New data on an old issue: subject/object asymmetries in long extraction contexts

Tanja Kiziak

University of Tuebingen

`tanja.kiziak@uni-tuebingen.de`

Constituent movement is a fundamental property of language and has received much attention in theory-building. Long extraction is a case in point. Essential questions concern mobility and transparency: Which constituents can be extracted out of which syntactic contexts? With regard to mobility, the subject/object asymmetry found in long *wh*-movement from *that*-clauses in English (1) has stirred much debate.

(1) a. **Who do you think that came?*
   b. *Who do you think that John likes?*

Subject/object asymmetries arise in a similar fashion with long movement from *wh*-islands (2) and other extractions sites. Thus the question of mobility is interconnected with aspects of transparency.

(2) a. **Which student do you wonder how could solve the problem?*
   b. *[??]Which problem do you wonder how John could solve?*

Over the years, a number of accounts have been proposed for subject/object asymmetries. In generative grammar, the Empty Category Principle (ECP) has played a predominant role, relating the asymmetry to differences in government. With the abolition of the theoretical role of government in Minimalism, new explanations were called for. Moreover, the exclusively formal accounts have been challenged by explanations along the lines of processing (e.g. Fanselow/Frisch 2004, Kluender/Kutas 1993) and information structure (e.g. Bayer 2005).

Linguists have searched for equivalents of the English extraction asymmetries in other languages. The findings of their quest in the case of German are highly controversial. While some linguists claim that any perceived asymmetry is just a case of wishful thinking (Müller/Sabel 1989, footnote 2: "ECP-Wunschdenken"), others take them as real and even use them as core arguments for the position of the subject in German sentence structure. The controversy regarding asymmetries encompasses both extractions from dependent declarative clauses as well as extractions from *wh*-islands. The contradictory views of long extraction asymmetries in German as well as the lack of any systematic empirical investigation have repeatedly been commented on (e.g. Lutz 1996, Haider 1993). What is thus called for is a systematic elicitation of the German extraction data.

We claim to meet this demand with a series of judgement studies for German, in which we systematically consider three aspects of extraction structures: mobility, transparency and movement type. In German, long *wh*-movement and long extraction of a declarative constituent (= long topicalization) show the same surface structure, (3). The question is thus whether the two movement types behave in parallel as far as mobility and transparency are concerned.

(3)   a.   *Wen   glaubt sie,   dass der   Anwalt   angerufen hat?*
          Who thinks she   that   the   layer   called   hat
          'Who does she think that the layer has called?'

      b. D*en Richter glaubt sie, dass der   Anwalt angerufen hat.*
          The   judge thinks she that the   layer   called   hat.
          'The layer has called the judge, she thinks.'

We use the Thermometer judgement method for eliciting strictly controlled judgements (Featherston 2007). This method is an advancement of Magnitude Estimation (Bard et al 1996).

With regard to the subject/object asymmetry, the insights from our experiments can be summarized in a nutshell: This asymmetry does exist and it shows up with both movement types and in different extraction contexts. Bearing the continuous controversies throughout German linguistic literature in mind, this conclusion appears to be too simplistic, and in fact it is. We have to add that the asymmetry is at times difficult to recognise because it interacts with a number of further factors.
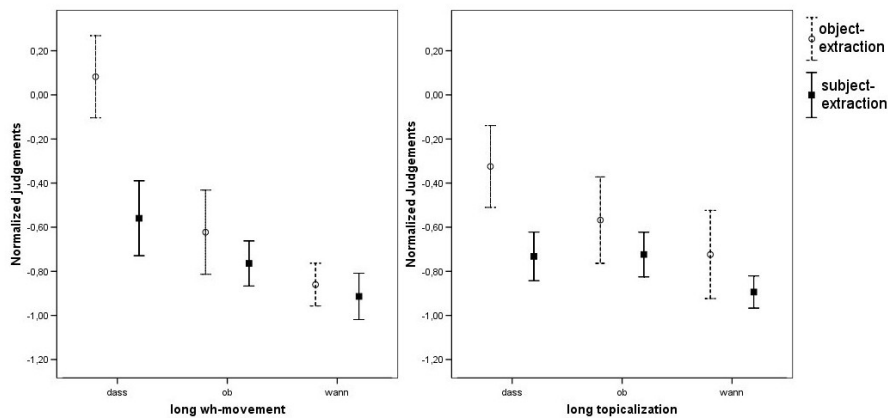
Consider the figures above. They represent judgements for long *wh*-movement (left) and long topicalization (right) from dependent *dass*-, *ob*-, and *wann*-clauses (*that*-, *whether*-, and *when*-clauses). The gap between subject and object extraction is biggest with long *wh*-movement from a *dass*-clause: we see a clear subject/object asymmetry. The gap is smaller with long topicalization from a *dass*-clause. We take this as a general dispreference for putting the object in sentence-initial position in a

declarative clause – a pattern we also find with simple matrix clauses in other experiments. What is clearly visible is the way in which the semantic heaviness of the complementizer negatively influences judgements, a finding which concurs with the results of Kluender/Kutas' (1993) investigation of English. We furthermore see that effects of semantic heaviness are more severe for long *wh*-movement than for long topicalization (two *wh*-elements versus just one). One thing that blurs the otherwise clear asymmetries are the floor effects we find with the subject extractions. 'Floor effect' is a descriptive term for the fact that at a certain level of "badness", judgements do not get much worse, even if theoretically there should be a contrast in acceptability between two structures because one violates more constraints than the other – for the cumulative view of constraint violation see Keller (2000).

We will show that by identifying a whole range of such factors as semantic complexity of the complementizer, word order preferences, compatibility with the matrix predicate etc. we get a better understanding of extraction phenomena as a whole, and we will see how the competing theories mentioned above can contribute to the overall picture. In order to be able to identify the factors, we need a fine-grained picture of the data. This is exactly what our judgement studies provide for. Thus we claim to gain new explanatory insight by means of our judgement studies.

References

Bard, E. et al (1996) "Magnitude estimation of linguistic acceptability". *Language* 72 (1): 32-68.

Bayer, J. (2005) „Was beschränkt die Extraktion? Subjekt - Objekt vs. Topic – Fokus." In: Deutsche Syntax: Empirie und Theorie. F.-J. D'Avis (ed). Göteborg: Acta Universitatis Gothoburgensis. 233-257.

Fanselow, G./ Frisch, S. (2004): "Effects of Processing Difficulty on Judgments of Acceptability." In: Fanselow, G. et al (eds.): *Gradience in Grammar*. Oxford: Oxford University Press.

Featherston, S. (2007) "Thermometer judgements as linguistic evidence". To appear in: Rothe A. (ed.) *Was ist linguistische Evidenz?* Herzogenrath: Shakerverlag.

Haider, H. (1993). *Deutsche Syntax Generativ*. Tübingen: Gunter Narr.

Keller, F. (2000) *Gradience in grammar Experimental and Computational Aspects of Degrees of Grammaticality*. PhD Thesis, University of Edinburgh.

Kluender, R./Kutas, M. (1993) "Subjacency as a Processing Phenomenon". *Language and cognitive processes 8* (4): 573-633.

Lutz, U. (2004) *Studien zu Extraktion und Projektion im Deutschen*. Dissertation, University of Tübingen.

Müller, G. /Sabel, J. (1989) "Aufgebrochene Barrieren". In: *Frankfurter Linguistische Forschungen*. 20-35.