Squibs
and
Discussion

UNSCRAMBLED PRONOUNS IN
DUTCH
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One correlate of the acceptability of scrambling in Dutch is the definiteness of the object. While nonspecific indefinite objects do not allow scrambling, for definite objects scrambling is optional (de Hoop 2003). Pronouns, as illustrated below, scramble almost obligatorily (the marked word order is indicated by #).

(1) #We moesten eerst hem voeren.
   we had.to first him feed

(2) We moesten hem eerst voeren.
   we had.to him first feed
   'First, we had to feed him.'

The preferred reading for the pronoun in (2) is anaphoric; that is, *hem* refers back to a previously mentioned individual in the discourse. Alternatively, *hem* can be stressed and receive a contrastive or deictic reading. Such stressed pronominal objects can occur in unscrambled position, as in (1). As we will show, however, the relation between scrambling and accenting is more complex than these examples suggest.

1 The Puzzle

Van Balen and de Hoop (2005) present a number of examples from the Dutch novel *Kees de Jongen* by Theo Thijssen (1923), which neatly cover the complete spectrum of pronominal object scrambling behavior. Let us start with an example of an unscrambled pronoun with a clearly contrastive interpretation.

(3) ''Afgelopen,'' zei oom schor, en Kees hoorde hem snikken.
''Ach God,'' zei tante.

  En Kees hoorde ook haar snikken.
  and Kees heard too her sob

' ''It's over,'' said Uncle hoarsely, and Kees heard him sob.
''Oh God,'' said Aunt.

  And Kees heard her sob as well.'

The contrast between hearing the aunt sob and hearing the uncle sob
is also reflected in the pronunciation of this sentence: *haar* is necessar-
ily read with stress. The position of *haar*, however, is not fixed. The
scrambled counterpart (4) is fully grammatical, perhaps even slightly
preferred, while retaining the contrastive reading and the contrastive
stress in a context like that in (3).

(4) En Kees hoorde haar ook snikken.
  and Kees heard her too sob
  'And Kees heard her sob as well.'

Examples like (4) are found in the book, too. Hence, for a stressed
pronoun, scrambling is optional, unlike the normal pattern where un-
stressed pronouns scramble obligatorily.

    Interestingly, however, van Balen and de Hoop also present exam-
ples of unscrambled *and* unstressed pronouns. Consider one of their
examples, reproduced in (5).

(5) Maar deze mevrouw was een edele dame,
  en als ze ooit hem nodig had . . .
  and if she ever him needed
  'But this lady was a noble woman, and if she ever needed
him . . .'

The pronoun *hem* 'him' in (5) is unstressed and does not receive a
contrastive interpretation in the given context. Yet it appears in un-
scrambled position, and the sentence is judged to be grammatical and
natural. However, van Balen and de Hoop do observe that (5) differs
from the ill-formed (1) in that the *adverb* receives stress. Indeed, utter-
ing (5) without emphasis on the adverb renders it ill formed. Other
examples of unscrambled, unstressed pronouns they find in *Kees de
Jongen* share these properties. Still, scrambling is not forbidden with
a strongly accented adverb. A constructed, scrambled version of (5)
is grammatical in the same context, without changing its meaning or
accenting.

(6) en als ze hem ooit nodig had . . .
  and if she him ever needed

    So far, we have shown that under the right circumstances, all
combinations of (de)accented pronominal objects and scrambling can
be found. One possible factor in the acceptability of unscrambled,
unstressed pronouns is whether constituents nearby are accented or
not. We can also conclude that the scrambled word order is always

allowed. In the next section, we will account for these observations within Optimality Theory (OT).

2 Prosody and Scrambling in Dutch

An influential analysis of the interaction between stress and scrambling is that of Neeleman and Reinhart (1998). Their account of scrambling builds on the assumption that default main stress falls on the most deeply embedded constituent and that deviating from this default is avoided if possible. In a Dutch unscrambled sentence, the most deeply embedded constituent is the object, and in a scrambled sentence, the final verb. Consequently, if an object needs to be accented, it is best left unscrambled, while a deaccented object scrambles to avoid stress.

This means that Neeleman and Reinhart (1998) account for two of the four possibilities noted in section 1: the scrambled unstressed pronoun and the unscrambled stressed pronoun. However, it is not clear that these two options are the defaults in any way or that the other two are deviations that need to be motivated. Rather, if anything is the default word order for pronominal objects, stressed or not, it is the scrambled word order, for it is allowed in every context. This suggests that the so-called definiteness effect on scrambling cannot be fully explained by prosody, pace Neeleman and Reinhart. However, we agree with Neeleman and Reinhart that essential parts of the scrambling data are prosodically motivated and can be explained by appealing to crosslinguistic tendencies in the assignment of stress. Before we lay out our analysis, we need to say a few more words about the prosodic properties of Dutch.

Notoriously, in German and Dutch, the object rather than the verb (the rightmost element in a sentence) bears main stress in a wide focus context (see Schmerling 1976, for German). When the object is pronominal (or given in general) and unstressed, main stress moves to the verb in a wide focus context, a phenomenon known as deaccenting (Ladd 1980). An accented pronominal object can only be understood as narrowly focused (Schwarzschild 1999). This narrow focus corresponds to either a deictic or a contrastive meaning. In this squib, we consider only the latter case.

Inserting an adverb does not affect this relation between the verb and its argument, regardless of scrambling and emphasis. Reconsider (1) and (2), repeated here, intended as wide focus sentences.

(7) #We moesten eerst hem VOEREN.
     we had.to first him feed

(8) We moesten hem eerst VOEREN.
    we had.to   him first feed
    'First, we had to feed him.'

As shown in section 1, sentences like (7) are allowed when there is a strong accent on the adverb. What is important, however, is that this does not interfere with the facts about main stress: when the object is accented, main stress falls on the object; when the object is deaccented, it falls on the final verb.

3 An Optimality Theory Solution

We can model the basic behavior seen in section 2 using three OT constraints:

(9) STRESS-R(IGHT)
     Main stress falls on the rightmost word in the Intonational Phrase (I-Phrase). This constraint is violated once for every word between the stress and the right edge of the I-Phrase.

(10) STRESS(O[BJECT])
     The object is prosodically more prominent than the verb (Schwarzschild 1999, Büring and Gutiérrez-Bravo 2001).

(11) CONTR(ASTIVE STRESS)
     Stress on a pronoun corresponds to a rhetorical relation of contrast (de Hoop 2004), and vice versa.

For the sake of simplicity, we assume that the right edge of the syntactic clause coincides with the edge of an I-Phrase. In the examples we have presented thus far, the rightmost word in the I-Phrase has been the verb in final position. One might argue that a constraint like STRESS-R should not be adopted, because in default prosody in German and Dutch, main stress is assigned to a prefinal constituent. However, this only shows that the constraint is violable rather than absolute. Prosodic alignment constraints like STRESS-R can be found in the OT literature; see, for instance, Samek-Lodovici 2005 and Féry and Samek-Lodovici 2006 for a (crosslinguistic) investigation of the interaction between prosodic alignment constraints at different levels and other prosodic constraints like constraints on the realization of focus.

Ranking STRESS(O) above STRESS-R captures the fact that Dutch, as an OV language, does not by default have its main stress on the final constituent. However, if the object for some reason cannot bear stress, there is no way of satisfying STRESS(O). In that case, STRESS-R causes main stress to fall on a final verb, rather than, say, a verb in second position. With pronominal objects, we can expect STRESS(O) violations to be the rule, rather than the exception, since pronouns are typically deaccented. Accenting of the pronouns is controlled by CONTR, but we do not exclude the possibility that this constraint should be replaced by more general constraints dealing with contrast, focus, and accent (see, e.g., Schwarzschild 1999, Féry and Samek-Lodovici 2006). Neeleman and Reinhart assume a very similar bi-implication, but phrase it in terms of anaphoricity rather than contrast. The ranking CONTR ≫ STRESS(O) ≫ STRESS-R will form the background for our analysis of the scrambling data.

In a simple sentence without an adverb—so that we can ignore scrambling—our grammar correctly predicts the placement of main stress. An important difference between Neeleman and Reinhart's approach and ours is that we have separated the structural position of the object from its being accented. Our account includes no constraint that links the (un)scrambled position of an object in Dutch to its being

accented or deaccented. Rather, it includes a constraint that links (de)accenting of a pronoun to the meaning of contrast, regardless of the position the pronoun occupies. The apparent correlation between scrambling and deaccenting is explained via interaction among constraints. This opens up the possibility of having stressed pronouns in scrambled position and unstressed pronouns in unscrambled position. In the rest of this section, we will present two constraints from the literature that bring these cases about.

We have already indicated that we will not try to reduce the definiteness effect and especially pronominal scrambling to anaphoric deaccenting. Apart from our pronoun data, other studies of scrambling have shown that not all and not only anaphoric DPs scramble. For instance, an unscrambled definite DP can still receive an anaphoric interpretation, while a scrambled definite DP can receive a nonanaphoric interpretation (de Hoop 2003). De Hoop therefore assumes a dedicated constraint that requires pronouns to scramble, which we will adopt here.

(12) SCRAMBLE
Pronominal objects scramble to the left of adverbial phrases. This constraint is violated once for each adverbial phrase that the pronominal object does not pass.

This constraint does not differentiate between stressed and unstressed pronouns. To be clear, this means that we assume that scrambling of pronouns is due at least in part to some inherent property of pronouns. Of course, we have presented cases where stressed pronouns can remain unscrambled and unstressed pronouns cannot. This means that stress does influence word order. The reason for this can already be found in the interaction of the constraints introduced so far: when a pronominal object is stressed, main stress is prefinal, but in an unscrambled sentence, main stress falls closer to the right edge than in a scrambled sentence. This means that STRESS-R and SCRAMBLE favor different structures. We assume that the two constraints STRESS-R and SCRAMBLE are tied constraints (Prince and Smolensky 1993/2004). Our grammar is thus CONTR ≫ STRESS(O) ≫ {STRESS-R, SCRAMBLE}. As tableaux (13) and (14) show, this grammar models three of the four observed constructions.

(13)

Noncontrastive pronoun	CONTR	STRESS(O)	STRESS-R	SCRAMBLE
hem eerst voeren		*	*!**	
HEM eerst voeren	*!		**	
eerst hem voeren		*	*!**	*
eerst HEM voeren	*!		*	*
☞ hem eerst VOEREN		*		

When the pronoun is noncontrastive, hence not stressed, Stress-R and Scramble favor the same candidate. As a result, there is only one winner. For a contrastive pronoun, however, there are two optimal output candidates, one favored by Scramble and one favored by Stress-R.

(14)

Contrastive pronoun	Contr	Stress(O)	Stress-R	Scramble
hem eerst voeren	*!	*	***	
☞ HEM eerst voeren			**	
eerst hem voeren	*!	*	***	*
☞ eerst HEM voeren			*	*
hem eerst VOEREN	*!	*		

Now it is time to solve the final part of the puzzle: unscrambled, unstressed pronouns. We have already pointed out that these cases involve stressed adverbials. If we combine this emphasis on the adverb with the facts about deaccenting, the relevant bits from (5) and the constructed (6) show the following intonation patterns:

(15) ze   OOIT hem   NODIG had . . .
      she   ever   him   needed

(16) ze   hem   OOIT NODIG had . . .

In (15), the pronoun sits neatly between the accented adverb and the accented final verb. However, scrambling the pronoun as in (16) leads to two adjacent strong accents. Herein lies the solution to our final problem.

Féry (2007) argues that some types of topicalization in German are motivated by the need to separate two accents that would be adjacent in the alternative word order. In OT, the constraint that accounts for this phenomenon is known as *Clash (Hayes 1995, Elenbaas and Kager 1999, Féry 2007).

(17) *Clash
      Equally strong accents are not adjacent.

We propose that in the unscrambled, unstressed cases shown above, the pronoun fulfills exactly this function: it separates two strong accents. This is also the reason that not emphasizing the adverb renders the sentences ill formed: there is no stress clash to prevent.

Given that a stress clash is possible, there *is* true optionality: the pronoun can be scrambled anyway. Thus, we have reason to assume *Clash and Scramble to be tied. We have not provided any mechanism to account for stress on adverbs, and instead of introducing some ad hoc constraint, we will just assume that all candidates in tableau (18) involve stressed adverbs. For ease of exposition, we also limit ourselves to unstressed pronominal objects here, and we assume that accenting of the verb has been taken care of, as demonstrated in the

previous tableaux. We therefore have just two relevant candidates, each of which is favored by one of the tied constraints SCRAMBLE and *CLASH.

(18)

Noncontrastive pronoun, emphatic adverb	SCRAMBLE	*CLASH
☞ hem EERST VOEREN		*
☞ EERST hem VOEREN	*	

Clearly, in the case of a nonemphatic adverb, there is no clash to be avoided, and *CLASH has no influence on the predictions.

Our final grammar looks like this:

(19) CONTRASTIVE STRESS ≫ STRESS(OBJECT) ≫ {STRESS-RIGHT, SCRAMBLE, *CLASH}

This grammar can capture all four combinations of scrambling and accenting that we have discussed so far. However, it also makes predictions about structures we have not yet considered. For instance, if there is no stress clash that can be solved by leaving a pronoun in situ, because there is no final verb, unscrambled unstressed pronouns are predicted not to be acceptable. This is correct, as (20) shows.

(20) We VOEREN hem EERST. / *We VOEREN EERST
     we feed   him first /   we feed   first
     hem.
     him
     'We feed him first.'

The ranking in (19) also makes predictions for structures with two or more adverbs. We have not systematically examined such structures, but we believe our analysis can be applied to them as well. When more adverbs are involved, STRESS-R and SCRAMBLE may counterbalance each other (just as they do when only one adverb is present), because STRESS-R is violated by each adverb the stressed pronominal object scrambles across, while SCRAMBLE is violated by each adverb the stressed pronominal object does not scramble across. In example (21), from the Corpus of Spoken Dutch (CGN), a clear relation of contrast is involved such that the pronoun receives stress. The affirmative particle *wel* has a contrastive reading here (see Hogeweg 2005), but it is not stressed. The verb *gebeld*, the rightmost word in its I-Phrase, receives some prominence, but the main accent clearly falls on the pronoun *jullie* 'you'. The pronoun thus ends up between two unstressed adverbs.

(21) Maar ja hij heeft dus JULLIE wel gebeld hij gaat niet
     but yes he has   so you.PL PRT called he goes not
     al die duizend mensen bellen.
     all these thousand people call
     'So, he did call you, he won't call all these thousands of other people.'

On the basis of the ranking in (19), this can indeed be one of the expected winners, since it violates STRESS-R as much as it satisfies SCRAMBLE. As a reviewer points out, for this analysis to hold, a specific concept of tied constraints is needed, as discussed in Prince and Smolensky 1993/2004 and advocated in Müller 1997. A candidate violates a constraint tie if it violates a constraint that is part of this tie and multiple violations add up. Under such a view, the stressed pronoun in (21) should be able to occur either after, before, or between the two adverbs, a prediction that seems to be borne out. Most importantly, of course, all possible winners are predicted to satisfy the strongest constraint CONTR.

4 Conclusions

Notwithstanding the importance of prosody in word order variation, we have shown that prosodic considerations alone cannot explain the word order options of pronominal objects in Dutch. Prosodic constraints that deal with the alignment and assignment of stress interact with constraints that refer to the form and interpretation of the object. We would like to emphasize that all the constraints active in the tableaux above have been introduced and motivated in the literature independently of the data and analysis put forward here. The data presented here and our analysis of the scrambling behavior of pronominal objects in Dutch show the interaction of these constraints. Interestingly, prosody can have a different influence on word order under different circumstances: sometimes it requires stress to ''move to the right'' (stressed unscrambled pronouns) and sometimes it requires it to ''move to the left'' (pronouns in situ in case of a stressed adverbial). Unfortunately, for reasons of space we cannot be more explicit about how deaccenting and focus are related to discourse relations such as contrast, or investigate the constructions in more prosodic detail. However, in our approach stress and interpretation go hand in hand, in both scrambled and unscrambled word order. The scrambled word order remains the unmarked word order for pronouns, even for the stressed ones. We believe that the core of the analysis presented here is valid and that it can easily be extended to paint a more complete picture of the interaction among information structure, word order, and prosody.

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AN UNNOTICED READING FOR *WH*-QUESTIONS: ELIDED ANSWERS AND WEAK ISLANDS
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1 The Scope of Quantified Elided Answers

Consider the following question-answer pair:

(1) a. Which books must Jack read?
    b. The French or the Russian novels.