

## Topics in Dutch Scrambling

Gert-Jan Schoenmakers (Radboud University Nijmegen), Marjolein Poortvliet (Charles University Prague), and Jeannette Schaeffer (University of Amsterdam)

Paper presented at the 50<sup>th</sup> Poznań Linguistic Meeting

This study reports experimental data on Dutch definite direct object scrambling, a phenomenon in which the definite object follows or precedes an adverb. An example is given in (1). Although most theories agree that definite object scrambling is regulated by the topicality and anaphoricity of the object, they differ as to whether or not scrambling is optional, and as to what kinds of topics scramble. However, experimental evidence is scarce. The *topicality* of an object is related to its accessibility in discourse. We refer to an entity as *anaphoric* if it is explicitly mentioned in the preceding discourse. Crucially, anaphoricity is not a necessary condition for topic-hood. Our study includes permanently available topics, i.e. those definites which are presuppositional from encyclopedic knowledge. The most relevant accounts from the literature can be summarized as follows:

Scrambling is

- i) obligatory for all topics (Neeleman & Reinhart 1998);
- ii) obligatory for anaphoric topics (Schaeffer 1997; 2000);
- iii) obligatory for continuous topics (Erteschik-Shir 2007);
- iv) preferred, but not obligatory, for anaphoric topics (de Hoop 2000; 2003);
- v) optional, but undesirable, for all topics (van Bergen & de Swart 2009; de Swart & van Bergen 2011).

These accounts render the following predictions for different types of definite objects:

	Anaphoric topics	Anaphoric foci	Permanently available topics	Non-anaphoric foci
Neeleman & Reinhart (1998)	+	NA	NA	-
Schaeffer (1997; 2000)	+	+	+ (anaphoric) - (non-anaphoric)	-
Erteschik-Shir (2007)	+	-	-	-
De Hoop (2000; 2003)	$\frac{2}{3}$	$\frac{2}{3}$	$\frac{1}{2}$	$\frac{1}{2}$
Van Bergen & de Swart (2009); de Swart & van Bergen (2011)	-	-	-	-

Table 1. Overview of predictions per analysis of definite objects scrambling

To test these predictions, 44 adult Dutch native speakers (32 female;  $M_{\text{age}}$  24.48; age range 17–57; SD 6.66) participated in a sentence completion task (Table 2 illustrates the design). Participants are asked to read three-sentence pre-amble on a computer screen and to orally complete a target sentence using three constituents (transitive verb, definite object, temporal adverb), presented in random order on the screen (see (2) and (3)). The results are presented in Tables 3 and 4. Statistical analyses reveal that:

- Permanently available topics are strongly preferred in unscrambled position ( $p < .001$ );
- Anaphoric objects occur in scrambled position more frequently than non-anaphoric objects ( $\beta = -.40$ ,  $SE = .10$ ,  $z = -4.02$ ,  $p < .001$ );
- (Anaphoric) topics occur in scrambled position more often than (anaphoric) foci ( $\beta = -.54$ ,  $SE = .13$ ,  $z = -4.07$ ,  $p < .001$ ).

Our results best corroborate de Hoop's (2000, 2003) account of scrambling, as scrambling is optional for all kinds of definites, but influenced by both topicality and anaphoricity.

- (1) *dat Jan (het boek) gisteren (het boek) las.*  
 that Jan the book yesterday read  
 ‘...that Jan read the book yesterday.’

Item set	Conditions	Example	Topical	Anaphoric
T/F (N=24)	A. Anaphoric topic	(2a)	+	+
	B. Anaphoric focus	(2b)	-	+
	C. Non-anaphoric focus	(2c)	-	-
PA (N=8)	D. with context	(3a)	+	-
	E. without context	(3b)	-	-
Both sets (N = 48)	Filler items			

Table 2. Design of the sentence completion task, incl. discourse status of definite objects

- (2) a. **T/F Set - A: Anaphoric topic condition**  
*Dit gaat over een geleende fiets die Sophie heeft gesloopt. Het is een zwarte fiets met een flinke slag in het wiel. Wat gaat er gebeuren met de fiets?*  
 ‘This is about a borrowed bicycle that Sophie wrecked. It is a black bicycle that has a buckled wheel. What will happen with the bicycle?’
- b. **T/F Set - B: Anaphoric focus condition**  
*Dit gaat over Sophie die een geleende fiets heeft gesloopt. Ze maakt wel vaker per ongeluk andermans spullen stuk. Wat gaat Sophie doen?*  
 ‘This is about Sophie who wrecked a borrowed bicycle. She often breaks other people’s things by accident. What will Sophie do?’
- c. **T/F Set - C: Context-free condition**  
*Wat gaat er gebeuren?*  
 ‘What will happen?’

**Target sentence**

Sophie gaat... [repareren] [de fiets] [gauw]  
 Sophie goes repair the bicycle soon

- (3) a. **PA Set - D: Permanently available topic condition**  
*Dit gaat over Jasper die een afspraak heeft met een speciaal iemand. Hij kijkt er al heel erg lang naar uit. Wat gaat er gebeuren?*  
 ‘This is about Jasper who has an appointment with a special someone. He has been looking forward to it for a long time. What will happen?’
- b. **PA Set - C: Context-free condition**  
*Wat gaat er gebeuren?*  
 ‘What will happen?’

**Target sentence**

Jasper gaat... [ontmoeten] [de koning] [weldra]  
 Jasper goes meet the king soon

	Scrambled	Unscrambled
<i>Anaphoric topic</i>	57% (188/332)	43% (144/332)
<i>Anaphoric focus</i>	42% (138/332)	58% (194/332)
<i>Non-anaphoric focus</i>	34% (110/319)	66% (209/319)

Table 3. Placement of definite objects per condition in the T/F item set.

	Scrambled	Unscrambled
<i>with context</i>	26% (43/164)	74% (121/164)
<i>without context</i>	21% (34/160)	79% (126/160)

Table 4. Placement of definite objects per condition in the PA item set.

## References

- van Bergen, G., & de Swart, P. (2009). Definiteness and scrambling in Dutch: Where theory meets practice. In A. Schardl, M. Walkow, & M. Abdurrahman (Eds.), *Proceedings of NELS 38* (pp. 89–100). Amherst, MA: GLSA.
- Erteschik-Shir, N. (2007). *Information Structure: The Syntax-Discourse Interface*. Oxford: OUP.
- de Hoop, H. (2000). Optional scrambling and interpretation. In: H. Bennis & M. Everaert (Eds.), *Interface Strategies* (pp. 153–168). Amsterdam: Holland Academic Graphics.
- de Hoop, H. (2003). Scrambling in Dutch: Optionality and optimality. In: S. Karimi (Ed.), *Word Order and Scrambling* (pp. 201–216). Malden, MA: Blackwell Publishing.
- Neeleman, A., & Reinhart, T. (1998). Scrambling and the PF interface. In M. Butt & W. Geuder (Eds.), *The Projection of Arguments* (pp. 309–353). Stanford, CA: CSLI Publications.
- Schaeffer, J. (1997). *Direct Object Scrambling in Dutch and Italian Child Language*. PhD dissertation, University of California, Los Angeles, CA.
- Schaeffer, J. (2000). *Direct Object scrambling in Dutch and Italian Child language*. Amsterdam: John Benjamins.
- de Swart, P., & van Bergen, G. (2011). *Definiteness and adverb-object order in Dutch*. Manuscript University of Groningen and Université Catholique Louvain-La-Neuve.