

Extrapolation in English: Evidence from *wh*-movement

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Background: The syntax of extraposed clauses such as those in (1) has been subject to extensive debate.

- (1) a. (i) It is possible that John left early.
(ii) That John left early is possible.
b. (i) It worries the teacher that the students did not understand the accounting equation.
(ii) That the students did not understand the accounting equation worries the teacher.
c. (i) It is a tragedy that pollutants harm bees.
(ii) That pollutants harm bees is a tragedy.

The major questions of discussion are (i) the base-position of the clause (subject or complement to predicate); (ii) the relationship of the clause to the word *it* (correlate, cataphoric pronoun, nominal head, expletive), (iii) whether or not there are different subclasses of predicates within English, most notably unergative vs. ergative ones. We can distinguish the following types of analyses with respect to the assumptions about (i) and (ii). The **Adjunct Analyses (AAs)** takes *it* to be the selected subject while extraposed clause is an adjunct (see for verbal complements Koster 1978, Bennis 1986, Vikner 1995). The **Complement Analyses (=CAs)** take the clause to be a selected argument while *it* is assumed to be an expletive in TP (see for ergative adjectives Bennis 2000, for *seem* in Alrenga 2005). The **Complex Constituent Analyses (CCAs)** assume that the sentence and *it* form a nominal constituent from which the clause is necessarily extraposed (see Rosenbaum 1967, Sonnenberg 1992, partly Buring & Hartmann 1997, Müller 1995). While the CCAs and AAs are compatible with both unergative and ergative predicates, the complement analysis is only compatible with ergative adjectives.

Data. In this talk I present two experimental studies (acceptability study, thermometer technique) that investigate the possibility of the *that*-clause to occur in subject position and the availability of *wh*-extraction from the extraposed clause with adjectival predicates, plus two pilot studies that tests the same with a small number of psych verbs and nominal predicates. *That*-clauses are expected to be acceptable in most analyses that take extraposition to be movement from the subject position. *Wh*-extraction on the other hand is expected to be available in those analyses that take the *that*-clause to be the complement of the adjectival predicate (without *it* as a nominal head). Example sentences for four of the five studies are provided in the examples in (2) to (4) (nominal predicates are designed as Adjectives 1)

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| (2) | Adjectives 1 | (4) | Adjectives 2: |
| a. | Extraposition: It is possible that Peter sold his school books. | 1. | Extraposition: It is clear that the parliament will vote against the proposal. |
| b. | Extraction: Which books is it possible that ... ? | 2. | Extraction: Which proposal was it clear that the parliament will vote against? |
| c. | In-situ Subject: That Peter sold his school books is possible. | 3. | In-situ subject: That the parliament will vote against the proposal was clear. |
| (3) | Psych verbs | 4. | Extraposition mit PP: It is clear to the public that the parliament will vote against the proposal. |
| a. | Base: It worries the teacher that the students did not understand the accounting equation. | 5. | Extraction with PP: Which proposal was it clear to the public that the parliament will vote against? |
| b. | Extraction: Which equation does it worry the teacher that ... | | |

The results show across all configurations (see the figures for adjectives in Figure 1 and Figure 2) (i)

that *that*-clauses are overall not tolerated in subject position (with the exception of a few selected adjectival predicates) and (ii) that *wh*-extraction is not possible out of *that*-clause with all investigated adjectival predicates. Post-hoc tests reveal that with a small set of unergative predicates (disallowing *that*-drop, occurrence in as-is constructions and DP+INF, see Cinque 1989, Bennis 2000, 2004) *wh*-extraction is rated significantly worse than clausal subjects, while *wh*-extraction and occurrence in subject position are rated equally bad with ergative adjectives.

Discussion. Based on this study, *wh*-extraction is generally not possible out of extraposed clauses, both with unergative and ergative adjectives. This result is not expected under the Complement Analyses, but it is under the Adjunct Analyses and Complex Constituent Analyses. Considering the availability of the clause in subject position being dependent on the nature of the predicate as unergative or ergative suggests that the *that*-clause without *it* can be a selected subject. Taking this together extraposed clauses are either adjoined with *it* as a kind of cataphoric pronoun in subject position (both with unergative and ergative adjectives) or they are base-generated in complement position with the correlate extracted to subject position (ergative adjectives) or they are base-generated as *that*-clauses in subject position (unergative adjectives).

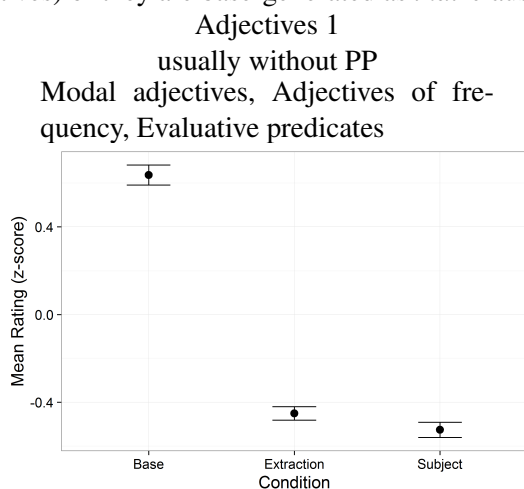


Figure 1

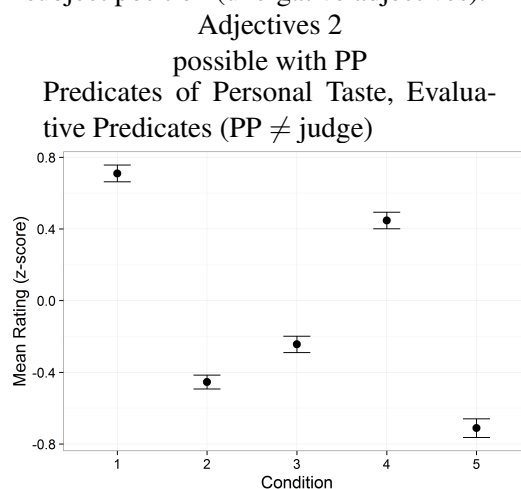


Figure 2

References:

- Alrenga**, Peter. 2005. A sentential subject asymmetry in English and its implications for complement selection. *Syntax* 8(3). 175–207. • **Bennis**, Hans. 1986. Gaps and Dummies. Tilburg: Tilburg, Katholieke Hogeschool dissertation. • **Bennis**, Hans. 2000. Adjectives and Argument Structure. In Peter Coopmans, Martin Everaert & Jane Grimshaw (eds.), *Lexical Specification and Insertion*, 27–67. Amsterdam/ Philadelphia: Benjamins. • **Bennis**, Hans. 2004. Unergative adjectives and psych verbs. In Artemis Alexiadou, Elena Anagnostopoulou & Martin Everaert (eds.), *The Unaccusativity Puzzle: Explorations at the Syntax-Lexicon Interface*, 84–113. Oxford: OUP. • **Büring**, Daniel & Katharina Hartmann. 1997. Doing the right thing. *The Linguistic Review* 14(1). 1–42. • **Cinque**, Guglielmo. 1989. On Embedded Verb Second Clauses and Ergativity in German. In Dany Jaspers, Wim Klooster, Yvan Putseys & Peter Seuren (eds.), *Sentential Complementation and the Lexicon*, Dordrecht: Foris. • **Koster**, Jan. 1978. Why Subject Sentences Don't Exist. In Samuel Jay Keyser (ed.), *Recent Transformational Studies in European Languages*, Cambridge, MA: MIT Press. • **Müller**, Gereon. 1995. On Extraposition & Successive Cyclicity. In Uli Lutz & Jürgen Pafel (eds.), *On Extraction and Extraposition in German*, vol. 11 *Linguistik Aktuell*, 213–243. Amsterdam: Benjamins. • **Rosenbaum**, Peter S. 1967. *The Grammar of English Predicate - Complement Constructions*. Cambridge, M.A.: MIT. • **Sonnenberg**, Bernhard. 1992. *Korrelate im Deutschen: Beschreibung, Geschichte und Grammatiktheorie*. Tübingen: Niemeyer. • **Vikner**, Sten. 1995. *Verb Movement and Expletive Subjects in the Germanic Languages*. Oxford: Oxford University Press.