

- Pierrehumbert, Janet and Mary Beckman. 1988. *Japanese Tone Structure*. Cambridge, MA: MIT Press.
- Reinhart, Tanya. 1995. *Interface Strategies*. OTS Working Papers, Utrecht University.
- Rizzi, Luigi. 1997. The Fine Structure of the Left Periphery. In *Elements of Grammar: Handbook in Generative Syntax*, ed. Liliana Haegeman, 281-337. Dordrecht: Kluwer Academic Publishers.
- Saito, Mamoru. 1989. Scrambling as Semantically Vacuous A'-movement. In *Alternative Conceptions of Phrase Structure*, ed. M. Baltin and A. Krook, 192-200. Chicago: University of Chicago Press.
- Saito, Mamoru. 1992. Long Distance Scrambling in Japanese. *Journal of East Asian Linguistics* 1:69-118.
- Schwarzschild, Roger. GIVENness, AvoidF and other Constraints on the Placement of Accent. *Natural Language Semantics* 7:141-177.
- Selkirk, Elizabeth O. 1984. *Phonology and Syntax: The Relation between Sound and Structure*. Cambridge, Massachusetts: MIT Press.
- Selkirk, Elizabeth. 1995. Sentence Prosody: Intonation, Stress, and Phrasing. In *The Handbook of Phonological Theory*, ed. John A. Goldsmith, 550-569. London: Basil Blackwell.
- Selkirk, Elizabeth and Koichi Tateishi. 1988. Constraints on Minor Phrase Formation in Japanese. *CLS* 24:316-336.
- Selkirk, Elizabeth and Koichi Tateishi. 1991. Syntax and Downstep in Japanese. In *Interdisciplinary Approaches to Language Essays in Honor of S.-Y. Kuroda*, ed. Carol Georgopoulos and Roberta Ishihara, 519-543. Dordrecht: Kluwer Academic Publishers.
- Tada, Hiroaki. 1993. *A / A-bar Partition in Derivation*. Ph.D. dissertation, MIT.
- Ura, Hiroyuki. 2000. *Checking Theory and Grammatical Functions in Universal Grammar*. Oxford Studies in Comparative Syntax, Oxford: Oxford University Press.
- Webelhuth, Gert. 1992. *Principles and Parameters of Syntactic Saturation*. Oxford: Oxford University Press.
- Zubizarreta, Maria Luisa. 1998. *Prosody, Focus, and Word Order*. Cambridge, MA: MIT Press.

## A First Look at the Syntactic Structure of Finnish Ditransitive Verbs\*

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### 1. Introduction

In this paper I explore the syntax and pragmatics of Finnish ditransitive verbs. My analysis suggests that Finnish ditransitive constructions, which permit both the direct object-indirect object (DO-IO) order and IO-DO order, in fact have DO-IO as their underlying order. This claim is supported by evidence from binding, scope asymmetries and pragmatic word order constraints. In section 1, I discuss some of the previous research on ditransitives, and I lay out the basic morphology and word order possibilities of the Finnish ditransitive structure. In section 2, I present binding data for Finnish ditransitives and show how they provide support for underlying DO-IO order. In section 3, the scope asymmetry between the two orders is analyzed and its implications are considered. Section 4 discusses the nature of the pragmatic factors which constrain argument ordering in Finnish ditransitives and how these constraints provide further evidence that DO-IO is the underlying order. Section 5 is the conclusion.

#### 1.1 Ditransitive verbs

Before considering the behavior of Finnish ditransitives<sup>1</sup>, it will be useful to briefly review some of the existing research in this area. Ditransitive verbs have been the focus of much linguistic research. Barss and Lasnik (1986) were the first to discuss a number of asymmetries between the two objects in English double-object constructions such as (1). They present evidence from a number of sources, including anaphor binding, quantifier-variable binding and weak

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<sup>1</sup> I use the term 'ditransitive' in this paper to refer to Finnish verbs with two arguments. I chose this term instead of 'double-object' or 'double complement'/'to-dative' in order to be as neutral as possible.

crossover, which suggests that the first object (indirect object) asymmetrically c-commands the second (direct) object. Barss and Lasnik note that this observation, when combined with the assumption that binding asymmetries are a consequence of symmetric c-command, poses problems for the structures that have traditionally been assigned to double object constructions.

- (1) a. Paul sent Amanda a letter. (double object)  
 b. Paul sent a letter to Amanda. (to-dative)

On the basis of data given by Barss and Lasnik as well as other examples, Larson (1988) argues that English ditransitive verbs have an underlying to-dative structure (DO-IO), and that the double object structure (IO-DO) is derived via a 'Dative Shift' operation. This approach enables Larson to maintain the generalization that binding domains rely on asymmetric c-command. However, Jackendoff (1990) presents arguments which suggest that the to-dative and the double object constructions may have two different underlying structures. This suggests that Larson's claim that the double object structure is derived from the to-dative may be faulty.

Crosslinguistic work in this area has also often led to conflicting claims. For example, Hoji (1985) suggests that IO-DO is the basic order for Japanese and DO-IO is due to scrambling of the direct object to a higher position. In contrast, Miyagawa (1997) argues that in Japanese, IO-DO and DO-IO are both base-generated. For German, Müller (1992) argues that IO-DO is the basic order, and Bayer and Kornfilt (1994) also assume this. In contrast, den Dikken (1992) argues that German is underlyingly DO-IO, and that the indirect object is actually a zero-headed dative PP (den Dikken 1992:205). He claims that the IO-DO order in German is a result of the zero-headed PP scrambling over the direct object (den Dikken 1992:213). Müller and Sternefeld (1994) similarly assume that in German, direct objects underlyingly c-command indirect objects. In brief, there does not appear to be any straightforward crosslinguistic generalization that could be applied to ditransitive verbs.

### 1.2 Finnish ditransitive construction

In this section I present a brief overview of the morphology and the word order possibilities of the Finnish ditransitive construction. Finnish has canonical subject-verb-object (SVO) order, but other word orders are also grammatical in the appropriate contexts (Vilkuna 1995). Finnish has no definite or indefinite article, and it has often been noted in the literature that Finnish uses word order to encode things such as definiteness, which are encoded by articles in other languages.

In ditransitive structures, both the IO-DO and DO-IO orders are possible (ex. (2) and (3)). The direct object (the theme) bears accusative case marking and the indirect object (the goal) is marked for allative case<sup>2</sup>.

<sup>2</sup> Finnish has no dative case, and the allative case, which marks the indirect object, "expresses movement 'towards a surface' or 'to someone'". (Karissan 1987:108).

- (2) Minä annoin miehelle kirjan. [IO-DO]  
 I-NOM gave man-ALL book-ACC.  
 'I gave a/the man a/the book.'
- (3) Minä annoin kirjan miehelle. [DO-IO]  
 I-NOM gave book-ACC man-ALL  
 'I gave a/the book to a/the man.'

### 2. Binding

In this section, we will analyze reciprocal binding data for Finnish ditransitive verbs, and I will suggest that the asymmetries we encounter are best explained by assuming an underlying DO-IO order.

#### 2.1 Reciprocal binding

The examples below show that in the DO-IO order, the DO can bind a reciprocal anaphor in the IO, and that in the IO-DO order, when the IO binds a reciprocal anaphor in the DO, the sentence becomes more marked, but it is still grammatical.<sup>3</sup>

- (4) DO-IO<sub>recipr.</sub>  
 Minä esittelin Liisan ja Marin toisilleen.  
 I-NOM introduced Liisa-ACC and Mari-ACC each-other-ALL-Px3  
 'I introduced Liisa and Mari to each other.'
- (5) IO-DO<sub>recipr.</sub>  
 ? Minä esittelin Liisalle ja Marille toisensa.  
 I-NOM introduced Liisa-ALL and Mari-ALL each-other-ACC-Px3  
 'I introduced to Liisa and Mari each other.'

Let us turn now to the cases without surface c-command. Interestingly, in the IO-DO order, the DO can bind a reciprocal anaphor in the IO, as shown in (6) below. However, in the DO-IO order, the IO cannot bind a reciprocal anaphor in the DO (ex. (7)).

- (6) IO<sub>recipr.</sub>-DO  
 ? Minä esittelin toisilleen Liisan ja Marin.  
 I-NOM introduced each-other-ALL-Px3 Liisa-ACC and Mari-ACC.  
 'I introduced to each other Liisa and Mari.'

<sup>3</sup> This raises the question, what about reflexive pronouns? Unfortunately, I was unable to find speakers who find examples along the lines of 'I showed Peter himself in the mirror' felicitous, and thus I leave this question for future research.

<sup>4</sup> Px3 stands for 'third person possessive suffix.' Finnish has a system of possessive suffixes which are part of the morphology of reciprocals and reflexives, and also used to show possession in contexts such as 'John read his book.' (For more information, see Nelson 1998, *inter alia*)

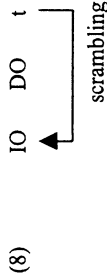
(7) DO<sub>recipr.</sub>-IO

\* Minä esittelin toisensa Liisalle ja Marille.

I-NOM introduced each-other-ACC-Px3 Liisa-ALL and Mari-ALL

'I introduced each other to Liisa and Mari.'

A possible way of capturing this binding asymmetry is to posit that DO-IO is the underlying order, and that in sentences with IO-DO order, such as (6), the indirect object has scrambled over the direct object as shown below in (8). As this movement can create new binding relations (ex. (5)), it patterns like A-movement. In ex. (5), the scrambled IO c-commands and binds a reciprocal pronoun in the DO.



Now, to account for the grammaticality of ex. (6), where the DO can bind a reciprocal anaphor in the IO despite the surface order being IO-DO, we could posit that the IO can reconstruct below the DO (or that a copy of it is located there).<sup>5</sup> In this respect, the movement patterns like A-bar movement. This co-occurrence of A and A-bar properties is typical of scrambling (see Takano 1998 on Japanese, for example). Ex. (7), with DO-IO order, is ungrammatical because no scrambling has occurred and the only copy of the antecedent IO does not c-command the reciprocal DO.

Moreover, it is important to note that the binding facts illustrated in (4) through (7) cannot be as elegantly captured under the assumption that IO-DO is the underlying order or the assumption that both orders are base-generated. Let us assume, for the sake of argument, that IO-DO is the base-generated order. The following wrong predictions would arise. First, we would expect a sentence such as (5), where the IO binds the DO in IO-DO order, to be perfectly grammatical – and at least as grammatical, if not more so, than (4), where the DO binds the IO in DO-IO order. This, however, is not the case. Second, it would not be clear how to account for the contrast between (6) and (7) without introducing additional stipulations concerning the interaction of binding and scrambling. The ungrammatical sentence (7), with DO<sub>recipr.</sub>-IO order, would be predicted to be acceptable, assuming that the DO is able to reconstruct to its original position. And the acceptable sequence IO<sub>recipr.</sub>-DO in (6), which would involve base-generation and no scrambling, would not be able to license the

5 Takano (1998), citing Kitagawa (1994) and Pesetsky (1995), notes that English behaves in the opposite way:

(a) \*I showed each other's mothers the babies. IO-DO is ungrammatical

(b) ?I showed each other's babies to the mothers. DO-IO is marginal, almost grammatical. Kitagawa (1994) concludes that IO-DO is the underlying order, and cases like (b) involve reconstruction of the DO to a position below the IO. Applying the same logic, we can suggest that Finnish is DO-IO underlyingly.

reciprocal by reconstructing it under its intended antecedent, thus wrongly predicting ungrammaticality.

Treating both orders as base-generated also fails to offer a satisfactory explanation of the data. If both orders are base-generated, we would not expect (5) to be more marked than (4), nor would we expect to see the contrast between (6) and (7). Both pairs should be equally grammatical or ungrammatical. In sum, given the reciprocal binding asymmetries, DO-IO is the most likely underlying order.<sup>6</sup>

### 3. Scope interaction

Now, having considered the binding facts, let us take a look at the scopal behavior of Finnish ditransitives, to see whether the scope facts support the tentative hypothesis formulated above that the underlying order is DO-IO. We will first consider the basic scopal behavior of transitive verbs, and then move on to ditransitives.

#### 3.1 Transitive verbs

In this section I present the scope facts for transitive verbs. In Finnish, sentences with canonical SVO word order and two quantifiers (as in (9)) can be scopally ambiguous. This type of sentence, in English, is interpreted as evidence that Quantifier Raising (QR) has occurred. I will assume this for Finnish as well. (To rule out other possibilities, including interaction of Quantifier Lowering (QL) with A-movement, see Johnson and Tomioka 1997). Further evidence for the existence of QR in Finnish is provided by the inverse linking example in (10).

(9)

Joku tyttö näki jokaisen pojan.

Some-NOM girl-NOM saw every-ACC boy-ACC

'Some girl saw every boy.'

[Ambiguous √∃ > √ and √∀ > ∃]

6 Another way of testing binding relations in ditransitive structures is by means of variable binding. In Finnish, however, variable binding patterns differently from reciprocals in that it simply requires surface c-command relations to hold between the QuNP and the bound variable (at least when an overt possessive pronoun is used). In other words, when the binder does not precede the bindee in overt syntax, the sentence is ungrammatical. A possible reason for the differences between reciprocals and variable binding could be the nature of the Finnish possessive system. In Finnish, possession is encoded by a system of possessive pronouns and possessive suffixes (Px s). The interactions between these two elements, combined with the fact that Finnish tends to disprefer cataphoric pronouns in general (Hakulinen and Karissson 1988:317) may be part of the reason for the difference in the behavior of variable binding and reciprocals. Further research is needed in this area.

(10)

Yksi omena jokaisessa korissa on mädäntynyt.  
 One-NOM apple-NOM every-INE basket-INE is rotten.  
 'One apple in every basket is rotten.' (adapted from Heim and Kratzer 1998:197)

### 3.2 Ditransitive verbs

Now let us turn to the scope facts of ditransitive verbs. The IO-DO and DO-IO orders display scopal asymmetries. In the DO-IO order, both surface and inverse scope are possible (11), but the IO-DO order seems to permit only the surface scope reading (12).

(11) DO<sub>3</sub>-IO<sub>V</sub>  
 Pekka antoi jonkun kirjan jokaiselle tytölle.  
 Pekka-NOM gave some-ACC book-ACC every-ALL girl-ALL  
 'Pekka gave some book to every girl.'  
 [Ambiguous:  $\sqrt{\exists} > \forall$  and  $\forall > \exists$ ]

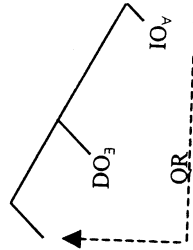
(12) IO<sub>3</sub>-DO<sub>V</sub>  
 Pekka antoi jollekin tytölle jokaisen kirjan.  
 Pekka-NOM gave some-ALL girl-ALL every-ACC book-ACC  
 'Pekka gave some girl every book.'  
 [Unambiguous:  $\sqrt{\exists} > \forall$  and  $\forall > \exists$ ]

### 3.3 Explaining the asymmetry

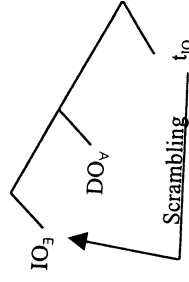
In this section I explore the three logical possibilities for the structure of ditransitive verbs. I will first discuss the degree to which the DO-IO underlying structure – which I am arguing in favor of – can account for the scope data, and then I will discuss the other two possibilities (IO-DO as the underlying order or two base-generated orders) and present some of the reasons why they are unlikely to be the correct solutions for Finnish.

#### 3.3.1. Possibility 1: Base-generated DO-IO

Under this account, to explain why DO-IO is scopally ambiguous, we can appeal to QR to raise the indirect object above the direct object (as shown in (13a) below).

(13a)<sup>7</sup> $\sqrt{\exists} > \forall$  and  $\forall > \exists$ 

(13b)

 $\sqrt{\exists} > \forall$  but  $\forall > \exists$ 

To account for the observation that IO-DO (i.e., IO-DO- $t_{00}$ ) is scopally unambiguous, we need to assume that QNP's scrambled 'inside the VP'<sup>8</sup> do not reconstruct for scope. Moreover, in the case of IO-DO order, QR must somehow be constrained such that the direct object cannot QR above the indirect object in the IO-DO order. A possible way doing this is discussed by Bayer and Kornfilt (1994). They claim that "Scrambling bleeds LF movement" (Bayer and Kornfilt 1994:42.) They argue that "If LF movement could freely undo the S-structure scope relations exhibited by scrambled sentences, the semantic effect of scrambling would be destroyed, and scrambling would lose its function" (Bayer and Kornfilt 1994:42).

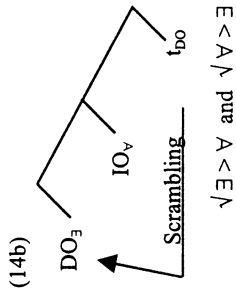
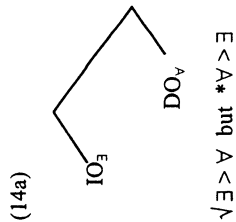
According to Bayer and Kornfilt's analysis, after scrambling would occur, QR cannot take place simply because it would destroy the effect of scrambling. Thus, this approach predicts that in Finnish, the unambiguous order is the derived order, and the ambiguous order is the default, basic order. In section 4, I will show that this prediction is supported by the pragmatics of the ditransitive in Finnish. Another related approach has been proposed by Brandt (1999), and will be discussed in more detail in section 4.

#### 3.3.2. Possibility 2: Base-generated order IO-DO

One might try to account for the Finnish scope data by assuming that IO-DO is the underlying order, as has been suggested for Japanese (Hoji 1985) and German (Müller 1992).

<sup>7</sup> The trees provided are intended to be nothing more than schematic representations of the dominance relations between the two arguments. I am not making any claims about where exactly in the tree (Spec or complement positions) the objects are located.

<sup>8</sup> I will refer to the alternation between IO-DO and DO-IO as scrambling 'inside the VP', to distinguish it from scrambling of IO or DO over the verb or over the subject – even though it may actually involve scrambling to some VP-external functional projection (cf. Takano 1998).



Under this account, in order to account for the scopal ambiguities that arise with the DO-IO order (more accurately, DO-IO-t), we need to assume that QNP's scrambled 'inside the VP' can undergo Scope Reconstruction (by QL in the sense of May 1985 or by Copy Theory in Chomsky 1995), as an alternative to being interpreted in their surface positions. More specifically, in the DO-IO order, it must be possible to interpret the direct object in a position below the indirect object, in order to generate inverse scope.

However, since the (purportedly) base-generated IO-DO order is unambiguous in Finnish and we assume that Finnish has QR (as shown in (9) and (10)), QR must be subject to some restrictions to ensure that the direct object cannot covertly raise above the indirect object.<sup>9</sup> It is not clear how this could be done without resorting to *ad hoc* stipulations. One might try to formulate some Economy-type constraint that would limit the distance that a quantifier can raise. However, such an approach would be stipulative and also would not correspond to the way we usually think of Economy. According to Fox (1995, 1999), for example, Economy can be violated when the violation makes another interpretation possible (i.e., where it has semantic consequences). Thus even if we formulate an Economy constraint to limit QR, we would still expect QR to be able to violate Economy if the violation makes another scopal interpretation possible – which, in this case, it would. We can thus conclude that if we treat IO-DO as the base-generated order and DO-IO as derived, the scope facts cannot be explained without additional stipulations.

**3.3.3 Possibility 3: Both orders are base-generated**

The third possibility is that both IO-DO and DO-IO are base-generated. However, if this is the case, it is not clear why the two orders should show any scopal differences. We would presumably have to claim that if DO-IO is base-generated and ambiguous, then QR is taking place. However, if IO-DO is base-generated and unambiguous, there must be no QR. A possible way out of this quandary is offered by Bruening (1999).

<sup>9</sup> It is worth noting that the reason this approach works well for Japanese is because Japanese does *not* have QR, but still shows the same scope asymmetry that Finnish does (illustrated in ex. (11) and (12)). Thus, it can be argued that in Japanese, the only way to obtain inverse scope is by reconstruction – i.e. sentences which allow inverse scope (such as DO-IO order) must involve scrambling.

**3.3.3.1. Bruening 1999 on Scope Freezing**

A possible way of capturing the scope asymmetry under the assumption that both orders are base-generated is presented in Bruening (1999). Bruening assumes that double object constructions and to-datives have different underlying structures, and derives the 'frozen scope' of double object constructions by positing that QR is subject to Economy and hence to SHORTEST (Richards 1997:113). According to his analysis, in double object constructions, both quantifiers can undergo QR, but because of the syntactic structure he assigns to double objects, and because of the constraint SHORTEST, the quantifiers are not re-ordered relative to each other (see Bruening 1999 for details).

At first glance, this approach appears promising, as it provides a principled means of accounting for the lack of inverse scope in English sentences with IO-DO order. Could we also use it to account for the frozen scope in Finnish sentences with IO-DO order? The answer is not so clear. Bruening's argument relies on the underlying order for scopally-frozen ditransitive structures being IO-DO. If we extend his analysis of English to Finnish, we would predict that for phenomena such as reciprocal binding, IO-DO order should be perfectly grammatical.<sup>10</sup> However, as we saw in section 2.1, this does not appear to be the case: Native speakers prefer DO-IO order (ex. (4)), and often judge IO-DO order as marked (ex. (5)). Moreover, as we will see in section 4, the pragmatically most unmarked order for Finnish seems to be DO-IO, which is unexpected if IO-DO is the basic order.

Thus, it should be noted that while Bruening's analysis is not impossible for the Finnish scope facts (and should be kept in mind as a possible account of the data), it does not receive independent support from other aspects of the language. My claim that DO-IO order is underlying is, however, supported by other aspects of Finnish, such as reciprocal binding and pragmatic word order factors.

**3.4 Summary**

In sum, all three possibilities have some problems with the scope data, but Possibility 1 (base-generated DO-IO) seems to be the best candidate at this point. This conclusion is supported by the reciprocal binding data discussed earlier and, as we will see in section 4, it receives additional support from pragmatic word order patterns.

**4. Pragmatic considerations**

In this section, we will examine some of the pragmatic and semantic characteristics of the two possible orders in the Finnish ditransitive construction. I will present evidence regarding the interaction of word order and information

<sup>10</sup> Unless, of course, the basic structure for reciprocal binding involves DO-IO and the basic structure for unambiguous scope is IO-DO. It is not clear why this should be the case.

status which can be captured more elegantly by positing underlying DO-IO order than underlying IO-DO order or two base-generated orders.

#### 4.1 Basics of word order in ditransitives

In Finnish, varying the order of the postverbal arguments in a ditransitive structure affects not only the scope readings, but also the pragmatic interpretation. Sentence (15b), with IO-DO order, is an appropriate answer to a question such as (15a) which asks for the direct object and treats the indirect object as 'known information'. In contrast, sentence (15d), with DO-IO order, is an appropriate answer to question (15c), which asks for the indirect object and treats the direct object as 'known'. The opposite pairing is judged infelicitous.

- (15a)  
Mitä sinä annoit miehelle?  
What-ACC you-NOM gave man-ALL?  
'What did you give to the man?'
- (15b) IO-DO  
Minä annoin miehelle kirjan.  
I-NOM gave man-ALL book-ACC.  
'I gave the man a book.'
- (15c)  
Kenelle sinä annoit kirjan?  
Who-ALL you-NOM gave book-ACC?  
'Whom did you give the book?'
- (15d) DO-IO  
Minä annoin kirjan miehelle.  
I-NOM gave book-ACC man-ALL.  
'I gave the book to a/the man.'

Similar phenomena are attested in other languages as well. For example, consider the following Israeli Hebrew data (from Givón 1984:172). In (16), where the question asks for the indirect object, sentence (b), with DO-IO order, is an appropriate answer. In contrast, in example (17), where the question asks for the direct object, sentence (b), with IO-DO order, is an appropriate answer.

- (16)  
(a) Context: To whom did he give the book?  
(b) Reply: hu natán et-ha-séfer la-ishá  
'He gave ACC-the-book to-the-woman.'
- (17)  
(a) Context: What did he give to the woman?  
(b) Reply: hu natán la et-ha-séfer  
'He gave to-her ACC-the-book  
'He gave her the book.'

In sum, it seems that, in Finnish (and Israeli Hebrew), if one of the arguments is old, known information, and the other one is new information, the old one occurs first and the new one later.<sup>11</sup> However, what happens when both of the arguments are old, or both are new? What order do they occur in?

Vilkuna (1989) suggests that "if two adjacent phrases A and B are equal in information status (both old or both new), their mutual order reflects their syntactically unmarked order" (Vilkuna 1989:66). This observation is supported by the ordering facts for subjects and objects in Finnish, as illustrated in Table 1 (see Chesterman 1991).

Table 1: Information status and word order in Finnish

	object-new	object-old
subject-new	SVO	OVS
subject-old	SVO	SVO

When a subject and an object have the same information status (both old or both new), they tend to occur in the order SVO. Moreover, if the subject is old information and the object is new information, the order is again SVO. The only time when OVS order is more felicitous than SVO order is when the subject is new and the object is old information.

It follows from Vilkuna's suggestion that when the two postverbal arguments of a ditransitive verb have the same information status, their ordering will reflect the base-generated order. If DO-IO is the base-generated order, as I have suggested above, then we expect two arguments of equal information status to occur most felicitously in the order DO-IO. Alternatively, if IO-DO is the basic order, arguments with the same information status should reflect this order. If both orders can be base-generated, then presumably both IO-DO and DO-IO orders are possible when the two postverbal arguments have the same information status. In the next section we will take a closer look at the pragmatic word order patterns of Finnish ditransitives.

#### 4.2 A closer look at the pragmatics of word order

In this section we will look at the interactions between word order and information status in the Finnish ditransitive. Table 2 below summarizes the findings. As the table shows, the default order when both arguments have the same information status tends to be DO-IO. The DO-IO order also occurs when

<sup>11</sup> In this paper, I assume that an entity which is 'old information' is *discourse-old*, i.e. it has already been mentioned in the discourse (Prince 1992). 'New information' is information that has not yet been mentioned in the current discourse. I am using this 'relativized' notion of information status because Finnish permits proper names to occur in either order (IO-DO or DO-IO). This shows that information that is known to the hearer but has not been mentioned in the particular discourse at hand counts as new information.

the DO is old information and the IO is new information. Crucially, the only time when IO-DO order is more felicitous than DO-IO order is when the IO is old and the DO is new.<sup>12 13</sup>

Table 2: Information status and word order in ditransitives

	IO-new	IO-old
DO-new	DO-IO	IO-DO
DO-old	DO-IO	DO-IO

To explain these data, one could hypothesize that IO-DO order is generated from underlying DO-IO order by scrambling old indirect objects to a higher 'old information' position. Old DO's presumably also move to this higher position, but this movement is string-vacuous. When there are two old elements, the closest one moves to the landing site, in accordance with locality. This means that if both DO and IO are equally old, DO will scramble (result: DO-IO order).<sup>14</sup> But if only one of them is old, then only that one moves up. So the only time we will get IO-DO order is if the IO is old when the DO is new.<sup>15</sup>

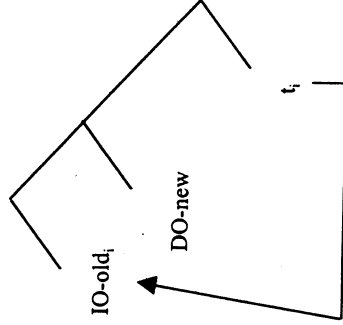
<sup>12</sup> It may be the case that the relative information status of two entities plays a role as well. In other words, an entity which was just mentioned in the preceding sentence may well be treated as more saliently 'older' than an entity that was mentioned five sentences ago – even though both are, strictly speaking, discourse-old. A corpus study should be done to explore this further. Should it turn out that relative information status matters, then we could simply change the two preceding sentences to read: "DO-IO order occurs when the DO is older than the IO, and IO-DO order occurs when the IO is older than the DO."

<sup>13</sup> For reasons of space, I am unfortunately unable to include the actual sentences that motivate Table 2 (see Kaiser 2000 for more details). Only sentences with normal intonation and prosody were considered. Also, it is important to note that the data given in the table are based merely on intuitions and are not intended as the last word on the matter. A rigorous corpus study needs to be conducted in order to assess the validity of the ordering patterns being proposed here.

<sup>14</sup> Alternatively, it could be the case that if both DO and IO are old, both scramble. One might hypothesize that this movement patterns like multiple wh-movement: An element that moves later is 'tucked in' below the one that moved first (see Richards 1997).

<sup>15</sup> See Viljuna (1989) for a slightly different take on the pragmatics of Finnish ditransitives.

(18)



['Old' info (DO or IO) is attracted to this position]

Alternatively, to explain the data, one might claim that DO-IO order is derived from underlying IO-DO order by scrambling old arguments to a higher position. However, this approach soon runs into a snag: What about a sentence where DO and IO have the same information status? For example, consider the case where both DO and IO are old information. Such a sentence only permits the DO-IO order, but this is not predicted if the basic order is IO-DO. If anything, an old IO seems to be structurally *closer* to the 'old info landing site' than an old DO, and thus we might (incorrectly) expect the order to be IO-DO. Moreover, if both DO and IO are new information, we might expect them to stay in their base-generated positions, creating IO-DO order. This, however, is not the case: When both arguments are new, DO-IO order is most felicitous. Thus, it seems that positing the underlying order to be DO-IO, and not IO-DO, offers a more elegant way of capturing the pragmatic word order tendencies.

If both orders are base-generated, it is not clear why DO-IO order should be more felicitous than IO-DO order when both arguments have the same information status. In other words, it is not clear how to capture the word order asymmetries if both orders are base-generated.

#### 4.3 Information status and scope

Having considered the pragmatic patterns of Finnish ditransitives, we found additional evidence for DO-IO being the underlying order. Let us now return to the scope facts and reconsider them in light of the pragmatic findings. In the preceding sections I have suggested that the IO-DO order differs crucially from DO-IO order because in the former, the indirect object is interpreted as being discourse-old and the direct object as discourse-new, whereas in the latter, both objects can have the same information status, or the DO can be discourse-old and the IO discourse-new. Let us now consider the implications of 'discourse status' for scopal interpretation.

In section 3, we saw that while DO-IO order is scopally ambiguous in Finnish, IO-DO order is unambiguous and only permits surface scope. It is

interesting to note that, pragmatically, IO-DO is the only order that requires one of the arguments to be discourse-old: the indirect object *must* be old information in the IO-DO order. In the DO-IO order, it is possible for both arguments to be new information. One might thus reason as follows: In IO-DO order, an indirect object such as *to some girl* in (19) must be interpreted as old information. In other words, it is assumed that – in some sense – the speaker means some particular girl. This, in turn, means that a distributed (inverse) scopal interpretation is impossible: it is not possible to distribute over a particular individual.

(19) IO<sub>F</sub> DO<sub>V</sub>  
 Pekka antoi jollekin tytölle jokaisen kirjan.  
 Pekka-NOM gave some-ALL girl-ALL every-ACC book-ACC  
 'Pekka gave some girl every book.'  
 → Unambiguous: √ ∃ > ∀ and \*∀ > ∃

A similar kind of analysis has been put forth by Brandt (1999), who argues that in English double-object constructions (IO-DO order), "the IO receives a definite (existence and 'uniqueness' presupposition) interpretation" (Brandt 1999:17), which he uses to explain why IO-DO order is scopally unambiguous: "If we can show that in fact the IO is interpreted as 'definite' in the [double object construction], the scope mystery dissolves. Clearly, if there is just one individual referent available for a particular expression, even if this expression found itself in the scope of some distributive quantifier at some level of representation, we would not see the effect" (Brandt 1999:18).

I would like to suggest that perhaps something very similar is occurring in Finnish structures with IO-DO order, and that this is why inverse scope is not possible in these sentences. This idea, however, requires further research, because a lot of questions are still left unanswered: What exactly is 'definiteness'? Is it really the case that all indirect objects which can occur in the IO-DO order are 'definite' (under some definition of 'definiteness')? These questions are outside the scope of this paper and I leave them as issues for future research.

## 5. Conclusions

In this paper I provide an analysis of some syntactic and pragmatic aspects of the Finnish ditransitive construction. On the basis of reciprocal binding and scope asymmetries, as well as pragmatic word order patterns, I suggest that the Finnish ditransitive construction, which permits both IO-DO and DO-IO orders, has DO-IO as its underlying order. In addition, I discuss a possible way of deriving the scope asymmetry between the two orders from the pragmatic differences between them.

## References

- Barss, Andrew and Howard Lasnik (1986). A Note on Anaphora and Double Objects. *Linguistic Inquiry* 17(2):347-354.
- Bayer, Josef and Jaklin Kornfilt (1994). Against scrambling as an instance of Movement. In Norbert Corver and Henk van Riemsdijk (eds.), *Studies on Scrambling*. New York: Mouton de Gruyter, pp. 17-60.
- Bruening, Benjamin. (1999). QR Obeys Superiority. ACD and Frozen Scope. Submitted to *Linguistic Inquiry*.
- Brandt, P. (1999). Scope, Topichood and Double Objects. In Amalia Todirascu (ed.) *ESSLLI Student Session*, pp.17-27.
- Chesterman, Andrew (1991). *On Definiteness. A study with special reference to English and Finnish*. Cambridge: Cambridge University Press.
- Chomsky, Noam (1995). *The Minimalist Program*. Cambridge, Mass.: MIT Press.
- den Dikken, Marcel. (1992) *Particles*. Dordrecht: HIL
- Fox, Danny (1999). Reconstruction, Binding Theory and the Interpretation of Chains. *Linguistic Inquiry* 30(2):157-196.
- Fox, Danny (1995). Economy and Scope. *Natural Language Semantics* 23(3): 283-341.
- Givón, Talmy (1984). *Syntax – A Functional-Typological Introduction*. Amsterdam/Philadelphia: John Benjamins
- Heim, Irene and Kratzer, Angelika (1998). *Semantics in Generative Grammar*. Malden, Mass.: Blackwell
- Hoji, Hajime (1985). *Logical Form Constraints and Configurational Structures in Japanese*. Ph.D. dissertation, University of Washington.
- Jackendoff, Ray (1990). On Larson's Treatment of the Double Object Construction. *Linguistic Inquiry* 21(3): 427-456
- Johnson, Kyle and Tomioka, Satoshi (1997). *Lowering and Mid-Size Clauses*. Proceedings of the Tübingen Workshop on Reconstruction, pp. 177-197.
- Kaiser, Elsi. (2000) *On the syntax and pragmatics of Finnish Ditransitives*. Ms. University of Pennsylvania.
- Karlsson, Fred (1987). *Finnish Grammar*. Helsinki: WSOY.
- Kitagawa, Yoshihisa. (1994). Shells, yolks and scrambled e.g.s. *Proceedings of NELS 24*, 221-239.
- Larson, Richard. (1988). On the Double Object Construction. *Linguistic Inquiry* 19(3): 335-391.
- May, Robert (1985). *Logical Form*. Cambridge, Mass.: MIT Press.
- Nelson, Diane. (1998). *Grammatical Case Assignment in Finnish*. New York: Garland.
- Miyagawa, Shigeru. (1997). Against Optional Scrambling. *Linguistic Inquiry* 28(1): 1-15.
- Müller, Gereon. (1992). In support of dative movement. In S. Barbiers, M. den Dikken and C. Levelt. *Proceedings of the Third Leiden Conference for Junior Linguists*. Leiden: University of Leiden.
- Müller, Gereon and Sternefeld, Wolfgang. (1994). Scrambling as A-bar Movement. In Norbert Corver and Henk van Riemsdijk (eds.), *Studies on Scrambling*. Berlin: Mouton de Gruyter, pp. 331-385.
- Pesetsky, David. (1995). *Zero Syntax: Experiencers and Cascades*. Cambridge: MIT Press.
- Prince, Ellen F. (1992). The ZPG Letter: Subjects, Definiteness, and Information-Status. In William Mann and Sandra Thompson (eds.), *Discourse Description: Diverse Linguistic Analyses of a Fund-raising Text*, Amsterdam/Philadelphia: John Benjamins. pp.295-325.
- Richards, Norvin. (1997) *What Moves Where in Which Language?* Ph. D. diss. MIT.
- Takano, Yuji. (1998). Object shift and scrambling. *Natural Language and Linguistic Theory* 16(4): 817-889.

- Vaimikka, Anne (1989). *Deriving syntactic representations in Finnish*. Ph.D. dissertation. UMass.
- Vilkuna, Maria (1989). *Free Word Order in Finnish*. Helsinki: Suomalaisen Kirjallisuuden Seura.
- Vilkuna, Maria (1995). Discourse configurationality in Finnish. In Katalin É. Kiss (ed.), *Discourse Configurational Languages*. New York: Oxford University Press. pp. 244-26

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## Definiteness and the Structure of Noun Phrase in Japanese\*

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### 1. Introduction

It is commonly assumed that noun phrases in a language without articles like Japanese are ambiguous between definite/indefinite readings. However, this is not so in the case of noun phrases associated with a numeral classifier. This is exemplified in (1)-(2).

- (1) a. John-ga [hon-o san-satu] katta  
-Nom [book-Acc 3-CI] bought  
'John bought three books.'
- b. John-ga [hon san-satu-o] katta  
-Nom [book 3-CI-Acc] bought  
'John bought the three books.'
- (2) a. herikoputaa-ni [puopera-ga ip-pon] aru  
helicopter-Dat [propeller-Nom 1-CI] exist  
'A helicopter has one propeller.'
- b. ?\*herikoputaa-ni [puopera ip-pon-ga] aru  
helicopter-Dat [propeller 1-CI-Nom] exist

In (1a) *hon-o san-satu* 'book-Acc 3-CI' has an indefinite reading, while *hon san-o* 'book 3-CI-Acc' in (1b) gives a definite reading (Takano 1984; Downing 1993, 1996; Ishii 1997; Sasaki Alam 1997). It is generally true that the expression of the form [N+Case-marker+Numeral Classifier] (the Case-medial form) gives an indefinite reading and the order [N+CL+Case] (the Case-final form) is associated with a definite reading. In fact, as shown in (2), the Case-final form in an existential construction shows a definiteness effect. That is, while (2a) is good, (2b) with the Case-final form is deviant for an integral-part reading. In the recent syntactic literature, however, Kitahara (1993) treats these phrases

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