

# Some notes on word order and interpretation in Dutch and Finnish<sup>1</sup>

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## Abstract

Dutch is typically known to allow scrambling. Finnish on the other hand has a flexible word order. Even though the two languages differ in many aspects and Finnish does not have scrambling in the sense of an alternation between an adverb and an object, we suggest that the relation between word order and interpretation observed in the two languages is similar. On the basis of new empirical data from Finnish, we show that in both Dutch and Finnish movement of the direct object from its base-position to a non-canonical position in the middle field is related to *discourse anaphoricity*.

## 1. Introduction

Dutch has a rather rigid word order, but it does allow scrambling. Following Van Gelderen (2003) – but contra e.g. Hopp (2007) – we take scrambling in Dutch to be the alternation between a (sentential) adverb and an object (thus excluding dative shift or PP-movement across an adverb). Finnish, on the other hand, has a relatively free word order. It is a discourse-configurational language (Vilkuna 1989, 1995), in the sense that word order is mainly driven by discourse considerations. Although Finnish does not seem to show scrambling as in Dutch, the aim of this paper is to show that the relation between word order and interpretation in Finnish is highly similar to the relation between word order and interpretation that is found in Dutch scrambling with full noun phrases. To capture the Finnish word order data in relation to the Dutch scrambling data, a broader definition of the notion *scrambling* is assumed. That is, we take scrambling *in the broad sense* to indicate movement of the direct object (DO) to a non-canonical position in the middle field of the clause, and we show that scrambling in the broad sense has the same effect on interpretation in both Dutch and Finnish, namely a D-linked interpretation of the scrambled object.

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We restrict our discussion of the relation between word order and interpretation to scrambling with *full noun phrases*, as scrambling of pronouns in Dutch is obligatory (under normal circumstances) and thus has no effect on interpretation. Furthermore, we restrict the discussion of scrambling to *direct objects* as opposed to *indirect objects*. The main reason for this is that it is plausible to assume that constructions with indirect objects involve different structures from those with only direct objects, thereby potentially obscuring the facts we want to investigate.

The definition of *discourse anaphoricity* or *D-linking* that we assume throughout this paper, is given in (1), cf. De Hoop (2003:205).<sup>2,3</sup>

(1) *Discourse anaphoricity*

A DP is anaphoric iff it refers to an object that has previously been mentioned in the discourse, and/or is part of the common ground.

## 2. Scrambling and discourse anaphoricity in Dutch

It is a well known fact that Dutch allows scrambling. Personal pronouns as well as definite and indefinite DPs are to some extent able to scramble. However, the scrambling patterns they display are different. More specifically, pronouns scramble (almost) obligatorily, indefinite DPs almost never scramble and definite DPs seem to scramble freely (cf. Hendriks et al. 2010, but see Van Bergen & De Swart 2010). As we are interested in the relation between word order and interpretation, scrambling of pronouns will be disregarded, as pronouns (almost) always scramble.<sup>4</sup>

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<sup>2</sup> The notion *discourse anaphoricity* has often been related to notions like *specificity* (or *referentiality*, *identifiability*). In the literature there exist several different uses of the notion *specificity*, roughly distinguishing *scopal* specificity, *epistemic* specificity, and *partitivity* (cf. Farkas 1994, 2002). We decided to use the term *discourse anaphoricity*, as it covers all examples in this paper.

<sup>3</sup> See Schwarzschild (1999) and Krifka (2007) about the notion *GIVENness* – intended as a discourse-based notion – that is very similar to our definition of *discourse anaphoricity* in (1).

<sup>4</sup> In Dutch, pronominal objects scramble obligatorily, unless they are stressed (which gives rise to a deictic or contrastive interpretation), as indicated in (i), or unless an adjacent adverb is stressed, as indicated in (ii); small capitals indicate stress.

- (i) a. Ik weet zeker dat ik hem gisteren zag.  
*I know for sure that I him yesterday saw*  
 ‘I know for sure that I saw him yesterday.’
- b. \*Ik weet zeker dat ik gisteren hem zag.  
*I know for sure that I yesterday him saw*
- c. Ik weet zeker dat ik gisteren HEM zag.  
*I know for sure that I yesterday him saw*

Notice that as in Dutch scrambling there does not seem to be any real difference between (i) main clauses and embedded clauses, and (ii) sentences with only a finite verb or sentences with an auxiliary and a main verb, we will abstract away from these dimensions in this paper. Furthermore, to keep matters as clear as possible, in the discussion of Dutch scrambling we will be concerned with scrambling over sentential (high) adverbs, rather than scrambling over low adverbs (although there does not seem to be any difference between the two types of adverbs with respect to scrambling).

### 2.1 Definite direct objects and discourse anaphoricity

There is an ongoing debate regarding the optionality of scrambling with definite objects. Many researchers have claimed that scrambling of definite DPs is *truly* optional (despite the general *tendency* that D-linked or anaphoric definite DPs scramble more often than not, cf. Van der Does & De Hoop 1998, De Hoop 2003, Hendriks et al. 2010 amongst others), but there are also scholars who have suggested that the optionality of definite DP scrambling is only illusory.<sup>5</sup> The latter viewpoint is the perspective that Neeleman & Reinhart (1998:349) take. According to them “the reason why the obligatoriness of the scrambling order has not been observed, is that with definite DPs, whether they are anaphoric or not, [scrambling] is always context dependent. Hence, with no context, both orders seem

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- d. Ik weet zeker dat ik HEM gisteren zag  
*I know for sure that I him yesterday saw*

[adapted from Van Balen & De Hoop 2005:146]

- (ii) Hoe weet je eigenlijk zo zeker dat hij die moord heeft gepleegd?  
*how know you actually so sure that he that murder has committed*  
 ‘How do you know for sure that he committed that murder?’

- a. Omdat ik het MET EIGEN OGEN gezien heb!  
*because I it with own eyes seen have*  
 ‘Because I have seen it with my own eyes!’

- b. Omdat ik MET EIGEN OGEN het gezien heb!  
*because I with own eyes it seen have*

[adapted from Van Balen & De Hoop 2005:150]

See Van Bergen & De Swart (2010) for new insights into the relation between stress assignment and scrambling of objects in general. They show for example that the scrambling behaviour of *proper nouns* is sensitive to stress assignment as well: the majority of unstressed proper nouns scramble, whereas the majority of stressed proper nouns do not scramble.

<sup>5</sup> There is a lot of controversy about the nature of scrambling (i.e. A-movement, A'-movement, a specific type of movement or base-generation). As we are not in the first place concerned with the syntax of scrambling, but with its interpretational properties, we will leave the issue of the exact analysis of scrambling for future research.



shared knowledge between speaker and hearer. This is in line with our definition of *discourse anaphoricity* as given in (1).

In sum, for the definite DO to scramble, it needs to have been mentioned before in the discourse or it needs to be part of the common knowledge between the discourse participants (i.e. *given* information). It is thus *discourse anaphoricity* that seems to drive scrambling of definite direct objects in Dutch (cf. Neeleman & Van de Koot 2008).

It should be noted that a recent large-scale corpus study of scrambling in spoken Dutch by Van Bergen & De Swart (2010) shows that the observed scrambling patterns are not fully in line with what has been said in the literature.<sup>6</sup> Most prominently, Van Bergen & De Swart observe that definite object DPs hardly ever occur in scrambled position (except for proper nouns, that do not seem to show any preference for scrambled or unscrambled position). However, seeing as they still found a significant interaction between anaphoricity and scrambling – i.e. anaphoric proper nouns scramble more often than non-anaphoric proper nouns – we take the generalization in (2) as our starting point, while keeping in mind that things are a bit more complex: (2) is a *tendency*, exemplified by the judgments in (3) and (4).

## 2.2 Indefinite direct objects and discourse anaphoricity

It is well known that scrambling of indefinite direct objects has a clear semantic effect: when indefinite objects scramble, they get a *specific* or *referential* reading (cf. Diesing 1992, De Hoop 1996, Hopp 2007, Hendriks et al. 2010 amongst others). This is illustrated in (5).<sup>7</sup>

- (5) a. De vrouw heeft een kat zachtjes geaaid.  
*the woman has a cat softly stroked*  
 ‘The woman softly stroked a (particular) cat.’
- b. De vrouw heeft zachtjes een kat geaaid.  
*the woman has softly a cat stroked*  
 ‘The woman softly stroked a cat.’ [Hendriks et al. 2010:69]

To make the distinct interpretations of the indefinite DP clearer, in (6) an adverb of frequency is used. In (6a) the adverb is in the scope of the indefinite DP, whereas in (6b) it is the other way around: the indefinite DP is in the scope of the adverb. These scope differences have a clear effect on the interpretation.

<sup>6</sup> Thanks to an anonymous reviewer for bringing this reference to our attention.

<sup>7</sup> In unscrambled position the indefinite DP can get a specific as well as a non-specific reading, but the non-specific reading seems to be the preferred one, cf. Hendriks et al. (2010:77).

- (6) a. De vrouw heeft een kat twee keer geaaid.  
*the woman has a cat two times stroked*  
 ‘The woman stroked a cat twice.’ (one and the same cat)
- b. De vrouw heeft twee keer een kat geaaid.  
*the woman has two times a cat stroked*  
 ‘The woman stroked a cat twice.’ (likely: two different cats)

We follow Neeleman & Van de Koot (2008:172ff) in using the notion *discourse anaphoricity* to account for the scrambling behavior of indefinite object DPs as well. This means that in (5a) and (6a) the scrambled indefinites are construed as *discourse anaphoric*: *een kat* ‘a cat’ refers to an identifiable cat in the common ground.

The reason why indefinite DPs do not like scrambling (i.e. there seems to be a ban on scrambling with indefinites generally, cf. also Van Bergen & De Swart), is that indefinite DPs generally introduce *new* information, and thus prefer not to scramble. The lack of scrambling with indefinites is illustrated in (7) for a bare plural with an existential interpretation.<sup>8</sup>

- (7) a. dat de politie gisteren taalkundigen opgepakt heeft  
*that the police yesterday linguists arrested has*  
 ‘that the police arrested linguists yesterday’
- b. \*dat de politie taalkundigen gisteren opgepakt heeft  
*that the police linguists yesterday arrested has*  
 [De Hoop 1992:138]

When we compare the sentences in (7) with the sentences in (8), we clearly see the contrast between scrambling of definite DPs (8) and scrambling of indefinite DPs (7). That is, whereas scrambling with an indefinite DP is hard – in fact, ungrammatical in example (7) –, scrambling with a definite DP is grammatical – albeit pragmatically odd without any context (cf. above).

- (8) a. dat de politie gisteren de taalkundigen opgepakt heeft  
*that the police yesterday the linguists arrested has*  
 ‘that the police arrested the linguists yesterday’
- b. #dat de politie de taalkundigen gisteren opgepakt heeft  
*that the police the linguists yesterday arrested has*  
 [Hendriks et al. 2010:69]

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<sup>8</sup> As suggested by Antonio Fábregas (p.c.), whether or not an indefinite DP can scramble seems to be partly determined by the type of predicate involved (*telicity*): scrambling of indefinite DPs seems easier with atelic predicates, than with telic ones. The relation between the telicity of the verb and the specificity of the direct object DP is beyond the scope of this paper, but we intend to deal with this issue in future research.

The sentences in (9) furthermore illustrate the scrambling behaviour of the generic indefinite object *books about Freud* ‘books about Freud’. In (9) *boeken over Freud* ‘books about Freud’ is not discourse anaphoric (i.e. not previously mentioned in the discourse, nor part of the common ground), and as expected, the sentence in which the indefinite is scrambled is marked (i.e. infelicitous in the given context).

- (9) Het is onmogelijk met Max een afspraak te maken. Hij heeft  
*it is impossible with Max an appointment to make. He has*  
 nooit tijd, ...  
*never time*  
 ‘It is impossible to make an appointment with Max. He never has  
 time, ...’
- a. #omdat hij boeken over Freud altijd leest...  
*because he books about Freud always reads*  
 ‘because he always reads books about Freud’
- b. omdat hij altijd boeken over Freud leest...  
*because he always books about Freud reads*  
 ‘because he always reads books about Freud’
- ... en zoals je weet, zijn er talloze boeken over Freud.  
*and as you know are there numerous books about Freud*  
 ‘and as you know there are numerous books about Freud.’
- [adapted from Neeleman & Reinhart 1998:347-348]

### 2.3 Interim summary

To sum up, scrambling in Dutch seems to mark *discourse anaphoricity* (cf. Neeleman & Van de Koot 2008). That is to say, a scrambled DP is (preferably) interpreted as discourse anaphoric, whereas a DP in unscrambled position is (preferably) interpreted as not discourse anaphoric. Notice now that since the unmarked reading of pronouns is the discourse anaphoric reading, pronouns obligatorily scramble (under normal circumstances; cf. footnote 4, and see Hendriks et al. 2010:47).<sup>9</sup>

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<sup>9</sup> Things are a bit more complex than suggested in the main text. That is, the fact that a pronoun scrambles obligatorily cannot *only* be the result of its anaphoricity, but also has to do with its syntactic properties, as illustrated in (i) in which a pronoun is introduced out of the blue, yet still obligatorily scrambles (De Hoop 2003:205).

- (i) Een poosje zaten ze zwijgend naast elkaar te kijken naar de regen.  
*a while sat they silent next each other to look at the rain*  
 Toen zei Otje:  
*then said Otje*  
 ‘They sat together a while looking at the rain. Then Otje said:’
- a. ?\*Pappa, we moeten maar het doen.  
*dad we must just it do*

### 3. Word order in Finnish

Finnish is an agglutinative language with rich inflectional morphology,<sup>10</sup> and it is considered to be a discourse-configurational language, i.e. the quite flexible word order observed in this language is mainly driven by discourse factors (cf. Vilkuna 1989, 1995). For a better understanding of the relation between word order and interpretation in Finnish, we will briefly go through some analyses of the Finnish clause since the flexible word order is strictly related to the notions of both *focus*, which can be contrasted or new information (e.g. Belletti 2001, 2004 amongst others), and *topic*, intended as known/given information.

Vilkuna (1995) proposes three positions in the clause that correspond to discourse functions and which together account for all the possible permutations in a simple transitive sentence. These positions are labeled K, T and V-field and correspond roughly to CP, IP and VP respectively. T and K “are compromises between discourse and syntactic categories rather than pure discourse concepts” (Vilkuna 1995:38), whereas the V-field is “the part of the sentence that is not d-configurational” (Vilkuna 1995:63). The sentences in (10) provide an illustration of the six logically possible word orders (adapted from Vilkuina 1995; the questioned information is boldfaced). As noted by Vilkuina (1995), (10f) would be better with a pronoun object instead of the full DP object (*Osti sen Jussi* “bought it-ACC Jussi”). From a semantic point of view, although the object in both (10e) and (10f) is discourse anaphoric, the difference between them is that in (10f) the object is interpreted as more backgrounded and given than in (10e), in which the basic word order of the subject preceding the object is maintained. Syntactically, this interpretational difference seems to us to correspond to leftward movement of the verb with the object left *in situ*, or movement of the whole verb phrase, respectively.

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- b. Pappa, we moeten    het maar doen.  
*dad we must    it just do*  
 ‘Dad, we just have to do it.’

<sup>10</sup> The Finnish examples in this section are not glossed in detail, for ease of exposition and because it is irrelevant to the discussion on the relation between *word order* and *interpretation*.

(10)

	<b>Word order</b>	<b>Context</b>	<b>K</b>	<b>T</b>	<b>V-field</b>
a.	<b>SVO</b>	What happened?/ Who bought a book?/What did Jussi buy?)	Jussi <i>Jussi</i>	osti <i>bought</i>	kirjan <i>book</i>
b.	<b>SOV</b>	Did Maija (not Jussi) buy a book?/ Who bought the book? With special stress on T also: Did Jussi buy a newspaper?/ What did Jussi buy?	Jussi <i>Jussi</i>	kirjan <i>book</i>	osti <i>bought</i>
c.	<b>OSV</b>	Did Jussi buy a newspaper?/ What did Jussi buy?/ With special stress on T also: Who bought a book? Did Maija (not Jussi) buy a book?	Kirjan <i>book</i>	Jussi <i>Jussi</i>	osti <i>bought</i>
d.	<b>OVS</b>	Who bought a book?	Kirjan <i>book</i>	osti <i>bought</i>	Jussi <i>Jussi</i>
e.	<b>VSO</b>	Did Jussi buy a book?/*What did Jussi buy? *Who bought the book?	Osti <i>bought</i>	Jussi <i>Jussi</i>	kirjan <i>book</i>
f.	<b>VOS</b>	Did Jussi buy a book?/*What did Jussi buy?/*Who bought the book?	Osti <i>bought</i>	kirjan <i>book</i>	Jussi <i>Jussi</i>

As becomes clear from (10), the K and the T position are available as landing positions for all the constituents. Following from the possible question(s) corresponding to the sentence, the difference between the two positions is that the K position is more naturally interpreted as the locus for contrastive and new information focus. The T position on the other hand can only be a focus position if special stress is associated with it and even then, contrastive interpretation sounds rather marginal (cf. Kaiser 2006 who accounts for the impossibility of linear orders such as SOV where subject is given/known topic and the object is focalized). The T position is normally the position for given information. It seems then that a focalized element (either as new information or contrastive focus) can appear at least in two different positions: (i) in a position higher in the clause (*K* in Vilkuna's terms, as in (10a), (10b) and (10c)), or (ii) postverbally in sentence-final position (as new information focus, cf. (10d) if no special

stress occurs).<sup>11</sup> So, new information focus can be in sentence-initial (K) or in sentence-final position (V-field) and topic may appear in either T or K and can be contrastive.

Adapting Vilkuna's analysis to a different theoretical approach, Holmberg & Nikanne (2002) assume that the structure of a finite sentence in Finnish looks like (11).

$$(11) \quad [_{CP} [_{C^{\circ}} [_{FP} [_{F^{\circ}} EPP [_{PredP} ]]]]]$$

The authors assume that the structure in (11) represents the three domains of the Finnish clause: the operator domain, [Spec,CP], the Presupposition domain, [Spec,FP], and the Information Focus domain, [PredP] (Holmberg & Nikanne 2008:13). In the unmarked SVO order the subject is assumed to be in [Spec,FP]. The [Spec,CP] position is dedicated to contrastivity or *wh*-elements.

In a similar spirit, Kaiser (2006) proposes for Finnish the structure in (12), in which, again, the contrasted element is assumed to raise to the leftmost position in KontrastP and the known/given information (*D-linked* in our terms) has a dedicated position in FP, which can be recursive in the sense of Rizzi's recursive TopP projection (cf. Rizzi 1997 and subsequent work in the cartographic framework).

$$(12) \quad [_{KontrastP} \dots \quad [_{FP} \dots \quad [_{NegP} \dots [_{TP} \dots [_{VP} \dots ]]]]]$$

contrasted element
subj./obj.(D-linked)

All these analyses have one important assumption in common: the leftmost position is dedicated to contrast and there is no place for a leftward moved topic (*D-linked* in our terms) in front of it. That is to say, a topic cannot appear before the focalized element in the linear order. On the other hand, there seems to exist a kind of 'middle position' to which the topic can move from its canonical (VP-internal) position. A formal way to account for these different interpretational effects as being related to dedicated syntactic positions could be in the cartographic tradition along the line of Rizzi (1997), Cinque (2002), Belletti (2004) and related works (but see Neeleman & Van de Koot (2008) for an alternative approach).

A final important note concerns the discussion presented in Holmberg (2002) on the nature of Finnish SOV and SVO orders. Holmberg mainly deals with the SOV order, and proposes that OV can only be resorted to

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<sup>11</sup> It might be the case that there is a lower intermediate position that hosts contrastive focalized elements, but only when associated with special stress, e.g. (10c). As we are not in the first place interested in focus (positions), we leave open the nature of this particular lower focus position and its relation to Vilkuna's (1995) T position.

when there is a focus feature in CP, which attracts the subject.<sup>12</sup> Moreover, he shows that in case the subject is focused – and both VO and OV order are in principle possible, as in (10b) and (10d) – the object can appear in a position preceding the V (namely OV) only when it is discourse anaphoric, but when the object expresses new information, it must stay in-situ, as indicated in (13). Notice that an object that is discourse anaphoric may also stay in-situ.

(13) <sup>13</sup>	Jussi	kirjan	luki	kirjan
	<i>Jussi</i>	<i>book</i>	<i>read</i>	<i>book</i>
	S <sub>FOC</sub>	O <sub>D-linked/*NEW</sub>	V	O <sub>D-linked/NEW</sub>

The discourse anaphoric status of preverbal objects has also been previously observed (albeit in different terms) on theoretical grounds by Vilkuna (1989) and on empirical grounds in Kaiser & Trueswell (2004).

In light of all these considerations, we take scrambling of the object in Finnish to be movement of the object to a non-canonical position in the middle field (but not to a contrastive position). Given this assumption, the OSV order exemplified in (10c) may be disregarded as scrambling, because the object can only occur in that position when it gets a contrastive interpretation. In (10e) and (10f) the object stays in its canonical position; it is either the V that is contrasted (10e) or the whole VP (10f). Moreover, it seems to us that the generalization made by Holmberg (2002) – namely, that OV order is only possible when the S is focused – can be extended to the other “scrambled” word orders in Finnish suggesting that scrambling is possible whenever there is a focus, either contrastive or new information, which can be either high in the left periphery (CP) or *in situ*. This accounts for the SOV, OVS and VOS permutations exemplified in (10).

It is important to note that scrambling in Finnish is non-existent when we take scrambling to be the alternation between an adverb and an object (which we consider scrambling in Dutch to be, cf. above). However, Finnish does show the same interpretational effects as Dutch scrambling when the position of the object is varied, i.e. its interpretation is dependent on whether it is in canonical position (VO) or in non-canonical position

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<sup>12</sup> Holmberg (2002:124) “OV order in finite sentences is possible if and only if the O and the V are embedded in a sentence headed by a focus-marked C”. For a detailed elaboration of this (and related) claim(s), we refer the interested reader to Holmberg’s (2002) paper.

<sup>13</sup> In contrast to the generalization made in (2) for Dutch, in Finnish the postverbal (canonical) object can be interpreted both as discourse anaphoric and as new information. Nevertheless, once the object undergoes leftward movement across the verb, the new interpretation is crucially excluded, parallel to Dutch.

(OV), cf. Holmberg (2002), Vilkuna (1989), and see above. For the topic under investigation, Finnish does not seem to show a difference between (i) main clauses and embedded clauses, (ii) sentences with only a finite verb or sentences with an auxiliary and a main verb, and (iii) high adverbs and low adverbs (as in Cinque 1999). Therefore, we will abstract away from these variables in the remainder of this paper, as we did for Dutch (cf. above), thereby making a good comparison between Dutch and Finnish possible. Furthermore, we will not deal with scrambling of pronouns, as their position in the sentence does not influence their interpretation.

### 3.1 Word order and discourse anaphoricity

This section is devoted to some observations related to word order alternations and interpretation in terms of discourse anaphoricity of the moved element (the direct object in the present study). As discourse anaphoricity is related to specificity and definiteness, it is worth mentioning that Finnish does not have articles (it does not encode definiteness grammatically), and there is no defined system to mark definiteness and specificity, which are really hard to tease apart. However, in Finnish definiteness and specificity can be overtly conveyed by other means, which nevertheless are always optional: (i) word order, (ii) case alternation, and (iii) demonstrative pronouns used as functional items, i.e. articles. As we are interested in the relation between word order and interpretation, we will not discuss the two other possibilities of encoding definiteness and specificity in Finnish, as they are not relevant to our discussion of the relation between word order and discourse anaphoricity.

To see how word order plays a role in the determination of discourse anaphoricity consider the sentence in (14), in which the direct object *kirjan* ‘book’ is unspecified for definiteness and has not been mentioned previously in the discourse; it is thus not D-linked. Therefore, it cannot (under normal circumstances) be interpreted as definite or specific. Interestingly, this (by the context determined) indefinite direct object cannot move leftward, but needs to stay in a low position. Thus, similarly to Dutch, the movement possibilities of indefinite noun phrases are restricted in Finnish as well, and have to do with notions like discourse anaphoricity.

- (14) Menimme elokuviin, mutta ...  
       *went*       *cinema*       *but*  
       ‘We went to the cinema, but ...’  
   a.    ensin luimme kirjan                                   *Adv – V – DO*  
       *first read-we book*  
       ‘we first read a/the book’



– in which case the object is in non-canonical position ((17f) shows the canonical SVO order) –, with an indefinite or non-specific object, the SOV order becomes more marked (17a-b), as opposed to the neutral (17c) in which the object follows the V.

- (17) On mahdotonta sopia mitään Mattin kanssa, koska ...  
*is impossible agree anything Matti with because*  
 ‘It’s impossible to make an appointment with Matti, because ...’
- a. #hän aina joitakin kirjoja Freudista lukee  
*he always some book Freud reads*  
 ‘He always reads some books about Freud.’
  - b. #hän joitakin kirjoja Freudista aina lukee  
*he some books Freud always reads*
  - c. hän lukee aina joitakin kirjoja Freudesta  
*he reads always some book Freud*
  - d. hän aina tuota samaa kirjaa lukee  
*he always that same book reads*  
 ‘He always reads that same book.’
  - e. hän tuota samaa kirjaa aina lukee  
*he that same book always reads*
  - f. hän lukee aina tuota samaa kirjaa  
*he read always that same book*

#### 4. Discussion

As we have observed, there are some parallelisms between Dutch and Finnish direct object movement: even though it is not possible to talk about *scrambling* as the alternation between adverb and direct object in Finnish, it is interesting to note that the interpretational differences in (indefinite) direct objects that are induced by scrambling in Dutch have counterparts in Finnish. In other words, also movement of the definite or indefinite direct object in Finnish has consequences for its interpretation. The notion *discourse anaphoricity* seems to play a crucial role here. Our observations go in the same direction of the well known generalization that is often mentioned in the literature on scrambling, namely that information structure is relevant for the linear order in which constituents appear, and that changes in the word order cause modifications in the interpretation of the sentence (e.g. Neeleman & Reinhart 1998, Van Gelderen 2003, Van Balen & De Hoop 2005). Given this, it is after all not surprising to find scrambling in Dutch and in Finnish to be related to discourse anaphoricity, as discussed on the basis of the examples of the previous sections.

Similar observations hold for other languages, as shown in (18)-(19). Scrambling with a definite DP in German and Icelandic (this phenomenon

in Icelandic is traditionally referred to as *object shift*) triggers interpretational differences: the scrambled/shifted definite DP gets a *specific* interpretation, whereas such an interpretational restriction does not seem to hold for the non-scrambled/non-shifted definite DP.

(18) *German*

- a. ... weil ich selten die kleinste Katze streichle  
*because I rarely the smallest cat pet*  
 ‘whichever group of cats I meet, I rarely pet the one which is the smallest of that particular group’
- b. ... weil ich die kleinste Katze selten streichle  
*because I the smallest cat rarely pet*  
 ‘there is a cat which is smaller than all others, and that cat I rarely pet’ [taken from Vikner 2006:423]

(19) *Icelandic*

- a. Hann les sjaldan lengstu bókina.  
*he read rarely longest book-the*  
 ‘whichever group of books he is put in front of, he rarely reads the one which is the longest in that particular group’
- b. Hann les lengstu bókina sjaldan.  
*he read longest book-the rarely*  
 ‘there is a book which is longer than all others, and that book, he rarely reads’ [taken from Vikner 2006:423]

As Heimir Freyr Viðarsson (p.c.) informs us, Icelandic works the same as Dutch and Finnish regarding the interpretation of (un)shifted *generic indefinite objects*. That is, when the context requires a non-specific interpretation of the generic indefinite object, shifting the object over the adverb is pragmatically odd, rather the object stays in-situ, as illustrated in (20) – the Icelandic counterpart of Dutch (9) and Finnish (17).

- (20) það er ómögulegt að mela sér mót við Max. Hann hefur aldrei  
*it is impossible to say REFL meeting with Max. He has never*  
*time*  
 ‘It is impossible to meet with Max. He never has time...’
- a. # af því að hann les bækur um Freud alltaf.  
*because he reads books about Freud always*  
 ‘because he always reads books about Freud.’
- b. af því að hann les alltaf bækur um Freud.  
*because he reads always books about Freud*

However, in contrast to Dutch, in Icelandic it is very hard to shift an indefinite object like *a cat* over the adverb to get a specific interpretation

(21a). Instead, the definite form of the noun is used (21c). Interestingly, to the extent that (21a) is grammatical, the indefinite DP needs to get a specific interpretation, just like Dutch (cf. (6)).

- (21) a.    ??Hún klappar ketti       oft/tvisvar    í friinu.  
           *he strokes cat.DAT often/twice in vacation*  
           ‘He strokes a cat often/twice in vacation.’  
       b.    ?Hún klappar oft/tvisvar ketti     í friinu.  
           *he strokes often/twice cat.DAT in vacation*  
           ‘He strokes a cat often/twice in vacation.’  
       c.    Hún klappar kettinum oft/tvisvar í friinu.  
           *he strokes cat-the.DAT often in vacation*  
           ‘He often strokes the cat in vacation.’

Finally, it is interesting to mention here that shifting/scrambling of definite direct objects in Icelandic seems to be subject to the same restrictions as Dutch scrambling of definite DPs, i.e. it is related to D-linking. That is, when the direct object represents new information (non D-linked by the definition in (1)), it cannot be shifted, but when the direct object has been a topic of discussion (D-linked) shifting it is preferred. This contrast is illustrated in (22) and (23) – the examples are taken from Thráinsson (2007:76).

- (22) Context A: Pekkir Jón Stríð og frið?  
                   *knows John War and Peace*  
                   ‘Does John know War and Peace?’  
       a.    Já, hann les    Stríð og frið alltaf    í frínu        sínu.  
           *yes he reads W&P       always in vacation-the his*  
           ‘Yes he reads always War and Peace in his vacation.’  
       b.    ?Já, hann les    alltaf    Stríð og frið    í frínu        sínu.  
           *yes he reads always W&P       in vacation-the his*  
           ‘Yes he reads always War and Peace in his vacation.’
- (23) Context B: Hvað gerir Jón    í frínu        sínu?  
                   *what does John in vacation-the his*  
                   ‘What does John do in his vacation?’  
       a.    \*Hann les    Stríð og frið alltaf  
           *he reads W&P       always*  
       b.    Hann les    alltaf    Stríð og frið.  
           *he reads always W&P*  
           ‘He always reads War and Peace.’

As for a formal implementation of a (unified) account of scrambling (that is, scrambling of both definites and indefinites (and pronouns)) in terms of discourse anaphoricity, three possible alternatives come to mind – as

pointed out to us by an anonymous reviewer. First, there could be a designated position (or area) in the middle field to which direct objects in both Dutch and Finnish move. Second, the observation that scrambling triggers discourse anaphoricity could be the result of a specific type of movement operation, which is not necessarily tied to a designated landing site (in contrast to option one). Three, given the observation that in Dutch as well as in Finnish the discourse anaphoric DP undergoes leftward movement (across the adverb in Dutch and across the verb in Finnish), linear order could be responsible for the discourse anaphoric interpretation of the scrambled DP. Possibility three can be quite safely excluded on the basis of the possible word orders sketched out in (10) for Finnish. As noted earlier, Finnish allows for several word orders in which the interpretation of the DO is similar. At this point it is unclear to us how to empirically distinguish the two other options, so we leave this investigation aside for now.

In conclusion, in Dutch and Finnish – but also in German and Icelandic for example (cf. (18)-(19)) – scrambling, or more generally, movement of the direct object leftward in the clause, is related to *discourse anaphoricity*.<sup>14</sup>

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<sup>14</sup> However, it is not universally true that scrambling is related to an interpretational difference. Japanese for example is claimed to have scrambling that is unrelated to interpretation (cf. Saito 1989, 2004, Naoyuki Yamato, p.c. amongst others). It would be interesting to see if this difference between Japanese scrambling and scrambling in the languages under discussion can be attributed to independent language-specific properties.

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