

Contrast and Verb Phrase Ellipsis: Triviality, Symmetry, and Competition

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26 November 2020

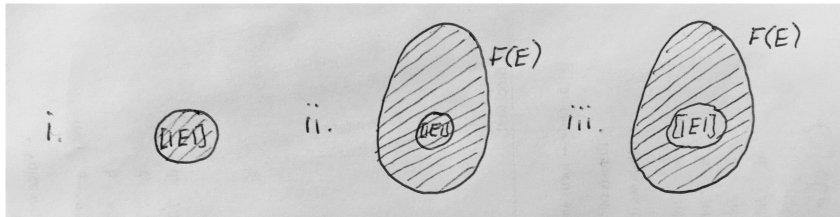
1 Contrast & VPE

- Three views of Verb Phrase Ellipsis (VPE):

(0) For VPE of ε , ε must be inside a phrase E that has an antecedent A such that:¹

- | | | | |
|------|--------------------------------------|---|-----------------------|
| i. | Identity ² | $\llbracket A \rrbracket = \llbracket E \rrbracket$ | equal |
| ii. | Alternative-hood ³ | $\llbracket A \rrbracket \cong \llbracket E \rrbracket$ | equal or similar |
| iii. | Proper alternative-hood ⁴ | $\llbracket A \rrbracket \sim \llbracket E \rrbracket$ | similar but different |

- In other words, where can $\llbracket A \rrbracket$ be?



⇒ Here, (iii): similar but different; equality disallowed, contrast required

¹Under the hood of alternative-hood is focus semantics (Rooth 1992a). Alternative-hood requires that the ordinary meaning of A be a member of the focus value of E , $\llbracket A \rrbracket \in F(E)$, where $F(E)$ is calculated by replacing F (ocus)-marked constituents in E with things of the same type and collecting the results into a set. Proper alternative-hood additionally requires contrast, $\llbracket A \rrbracket \neq \llbracket E \rrbracket$.

²E.g. Hankamer (1971), Sag (1976).

³For focus — Rooth (1985, 1992a); applied to ellipsis — Tancredi (1992), Rooth (1992b), Heim (1997), Fox (1999), Takahashi & Fox (2005), a.o.

⁴Griffiths (2019), Stockwell (2018, 2020).

- Allowing equality permits two independent analyses of (1) (cf. Rooth 1992b: exx. 22, 23; 32):

(1)	John left, and Bill did leave , too.	$\epsilon = \text{leave}$	=	\sim
	VP A and E:	$\text{leave}' = \text{leave}'$	✓	✗
	Clausal A and E: $\llbracket A \rrbracket = \text{leave}'(j)$	$\llbracket E \rrbracket = \text{leave}'(b)$	✗	✓ $\text{leave}'(_); j, b$

- Requiring contrast continues to make a correct prediction in (1) — viz. (b).
- But in other cases, contrast is crucial:

2. Triviality — contrast failure is the problem, rather than trivial truth conditions:

- (2) a. If John_j comes, he_j comes.
 b. * If John_j comes, he_j does ~~come~~.

3. Symmetry — semantic rather than syntactic identity, with some residual cases ruled out by contrast:

- (3) a. John₁ wanted to dance with Mary₂, but she₂ didn't want to dance with him₁.
 b. John₁ wanted to dance with Mary₂, but she₂ didn't want to ~~dance with him₁~~.

4. Competition — ‘MaxElide’ effects (Schuyler 2001, Merchant 2008)

- equality vs. contrast (esp. Takahashi & Fox 2005 vs. Griffiths 2019)

- | | | | |
|-----|----|--|-----------------|
| (4) | a. | John ate something, but I don’t know what he ate <i>t</i> . | <i>Baseline</i> |
| | b. | John ate something, but I don’t know what he ate <i>t</i> . | <i>Sluicing</i> |
| | c. | * John ate something, but I don’t know what he did eat <i>t</i> . | <i>*VPE</i> |

- speculations on pseudogapping (Stump 1977, Jayaseelan 1990, Winkler 2005 et seq.):

- | | | | |
|-----|----|--|--|
| (5) | a. | John ate CHEESE, and MARY did eat CHOCOLATE. | |
| | b. | ? John ate CHEESE, but he DIDN’T eat CHOCOLATE. | |
| | c. | * John ate CHEESE, and he did eat CHOCOLATE. | |

5. Conclusion

6. Further directions — further delimiting and applying the proper alternative-hood condition on VPE

- questions, reciprocals, NPE, voice mismatch, *only*

2 Triviality & VPE

- Ellipsis is ungrammatical in tautologous conditionals:

- (6) a. If John_j is wrong, then he_j is wrong.
 b. * If John_j is wrong, then he_j is ~~wrong~~. $\llbracket A \rrbracket = \llbracket E \rrbracket = \text{wrong}'(j)$

- Ellipsis is the problem,⁵ contrast failure
- Triviality as a base from which to see what counts for contrast
- Negation — Yes; positive and negative contrast:

- (7) a. John₁ is wrong and he₁ isn't wrong.
 b. John₁ is wrong and he₁ isn't ~~wrong~~. $\llbracket A \rrbracket = \text{wrong}'(j) = \llbracket A \rrbracket \sim \llbracket E \rrbracket = \neg \text{wrong}'(j) \text{ — wrong}'(j); \emptyset, \neg$
- (8) a. Either John₁ is wrong, or he₁ isn't wrong.
 b. Either John₁ is wrong, or he₁ isn't ~~wrong~~.

- Questions — Yes; questions denote a set of possible answers (Hamblin 1973), contrasting with declaratives:⁶

- (9) A: Is John₁ wrong? B: If John₁ is wrong, then he₁ is ~~wrong~~.

⁵Rather than triviality; e.g., an extended version of Gajewski's (2002, 2009) L(ogical)-triviality.

⁶In focus semantic terms, subsethood, $\llbracket A \rrbracket \subseteq F(E)$. See section 5.1 for evidence this is not quite right.

- Intensionality — Yes; contrast between Mary's beliefs and the actual state of affairs:⁷

- (10) a. John eats what he eats. tautologous free relatives (Horn 1981)
 b. * John eats what he does eat. $A = E = \lambda x. \text{eat}'(x)(j)$
 c. Mary believes that John eats what he eats.
 d. Mary believes that John eats what he DOES eat.
 $\llbracket A \rrbracket \sim \llbracket E \rrbracket \quad \lambda x. __(\text{eat}'(x)(j)); \text{m-believes}', \text{for-sure}'$

- Tense — No; but Times — Yes:

- (11) a. John will eat what he ate.
 b. * John will eat what he did eat. $\llbracket A \rrbracket \approx \llbracket E \rrbracket \quad \nexists \lambda x. __(\text{eat}'(x)(j)); \text{FUT, PAST}$
- (12) a. John will eat (tomorrow) what he ate (yesterday).
 b. John will eat (tomorrow) what he did eat *(yesterday).

⁷More precisely, alternativehood is achieved by taking stress on *DOES* to realise focus on VERUM (Romero & Han 2004: 627, ex. 43), a conversational epistemic operator meaning roughly 'it is for sure that'.

3.2 Semantic identity

- Symmetry is crucial:

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

(17) John₁ wanted to meet Mary₂, and SHE_{2,F} wanted to ~~meet-him_T~~, as well.

since $\text{meet}'(j,m) = \text{meet}'(m,j)$,

$\llbracket A \rrbracket \sim \llbracket E \rrbracket$ want'($\text{meet}'(m,j)$)($_$); j, m

(18) a. * John₁ wanted to criticise Mary₂, but she₂ didn't want to ~~criticise-him_T~~.

b. * Bill₃ expected John₁ to criticise Mary₂, but in fact SHE₂ did ~~criticise-him_T~~.

c. *since* $\text{criticise}'(m)(j) \neq \text{criticise}'(j)(m)$

- Obligatory switching — consistency of participants across A and E:

(19) Bill₃ expected John₁ to work with Mary₂, . . .

a. . . and (as it turned out) she₂ DID ~~work-with-him_{T/*3}~~.

b. ?? . . . but (as it turned out) she₂ DID ~~work-with-him_{??T/*3}~~.

c. *since* $\text{work-with}'(j,m) = \text{work-with}'(m,j) \neq \text{work-with}'(m,b)$

$\llbracket A \rrbracket \sim \llbracket E \rrbracket$ $_(\text{work-with}'(m,j)); b\text{-expect}', \emptyset$

3.3 Contrast and symmetrical VPE

- Contrast failures in participant switching:

- (20) a. John₁ wanted to meet Mary₂, and for her₂ to meet him₁.
 b. * John₁ wanted to meet Mary₂, and for her₂ to ~~meet him~~_T. $\llbracket A \rrbracket = \llbracket E \rrbracket = \text{meet}'(j,m)$
- (21) a. John₁ danced with Mary₂, and she₂ danced with him₁.
 b. * John₁ danced with Mary₂, and she₂ did ~~dance with him~~_T. $\llbracket A \rrbracket = \llbracket E \rrbracket = \text{dance-with}'(j,m)$

- Negation usually counts for contrast:

- (22) a. John₁ wanted to work with Mary₂, but SHE₂ DIDN'T_F ~~want to work with him~~_T.
 b. John₁ wanted (both) to meet Mary₂, and for her₂ NOT to ~~meet him~~_T.
 c. *since* $\llbracket A \rrbracket \sim \llbracket E \rrbracket$ $\text{---meet}'(j,m); \emptyset, \neg$

- Except in contradiction:⁹

- (23) a. John₁ danced with Mary₂, but she₂ didn't dance with him₁.
 b. * John₁ danced with Mary₂, but she₂ didn't ~~dance with him₁~~.

- (24) A: John₁ danced with Mary₂. B: *But she₂ didn't ~~dance with him₁~~.

- Idea: a sentence cannot contradict the route to its own construction

- the symmetry presupposed for ellipsis licensing is contradicted by the assertion of the sentence overall:¹⁰

- (25) For ellipsis: dance'(j,m) = dance'(m,j)
 Assertion: dance'(j,m) ≠ dance'(m,j)

⁹For (24), cf. (i):

- (i) A: John₁ left. B: But he₁ didn't ~~leave~~.

¹⁰Potentially cf. voice mismatch. In (i), but not (ii), accommodation of Gorbachev in A for ellipsis is contradicted by the assertion:

- (i) * This information was released, but Gorbachev didn't.
 Assumption for ellipsis: $\exists e.\text{info-release}'(e) = \exists e.\text{info-release}'(e) \wedge \text{agent}(e,g)$
 Assertion: $\exists e.\text{info-release}'(e) \wedge \neg \text{agent}(e,g)$
- (ii) This information should have been released, but Gorbachev didn't.

3.4 How much semantic identity?

- Transitivity switching VPE:

- (26) a. John₁ met Mary₂, because they₁₊₂ wanted to ~~meet~~.
 b. John₁ and Mary₂ met, because she₂ wanted to ~~meet-him_T~~.

- One-way $\llbracket A \rrbracket \sim \llbracket E \rrbracket$ (Rooth 1992b; Fox 2000)
- Not also $\llbracket E \rrbracket \sim \llbracket A \rrbracket$ (Griffiths 2019, cf. Merchant 2001)
- *meet*: John and Mary met \longleftrightarrow John met Mary, Mary met John
- *kiss*: John and Mary kissed \longrightarrow John kissed Mary, Mary kissed John; John kissed Mary \nrightarrow John and Mary kissed
- After allowing ‘indirect parallelism’ (Fox 2000) based on entailment, $\llbracket A \rrbracket \sim \llbracket E \rrbracket$ makes correct predictions; where adding $\llbracket E \rrbracket \sim \llbracket A \rrbracket$ incorrectly predicts (28) should be just as bad as (27):

- (27) ?? John₁ kissed Mary₂, because they₁₊₂ wanted to ~~kiss~~.

kiss'(m)(j) \nRightarrow kiss'(j+m) $\times \llbracket A \rrbracket \sim \llbracket E \rrbracket$

- (28) John₁ and Mary₂ kissed, because she₂ wanted to ~~kiss-him_T~~.

kiss'(j+m) \Rightarrow kiss'(j)(m) $\checkmark \llbracket A \Rightarrow \rrbracket \sim \llbracket E \rrbracket$

kiss'(m)(j) \nRightarrow kiss'(j+m) $\times \llbracket E \rrbracket \sim \llbracket A \rrbracket$

4 Competition & VPE

- MaxElide effects (Schuyler 2001, Merchant 2008):

- (29)
- | | | |
|----|--|-----------------|
| a. | John ate something, but I don't know what he ate <i>t</i> . | <i>Baseline</i> |
| b. | John ate something, but I don't know what he ate <i>t</i> . | <i>Sluicing</i> |
| c. | * John ate something, but I don't know what he did eat <i>t</i> . | <i>*VPE</i> |

- Competition — (c) is ungrammatical for losing to (b); framed in terms of:
 - syntactic size, bigger ellipsis defeating smaller (Merchant 2008, Takahashi & Fox 2005, Hartman 2011)
 - construction, sluicing defeating VPE (Messick & Thoms 2016)
 - semantic size, ellipsis of a lower type defeating ellipsis of a higher type (Jacobson 2019a,b)

- Takahashi & Fox (2005): $\llbracket A \rrbracket \cong \llbracket E \rrbracket$, and maximal elision in Parallelism Domains (PD)
- With A-bar movement, PD must include the binders of A-bar traces to maintain alternativehood:

(30) LF of (29): [something₁ John ate t₁] but I don't know [what₂ he ate t₂]

a. ✗ VP PD: $\text{eat}'(g(1))(j) = \llbracket A \rrbracket \not\cong \llbracket E \rrbracket = \text{eat}'(g(2))(j)$

b. Clausal PD: $\lambda x.\text{eat}'(x)(j) = \llbracket A \rrbracket \cong \llbracket E \rrbracket = \lambda x.\text{eat}'(x)(j)$

– Maximal elision in clausal PD = sluicing; *VPE

- Absent A-bar movement, big ellipsis does not defeat small:

(31) a. Mary said John ate cheese. SAM also said John ate cheese.

b. Mary said John ate cheese. [_{PD} SAM also did ~~say John ate cheese~~].

c. Mary said John ate cheese. SAM also said [_{PD} he did ~~eat cheese~~].

– Maximal elision in a main clause PD yields (b):

$\text{say}'(\text{eat}'(\text{cheese}')(j))(m) = \llbracket A \rrbracket \sim \llbracket E \rrbracket = \text{say}'(\text{eat}'(\text{cheese}')(j))(s)$

– Maximal elision in an embedded clause PD yields (c):

$\llbracket A \rrbracket = \llbracket E \rrbracket = \text{eat}'(\text{cheese}')(j)$

⇒ Tension with contrast

4.1 Competition doesn't work

- Why doesn't the fully pronounced (a) get to compete?
- Competition: there should be one winner

No winner

- Victor (b) in (32) (Merchant 2008: 142, ex. 33) removed in (33); (c) and (d) still bad:

(32) BETH knows what John will eat *t*, and . . .

- CAROL also knows what he will eat *t*.
- CAROL also does ~~know what he will eat *t*~~.
- ?? CAROL also knows what ~~he will eat *t*~~.
- ?? CAROL also knows what he will ~~eat *t*~~.

(33) Beth KNOWS what John will eat *t*. In fact, . . .

- she REPORTED what he will eat *t*.
- ✗ she did ~~REPORT what he will eat *t*~~.
- ?? she REPORTED what ~~he will eat *t*~~.
- ?? she REPORTED what he will ~~eat *t*~~.

- In relative clauses (34), sluicing is impossible (b), but VPE is still bad:¹¹

(34) Sue KNOWS the girl who Joe kissed *t*, but . . .

a. she doesn't RESPECT the girl who he kissed *t*.

Baseline

b. * she doesn't RESPECT the girl who ~~he kissed *t*~~.

**Sluicing*

c. * she doesn't RESPECT the girl who he did ~~kiss *t*~~.

**VPE*

Too many winners

- Multiple auxiliaries (35) — (b) should beat (c) and (d):

(35) John could have been eating something, but I don't know . . .

a. what SAM could have been eating *t*.

b. what SAM could ~~have been eating *t*~~.

c. what SAM could have ~~been eating *t*~~.

d. what SAM could have been ~~eating *t*~~.

¹¹Griffiths (2019: 583, ex. 28a); cf. Schuyler 2001: 10f., exx. 67-70.

- Focused restrictors (36):¹²

(36) I know which GIRL he kissed, but I don't know . . .

a. which BOY he kissed *t*.

Baseline

b. which BOY ~~he kissed~~ *t*.

Sluicing

c. which BOY he did ~~kiss~~ *t*.

VPE

¹²Cf. Griffiths (2019: 581, ex. 21a; 588, ex. 45a); Schuyler (2001: ex. 47).

4.2 Contrast might work

- Griffiths (2019): $\llbracket A \rrbracket \sim \llbracket E \rrbracket$
- The VPE member of the MaxElide paradigm is ruled out on its own terms as contrast failure:

(37) * John ate something, but I don't know what he did eat t .
 something $[_A \text{ John ate } t]$, but I don't know what $[_E \text{ he did } [_{\bar{E}} \text{ eat } t]]$.
 $\llbracket A \rrbracket = \llbracket E \rrbracket = \lambda x. \text{eat}'(x)(j)$

- Promising — intervening focus (38):

(38) a. John should eat something, but I don't know what SAM should eat t . $\lambda x. \text{eat}'(x)(__); j, s$
 b. John will eat something, but I don't know what he SHOULDN'T eat t . $\lambda x. __ \text{eat}'(x)(j); \text{will, shouldn't}$

– Cf. competition theories: the phonology of focus blocks sluicing, VPE wins by default

- Problem 1 — superordinate focus (39):

(39) a. ?? BETH knows what John will eat t , and CAROL also knows what he will eat t .
 b. ?? Beth KNOWS what John will eat t . In fact, she REPORTED what he will eat t .

- Griffiths (2019): PD cannot include λ , hence contrast must be found within C'
 - technically unviable (Charlow 2020)¹³
 - bad prediction on (40); contrast failure at a λ -limited PD:

(40) BETH knows what John will eat t , and CAROL does ~~know what λ he will eat t~~ , too.

- Stipulation here: when there is A-bar movement out of an ellipsis site, PD must be the node immediately above the landing site of movement; i.e. CP
 - addresses the problem of superordinate focus
 - corrects the prediction for (40) — movement is within, not out of, the ellipsis site
 - stipulative, but avoids other questionable assumptions; e.g. focused traces (Sauerland 1998) for (36)¹⁴

¹³Griffiths (2019) follows Kotek (2016) in elevating known technical difficulties with the compatibility of alternative semantics and A-bar λ -binding (Rooth 1985; Shan 2004) into a constraint with empirical bite. To maintain alternative-hood without λ -binding, Griffiths (2019) calculates it modulo \exists -closure. Yet, as Charlow (2020) explains, any binding, whether by λ or \exists , is incompatible with standard alternative semantics for the same reason; and a fix, proceeding from the assumption meanings are functions from assignments to values (Rooth 1985 et seq.), applies equally to λ and \exists .

¹⁴While lower copies of restrictors can be interpreted in their base positions, quantifiers themselves cannot be. Griffiths (2019) therefore predicts that only focused restrictors (36), and not focused quantifiers, should alleviate MaxElide effects, per (i) (Griffiths 2019: 582, ex. 25b). However, (i) might suffer from zeugmaticity on *like*; and Schuyler (2001: ex. 48), meanwhile, does not so much mind (ii):

- (i) * I know WHO John likes t , but not WHAT he does ~~like t~~ .
- (ii) ? Some guests wondered WHAT Jan would eat t , and other guests wondered HOW MUCH she would ~~eat t~~ .

- Problem 2 — no MaxElide effects with subjects and adjuncts (41):

- (41) a. Someone ate cheese, but I don't know who t did ~~eat cheese~~. ____([someone/who ate cheese]); \emptyset , IDK
 b. John ate cheese, but I don't know when t he did ~~eat cheese~~.

- Unembedded A can be an alternative to biclausal E¹⁵, ¹⁶
- Indefinites are non-proper alternatives to wh-words, i.e. equal; e.g. [what] = [something] (compatible with sluicing based on identity, e.g. AnderBois 2011; Barros 2014)
- In a sense, assimilating to the double-wh cases in (42):

- (42) a. * Beth knows what John ate t . CAROL knows [_{PD} what he did ~~eat~~ t], too.
 b. Beth knows who t ate. [_{PD} CAROL knows who t did ~~eat~~], too.
 c. Beth knows when John ate t . [_{PD} CAROL knows when he did ~~eat~~ t], too.

– A-bar movement out of the ellipsis site roofs PD at CP in (a)

– PD free to extend into the higher clause to find contrast in (b) and (c)

¹⁵Quite apart from the issue of MaxElide effects, something along these lines is necessary for ellipsis licensing to respect contrast in cases like (i) (Hardt & Romero 2004: 406, ex. 98) and (ii):

- (i) Sue expected John₁ to win, and he₁ DID ~~win~~.
 (ii) John₁ eats cheese, because Mary tells him₁ to ~~eat cheese~~.

¹⁶Cf. Griffiths (2019): wh-subjects and -adjuncts do not A-bar move in (41); absent λ , PD can include material in the specifier of CP; and indefinites contrast with wh-words, e.g. [what] \neq [something].

4.3 Why?

- Stipulation: when there is A-bar movement out of an ellipsis site, PD must be the node immediately above the landing site of movement; i.e. CP
- Recalling Takahashi & Fox (2005) on (30), there is a reason why PD must stretch up to (near) CP — to maintain alternative-hood, binders must be included in PD
- But why can PD not extend higher than CP?
- (Insurmountable) pressure for PD to be the same as the filler-gap domain?
- More broadly, rather than attempting to derive MaxElide effects from other things — maximal elision (Merchant 2008; Takahashi & Fox 2005; Hartman 2011), λ -intervention (Griffiths 2019), construction (Messick & Thoms 2016), semantic size (Jacobson 2019a,b) . . .
- Maybe A-bar traces inside ellipsis sites themselves are the problem — per Schuyler's (2001) original observations and Merchant's (2008) statement of MaxElide

4.4 Speculations on pseudogapping

- Pseudogapping (43) is ‘about’ the contrastive object remnant (Stump 1977, Jayaseelan 1990, Winkler 2005 et seq.)
- But contrast on the subject (a) or auxiliary (b) is still required (c):^{17, 18}

- (43)
- a. John ate CHEESE, and MARY did ~~eat~~ CHOCOLATE.
 - b. ? John ate CHEESE, but he DIDN'T ~~eat~~ CHOCOLATE.
 - c. * John ate CHEESE, and he did ~~eat~~ CHOCOLATE.

- Movement out of VP
- Tantalising parallelism with MaxElide effects

¹⁷Gapping patterns similarly in (i), where only (a) with a focused subject is grammatical. While deletion of the tense node causes additional complications in (b), the ungrammaticality of (c) remains instructive (cf. Kuno 1976: 309, ex. 39):

- (i)
- a. John ate CHEESE, and MARY ~~ate~~ CHOCOLATE.
 - b. * John ate CHEESE, (and) <not> he <not> ~~ate~~ CHOCOLATE.
 - c. * John ate CHEESE, and he ~~ate~~ CHOCOLATE.

But since gapping is generally more restricted (e.g. to coordination, no embedding) than pseudogapping, we will run with the latter here.

¹⁸How about (i)? Cf. focused restrictors (36) vs. focused wh-words (footnote 14).

- (i)
- a. ___ John eats cheese from FRANCE, and MARY does ~~eat~~ cheese from ITALY.
 - b. ___ John eats cheese from FRANCE, but he DOESN'T ~~eat~~ cheese from ITALY.
 - c. ___ John eats cheese from FRANCE, and he does ~~eat~~ cheese from ITALY.

- Intervening focus helps:

- (44) a. * John will eat something, but I don't know [_{PD} what he will eat~~±t~~].
b. John will eat something, but I don't know [_{PD} what BILL will eat~~±t~~].
- (45) a. * John will eat CHEESE, and [_{PD} he will eat~~±t~~ CHOCOLATE].
b. John will eat CHEESE, and [_{PD} BILL will eat~~±t~~ CHOCOLATE].

- Superordinate focus doesn't help, since movement out of VP roofs PD:

- (46) a. Beth knows what John will eat, and Carol knows [_{PD} what BILL will eat~~±t~~].
b. * Beth knows what John will eat, and CAROL knows [_{PD} what he will eat~~±t~~], too.
- (47) a. Beth thinks John will eat cheese, and Carol thinks [_{PD} BILL will eat~~±t~~ CHOCOLATE].
b. * Beth thinks John will eat cheese, and CAROL thinks [_{PD} he will eat~~±t~~ CHOCOLATE].

- All is well with adjuncts, which don't have to evacuate VP:

- (48) a. * John will eat at Salathong, and he will eat at Salathong.
b. ? Beth thinks John will eat at Salathong, and [_{PD} CAROL also thinks he will eat at Salathong].

5 Conclusion

1. Proper alternative-hood
2. Triviality: baseline sameness, shows what counts for contrast
3. Symmetry: semantic similarity despite mismatching form; contrast still required
4. Competition: Takahashi & Fox (2005) crucially allow equality; but competition seems misguided, and contrast (cf. Griffiths 2019) might provide a better explanation
5. VPE requires contrast
6. Further directions: questions, reciprocals, NPE, voice mismatch, *only*

6 Further directions

- What other aspects of ellipsis are sensitive to contrast?

1. Questions — ??

- In section 2: “questions denote a set of possible answers (Hamblin 1973), contrasting with declaratives”¹⁹ . . .
- Questions about auxiliary or subject, VPE good:

(49) A: Is John wrong? B: He IS ~~wrong~~.

(50) A: Who left? B: JOHN did ~~leave~~.

- But questions about object or adjunct, or alternative questions, VPE bad (Kuno 1975; Levin 1979):

(51) A: What did John eat *t*? B: * He did ~~eat~~ CHEESE.

(52) A: Where did John eat *t*? B: * He did ~~eat~~ at SALATHONG.

(53) A: Did John recommend Mary or Beth? B: * He did ~~recommend~~ Beth.

- Lack of ‘core contrast’ in TP? Cf. pseudogapping; though no movement out of VP in (52)

¹⁹In focus semantic terms, subsethood, $\llbracket A \rrbracket \subseteq F(E)$.

- VPE good with implied follow-ups; mutual licensing, elliptical antecedents:

(54) A: What did John eat *t*?

B: He DID eat ~~*t*~~ CHEESE, but he DIDN'T eat ~~*t*~~ CHOCOLATE.

(55) A: Where did John eat *t*?

B: He DID eat at SALATHONG; he DIDN'T eat at RICE BOAT.

(56) A: Did John recommend Mary or Beth?

B: He DID ~~recommend~~ ~~*t*~~ Beth; he DIDN'T ~~recommend~~ ~~*t*~~ Mary.

- Superordinate focus helps with adjunct but not object; movement out of VP roofs PD:

(57) A: What did John eat *t*?

B: * Bill says [_{PD} he did eat ~~*t*~~ CHEESE].

(58) A: Where did John eat *t*?

B: ? [_{PD} Bill says he did eat at SALATHONG].

2. Reciprocals and VPE — ??

- With symmetry, assimilate-able to transitivity switching VPE:

(59) Irv and Martha want to dance with each other, (Webber 1978: 165; Hardt 2004, 2007)
but Martha can't ~~dance with Irv~~, since her husband is here.

- (60) a. Interviewer: Would you like to see each other again? (Elliott & Murphy 2019: ex. 1)
b. Interviewee 1: I would < >. < > = like to see interviewee 2 again
c. Interviewee 2: I would < >. < > = like to see interviewee 1 again

- ‘*other*-ellipsis’ analyses (Hardt 2004, 2007; Elliott & Murphy 2019) predict (61) good:

(61) % John₁ and Mary₂ criticised each other₁₊₂, even though she₂ didn't want to criticise him₁.

- But strong reciprocal readings only ... Entailments instead?

(62) %((?)) Every week in art class, John₁, Mary₂, Beth₃ and Chris₄ criticise each other₁₊₂;
though Beth₂ doesn't like to < >.

3. Noun phrase ellipsis — Yes

- (63) a. John bought five books and Bill bought three ~~books~~.
 b. * John bought five books and Bill bought five ~~books~~.
 c. John bought five books and Bill bought five ~~books~~, too.

4. Implicit existentials — No; Explicit indefinites — Yes

- (64) a. ? This information should have been released, but Gorbachev DIDN'T.
 b. * This information was released, but Gorbachev didn't.
 c. ? This information was released by someone, but GORBACHEV DIDN'T.
 d. ? This information was released by Dmitry, so GORBACHEV DIDN'T.

- Voice mismatch; 'non-actuality implicatures' (Grant et al. 2012), semantifiable as focus on VERUM²⁰

²⁰Repeating note 10, in (b), but not (a), accommodation of Gorbachev in A for ellipsis is contradicted by the assertion:

- (i) Assumption for ellipsis: $\exists e.\text{info-release}'(e) = \exists e.\text{info-release}'(e) \wedge \text{agent}(e,g)$
 Assertion: $\exists e.\text{info-release}'(e) \wedge \neg \text{agent}(e,g)$

5. *Only* — focus and ellipsis beyond proper alternative-hood

- Ellipsis of ‘live’ foci is bad (Han & Romero 2004; Büring 2015; Beaver & Clark 2008)
- (d) shows *eat cheese* is available as an elidable VP, so (b) is not bad for that reason

- (65)
- a. John only eats CHEESE. BILL only eats cheese_F, too.
 - b. * John only eats CHEESE. BILL only does ~~eat-cheese~~_F, too.
 - c. John only eats CHEESE. BILL does ~~only-eat-cheese~~_F, too.
 - d. John only eats CHEESE. BILL does ~~eat-cheese~~, too.

References

- AnderBois, Scott. 2011. *Issues and alternatives*. Santa Cruz, CA: University of California, Santa Cruz dissertation.
- Barros, Matthew. 2014. *Sluicing and identity in ellipsis*. New Brunswick, NJ: Rutgers University dissertation.
- Beaver, David & Brady Clark. 2008. *Sense and sensitivity: How focus determines meaning*. Oxford: Blackwell.
- Büiring, Daniel. 2015. A theory of second occurrence focus. *Language, Cognition and Neuroscience* 30(1-2). 73–87.
- Charlow, Simon. 2020. \exists -closure and alternatives. *Linguistic Inquiry*, Early Access.
- Elliott, Patrick D. & Andrew Murphy. 2019. The other reading of reciprocals in elliptical contexts. Unpublished Ms., ZAS and Leipzig.
- Fox, Danny. 1999. Focus, parallelism and accommodation. In *Proceedings of SALT IX*, 70–90. Ithaca, NY: CLC Publications.
- Fox, Danny. 2000. *Economy and Semantic Interpretation*. Cambridge, MA: MIT press.
- Gajewski, Jon. 2002. L-analyticity and natural language. Ms., MIT.
- Gajewski, Jon. 2009. L-triviality and grammar. Handout of a talk at University of Connecticut Logic Group, 27th February.
- Grant, Margaret, Charles Clifton Jr. & Lyn Frazier. 2012. The role of non-actuality implicatures in processing elided constituents. *Journal of Memory and Language* 66. 326–343.
- Griffiths, James. 2019. Beyond MaxElide: An investigation of A'-movement from elided phrases. *Linguistic Inquiry* 50(3). 571–607.
- Hamblin, Charles L. 1973. Questions in Montague English. *Foundations of Language* 10. 41–53.
- Han, Chung-hye & Maribel Romero. 2004. Disjunction, focus, and scope. *Linguistic Inquiry* 35(2).
- Hankamer, Jorge. 1971. *Constraints on deletion in syntax*. New Haven, Connecticut: Yale University dissertation.

- Hardt, Daniel. 2004. Ellipsis resolution and inference. *Acta Linguistica Hafniensia: International Journal of Linguistics* 65–77.
- Hardt, Daniel. 2007. Inference, ellipsis and deaccenting. In *Copenhagen studies in language*, 67–73. Denmark: Samfundslitteratur.
- Hardt, Daniel & Maribel Romero. 2004. Ellipsis and the structure of discourse. *Journal of Semantics* 21(4). 375–414.
- Hartman, Jeremy. 2011. The semantic uniformity of traces: Evidence from ellipsis parallelism. *Linguistic Inquiry* 42. 367–388.
- Heim, Irene. 1997. Predicates or formulas? Evidence from ellipsis. In Aaron Lawson & Eun Cho (eds.), *Proceedings of SALT VII*, 197–221. Ithaca, New York: CLC Publications.
- Horn, Laurence. 1981. A pragmatic approach to certain ambiguities. *Linguistics and Philosophy* 4(3). 321–358.
- Jacobson, Pauline. 2019a. Against grammatical competition: The case of MaxElide. In K. Kojima, M. Sakamoto, K. Mineshima & K. Satoh (eds.), *New frontiers in artificial intelligence*. Lecture Notes in Computer Science, vol 11717, 225–239. Cham: Springer.
- Jacobson, Pauline. 2019b. Why we still don't need/want variables: Two SALTy case studies. In *Proceedings of SALT 29*, 609–635.
- Jayaseelan, K. A. 1990. Incomplete VP deletion and gapping. *Linguistic Analysis* 20. 64–81.
- Kotek, Hadas. 2016. Movement and alternatives don't mix: A new look at wh-intervention effects. Talk given at the 47th annual meeting of the North East Linguistic Society (NELS 47), University of Massachusetts, Amherst, 14-16 October.
- Kuno, Susumu. 1975. Conditions for verb phrase deletion. *Foundations of Language* 13. 161–175.
- Kuno, Susumu. 1976. Gapping: A functional analysis. *Linguistic Inquiry* 7(2). 300–318.
- Levin, Nancy Sue. 1979. *Main-verb ellipsis in spoken English*. Columbus, OH: The Ohio State University dissertation.

- Merchant, Jason. 2001. *The syntax of silence: Sluicing, islands, and the theory of ellipsis*. Oxford: Oxford University Press.
- Merchant, Jason. 2008. Variable island repair under ellipsis. In Kyle Johnson (ed.), *Topics in Ellipsis*, 132–153. Cambridge: Cambridge University Press.
- Messick, Troy & Gary Thoms. 2016. Ellipsis, economy, and the (non)uniformity of traces. *Linguistic Inquiry* 47. 306–332.
- Romero, Maribel & Chung-Hye Han. 2004. On negative yes/no questions. *Linguistics and Philosophy* 27(5). 609–658.
- Rooth, Mats. 1985. *Association with focus*. Amherst, MA: University of Massachusetts, Amherst dissertation.
- Rooth, Mats. 1992a. A theory of focus interpretation. *Natural Language Semantics* 1. 75–116.
- Rooth, Mats. 1992b. Ellipsis redundancy and reduction redundancy. In Berman & Hestvik (eds.), *The Stuttgart Ellipsis Workshop*, SFB 340.
- Sag, Ivan. 1976. *Deletion and logical form*. Cambridge, MA: MIT dissertation.
- Sauerland, Uli. 1998. *The meaning of chains*. Cambridge, MA: MIT dissertation.
- Schuyler, Tamara. 2001. Wh-movement out of the site of VP-ellipsis. In Seamas Mac Bhloscaidh (ed.), *Syntax and semantics at Santa Cruz 3*, 1–20. University of California, Santa Cruz, Linguistics Research Center.
- Shan, Chung-chieh. 2004. Binding alongside Hamblin alternatives calls for variable-free semantics. In Kazuha Watanabe & Robert B. Young (eds.), *Proceedings of Semantics and Linguistic Theory 14*, 289–304. Ithaca, NY: Cornell University.
- Stockwell, Richard. 2018. Ellipsis in tautologous conditionals: the contrast condition on ellipsis. In Sireemas Maspong, Brynhildur Stefánsdóttir, Katherine Blake & Forrest Davis (eds.), *Proceedings of SALT 28*, 584–603.
- Stockwell, Richard. 2020. *Contrast and verb phrase ellipsis: Triviality, symmetry, and competition*. University of California, Los Angeles. dissertation.
- Stump, Gregory. 1977. Pseudogapping. Ms., Ohio State University.

- Takahashi, Shoichi & Danny Fox. 2005. MaxElide and the re-binding problem. In Efthymia Georgala & Jonathan Howell (eds.), *Semantics and Linguistic Theory 15 (SALT 15)*, 223–240.
- Tancredi, Christopher. 1992. *Deletion, deaccenting and presupposition*. Cambridge, MA: MIT dissertation.
- Webber, Bonnie L. 1978. *A formal approach to discourse anaphora*. Cambridge, MA: Harvard University dissertation. Published 1979 by Garland Publishing, New York.
- Winkler, Susanne. 2005. *Ellipsis and focus*. Berlin: Mouton de Gruyter.