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Coherence and finiteness effects in extraction from adjunct islands in English

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Introduction

It has traditionally been assumed that adjunct clauses are strong islands for extraction across languages, including in English (the Adjunct Condition, Huang, 1982). However, recent studies have claimed that extraction from adjunct clauses is possible in English given certain conditions:

Semantic coherence:

Extraction from adjunct clauses is possible in English, provided that a coherence relation (e.g., a causal, as opposed to a purely temporal relation) holds between the events referred to by the matrix and the adjunct clause (1a vs. 1b) (Truswell, 2011; Tanaka, 2015).

- (1) a. Who_i did John get upset [after talking to]_i?
(Truswell, 2011: 129)
b. *_i[Which letter]_i did John break a glass [after writing]_i?
(Truswell, 2011: 141)

Finiteness:

It has been argued that in English extraction from coherent adjuncts is only possible if the adjunct is non-finite (2a vs. 2b) (Truswell, 2011).

- (2) a. Who_i did John go home [after talking to]_i?
b. *Who_i did John go home [after he talked to]_i?

If coherence and/or finiteness indeed have an impact on the acceptability and/or processing of extraction from adjunct clauses, then this would call into question claims that filler-gap association is suspended in island domains, as has been argued for subject islands (Stowe, 1986) and relative clause islands in English (e.g., Traxler & Pickering, 1996).

The current study

The current study investigates how coherence and finiteness affect the acceptability (Exp. 1) and the real-time processing (Exp. 2) of adjunct island extraction in English.

Hypotheses:

- Predicted main effect of coherence: For Experiment 1, a higher level of sentential coherence will increase the acceptability of extraction from the adjunct as measured via higher ratings for coherent structures. For Experiment 2, higher coherence is expected to facilitate reading times at the embedded adjunct verb (R9) and spillover region (R10) where dependency formation is expected to occur.
- The presence of finiteness on the adjunct verb is expected to degrade the acceptability of extraction (Exp. 1) and slow processing at the adjunct verb (Exp. 2), provided that sentences are coherent – with no additional effect being hypothesized for non-coherent structures.

Finding an influence of either factor on dependency formation could be taken as evidence of the online permeability of such structures.

Experiment 1 (Acceptability judgments)

Participants: 72 mono-lingual, native English speakers.

Materials: 40 sentence items bearing argument extraction in the form of question formation (*Which NP*) from an *after*-adjunct clause, manipulating **Coherence** and **Finiteness** (3), distributed across four lists with 80 distractor items.

Coherence (coherent/non-coherent):

Sentential coherence was either augmented (3a) or impeded (3b). This was done by using telic matrix verbs in the coherent condition and activity verbs in the non-coherent condition (Truswell, 2011) and by using matching matrix adverbs, e.g. *almost* (coherent) vs. *a little* (non-coherent).

Finiteness (finite, non-finite): verb finiteness in the adjunct clause.

- (3) a. coherent | non-finite/finite
Which beer did he almost stumble [after chugging / after he chugged]?
b. non-coherent | non-finite/finite
Which beer did he stroll a little [after chugging / after he chugged]?

Procedure:

- 7-point Likert scale rating task (1 = “completely unacceptable” to 7 = “completely acceptable”) presented online using Google forms.

Results

Linear mixed models analysis: Main effect of Coherence: coherent > non-coherent ($\beta = 0.283, t = 3.98, p < .001$); Main effect of Finiteness: non-finite > finite ($\beta = -0.095, t = -2.70, p < .05$). Coherence \times Finiteness interaction: finite < non-finite for coherent structures ($\beta = -0.056, t = -2.69, p < .05$)

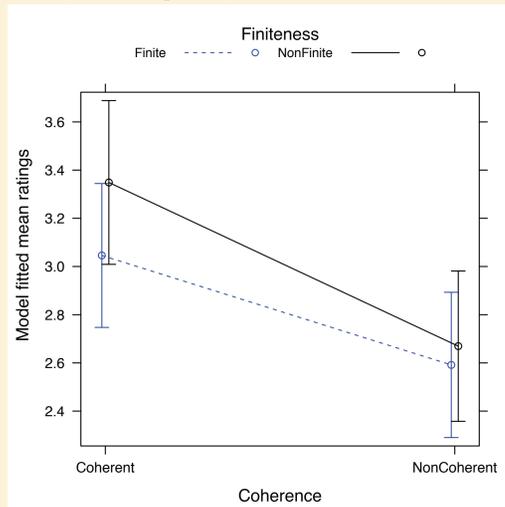


Figure 1. Exp. 1 fitted mean acceptability ratings

Discussion

- Overall, ratings were on the low side of the scale, suggesting that extraction is difficult.
- The acceptability of extraction from adjunct islands is increased in the presence of a coherence relation between matrix and adjunct clause event.
- Finiteness reduces the acceptability of coherent structures in English.
- The small size of the finiteness effect points towards a processing phenomenon.

Experiment 2 (Self-paced reading)

Participants: 60 mono-lingual, native English speakers.

Materials: 40 critical sentences partially modified from those used in Experiment 1, rotated across four presentation lists. 80 distractor items.

- (4) a. coherent | non-finite/finite
Which beer did he stumble immediately [after chugging/after he chugged] last night?
b. non-coherent | non-finite/finite
Which beer did he stroll a bit [after chugging/after he chugged] last night?

Results:

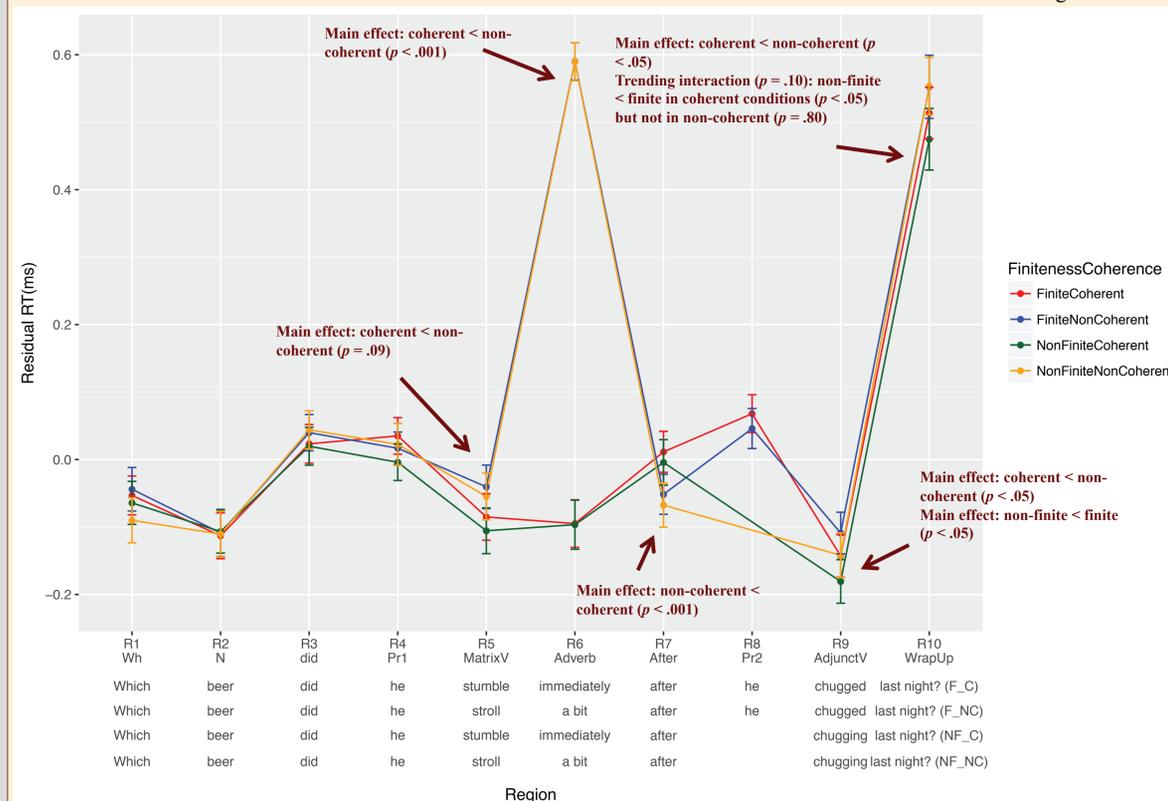


Figure 2. Exp. 2 residualized reading times (ms) by condition and region (C= coherent, NC = non-coherent, F = finite, NF = non-finite)

General discussion

Findings:

- Overall, coherent structures involving dependency formation into an adjunct are rated higher than non-coherent structures and are processed faster at the regions where filler-gap integration is expected to occur.
- Finiteness decreases the acceptability of coherent extraction, but has no effect on non-coherent extraction.
- Finiteness increases processing time at the first point of filler-gap integration (the adjunct verb). However, finiteness appears to only affect coherent structures at later stages of integration (the wrap-up region).
→ Later stages of integration during processing thus correspond to the offline acceptability ratings.

The Adjunct Condition:

The acceptability results are compatible with the Adjunct Condition; extraction from the adjunct clauses produced ratings that fell below the mid-point of the scale across all conditions.

Implications for the permeability of adjunct islands:

Our finding that coherence and finiteness have an impact on the acceptability of extraction from adjuncts as well as on the processing of such structures at the point of filler integration suggests that filler-gap integration need not be suspended in adjunct clauses, as has been claimed for other islands (Stowe, 1986; Traxler & Pickering, 1996).

This suggests that some degree of filler-gap integration takes place inside the adjunct islands investigated here (even if extraction is judged to be of low acceptability). See Tutunjian et al. (2017) for similar observations regarding relative clause islands.

How can the permeability of adjunct islands be reconciled with the Adjunct Condition?

- Our stimuli may have forced integration inside the island, due to the absence of another gap; this forced integration was facilitated in the presence of a coherence relation.
- Gap assignment may be supported in the presence of a cue that suggests a tighter semantic relation (coherence) between the adjunct and the matrix clause (e.g. the telicity of the matrix verb). This is also supported by the trending coherence by finiteness interaction at the wrap-up region (Exp. 2), which suggests that some of the permeability is only visible in the coherent conditions.

References

- Huang, J. C.-T. (1982). *Logical Relations in Chinese and the Theory of Grammar*. (PhD. Dissertation).
- Stowe, L. A. (1986). Parsing WH-constructions: evidence for on-line gap-location. *Language and Cognitive Processes* 1(3), 227–245.
- Tanaka, M. (2015). *Scoping out of adjuncts. Evidence for the parallelism between QR and wh-movement*. (Doctoral thesis).
- Truswell, R. (2011). *Events, phrases and questions*. Oxford: Oxford University Press.
- Traxler, M. J., & Pickering, M. J. (1996). Plausibility and the Processing of Unbounded Dependencies: An Eye-Tracking Study. *Journal of Memory and Language*, 35(3), 454-475.
- Tutunjian, D., Heintz, F., Klingvall, E., & Wiklund, A.-L. (2017). Processing Relative Clause Extractions in Swedish. *Frontiers in Psychology*, 8:2118. doi:10.3389/fpsyg.2017.02118

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