

The Relative Contributions of Discourse Features and Syntax in VPE Processing

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Summary. VPE has long remained a difficult phenomenon to pin down in terms of domain specific constraints. Such constraints, whether they are derived from the syntax or the discourse, have consistently failed to capture the full scope of the data. The current study proposes that the perceived grammaticality of VPE is better understood as resulting from a dynamic interaction between the syntax and the available discourse. The relative contribution of these two domains is determined by the utility of the information they provide in a given context. Results from an acceptability study show that the effect of degraded syntax is mitigated by the presence of more robust discourse features. Crucially, the impact of these discourse features increased as the syntax degraded, indicating the possibility of a process of weighing grammatical information on the basis of its quality.

Existing Findings. Theories on VPE have tended to fall into either the syntax or the discourse camp. Syntactic accounts have posited a constraint on syntactic parallelism, which is supported by cases of degraded VPE that exhibit voicing or category mismatches between the antecedent and the ellipsis as in (1) and (2) [1-5]. The extent to which the structure is degraded has been shown to be in proportion to how far the antecedent departs in syntactic form from the ellipsis [1]. However, this does not explain cases in which there is a difference in acceptability between two structures that have the same degree of syntactic mismatch, as shown in (3). Using such examples, discourse accounts argue that acceptability is not inherently a matter of syntax. Rather, it is driven by the discourse features these structures exhibit, such as their coherence relation and focus structure [3, 4]. However, these accounts have not been supported experimentally [5], and they are not equipped to explain why an acceptability cline can be produced by an increasing departure from the matching syntactic form. The current study explores the possibility that VPE resolution uses both domains, such that more robust discourse features can partially overcome the costs of degraded syntax.

Experiment. 70 native English speakers were given a 5-point Likert scale acceptability task composed of recycled materials from [1] on VPE gradience (see Table 1). The robustness of discourse was increased by changing the coherence relation and placing a lexical item which further emphasized this relation in focus. This also made the relation and focus structure well-formed [3], [4], in contrast to the original materials. In (a-d) each successive condition demonstrated a category mismatch that was more pronounced than the first, with (a) as a well-formed baseline. Conditions (e-g) mirrored the progressively degraded syntactic conditions in (b-d), but also each included the same new discourse manipulation. An acceptability cline was produced in both (b-d) and (e-g), but the addition of discourse features reduced the impact of syntax on acceptability in each condition (Figure 1). Thus, discourse features rather than eliminating the cline, simply ameliorated it. The effects of syntax alone on acceptability were significant in the (c) and (d) conditions. In the corresponding conditions with the discourse manipulation, (f) and (g), the effects of syntax only remained significant in (g). The effects of discourse features overall on acceptability reached significance in condition (g).

Discussion. These results provide novel evidence that both syntactic and discourse factors contribute to VPE resolution, not as absolute constraints, but as complementary and somewhat independent influences that dynamically compensate for each other's limitations.

(1) * The puzzle was solved by Kim and Lee did too. (passive-active voicing mismatch)

(2) * Running the marathon was hard but Josie did. (category mismatch)

Note: Focus structure is indicated in examples below with capitalization

(3) a. * The puzzle was solved by Kim and LEE did too. (passive-active voicing mismatch; ill-formed coherence relation (resemblance i); ill-formed focus structure)

b. The trash should have been taken out but nobody DID. (passive-active voicing mismatch; well-formed coherence relation (violated expectation); well-formed focus structure)

Defining well-formedness: (1) coherence: resemblance relations require syntactic parallelism; violated expectation does not [3], (2) focus: contrastive topics require each member of the topic set to be subjects of their own clause; vacuously satisfied by auxiliary focus [4].

Table 1. Sample Item Set (24 sets total, 6 sets for each alternation of item in focus)

The focused item in (e-g) alternated between somehow, surprisingly, despite that, in spite of that
Original syntactic conditions (a-d)

Well- formed syntax: well-formed coherence relation (resemblance ii) & focus structure:

a. Almost nobody approached the lion, but the TRAINER did. (Available VP)

ill-formed syntax: ill-formed coherence relation (resemblance ii) & focus structure:

b. Approaching the lion was nearly impossible, but the TRAINER did. (Embedded VP)

c. The lion was nearly impossible to approach, but the TRAINER did. (VP with a Trace)

d. The lion was nearly unapproachable, but the TRAINER did. (Negative Adjective)

Added conditions with discourse manipulation (e-g)

ill-formed syntax: well-formed coherence relation (violated expectation) & focus structure:

e. Approaching the lion should have been impossible, but [SOMEHOW] the trainer did.

f. The lion should have been impossible to approach, but the [SOMEHOW] the trainer did.

g. The lion should have been completely unapproachable, but the [SOMEHOW] the trainer did.

Note: Should is also implicated in the construction of the violated expectation relation

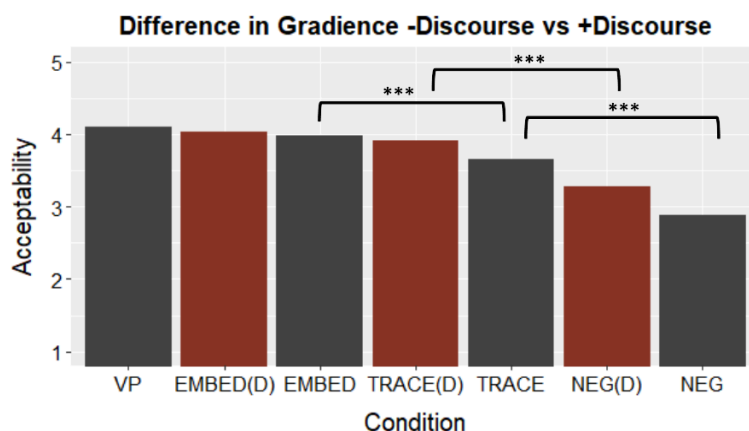


Figure 1. Mean acceptability for the syntactic conditions (gray) and the syntax + discourse conditions (red). Three models were produced using a helmert contrast, (1) syntactic conditions compared to each other, (2) discourse conditions compared to each other (3) syntactic conditions compared to their discourse condition counterpart.

References. [1] Arregui, et al., 2006, *JML*; [2] Frazier & Clifton, 2005, *Syntax*; [3] Kehler, 2000, *Linguistics and Philosophy*; [4] Kertz, 2013, *Language*; [5] Kim & Runner 2011, *Processing Linguistic Structure*