Ellipsis in tautologous conditionals
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I account for the novel observation that **ellipsis is ungrammatical in tautologous conditionals** (1) in terms of ellipsis parallelism, and consider the implications for L-triviality (<angled> brackets = unpronounced structure; antecedent and ellipsis underlined):

(1) a. If $John_1$ is wrong, then he_1 is wrong. b. *If $John_1$ is wrong, then he_1 is <wrong>.

Ellipsis parallelism. I argue that (1b) is ungrammatical because ellipsis licensing fails. For concreteness, assume the version of a parallelism condition on ellipsis licensing in (2) (cf. Fox 1999, 2000; Rooth 1992), where F(E) represents the focus semantic value of E. Clause (i) covers declarative antecedents, clause (ii) primarily question antecedents (assuming Hamblin 1973):

(2) Ellipsis of a constituent ε is licensed only if at LF there is some constituent E that reflexively dominates ε and the discourse contains an antecedent LF A such that either: (i) $[[A]] \in F(E)$ and $A \neq E$; or (ii) $[[A]] = F(E)$.

The ellipsis in (1b) is not licensed by this condition. Looking at the apodosis of the conditional, in (1a) focal stress falls on *wrong*; but in (1b), *wrong* is not even pronounced, let alone stressed. Since stress must fall somewhere in the apodosis of (1b), that leaves *he* or *is*. Focussing *he* would either result in disjoint reference – not the intended meaning; or be contrastive – but *John* is not in contrast with anyone in (1). Focussing *is* introduces polar focus alternatives, satisfying the first conjunct $[[A]] \in F(E)$ of clause (i) of (2); but the distinctness condition is not met – A does not contrast with E, but is the same as E – so ellipsis is not licensed in (3) (W = wrong):

(3) ε = wrong E = he_1 $[is]_F$ <wrong> F(E) = {W(g(1)), ¬W(g(1))}
A = $John_1$ is wrong [[A]] = W(g(1)) $[[A]] \in F(E)$, *but* A = E

The ellipsis parallelism analysis extends to additional data. First, (1b) becomes grammatical in (4a) when the discourse provides an **extra-sentential antecedent** (i) for the ellipsis in (ii). Where (1b) failed clause (i) of the ellipsis licensing condition, the polar alternatives introduced by focussing *is* in (4aii) are appropriately parallel to the polar question antecedent (4ai), meeting clause (ii) of (2) as in (4b):

(4) a. i. Is $John_1$ wrong? ii. If $John_1$ is wrong, then he_1 is <wrong>.
b. ε = wrong E = he_1 $[is]_F$ <wrong> F(E) = {W(g(1)), ¬W(g(1))}
A = Is $John_1$ wrong? [[A]] = {W(g(1)), ¬W(g(1))} [[A]] = F(E)

Second, ellipsis parallelism correctly predicts ellipsis to be grammatical in **other trivial sentences** (5a) where the opposition of positive and negative alternatives satisfies both the focus membership and distinctness conditions of (2i) as in (5b) (R = rain):

(5) a. i. It is raining and it isn't <raining>. ii. Either it is raining, or it isn't <raining>.
b. ε = raining E = it $[isn't]_F$ <raining> F(E) = {R, ¬R}
A = it is raining [[A]] = R $[[A]] \in F(E)$, and $A \neq E$

Third, ellipsis parallelism handles **double ellipsis** in both the protasis and apodosis at once (6a). A discourse context is required to resolve the ellipses in (6a) – unlike in (1b), there is no potential sentence-internal antecedent. (6a) can have a trivial meaning when both ellipses are resolved via the same antecedent, e.g. (6bi) in (6bii). Each ellipsis in (6bii) is separately and successfully licensed by parallelism with the antecedent in (6bi) in exactly the same way as in (4b):

(6) a. If he_1 is <_>, he_1 is <_>.
b. i. Is $John_1$ wrong? ii. If he_1 is <wrong>, he_1 is <wrong>.

L-triviality. We might have expected L-triviality (Gajewski 2002, 2009) to bear on the ungrammaticality of (1b). In seeking to reconcile explanations of ungrammaticality in terms of tautology and contradiction – e.g. Barwise and Cooper (1981) on the definiteness effect in *there*-existentials – with the fact that we can say trivial things like (1a), Gajewski argues that a formally identifiable subset of trivial sentences are L(ogically)-trivial, hence ungrammatical. L-triviality is assessed on a sentence's logical skeleton (LS): the LF configuration of a sentence's logical items where all occurrences of non-logical constants are treated as independent. Thus (1a) has the LS in (7a): while logical *if* is retained, the non-logical constant *wrong* in the first conjunct is replaced by *P*, in the second by the independent *Q*. Perfectly contingent sentences share the LS in (7a) – e.g. *If John$_1$ is wrong, then he$_1$ is stupid*. So (1a) is trivial but not L-trivial, hence grammatical.

(1) a. If John$_1$ is wrong, then he$_1$ is wrong. b. *If John$_1$ is <u>wrong</u>, then he$_1$ is <<u>wrong</u>>.

(7) a. [if α is P , then α is Q] b. *[if α is P , then α is P]

We could extend Gajewski's system to account for the contrast in (1) if we follow the hypothesis that ellipsis is subject to an identity relation and suppose that non-logical constants are treated as dependent under ellipsis. Then (1b) would be assigned the tautologous LS in (7b), rendering it L-trivial and ungrammatical. Notice that the coreferential terms *John* and *he* are replaced by the same constant *α* in the LSs in (7); otherwise L-triviality would not arise in (7b): *[if α is P, then β is P]* is contingent. This amendment to Gajewski's system would reduce to treating non-logical constants as dependent under ellipsis on the view that pronouns are determiners whose complements have undergone NP-ellipsis (Elbourne 2001), i.e. *he ~~John~~*.

However, an L-triviality analysis cannot handle all of the additional data. L-triviality can handle **extra-sentential antecedents** (4), since L-triviality is circumvented in the LSs in (4c): despite (4aii) = (1b), sourcing the antecedent from (4ai) means (4cii) ≠ (7b):

(4) a. i. Is John$_1$ <u>wrong</u>? ii. If John$_1$ is wrong, then he$_1$ is <<u>wrong</u>>.

c. i. [is α P] ii. [if α is Q , then α is P]

When it comes to **other trivial sentences** (5a), the LSs in (5c) incorrectly predict ellipsis to be ungrammatical. However, the conjunction (5ai) is only a contradiction and the disjunction (5aii) only a tautology under a naïve semantics for *and* and *or*. More sophisticated assumptions regarding the intensionality of conjunction and disjunction (e.g. Alxatib et al. 2013) could render (5) non-(L-)trivial, thereby saving the L-triviality analysis:

(5) a. i. It is <u>raining</u> and it isn't <<u>raining</u>>. ii. Either it is <u>raining</u>, or it isn't <<u>raining</u>>.

c. i. *[is P and is not P] ii.*[either is P , or is not P]

Most glaringly, L-triviality incorrectly predicts **double ellipsis** (6) to be ungrammatical. Treating each elided constant as dependent on the same antecedent results in the L-trivial LS in (6cii):

(6) a. If he$_1$ is <_>, he$_1$ is <_>.

b. i. Is John$_1$ <u>wrong</u>? ii. If he$_1$ is <<u>wrong</u>>, he$_1$ is <<u>wrong</u>>.

c. i. [is α P] ii.*[if α is P , α is P]

Since L-triviality cannot handle all of the additional data in (4-6), there is no reason to extend Gajewski's system in the directions necessary to capture (1): non-logical constants need not be dependent under ellipsis, nor coreferential terms replaced by the same constant in LSs.

That said, double ellipsis is also not entirely straightforward for ellipsis parallelism. (6a) can be judged acceptable in isolation, seemingly suspending resolution of the ellipses on the assumption that a discourse could readily supply their content. The presence of a potential but unlicensed antecedent in the protasis of (1b) seems to preclude such deference to discourse.

References

Alxatib, Sam, Peter Pagin & Uli Sauerland. (2013). Acceptable Contradictions: Pragmatics or Semantics? A Reply to Cobreros et al. *Journal of Philosophical Logic* 42: 619-634.

Barwise, Jon & Robin Cooper. (1981). Generalized quantifiers and natural language. *Linguistics and Philosophy* 4: 159-219.

Elbourne, Paul. (2001). E-type anaphora as NP-deletion. *Natural Language Semantics* 9:241–288.

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 UConn Logic Group, University of Connecticut, 27th February.

Hamblin, Charles L. (1973). Questions in Montague English. *Foundations of Language* 10: 41-53.

Rooth, Mats. (1992). Ellipsis redundancy and reduction redundancy. In S. Berman & A. Hestvik (eds.), *Proceedings of the Stuttgart Ellipsis Workshop*. Stuttgart.