ re}]\!]$

f. F(E$_{de\ re}$) = $\{\lambda x.eats'(x)(j)(w) \mid w \in W\}$ $[\![A]\!] \in$ F(E$_{de\ re}$)

- Contrast is satisfied when the antecedent and the clause containing are ellipsis are interpreted relative to different (sets of) worlds.

4 Participant switching VPE

- Participant switching verb phrase ellipsis: licensed despite apparent non-identity.

(18) John$_1$ wanted to dance with Mary$_2$, but she$_2$ didn't want to ~~dance with him$_1$~~.= (1)

- Syntactic non-identity: the antecedent and ellipsis take very different forms, since the subject and object switch between them.[3]

(19) a. John$_1$ hoped to meet (with) Mary$_2$, but she$_2$ hoped not to ~~meet (with) him$_1$~~.

b. John$_1$ yearned to marry Mary$_2$, and she$_2$ did ~~yearn to marry him$_1$~~, too.

c. John$_1$ needed to be introduced to Mary$_2$, and (in the end) she$_2$ was ~~introduced to him$_1$~~.

d. John$_1$ planned to build a house with Mary$_2$, but she$_2$ didn't ~~(plan to) build a house with him$_1$~~.

- Symmetry (20) is crucial; cf. non-symmetrical *criticise* (21):

(20) Symmetry: For all x, y: R(x,y) $\leftrightarrow$ R(y,x)

(21) * John$_1$ wanted to criticise Mary$_2$, but she$_2$ didn't (want to) ~~criticise him$_1$~~.

- The symmetry of *dance-with* supports focus membership, even without any F-marking:

(22) A = PRO$_j$ dance with Mary $\quad [\![A]\!] = \textit{dance-with}'(j,m) = \textit{dance-with}'(m,j)$

E = PRO$_m$ dance with John $\quad [\![E]\!] = \textit{dance-with}'(m,j)$

F(E) = $\{\textit{dance-with}'(m,j)\}$ $\quad [\![A]\!] \in$ F(E)

- But in the same breath, symmetry causes contrast failure:

(23) $[\![A]\!] = \textit{dance-with}'(j,m) = \textit{dance-with}'(m,j) = [\![E]\!]$

- Also crucial is intensionality:

(24) a. John$_1$ wanted to dance with Mary$_2$, but she$_2$ didn't want to ~~dance with him$_1$~~.

b. John$_1$ wanted to dance with Mary$_2$, and (in the end) she$_2$ did ~~dance with him$_1$~~.

c. John$_1$ danced with Mary$_2$, even though she$_2$ didn't want to ~~dance with him$_1$~~.

[3] Cf. Vehicle Change (Fiengo and May, 1994) — only alters the binding theoretic status of DPs, not their reference.

d. * John$_1$ danced with Mary$_2$, and she$_2$ did ~~dance with him$_1$~~.

e. * John$_1$ danced with Mary$_2$, but she$_2$ didn't ~~dance with him$_1$~~.

- Previously (Stockwell, 2017), I attributed the ungrammaticality of ellipsis in (24d,e) directly to the triviality of redundancy and contradiction.
- But we can say trivial things (25) — this is a fact about ellipsis:

(25) a. John$_1$ danced with Mary$_2$, and she$_2$ ⟨did⟩ dance⟨d⟩ with him$_1$.

b. John$_1$ danced with Mary$_2$, but she$_2$ didn't dance with him$_1$.

- Degradation in (24e) even more pronounced across speakers in (27) vs. (26):

(26) A: John$_1$ left. B: But he$_1$ didn't ~~leave~~.

(27) A: John$_1$ danced with Mary$_2$. B: * But she$_2$ didn't ~~dance with him$_1$~~.

- Contrasting intensionality (24a-c): A and E are interpreted with relative to different (sets of) worlds — John's desires vs. Mary's desires vs. the actual world.

5 Contrasting intensionality

- Contrasting intensionality is responsible for the differing status of ellipsis across tautologous conditionals (a), tautologous free relatives (b), and participant switching (c).
- Intensionality contrasts among belief/desire worlds and the actual world; above, *believe, want*; here modal *should*:

(28) a. If John$_j$ should be hungry, he$_j$ is ~~hungry~~.

b. John$_j$ eats what he$_j$ should ~~eat~~.

c. John$_1$ should dance with Mary$_2$, but she$_2$ won't ~~dance with him$_1$~~.

- Compare non-intensional embedding under aspectual verbs like *start*, which are extensional (Pearson, 2016).

(29) a. * If John$_j$ starts to leave, he$_j$ does ~~(start to) leave~~.

b. * John$_j$ is starting to eat what he$_j$ is ~~eating~~.

c. * John$_1$ started to dance with Mary$_2$, but she$_2$ didn't ~~(start to) dance with him$_1$~~.

- *Contrasting* intensionality, vs. intensionality with respect to the same attitude holder:

(30) a. Mary believes John$_j$ eats what Sally believes he$_j$ does ~~eat~~.

b. * Mary$_m$ believes that John$_j$ eats what she$_m$ believes he$_j$ does ~~eat~~.

(31) a. I believe/know that John$_j$ eats what he$_j$ eats.

b. ?? I believe/know that John$_j$ eats what he$_j$ does ~~eat~~.

6 Negation

- Negation doesn't count for contrast in ellipsis licensing calculations for participant switching VPE (32), but does elsewhere (33):

(32) * John$_1$ danced with Mary$_2$, but she$_2$ didn't ~~dance with him$_1$~~. = (4, 24e)

(33) John$_1$ is wrong and he$_1$ isn't ~~wrong~~.

- Previously, (Stockwell, 2018), I claimed based on the acceptability of (33) that negation counts for the contrast condition on ellipsis:
  - focus on *not* introduces polar focus alternatives for E, while the opposition of a positive A and a negative E satisfies contrast

(34) E = he$_1$ isn't$_F$ wrong — A = John$_1$ is wrong

$[\![E]\!] = \textit{not-wrong}'(j)$ — $[\![A]\!] = \textit{wrong}'(j)$

F(E) = $\{\textit{wrong}'(j), \textit{not-wrong}'(j)\}$ — $[\![A]\!] \in$ F(E), $[\![A]\!] \neq [\![E]\!]$

- Why then doesn't negation count for contrast in participant switching VPE?
- Perhaps because you can't contradict your own working in ellipsis licensing:[4]
  - Crucial contribution of symmetry to ellipsis licensing in (22): $\textit{dance-with}'(j,m) = \textit{dance-with}'(m,j)$
  - Assertion: $\textit{dance-with}'(j,m) \neq \textit{dance-with}'(m,j)$

[4] Alternatively, *not* could be excluded from A and E by an economy condition that prefers smaller parallelism domains. Recall from (22) that the symmetry of *dance-with* supports focus membership at the VP level even without any F-marking. But why should you be prevented from looking to a bigger A and E to fix things?

7 So-called MaxElide effects

- So-called (Griffiths, 2019) MaxElide effects (Merchant, 2008) (35):
  - Merchant (2008): (b) trumps (c), more ellipsis
  - Griffiths (2019): (c) a contrast failure, as in (d)

(35) a. John will kiss someone, but I don't know who he will kiss *t*. No ellipsis

b. John will kiss someone, but I don't know who ~~he will kiss *t*~~. Sluicing

c. * John will kiss someone, but I don't know who he will ~~kiss *t*~~. VPE

d. $[\![A]\!] = [\![E]\!] = \lambda x.$ *John will kiss x*

- Look to expand on Griffiths (2019) empirically in view of contrast being sensitive to intensionality.
- Canonical examples of sluicing give little opportunity for intensionality contrasts to arise: statement, *but I don't know, WH-word,* ~~*ellipsis*~~.
- Compare the improvement of VPE in (36) — opposition between different people's epistemic states, no negation:

(36) a. ? (I think that) John$_j$ will kiss someone, and Mary knows who he$_j$ will ~~kiss *t*~~.

b. ? SUE knows who John$_j$ kissed *t*, and MARY knows who he$_j$ did ~~kiss *t*~~, too.

- MaxElide (Merchant, 2008) or consideration of just the embedded clause for parallelism (Griffiths, 2019) would incorrectly(?) rule out VPE in (36).

8 Utterances of agreement

- Problem: in utterances of agreement, $[\![A]\!] = [\![E]\!]$:

(37) A: John$_j$ is wrong. B: Yes, he$_j$ is ~~wrong~~.

- Intensionality? A and E are uttered with respect to the contrasting epistemic states of each speaker — though this didn't work in (27).
- The problem may recede in light of a more complete statement of parallelism.

- Subset condition clause (II) when $[\![A]\!]$ is a set, e.g. questions (Hamblin, 1973):[5]

  (38) For ε to be elided, ε must be inside a phrase E that has an antecedent A such that either:

  (I) (i) $[\![A]\!] \in$ F(E) and

  (ii) $[\![A]\!] \neq [\![E]\!]$; or

  (II) $[\![A]\!] \subseteq$ F(E) — the subset condition

- Applied to (37):

  – speaker A proffers alternatives, establishing a Question-Under-Discussion (QUD) (Roberts, 1996) as to whether John is wrong

  – take this QUD as A, circumvent the contrast condition in using clause (II) of (38)

  (39) E = he$_1$ is$_F$ wrong — A = Is John$_1$ wrong?

  $[\![E]\!] = wrong'(j)$ — $[\![A]\!] = \{wrong'(j), not\text{-}wrong'(j)\}$

  F(E) = $\{wrong'(j), not\text{-}wrong'(j)\}$ — $[\![A]\!] \subseteq$ F(E)

- As explicitly for (40):

  (40) A: Is John$_j$ wrong? B: If John$_j$ is wrong, then he$_j$ is ~~wrong~~.

- But we would need principled constraints, motivated independently of ellipsis licensing, on when a declarative can and cannot proffer a QUD.

9 Conclusion

- Coming at identity from opposite directions:

  – participant switching — semantic identity

  – tautologous conditionals and free relatives — proper contrast vs. too much identity

- The contrast condition on ellipsis is sensitive to intensionality: where A and E are otherwise the same, it suffices for contrast that they be interpreted relative to different (sets of) worlds.

[5] Motivated by Rooth (1992a) for question-answer congruence.

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