Verb Phrase Ellipsis is discourse reference: novel evidence from dialogue

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Introduction   It is widely acknowledged that the licensing and interpretation of Verb Phrase (VP) ellipsis is context-dependent, but the nature of that dependency remains controversial. One influential family of theories maintains that VP ellipsis is licensed only if the linguistic context provides an antecedent VP that is syntactically identical to the elided VP (Fiengo & May, 1994). On that view, the meaning of the ellipsis clause is derived directly from the (partially unpronounced) syntactic and lexical material at the ellipsis site. One challenge to such 'syntactic-identity' theories comes from "mismatch" cases, in which the ellipsis appears to depend on antecedents that violate the identity constraint, such as voice-mismatched VPs (Hardt, 1993; Kertz, 2013), nominals (Miller & Hemforth, 2013), adjectival phrases (Kehler, 1995), and VPs with mismatched polarity items (Merchant, 2013). An analogous challenge comes from exophoric VP ellipsis—ellipsis in the *absence* of a linguistic antecedent (Miller & Pullum, 2013). While inconsistent with syntactic-identity analyses, exophora and acceptable mismatch cases are compatible with the alternative view that VP ellipsis involves discourse reference. On that view, it is interpreted anaphorically and licensed only when a suitable target meaning is available in the current discourse context (cf. Miller & Pullum, 2013).

Here, we present novel evidence in support of the discourse-reference view based on short dialogues, in which VP ellipsis is acceptable and interpretable, but does not depend for its interpretation on the preceding VP even when that VP satisfies the syntactic-identity constraint. Consider the following example:

(1)   **Spectator**: Can I please see that card trick one more time?
   a.   **Magician**: I'm sorry, you can't. [see it again]   [NO-CHANGE variant]
   b.   **Magician**: I'm sorry, I can't. [show it to you again]   [CHANGE variant]

The spectator's utterance does two things: it poses a question to the magician, which (a) provides a VP that could serve as the antecedent for subsequent ellipsis, and (b) communicates an indirect speech act by implicitly submitting a request—in this case, that a card trick be performed. The interlocutor's response in (1-a), the NO-CHANGE variant, demonstrates that the meaning of a subsequent ellipsis clause *can* be provided by the preceding VP. By contrast, the use of the first-person pronoun in (1-b), the perspective-CHANGE variant, shifts the speaker's perspective in a way that promotes the alternative reading based on the implicit request. Crucially, this interpretation is beyond the explanatory reach of syntactic-identity accounts, as well as 'syntactic repair' analyses (e.g. Arregui et al., 2006), which have been proposed to account for mismatch cases: there is no repair mechanism that could recover the required antecedent VP—in this case [$_{VP}$ *show you the card trick again*]—from the one that is given ([$_{VP}$ *see the card trick again*]). In what follows, we report experimental evidence on the acceptability and interpretation of VP ellipsis in dialogues like (1) in order to test diverging predictions of syntactic-identity and discourse-reference theories.

Method   20 native English speakers read ten 2-turn dialogues like the one in (1), in which the first utterance contained an active-voice VP ($V = \{see, get, hear, know, borrow\}$), and the second utterance employed auxiliary-focus VP ellipsis. Participants rated the acceptability of the elliptical utterance on a 5-point Likert scale and—in the second part of the experiment—paraphrased the ellipsis site in a free production task. The purpose of the paraphrase task was to investigate to what extent comprehenders' interpretation

of the ellipsis deviated from the meaning denoted by the linguistic antecedent. To that end, the paraphrases were analyzed by extracting the main verb and comparing it to the head of the preceding VP to determine whether comprehenders' interpretation of the ellipsis matched the preceding VP (e.g. *see—see*, as in (1-a)) or not (e.g. *see—show* in (1-b)). Experimental items were interspersed with 20 non-elliptical and 20 elliptical filler dialogues, and the latter were used to establish independent upper- and lower-bound baselines for the acceptability and interpretation of run-of-the-mill VP ellipsis (upper-bound example: *Can you see the remote control? —I can't, sorry.*; lower-bound: *Bill is popular, isn't he?. —Yes, but Sarah admires him more than he is by anyone else.*).

Predictions If, as we expect, comprehenders' interpretation of the ellipsis clause in CHANGE items differs from the meaning denoted by the preceding VP (as exemplified by the *see—show* mismatch in (1-b)), syntactic-identity analyses would predict these utterances to be severely degraded in acceptability, since the interpretation they receive lacks a matching linguistic antecedent. The discourse-reference view, on the other hand, predicts CHANGE items to be more acceptable than lower-bound elliptical fillers, and comparable to the reference point provided by their NO-CHANGE counterparts.

Results The results are consistent with the predictions of the discourse-reference view: despite the strong tendency for CHANGE items to deviate in their interpretation from the preceding VP (5% re-use of the preceding verb, compared to 74% for their NO-CHANGE counterparts; $\beta = 4.47$, $p < .001$; see Fig. 1), they were much more acceptable than lower-bound elliptical fillers ($\beta = 1.39$, $p < 0.001$), and only slightly less acceptable than their NO-CHANGE counterparts ($\beta = -0.22$, $p = 0.011$; cf. Fig. 2).

Figure 1: Verb re-use in experimental items compared to upper-bound elliptical fillers (dashed line).

Discussion The results demonstrate that VP ellipsis can be acceptable even when its interpretation is fundamentally different from the meaning denoted by the preceding VP. While these results are inconsistent with syntactic-identity accounts and syntactic repair analyses, they are compatible with the view that VP ellipsis receives its meaning through discourse reference—a process that is, in principle, compatible with inferred referents.

The results also raise a series of new questions. Consider:

(2)　After the test I wasn't sure if I had passed or not.
　　As it turns out,
　　a.　I did. [pass; *fail]
　　b.　I didn't. [pass; *fail]
　　c.　it's unlikely. [that I passed; *failed]

Figure 2: Acceptability (z-scores) of experimental items compared to elliptical filler means (dashed lines).

Both (2-a) and (2-b) appear to be strictly limited to the meaning denoted by the antecedent VP, even though the possibility of having failed the test is easily inferred from the phrase *passed or not*. The same limitation appears to apply to the propositional anaphora in (2-c): *it* cannot mean *that I failed*. A follow-up study to tease apart the interpretational flexibility of (1) and the "rigidity" of (2) is currently under design.

Arregui, A., Clifton, C., Frazier, L., & Moulton, K. (2006). Processing elided verb phrases with flawed antecedents: The recycling hypothesis. Journal of Memory and Language, 55(2), 232246. • **Fiengo, R., & May, R. (1994)**. Indices and identity (Vol. 24). MIT Press. • **Hardt, D. (2003)**. Sloppy Identity, Binding, and Centering. Proceedings of SALT XIII, (Wescoat 1989), 109126. • **Kehler, A. (1995)**. Interpreting cohesive forms in the context of discourse inference. • **Kertz, L. (2013)**. Verb phrase ellipsis: the view from information structure. Language. • **Merchant, J. (2013)**. Polarity Items under Ellipsis. Diagnosing Syntax, (January), 44162. • **Miller, P., & Hemforth, B. (2013)**. Verb Phrase Ellipsis with Nominal Antecedents, (1976), 3436. • **Miller, P., & Pullum, G. K. (2013)**. Exophoric VP Ellipsis. The Core and the Periphery: Data-Driven Perspectives on Synta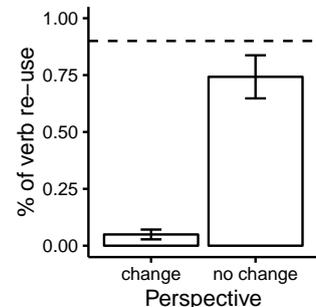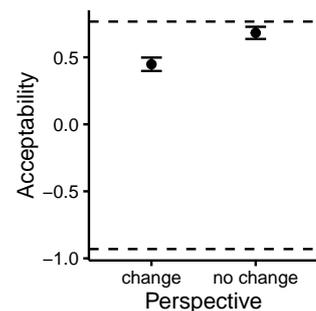x Inspired by Ivan A. Sag, 532.