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AGAINST FEATURE STRENGTH: THE CASE OF SCANDINAVIAN OBJECT SHIFT[*]

ABSTRACT. In this article, it is argued that the distinction between strong and weak formal features can and must be eliminated. I adopt the derivation-and-evaluation model of grammar, according to which Chomsky's computational system (C_{HL}) functions as a generator which produces candidates that are evaluated in an optimality theoretic manner, and it is shown that the strong/weak distinction can be captured by assuming an interaction between a constraint that disfavors movement (STAY) and a constraint (family) F that requires checking of the formal features. The discussion of Scandinavian Object Shift shows that this is not just a reformulation of the original distinction, but has various desirable empirical consequences. The article concludes with a discussion of Scrambling of the Dutch/German type.

1. INTRODUCTION

In this paper, I argue that the distinction between strong and weak formal features must be eliminated (cf. Chomsky 1996, p. 11). As a starting point of the discussion, I adopt the derivation-and-evaluation (D&E) model of grammar in (1), in which Chomsky's (1995) computational system of human language (C_{HL}) functions as a generator which produces a candidate set that is evaluated in an optimality theoretic manner. In a sense, the evaluation determines the proper SPELL-OUT point of the derivation; the optimal candidate undergoes further computation in the LF-wing of the grammar in order to eliminate the yet unchecked -Interpretable formal features.

(1)   The derivation-and-evaluation Model (Broekhuis and Dekkers, 2000)
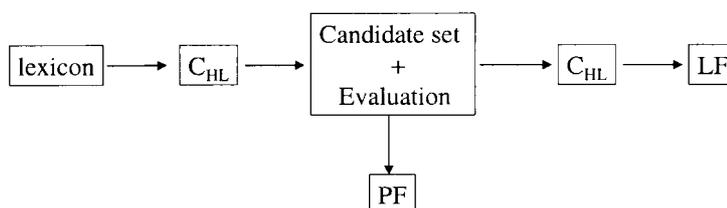
The D&E model is essentially an optimality system, although it differs in various respects from what is assumed in 'standard' Optimality Theory (OT). The basic assumptions of OT are summarized in (2), adapted from Archangeli (1997, p. 15).

(2)a.   UG contains a universal set of *violable* constraints CON.

  b.   A language L is a *ranking* of the constraints in CON.

  c.   The evaluator finds the candidate that *best satisfies* the ranked constraints in L:

   (i) Violation of a lower ranked constraint may be tolerated in order to satisfy a higher ranked constraint.

   (ii) Ties (by violation or by satisfaction) of a higher ranked constraint are resolved by a lower ranked constraint.

In 'standard' OT, the explanatory power of (2) mainly resides in the evaluator; it is assumed that the generator consists of a set of operations of a linguistic nature which apply in a random fashion to create an in principle *infinite set* of candidates among which the evaluator selects the optimal one(s) – the explanations that are provided in the OT-literature hardly ever involve the properties of the generator. In the D&E model, on the other hand, the generator is as important as the evaluator; since it is identified with some version of Chomsky's (1995) computational system C_{HL} only a *limited number* of candidates can be created among which the evaluator must select the optimal candidate (like in Pesetsky's work, 1994–1998, which is, however, less explicit about the content of the generator).[1]

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[1] I am, of course, aware of the fact that, for example, Grimshaw (1997) assumes that the generator obeys some version of X-bar-theory; the main point here is that, in general, analyses within OT do not take recourse to the properties of the generator. Note that the D&E model in (1) also differs from 'standard' OT in adopting the distinction between overt

I will show that the weak/strong distinction can be captured by assuming an interaction between the constraint STAY, which disfavors movement, and a constraint (family) F, which requires checking of the -Interpretable formal features (see Costa 1996, 1998 and Grimshaw 1997 for earlier proposals of this sort). The weak/strong distinction can be replaced by the rankings in (3a, b). This is not just a reformulation of the original distinction as movement can be forced even in the case of the 'weak' ranking in (3a), provided that there is some constraint A that outranks STAY and favors the movement that results in checking of the feature F, as in (3c). Similarly, movement can be blocked in the case of the 'strong' ranking in (3b), when there is some constraint B that outranks F, and disfavors the movement in question, as in (3d). What is new in the present proposal and will be crucial in the account of Scandinavian Object Shift is that all rankings in (3) can be 'overruled' by properties of the generator (= C_{HL}).

(3)a.   'weak' ranking: STAY ≫ F

b.   'strong' ranking: F ≫ STAY

c.   A ≫ STAY ≫ F (if A favors movement, 'Procrastinate' is overruled)

d.   B ≫ F ≫ STAY (if B disfavor movement, 'Strength' is overruled).

Let me start by briefly indicating the line of reasoning in this paper. According to Chomsky (1995, p. 243), a strong feature on a functional head must be checked before the projection of the relevant head is merged with a higher head; if checking does not take place, the derivation is canceled (cf. (8) below). A weak feature on a functional head, on the other hand, cannot be checked before SPELL-OUT as a result of the economy condition Procrastinate (which can only be overruled when some higher strong feature needs checking). Given 'last resort', that is, the assumption that movement is allowed only if it results in feature checking, this predicts that overt movement cannot be optional. As is well-known (but often ignored),

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and covert movement from the minimalist program. The D&E model can be made more in line with 'standard' OT in this respect by introducing a family of PARSE constraints, as in Dekkers (1999). I seriously doubt, however, that the data to be discussed in this article can be accounted for by this alternative version.

this prediction is wrong. Take the case of Swedish Object Shift (Holmberg 1986, pp. 165ff.).

(4)a. Vaför läste studenterna den$_i$ inte [$_{VP}$ alla t_v t_i]
      why read the students it   not   all

   b. ?*Varför läste studenterna inte [$_{VP}$ alla t_v den]

(5)a. *att   studenterna den$_i$ inte [$_{VP}$ alla läste t_i]
      that the students it   not   all read

   b. att studenterna inte [$_{VP}$ alla läste den]

Given the fact that the definite pronoun in (4a) can be moved in front of the negative element *inte*, we could assume that this movement results in checking of a strong N-feature. However, this assumption would lead to the false prediction that the derivation that leads to (5b) would be canceled as the structure contains a strong N-feature that has not been checked. Alternatively, the ungrammaticality of (5a) could lead to the assumption that the relevant N-feature is weak, but then we would predict (4a) to be unacceptable as movement of the definite pronoun leads to a violation of Procrastinate (which, in Chomsky 1995, is only tolerated when some higher strong feature forces the movement).

   Within the alternative sketched in (3), the patterns in (4) and (5) can be easily explained. Let us maintain the assumption that movement can apply only if it results in feature checking, and follow Vikner (1994) in assuming that Object Shift is A-movement, that is, in present terms, triggered by a Case feature (see also Jonas and Bobaljik 1993; Bobaljik and Jonas 1996; Collins and Thráinssson 1993, 1996). Given the fact that full DPs never undergo Object Shift in Swedish (see section 3.3 for a modification of this claim), we may conclude that the constraint CASE, which requires checking of the Case feature, is ranked lower than STAY. Let us further assume that there is an additional constraint D-PRONOUN which outranks STAY in Swedish and requires that definite pronouns be outside the VP-domain (Diesing 1997), a phenomenon common in many languages.

(6)   Swedish: D-PRONOUN ≫ STAY ≫ CASE.

This ranking correctly predicts that definite object pronouns (but not full DPs) must undergo Object Shift in structures like (4). It still does not explain, however, that the pronoun cannot undergo Object Shift in (5).

In these constructions, the inherent properties of the generator ($= C_{HL}$) become relevant. According to Holmberg's Generalization, Object Shift is possible only if the main verb of the clause has moved as well. In Chomsky (1995, chapter 3), this is accounted for by assuming that movement is subject to a locality condition, the Minimal Link Condition. If we adopt Chomsky's assumption that this condition is part of the definition of movement (hence, inviolable), it follows that C_{HL} cannot create a structure like (5a), so that this structure is not part of the candidate set. Hence, (5a) and (5b) do not compete, and (5b) is selected as the optimal candidate.

This brief discussion of the examples in (5) shows that the ranking in (6) need not force movement of the definite pronoun. Further, it illustrates that not only the OT-evaluator, but also the OT-generator ($= C_{HL}$) should be considered relevant for the determination of the optimal output, contrary to what is assumed in 'standard' OT; the generator works in a Clash-and-Crash fashion (cf. Pesetsky 1997).

The main claims in this paper are summarized in (7). The article is organized as follows. In section 2, I show that, contrary to what Chomsky (1995, section 4.10) claims, Holmberg's Generalization can be derived within the minimalist framework even with an AGR-less phrase structure theory. In section 3, I discuss Object Shift in the Scandinavian languages, especially those aspects that are related to the DP movements involved themselves.[2] In section 4, finally, I extend the analysis of Scandinavian Object Shift to 'Object Scrambling' of the Dutch/German type, which gives rise to a discussion of a slightly more speculative nature.

(7)a.   The Computational system C_{HL} functions as an OT-generator.

b.   The operations of the generator are subject to inviolable conditions, so that the generator operates in a Clash-and-Crash fashion.

c.   The evaluation proceeds in a optimality theoretic fashion: it takes place on the basis of a set of ranked, violable constraints.

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[2] A complete theory of Object Shift should also provide an analysis of the differences with respect to verb movement between the languages in question for the simple reason that Object Shift is partly dependent on it. I leave verb movement largely unanalyzed in this paper.

d. Chomsky's (1995) distinction between weak and strong fea-
    tures must be replaced by the constraint rankings in (i) and
    (ii):

 (i) 'weak' ranking: STAY ≫ F

 (ii) 'strong' ranking: F ≫ STAY

2. HOLMBERG'S GENERALIZATION AND LOCALITY

In section 2.1, I review how Chomsky (1995, chapter 3) derives
Holmberg's Generalization from the Minimal Link Condition. In section
2.2, I show that the same result can be obtained in a phrase structure the-
ory that abandons AGR-phrases when we adopt a version of Grimshaw's
theory of extended projections. As I will show, this results in a maxim-
ally simple and natural formulation of the operation MOVE/ATTRACT, in
which the notion of closeness, which features in Chomsky's formulation(s)
of the operation, can simply be replaced by the notion of c-command.

2.1. *Deriving Holmberg's Generalization*

Chomsky's Minimalist Program aims at evaluating the technical apparatus
of the 'standard' *Principles-and-Parameters* (P&P) model developed in
the 1980s. Its concern is mainly directed to the evaluation of the explanat-
ory adequacy of this model. The execution of the program has resulted in
a considerably more economically formulated theory. Basically, Chomsky
claims that the derivation takes a selection from the lexicon (the numera-
tion) as the input of C_{HL}. C_{HL} consists of at least two operations: MERGE,
which combines the elements from the numeration in a certain fashion
in order to create larger constituents, and MOVE/ATTRACT, which trans-
forms the structures built by MERGE. Probably, DELETION must be added
as a third operation (Pesetsky 1997; Broekhuis and Dekkers, 2000), but
this operation will not play a role in this article. Further, two levels of
representation are assumed that act as the interfaces with phonology and
semantics, PF and LF respectively, which are the sole loci for applying the
principles and conditions on representations.

  This does not necessarily imply, however, that derivations are only
constrained by these interface conditions. In addition, Chomsky (1995,
p. 234) assumes the derivational condition in (8) that applies throughout
the derivation. This ensures (among other things) that a strong feature is
checked by the time that the derivation reaches the SPELL-OUT point, that

is, that the movement that is responsible for checking the strong feature applies overtly. This condition overrules Procrastinate, which favors covert movement, that is, movement after the SPELL-OUT point.[3]

(8)   The derivation is canceled if α has a strong feature, and is in a category headed by β ($\alpha \neq \beta$).

Another way to constrain the derivation is to assume that the operations themselves obey certain conditions. For MERGE, for example, it can be assumed that it has the defining property that it is a binary operation, that is, that it can never combine more than two elements at the same time, and that it always applies at the root of the structures already formed (Chomsky 1995). For DELETE, it can be assumed that it obeys Recoverability in the sense that unchecked or +Interpretable formal features cannot be deleted (Broekhuis and Dekkers, 2000). Similarly, Chomsky (1995) assumes that the operation MOVE/ATTRACT has several defining properties. As this will be important for the discussion in the next sections, I will discuss these a bit more extensively.

The first condition on MOVE/ATTRACT is that the operation cannot apply at random, but must be triggered. The trigger in question is a formal feature on a (functional) head that is -Interpretable, and must hence be checked in order to be able to be erased;[4] if a -Interpretable feature survives at LF, Full Interpretation will be violated and the derivation crashes. This 'last resort' condition that MOVE/ATTRACT must be triggered is given as (9a). The second condition on MOVE/ATTRACT, given as (9b), is the Minimal Link Condition (MLC): a formal feature that must be checked attracts the closest element that could potentially check it. The notion of

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[3] Observe that condition (8) has a special status within the minimalist framework, since it is the sole condition that applies to intermediate representations. If the proposal defended in this article is on the right track, this condition can be eliminated from the theory; checking of features in the overt derivation is optional, and the evaluator selects from the set of possible outputs the optimal candidate, which is the candidate that has all its 'strong' and no 'weak' features checked (at least, in the 'unmarked' case). And, for obvious reasons, Procrastinate is also no longer needed. This means that, from the perspective of the minimalist framework, the enrichment of the system by the addition of the evaluator is at least partly compensated by a further reduction of the computational system itself.

[4] For completeness' sake note that Chomsky makes an exception for the [+wh] feature of C – despite the assumption that this feature is +Interpretable, Chomsky assumes that it can trigger movement of the *wh*-phrase. I do not see any principled reason, however, to not assume that the [+wh] feature of C is [-Interpretable], and to attribute the interrogative reading to the presence of a *wh*-phrase itself.

closeness in (9b) is defined in terms of minimal domains, as we will see shortly.

(9)   MOVE/Attract: a head α attracts β iff:

a. β enters into a checking relation with a formal feature of α (or a formal feature of a head adjoined to α), and

b. α cannot legitimately attract γ, where γ is closer to α than β.

As an illustration of the discussion above, consider the derivation of a simple Dutch or English transitive main clause in (10). Generally, it is assumed that the derivations in the two languages differ in that in Dutch all movements indicated apply overtly, whereas in English only the one indicated with a double line applies overtly – the others apply after SPELL-OUT. (The claim about English is controversial; cf. Johnson 1991; Koizumi 1993, and much related work. We assume it to be correct just for the sake of the illustration.)

(10)

It is assumed that AGR_o has two types of formal features: V-features that can be checked by a verb, and N-features that can be checked by a noun phrase. The same holds for I (which I use here as an abbreviation of AGR_s and T). The fact that in English only the subject moves overtly indicates that only the N-feature of I is strong – the other formal features are weak so that overt movement is blocked by Procrastinate. The fact that all movements must apply overtly in Dutch indicates that all the relevant features are strong – movement of the DPs and V is therefore forced by (8).[5]

Given the fact that AGR_o has a strong N-feature in Dutch, it must be checked by a DP. In accordance with the MLC in (9b), it must attract the closest DP. Intuitively, this is the subject *Jan*, but actually AGR_o, attracts the object *het vlees*. This is due to the fact that Chomsky does not define the notion of closeness purely in terms of c-command, but also in terms of minimal domains, as in (11).[6]

(11) γ is *closer to* head α than β is, iff:

a. γ c-commands β, and

b. γ is not in the minimal domain of CH.

For our present purposes, it suffices to note that movement of a Head Y to a higher head X, as in (12), creates a minimal domain for the chain (Y, t) that includes both SpecXP and SpecYP. Movement into SpecXP across SpecYP is therefore allowed. Note that the moved element can either be ZP or, if ZP cannot be attracted itself by the complex head Y-X, an element included in ZP (the structure in (12) illustrates the latter case). When

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[5] The situation in Dutch is more complex than suggested here as movement of the verb does not apply in embedded clauses. I will ignore this for the moment; see section 4 for further discussion.

[6] Chomsky's (1995) definition of minimal domain is given in (i), in a slightly simplified but logically equivalent version. In the definitions in (11) and (i), CH refers either to the head α or to the chain (α, t).

(i)a. $MAX(\alpha) =_{def}$ the smallest maximal projection including α.

b.   The domain $\delta(CH)$ of CH $=_{def}$ the set of categories included in $MAX(\alpha)$ that are distinct from and do not contain α or t.

c.   The minimal domain $MIN(\delta(CH))$ of CH $=_{def}$ the largest subset of $\delta(CH)$, such that for no $\beta \in MIN(\delta(CH))$ and no $\gamma \in \delta(CH)$, γ dominates β. (In other words, $MIN(\delta(CH))$ is the set of categories from $\delta(CH)$ that are not dominated by any other category from $\delta(CH)$.)

head movement of Y does not apply, however, the movement of DP_i into SpecXP is blocked by the DP in the specifier in YP.

(12) $[_{XP} DP_i [_{X'} [_X Y_j - X] [_{YP} DP [_{Y'} t_j [_{ZP} \dots t_i \dots]]]]]$

The definition of closeness in (11) accounts for Holmberg's Generalization, which states that Object Shift is possible only if the main verb of the clause has moved as well. Movement of the main verb to AGR_o in (10) creates a minimal domain that includes both $SpecAGR_oP$ and SpecVP, so that movement of the object into $SpecAGR_oP$ across the subject in SpecVP becomes possible. Nevertheless, by moving V to AGR_o and the object into $SpecAGR_oP$, the derivation of the Dutch example is only halfway as the subject must still be moved into SpecIP. As this movement is triggered by the strong N-feature on I, we must ensure that the object in $SpecAGR_oP$ does not block this movement. The MLC in (9b) therefore requires that a minimal domain be created which includes both SpecIP and $SpecAGR_oP$, which can be achieved by moving the V-AGR_o complex to I – it is this movement that places the verb in front of the object pronoun in examples like (4a). According to Chomsky's proposal Holmberg's Generalization therefore actually consists of two parts:

(13)   *Holmberg's Generalization*
        a. Object Shift is contingent on movement of V to AGR_o.

        b. In the Object Shift construction, subject movement is contingent on movement of AGR_o to I.

Note that in the English construction verb movement is not needed at all: as Object Shift does not apply, V-to-AGR_o is not required to license movement into $SpecAGR_oP$; and, as $SpecAGR_oP$ is not filled (or present) at the moment subject movement applies, the subject is the closest checker of the strong N-feature of I, so that movement into SpecIP does not require movement of AGR_o-to-I.

2.2. *Deriving Holmberg's Generalization in AGR-less Phrase Structures*

At this point, a digression is in order on the AGR-less phrase structure theory proposed in Chomsky (1995, section 4.10). Chomsky shows that in this theory, Holmberg's Generalization can no longer be derived. It seems likely, however, that this just depends on the definitions that are used. Consider the structure in (14), which Chomsky proposes for simple transitive clauses.

(14) $[_{TP} SUBJECT_j [_{T'} T [_{vP} OBJECT_i [_{v'} t_j [_{v'} v [_{VP} V t_i]]]]]]$

Following Hale and Keyser (1993), Chomsky assumes that a transitive verb consists of a verb V, which selects the internal argument, and a 'light' verb v. The 'light' verb introduces the external argument, and contains the Case feature that must be checked by the object in the outer specifier position of vP. The definition of closeness Chomsky assumes is given in (15).

(15) γ is *closer to* head α than β is, iff:

    a. γ c-commands β, and

    b. γ is not in the minimal domain of CH, or

    c. γ is not in the same minimal domain as β.

According to (15b), movement of the object into the outer specifier of vP in (14) is admissible as the external argument is in the minimal domain of v (or the chain (V, t) when V-to-v applies). Further, movement of the subject across the object in the outer specifier of vP is allowed by (15c) as the subject and the object in the outer specifier of vP are both in the minimal domain of V. Since movement of V and/or v is not needed to avoid a violation of the MLC on the definition of closeness in (15), Holmberg's Generalization can no longer be captured.

It must be noted, however, that this is just due to the introduction of the clause in (15c). If we adopt (15) and consider the structure in (10), the first part of Holmberg's Generalization cannot be captured either; irrespective of the question of whether the verb moves to AGR_o movement of the object into $SpecAGR_oP$ across the subject in SpecVP is allowed by (15c), as both the subject and the object are in the minimal domain of V. Movement of the verb can only be forced by the movement of the subject across the object in $SpecAGR_oP$ – clause (15b) wants there to be a minimal domain that contains both $SpecAGR_oP$ and SpecIP. Therefore, the assumption of (15c) is independent of the adoption of the AGR-less theory – in both phrase structure theories, it just has the effect of exempting the direct object from the MLC. Actually, it is not motivated at all, and given the fact that it deprives us of a satisfying analysis of Object Shift, it should be dropped.

On the basis of the original definition of closeness in (11), the same results can in principle be obtained with respect to Object Shift in the two competing phrase structure theories, provided that we assume that the outer specifier of a phrase XP can block attraction of an element lower in XP. Under this assumption, the object in the outer specifier of vP in (14) would block attraction of the subject in the inner specifier of vP, unless v-to-I would take place (cf. Kitahara 1997 for further discussion).

Although such an analysis would preserve the results of the earlier analysis, I will adopt here a version of Grimshaw's (1991, 1997) theory of extended projections in order to do away with the functional head AGR (see fn. 7 for one reason to do so), while maintaining that the derivation proceeds as indicated in (10), that is, without taking recourse to multiple specifiers. All we have to assume is that V has a Case feature that must be checked by the object of the clause, and that in order to create the required checking configuration an additional projection must be created above VP; the checking relation is created by filling the empty head of the additional projection with V and moving the object into the specifier of the projection (see also Ackema et al. 1992, and Nash and Rouveret 1996, for similar ideas). When V-to-T and movement of the subject into SpecIP also applies, we end up with the derivation in (16), which is virtually identical to the one in (10); the two structures differ only with respect to the labels of the nodes. For convenience, we may continue to think of eP as AGR_o, but only in the sense of AGR_o being an extended projection of V (in the same way Grimshaw maintains the traditional notation in her work); we have to keep in mind, however, that after V has moved into the position e, eP will actually be a VP.[7]

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[7] Note that the (Icelandic) transitive expletive construction (Jonas and Bobaljik 1993), which motivated the introduction of multiple specifiers, can be easily explained if we adopt this alternative to Chomsky's proposal. The account may take the following shape. First, the subject moves into SpecTP in order to check the agreement features of T. Besides these features, T contains a D-feature that cannot be checked by the subject (which is assumed to be an NP, not a DP). Therefore, T must enter into a checking relation with an expletive (which is a D by assumption). In order to create this checking configuration, an additional projection must be created above TP: T moves into the empty head of this projection and the expletive is placed into its specifier. This results in the structure in (i); note that the order of the expletive and the subject must be as indicated in order to make expletive replacement (movement of the subject to the expletive in order to check the N-feature on the expletive) possible. Finally, note that under this analysis also the verb second property follows, which remains mysterious under Chomsky's (1995, p. 354) original proposal.

(i) $[_{TP}$ EXPL $[$V-T$]_i$ $[_{TP}$ Subject$_j$ $[t_{V\text{-}T}$ $[_{VP}$ t_j t_V Obj$]]]$

(16)

TP

SPEC₁   T′

T   _eP_

SPEC₂   e′

e   VP

SUBJ   V′

V   OBJ

Jan   eet   het vlces
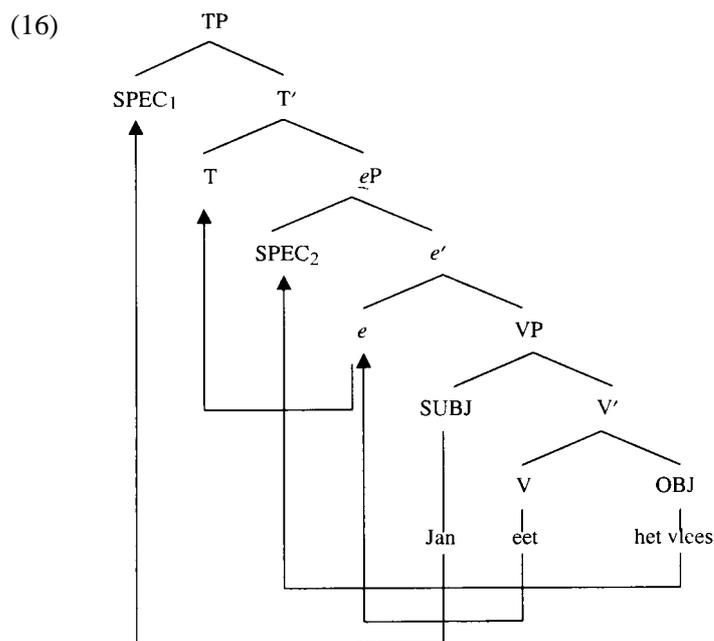
If we adopt the assumption that verbs are actually derived by moving an element V into a light verb v, as I do below, the derivation is slightly more complicated but remains essentially identical. The main difference is that the direct object takes an additional step; after V *eet* 'eat' has merged with the direct object *het vlees* 'the meat', as in (17a), an *e*P is inserted, as in (17b), which is used to create a checking configuration in which the Φ-features of V can be checked and erased, as in (17c). Note that the label of *e*P has changed into VP, due to the movement of V *eet*; *e*P has become an extended projection of V. The next step in the derivation is Merge of the light verb v and the VP in (17c), after which the subject *Jan* is added, as in (17d). From here, the derivation may continue as indicated in (16). For convenience, we only give the full structures in the sections below, when needed for our discussion; when not needed, we will just use 'V' as an abbreviation of 'V-v'.

(17)a.   [$_{VP}$ eet$_{[+\phi]}$ het vlees]

[$_{e}$P ... e [$_{VP}$ eet$_{[+\phi]}$ het vlees]]

[$_{VP}$ het vlees$_i$ eet$_\emptyset$ [$_{VP}$ t_v t_i]]

[$_{vP}$ Jan $v_{[+case]}$ [$_{VP}$ het vlees$_i$ eet [$_{VP}$ t_v t_i]]]

Finally, note that adopting this version of extended projections makes a simpler and more natural formulation of closeness possible. Since extended projections are introduced in order to create a checking configuration between a head H and some XP, the addition of these projections can be seen as part of the operation MOVE/ATTRACT itself. For two reasons, an extended projection will never be generated for an XP in the specifier of an attracting head H. First, H does not c-command its specifier, and can therefore not attract it. Secondly, assuming that the theory can be simplified such that checking can also take place in base positions (which of course implies that derivations involving a feature clash are canceled in order to allow object movement in (17d)), H and XP start out in a checking configuration, so that attraction of XP by H will be blocked by economy considerations (the constraint STAY), even when H c-commands XP at some later stage in the derivation. In short, extended projections only arise when H attracts an XP it c-commands. Consequently, clause (11b) can be dropped, so that the definition of closeness becomes maximally simple: γ is *closer to* a head α than β is, iff γ c-commands β. Actually, this makes the notion of closeness superfluous, so that we can simplify the definition of the MLC in (9b) as in (18b).

(18)   MOVE/Attract: a head α attracts β only iff:

   a. β enters into a checking relation with a formal feature of α (or a formal feature of a head γ adjoined to α), and

   b. α cannot legitimately attract γ, where γ c-commands β.

3. AN OPTIMALITY THEORETIC ACCOUNT OF SCANDINAVIAN OBJECT SHIFT

Now that we have seen that Holmberg's Generalization can also be derived from locality in an AGR-less phrase structure theory, we can discuss Scandinavian Object Shift. In sections 3.1 and 3.2, we start by discussing Object Shift across sentence adverbs in simple transitive clauses in Swedish/Danish and Icelandic. In section 3.3, we continue by briefly discussing 'short' object Shift, that is, Object Shift that does not cross a sentence adverb, but a VP adverb. In section 3.4, finally, I consider a number of more complicated constructions. The data below are taken from Holmberg (1986) and Vikner (1990), unless indicated otherwise.[8]

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[8] The analysis of Icelandic to be presented below can also be found in Costa (1996, 1998). As one of the NLLT reviewers has pointed out to me, some care must be taken

3.1. *Swedish/Danish*

In this subsection, I will provide an optimality theoretic account of some of the basic properties of Object Shift in Swedish/Danish. Consider the Swedish examples in (19).

(19)a. Varför läste studenterna den$_i$ inte [$_{VP}$ alla t_v t_i]   (Swedish)
   why   read the students it   not   all

   b.?*Varför läste studenterna inte [$_{VP}$ alla t_v den]

According to the 'last resort' condition in (18a), the movement of the definite pronoun in (19a) must be triggered by some -Interpretable formal feature on some higher head. Given the fact that we are dealing with a DP in this case, a good candidate would be the Case feature on the verb itself (which would be in line with Vikner's 1994 assumption that Object Shift is A-movement). This assumption correctly predicts that it is not possible to Object Shift a definite pronoun that is the complement of a preposition, as in (20): as the Case of the pronoun is checked by the preposition itself, there is no trigger for moving the pronoun into the checking domain of the verb. For the same reason, it is predicted that Object Shift is restricted to nominal phrases. That this is borne out is illustrated by the Danish examples in (21) (note that Danish and Swedish behave similarly in the relevant respects).

(20)a. Jag tror   inte på det   (Swedish)
   I   believe not in it

   b. *Jag tror det$_i$ inte på t_i

(21)a. Jeg betalte ikke for bogen   (Danish)
   I   paid   not for the books

   b. *Jeg betalte for bogen$_i$ ikke t_i

When we adopt Chomsky's distinction between strong and weak features, the possibility of Object Shift in (19) would lead to the conclusion that

with these data, since the characterization of Object Shift as being obligatory for weak pronouns in Swedish has been challenged by Christer Platzack; for the moment, I am particularly interested in the properties of the analysis, leaving the details of the Object Shift construction to the researchers of the languages in question.

the Case feature on the verb is strong in Swedish/Danish. This runs into problems, however, when we consider examples that involve full DPs. As is illustrated in (22), full DPs never undergo Object Shift across a sentence adverb in Swedish/Danish (see section 3.3 for 'short' Object Shift of full DPs).

(22)a. *Varför läste studenterna artikeln$_i$ inte [$_{VP}$

why read the students the article not

alla t_v t_i] (Swedish)

all

b. Varför läste studenterna inte [$_{VP}$ alla t_v artikeln]

According to (8), the strong Case feature should be eliminated before the higher functional projections like T or C can be integrated into the structure. Given the unacceptability of (22a), we must therefore conclude that the accusative feature on the verb is weak. But given this conclusion, we would wrongly predict (19a) to be unacceptable as it violates Procrastinate.

Of course, one could try to propose certain revisions of the theory in order to account for the facts in (19) and (22). One possibility would be to assume that the pertinent feature on the verb can be either weak or strong, but this runs into the problem that the choice between the two options should be made dependent on the presence of a definite pronoun or a full DP, which would certainly be *ad hoc*. Alternatively, one could assume that the weak/strong distinction is expressed on the nominal elements themselves: a full DP has a weak, and a definite pronoun has a strong Case feature. This would predict that object DPs cannot, whereas object pronouns must, undergo Object Shift. This prediction is clearly wrong as well, as object pronouns cannot undergo Object Shift in embedded clauses in Swedish/Danish. This is shown in (23).

(23)a. *att studenterna den$_i$ inte [$_{VP}$ alla läste t_i] (Swedish)

that the students it not all read

b. att studenterna inte [$_{VP}$ alla läste den]

The discussion above shows that Object Shift cannot immediately be accounted for by taking recourse to the weak/strong distinction. I demonstrate below that the D&E model in (1) can adequately account for the facts above.

In order to account for the Swedish/Danish data above, I propose the constraints in (24). The constraint CASE in (24a), taken from Costa (1996,

1998) requires that Case be checked at the time the evaluation takes place (essentially Chomsky's SPELL-OUT point), and is of course a direct descendant of the Case Filter. The constraint STAY prohibits movement; this constraint plays a role in virtually all OT-analyses proposed so far, and can in fact be equated with Chomsky's Procrastinate. The constraint D-PRONOUN in (24c) has not been proposed before, but it is clear that many languages indeed prefer (d-linked) definite pronouns to be moved into a VP-external position.[9]

(24)a. CASE: A Case feature must be checked

b. STAY: Do not move

c. D-PRONOUN: A (d-linked) definite pronoun must be VP-external

As has already been pointed out in section 1, the weak/strong distinction can be captured by means of a ranking of these constraints. By claiming that CASE is ranked above STAY, we express more or less the same as by

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[9] As several people have pointed out, the constraint D-PRONOUN can probably be considered the counterpart of the constraint ALIGNFOCUS that we will come across later in this section. They are probably both part of a constraint family that deals with the information structure of the clause, and has the effect that in general the 'old' information precedes the 'new' information of the clause. However, D-PRONOUN cannot be fully reduced to a constraint which prohibits VP-Internal 'old' information, since then we would predict that, contrary to fact, full DPs that are not part of the focus of the clause behave similarly to definite pronouns. An attempt to obtain the effects of D-PRONOUN can be found in Vikner (1997a). His analysis involves a constraint SCOPING, which requires that an element be in the position in the clause that corresponds to its relative scope (see also Diesing, 1997), and an additional constraint LICENSING. However, the formulation of the latter constraint in (i) is so complex (actually it just incorporates Holmberg's Generalization among other things) that we cannot consider it a serious candidate for a universal constraint – constraints should be formulated as optimally simple statements without making use of connectives like *and*, *or*, *unless*, etc.; complex statements like in (i) should follow from the interaction of the constraints, as in the proposal given in the main text. Further, Vikner's analysis is not able to account for the data discussed in section 3.3 below.

(i)   LICENSING: An object is always licensed *in situ*. It is also licensed after being scrambled, whereas after having undergone object shift, it is only licensed if the verb has moved to or through I^0.

claiming that the Case feature is strong, and by assuming the inverse order
of the constraints we express that the Case feature is weak.

(25)a.   'weak' ranking: STAY ≫ CASE

    b.   'strong' ranking: CASE ≫ STAY

By assuming that Swedish/Danish has the 'weak' ranking in (25a), we
account for the fact that full DPs cannot undergo Object Shift in this
language. Contrary to what is the case when we assume the weak/strong
distinction, the prohibition on Object Shift can in principle be overruled by
another constraint that forces the pertinent movement, provided that it out-
ranks STAY. This is precisely what I want to propose for Swedish/Danish
Object Shift. When we assume that Swedish/Danish has the ranking of the
pertinent constraints in (26), the data in (19) and (22) follow straightfor-
wardly. This is shown in the tableaux 1 and 2. In tableau 2, we see that the
'weak' ranking STAY ≫ CASE selects candidate 2a without Object Shift
as the optimal one. The ban on Object Shift is lifted, however, in the case
of a definite pronoun as leaving the pronoun in its base position would
violate the higher ranked constraint D-PRONOUN: candidate lb is therefore
selected as the optimal one.

(26)   Swedish/Danish: D-PRONOUN ≫ STAY ≫ CASE

Tableau 1: Swedish (19)	D-PRONOUN	STAY	CASE
a. Subj V inte [$_{VP}$ t_v pron]	*!		*
b. Subj V pron$_i$ inte [$_{VP}$ t_v t_i] ☞		*	

Tableau 2: Swedish (22)	D-PRONOUN	STAY	CASE
a. Subj V inte [$_{VP}$ t_v DP] ☞			*
b. Subj V DP$_i$ inte [$_{VP}$ t_v t_i]		*!	

Observe that in these tableaux only those violations are indicated that result
from the application/absence of Object Shift – the violations of STAY that
result from verb movement or movement of the subject are omitted from
the tableaux for simplicity. Note also that given the weak ranking of CASE,
movement of the subject cannot be forced by the Case features. Therefore,
we must assume an additional constraint EPP; in this respect there is no
difference with the standard minimalist framework, and I will therefore
ignore this in the discussion below.

For the sake of argument, assume that the constraint D-PRONOUN in (24c) is also violated when a pronoun occurs as the complement of a prepositional phrase that is VP-Internal, as in (27).

(27)   [$_{VP}$ ... [$_{PP}$ P pronoun]]

The Swedish/Danish ranking in (26) would then wrongly predict that the pronoun must be removed from the VP, either by movement of the pronoun itself, as in the Swedish example in (20b), or by movement of the complete PP, as in the Danish example in (21b). In order to block these candidates, we can take recourse to the generator itself – as movement is subject to the 'last resort' condition in (18a), the candidates in (20b) and (21b) cannot be created. The evaluation is therefore as given in the tableaux 3 and 4: the candidates that cannot be derived by the generator are marked with an asterisk (*), and the cells below the constraints are filled by ###.

Tableau 3: Swedish (20)		D-PRONOUN	STAY	CASE
a. Subj V inte [$_{VP}$ t_v [$_{PP}$ P pron]]	☞	*		
b. *Subj V pron$_i$ inte [$_{VP}$ t_v [$_{PP}$ P t_i]]		####	####	####

Tableau 4: Danish (21)		D-PRONOUN	STAY	CASE
a. Subj V ikke [$_{VP}$ t_v [$_{PP}$ P pron]]	☞	*		
b. *Subj V [P pron]$_i$ ikke [$_{VP}$ t_v [$_{PP}$ P t_i]]		####	####	####

Perhaps this account of the data in (20) and (21) is not completely convincing as we have no independent evidence that the constraint D-PRONOUN is violated by the structure in (27).[10] There is, however, more compelling

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[10] Perhaps such evidence is provided by R-extraction (Van Riemsdijk 1978). In Dutch, [-human] pronouns cannot occur in the complement position of a preposition; they must be replaced by a so-called R-word like *er* 'there', which must occur in a pre-P position. This is illustrated in (ib,c). As is shown in (id,e), when the PP is a complement of the verb, the position of the R-word is to the left of the sentence adverb *waarschijnlijk* (hence VP-external), which can perhaps be attributed to the constraint D-pronoun. It is, however, not clear to me at present what triggers the movement of the R-word in (ie) (although it can be noted that Van Riemsdijk postulates a separate position for these R-elements).

(i)a.   Jan kijkt naar het schilderij
         Jan looks at   the painting

   b.   * Jan kijkt naar het
         Jan looks at   it

evidence that the generator may block certain candidates from the candidate set. Consider again the Swedish examples in (23), repeated here as (28).

(28)a. *att   studenterna den$_i$ inte [$_{VP}$ alla läste t_i]   (Swedish)
    that the students it   not   all   read

b.   att studenterna inte [$_{VP}$ alla läste den]

Under the constraint ranking in (26), we would expect that Object Shift would be obligatory in the examples in (28). However, if the MLC in (18b) indeed prohibits Object Shift in the absence of verb movement, we should conclude that the candidate in (28a) cannot be created.[11] Consequently, (28b) is selected as the optimal candidate despite the fact that the constraint D-PRONOUN is violated. The evaluation is given in tableau 5.

Tableau 5: Swedish (28)		D-PRONOUN	STAY	CASE
a. att Subj I inte [$_{VP}$ V pron]	☞	*		*
b. *att Subj I pron$_i$ inte [$_{VP}$ V t_i]		####	####	####

Above, it is shown that the assumption that the generator is not able to generate certain candidates provides us with a simple account of the Swedish/Danish data discussed in this section. Of course, we would derive the same result if we postulated a constraint MLC, which is ranked highest (this is what the proposal in Vikner 1997a amounts to; see fn.9). Then we

c.   Jan kijkt er   naar
    Jan looks there at

d. *? Jan kijkt waarschijnlijk er   naar
    Jan looks probably   there at

e.   Jan kijkt er   waarschijnlijk naar
    Jan looks there probably   at

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[11] Various intricate questions arise here that I am not able to go into at this moment. First, we must address the question what causes the verb movement asymmetry between main and embedded clauses, which of course requires an investigation in its own right. Secondly, it must be explained why the ban on verb movement in embedded clauses cannot be canceled in order to render Object Shift possible, an option which would be conceivable within the optimality theoretic approach. Note that this also shows that various phenomena that could be dealt with separately in earlier syntactic approaches must be accounted for by means of one coherent analysis within the present framework.

would predict, however, that there are languages in which the MLC can be overridden by some other constraint. Since, to my knowledge, the MLC is strictly obeyed in all languages, we would have to assume that the MLC is universally highest-ranked. To assume that there is a set of constraints C* that are always ranked highest with respect to those constraints that could in principle override them goes against the spirit of OT. In addition, there is no principled way to restrict the postulated set of constraints C*. According to the hypothesis defended here that there is a set of inviolable conditions on the operations of the generator (C_{HL}), on the other hand, C* must be a condition on one of the operations MERGE, MOVE/ATTRACT, or DELETE (cf. Broekhuis and Dekkers 2000, who claim that Pesetsky's constraint RECOVERABILITY must be reformulated as an inviolable condition on the operation DELETE). The present proposal is clearly the more restrictive one, and is therefore to be preferred.

3.2. *Icelandic*

A first difference between Icelandic and Swedish/Danish Object Shift is that the former does not only apply to definite pronouns but also to full definite DPs. Contrary to what is the case with pronouns, however, Object Shift of DPs is optional. Consider the examples in (29) and (30).

(29) a. Hann las   hana$_i$ ekki t_i
       he   read it   not

    b. *Hann las ekki hana

(30) a. Jón keypti ekki bókina
      Jón bought not   the book

    b. Jón keypti bókina$_i$ ekki t_i

As far as the data in (29) are concerned, we could assume that the constraint ranking in Icelandic is similar to the one in Swedish/Danish. If that were correct, we would have to postulate an additional constraint C comparable to D-PRONOUN that, under certain circumstances, may override the 'weak' ranking STAY ≫ CASE in the case of full DPs. However, an alternative approach would be to assume that Icelandic has the 'strong' ranking CASE ≫ STAY, and to assume that it can be overridden by an additional constraint C′ that blocks the movement of full DPs in certain circumstances. The two alternatives are given in (31). For completeness' sake, note that in (31a) the relative ranking of D-PRONOUN and C cannot

be determined on the basis of the data under discussion, which is indicated
by the mark '=', and that the same holds for the ranking of D-PRONOUN
and the remaining constraints in (31b).

(31)   Alternative rankings for Icelandic:
   a.   (D-PRONOUN = C) ≫ STAY ≫ CASE
        C overrides the 'weak' ranking

   b.   (C′ ≫ CASE ≫ STAY) = D-PRONOUN
        C′ overrides the 'strong' ranking

The choice between the two options cannot be made straightforwardly.
Therefore, it seems reasonable to make it dependent on the availability of
independently motivated constraints. If there is an independently motiv-
ated constraint which has the property of C, but no proper candidate for
C′, the ranking in (31a) should be preferred. In the reverse situation, the
ranking in (31b) should be selected.

   The difference between (30a) and (30b) is a matter of (prosodically
unmarked) focus, which is also consistent with the fact that non-specific
indefinite DPs/pronouns may not undergo Object Shift in Icelandic (cf.
Diesing 1997, section 7); an element that is part of the focus seems to
prefer a position at the right edge of its clause. In order to account for this
tendency, Costa (1996, 1998) uses the constraint ALIGNFOCUS (Grimshaw
and Samek-Lodovici 1995), which I give here in a simplified version; in
Costa's work, the constraint in (32) includes the additional clause that
ALIGNFOCUS applies in accordance with the recursivity pattern of the
language, which I believe to be unnecessary. For concreteness' sake, I will
assume that each constituent that intervenes between a focused element
and the right clause boundary adds a violation of this constraint.[12]

(32)   ALIGNFOCUS (AF): The prosodically unmarked focus is the
        rightmost constituent in its clause.

The constraint in (32) is a suitable candidate for the constraint C′ in (31b);
movement in order to check the Case feature will then be blocked when
the pertinent DP is part of the focus of its clause. As I am not aware of any
constraint that could play the role of C in (31a), I will assume the ranking in

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[12] In order to avoid confusion note that the notion of focus used here refers to the in-
formation structure of the clause, that is, to the 'new' information of the clause (cf. fn. 7).
It does not refer to what is often called contrastive focus. See Diesing (1997, p. 378–9,
416–419) on the question whether definite DPs can be part of the focus of the clause.

(31b) in the present analysis (see fn. 9 for a brief discussion of the analysis in Vikner 1997a). The constraint ranking of Icelandic is therefore as given in (33).

(33)   ICELANDIC: (ALIGNFOCUS ≫ CASE ≫ STAY) = D-PRONOUN

On the basis of this constraint ranking, the data in (29) and (30) follow. Tableau 6 gives the evaluation of the data in (29): D-PRONOUN forces movement of the D-linked definite pronoun. Note that the ranking of this constraint with respect to the other constraints makes no difference for the set of data under discussion. In section 3.4.1, however, it will be shown that the ranking in tableau 6 is the correct one (see the discussion of the examples in (48)).

Tableau 6: Icelandic (29)	D-PRONOUN	AF	CASE	STAY
a. Subj V ekki [$_{VP}$ t_v pron]	*!			
b. Subj V pron$_i$ ekki [$_{VP}$ t_v t_i] ☞				*

The account of the data in (30) is slightly more complex, as we have to distinguish two cases. In the first case, depicted in tableau 7, the direct object is part of the focus of the clause, whereas in the second case, depicted in tableau 8, the direct object belongs to the presupposition of the clause (as the constraint D-PRONOUN does not play a role in the evaluation, I have omitted it from the tableaux). The presumed optionality of Object Shift is now derived from the focus-assignment in the clause.

Tableau 7: Icelandic (30) direct object in focus	AF	CASE	STAY
a. Subj V ekki [$_{VP}$ t_v DP] ☞		*	
b. Subj V DP$_i$ ekki [$_{VP}$ t_v t_i]	*!		*

Tableau 8: Icelandic (30) direct object not in focus	AF	CASE	STAY
a. Subj V ekki [$_{VP}$ t_v DP]		*!	
b. Subj V DP$_i$ ekki [$_{VP}$ t_v t_i] ☞			*

A second difference between Icelandic and Swedish/Danish Object Shift is that the former does not only apply in main but also in embedded clauses. The examples in (34) illustrate this for full DPs.

(34)a.   það var gott að   hann keypti ekki bókina   (Icelandic)
         it   was good that he   bought not the book

    b.   það var gott að hann keypti bókina$_i$ ekki t_i

As we have extensively discussed in section 3.1, the impossibility of Object Shift in Swedish/Danish is related to the fact that in these languages, V-to-I does not apply in embedded clauses; as is indicated in tableau 5, the generator is just not capable of deriving the structure with Object Shift as a result of this. In Icelandic, on the other hand, V-to-I does apply both in main and embedded clauses, which is clear from the fact that the verb *keypti* precedes the negative marker *ekki* in (34). Therefore, we correctly predict that the generator is able to derive embedded clauses in which Object Shift has applied, so that the evaluations of embedded clauses proceed essentially in the same way as those of main clauses; that is, the evaluations in the tableaux 6 to 8 also apply to embedded clauses.

3.3. *A Note on 'Short' Object Shift*

One of the *NLLT* reviewers has pointed out to me that Nilsen (1997) has shown that the Mainland Scandinavian languages do allow 'short' Object Shift of definite DPs across VP adverbs; Object Shift of definite DPs is only blocked across sentence adverbs. The contrast is shown for Swedish in (35) and (36), adapted from the reviewer's comments.

(35)a.   Han tvättar gärna   bilen
        he   washes with-pleasure the-car

    b.   Han tvättar bilen gärna

(36)a.   Han tvättar ju/inte   bilen
        he   washes indeed/not the car

    b.   *Han tvättar bilen ju/inte

We can account for the possibility of 'short' Object Shift if we adopt the assumption that verbs are actually composed of the light verb v, which has a case feature that must be checked by the direct object, and a lexical element V, which has Φ-features that must be checked by the direct object (cf. the discussion of (17); in section 4, I argue that also unaccusative verbs are composed of V and a light verb). Assume that the position in which the Φ-features of V are checked precedes the VP adverbs, and that the position in which the case features of V are checked precedes the sentence adverbs. The fact that Object Shift across the VP adverb in (35) is possible now follows when the constraint AGREEMENT, which requires that

Φ-features be checked, is ranked above STAY. The optionality of 'short' Object Shift can be accounted for in a similar way as the optionality of Object Shift across a sentence adverb in Icelandic, namely by assuming that ALIGNFOCUS is ranked above AGREEMENT. As before, the ban on Object Shift across a sentence adverb can be accounted for by assuming that CASE is ranked below STAY. The ranking is therefore as given in (37). The relevant evaluations for (35) are given in the tableaux in 9 and 10 (the representations in these tableaux are simplified; the movement of the subject has not been depicted). Example (36b) is excluded for the same reason why the two c-candidates in tableau 9 and 10 are excluded.[13]

(37)   Swedish/Danish: AF $\gg$ AGREEMENT $\gg$ STAY $\gg$ CASE

Tableau 9: Swedish (35) direct object in focus	AF	AGREEMENT	STAY	CASE
a. Subj V-v [$_{vP}$ t_v [gärna [$_{VP}$ t_v DP]]] ☞		*		*
b. Subj V-v [$_{vP}$ t_v [DP$_i$ t_v gärna [$_{VP}$ t_v t_i]]]	*!		*	*
c. Subj V-v [DP$_i$ t_v [$_{vP}$ t_v [t_i t_v gärna [$_{VP}$ t_v t_i]]]]	*!		**	

Tableau 10: Swedish (35) direct object not in focus	AF	AGREEMENT	STAY	CASE
a. Subj V-v [$_{vP}$ t_v [gärna [$_{VP}$ t_v DP]]]		*!		*
b. Subj V-v [$_{vP}$ t_v [DP$_i$ t_v gärna [$_{VP}$ t_v t_i]]] ☞			*	*
c. Subj V-v [DP$_i$ t_v [$_{vP}$ t_v [t_i t_v gärna [$_{VP}$ t_v t_i]]]]			**!	

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[13] One of the *NLLT* reviewers correctly observes that example (35b) is only possible when the direct object has contrastive stress – in this respect something is still missing in the present analysis. However, we cannot conclude from this that we are not dealing with Object Shift, because the 'short' movement is subject to similar constraints as 'long' Object Shift. As we will see in section 3.4, 'long' Object Shift cannot apply in embedded clauses or in clauses with a complex tense. Contrary to what the *NLLT* reviewer suggests, this is not possible in the case of 'short' Object Shift either – the examples in (i) are judged ungrammatical by my Swedish informant.

(i)a.   * Jag tvivlar på att   han tvättar bilen   gärna
          I   doubt on that he   washes the car with pleasure

  b.   *? Han skulle ha   tvättat bilen   gärna
          he   should have washed the car with pleasure

3.4. *Two Additional Problems*

The discussion in 3.1 and 3.2 is only concerned with simple transitive clauses. In this section, I want to consider two slightly more complex cases: the double object construction and the perfect tense construction. The discussion is complicated as it is not completely clear (at least not to me) what structure must be assigned to these constructions. Consequently, the discussion will be of a somewhat speculative nature.

3.4.1. *Object Shift in the Double Object Construction*
The double object construction is problematic in several respects and has received many analyses. Here, I assume that the construction has the properties in (38).

(38)   *Double object construction*
   a.   The indirect object is structurally higher than the direct object (if the double object construction is the result of Dative Shift, this holds after the application of the relevant operations).

   b.   The dative object is assigned structural Case.

   c.   Hence, attraction of the Case feature of the direct object can in principle be blocked by the indirect object (cf. the MLC in (18b)).

   d.   Movement of the indirect object into a position in which its Case is checked voids the barrier for movement of the direct object.

The assumption in (38a) is fairly standard, I believe, so I will not digress on it. The assumption in (38b) is not generally accepted. However, if it is true that Object Shift is triggered by a Case feature, this assumption seems to be well justified as an indirect object may undergo this movement, as is shown in (39); in Danish, a full DP must occur after the sentence adverb *jo*, whereas the dative pronoun *hende* must undergo Object Shift, as a result of which it is placed in front of the adverb. I refer to Broekhuis and Cornips (1994) for independent evidence for assumption (38b).

(39)a. Peter viste   jo   Marie bogen
         Peter showed indeed Marie the book

   b.   Peter viste   hende$_i$ jo t_i bogen
         Peter showed her   indeed the book

The assumptions in (38c,d) are in need of a more extensive justification. In order to avoid our explanation of the Scandinavian data becoming circular, I will motivate it on the basis of Dutch and West Flemish. In Den Dikken (1992, 1995), it is observed that *wh*-movement of a direct object across a dative object has a degrading effect in the West Flemish and Dutch examples in (40), in which the dative object follows the sentence adverb (provided that the indirect object is not contrastively focused; the West Flemish data are originally from Haegeman 1991). This degrading effect is, however, completely absent when the dative object is placed in front of the adverb, as in (41); *wh*-movement of the direct object is fully acceptable in these examples.[14]

(40)a.*?Wat$_j$ zal Jan waarschijnlijk Marie t_j given? (Dutch)
what will Jan probably Marie give

b.*?Wa$_j$ goa Valère vandoage Marie t_j geven? (West Flemish)
what goes Valère today Marie give

(41)a. Wat$_j$ zal Jan Marie$_i$ waarschijnlijk t_i t_j geven? (Dutch)
what will Jan Marie probably give

b. Wa$_j$ goa Valère Marie$_i$ vandoage t_i t_j geven? (West Flemish)
what goes Valère Marie today give

At first sight, the data in (40) are quite surprising from the perspective of the MLC in (18b), as they involve an A′-movement that is blocked by

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[14] As is noted by Den Dikken (1992, 1995), this effect is less clear in German. He claims that this is due to the fact that the overt dative morphology in German (which is absent in Dutch and W. Flemish) licenses an empty preposition; that is, the apparent German DO-IO orders are actually DO-PP orders. Something similar is assumed by Collins and Thráinsson (1993) for those verbs in Icelandic that allow for the exceptional DO-IO order. I have no new insights to offer here.

In Anagnostopoulou (1999), a comprehensive discussion of (38c) is given on the basis of a wide range of languages. The main difference between her proposal and (38c) is that she assumes that not Case but an EPP-feature is involved, which is possible since she only discusses cases involving NP-movement into SpecIP (Passive of ditransitive verbs, Subject Raising across a dative DP, and unaccusative verbs with a dative argument). Her proposal can be easily rephrased in terms of Case, and then be extended to the active ditransitive constructions discussed in the main text. Anagnostopoulou also shows that 'Scrambling' of the dative DP is only one strategy that can be used to void the blocking effect, and she extensively argues that Clitic movement/doubling has the same effect. When we assume that clitic movement is triggered by the need of checking Case, this would be compatible with the position defended in the main text.

an element in an A-position. However, under certain assumptions, the examples in (40) can be easily explained. First, assume that *wh*-movement of an argument with an unchecked Case- or Agreement feature is impossible. When an object undergoes *wh*-movement, this has to proceed via the positions in which these formal features are checked. We can attribute this property to the operation ATTRACT/MOVE by assuming (42), taken from Chomsky (1995, p. 304).[15]

(42)   Only the head of a chain CH enters into the operation AT-TRACT/MOVE (trace is immobile).

This condition on ATTRACT/MOVE may play a role in the well-known fact illustrated in (43) that in languages like French and Italian, participial agreement does not occur with a direct object in post-verbal position, but does show up when the object is *wh*-moved or placed in a clitic position (cf., e.g., Kayne 1985, 1989 and Burzio 1986) – according to the condition in (42), if the object would skip the position in which its Agreement features are checked, there would be no opportunity to check these features at a later stage in the derivation, and the derivation would crash as a result of a violation of Full Interpretation at LF. The derivation of (43b,c) must therefore be as roughly indicated in (43b′,c′); the intermediate trace t_i' indicates the position in which the Agreement features of the participle are checked.

(43)a. Paul a   repeint/*repeintes les tables   (French)
         Paul has repainted   the tables

    b.   Paul les   a   repeintes
         Paul them has repainted

    b′. Paul les$_i$ a t_i' repeintes t_i

    c.   Je sais combien de   tables il a   repeintes
         I know how   many tables he has repainted

---

[15] As one of the *NLLT* reviewers correctly points out, this indicates that, in English, the derivation of transitive clauses at least sometimes may involve movement of the verb and Object Shift. Otherwise, (42) would wrongly predict *wh*-movement of direct objects to be excluded in English. This supports analyses of English along the lines of Johnson (1991) and Koizumi (1993). A problem, however, is that (42) wrongly predicts *wh*-movement of direct objects to be impossible in complex tenses and embedded clauses without V-to-I movement. At this point I do not have a solution to offer for this problem.

    c′. Je sais combien de tables$_i$ il a t'_i repeintes t_i

Now, assume that in Dutch and West Flemish, the Case features of the objects in postadverbial position are still unchecked, that is, that the Case-checking position precedes the sentence adverb, just as in the Scandinavian languages (see section 4 for support for this assumption). According to (42), the direct object in (40) must first check its Case feature before it can undergo *wh*-movement. The hypothesis in (38c) now correctly states that Case movement of the *wh*-object is blocked by the MLC; the intermediate stage in the derivation of the relevant Dutch example, given in (44a), cannot be derived as the indirect object blocks Case attraction of the direct object. In this respect, the *wh*-object behaves just like the direct object in (44b). Hence (38c) seems to be supported.

(44)a. Intermediate stage in the derivation of (40a):
      *Jan zal wat$_j$ waarschijnlijk Marie t_j geven
      Jan will what probably   Marie   give

     b. *Jan zal het boek$_j$ waarschijnlijk Marie t_j geven
      Jan will the book probably   Marie   give

Under the assumption that the CASE positions precede the sentence adverb, the movement of the indirect object in (41), which is generally attributed to so-called 'Scrambling', is motivated by Case checking. According to the assumption in (38d), the barrier for the direct object is voided as the result of this movement of the indirect object; Case movement of the *wh*-object, as in (45a), becomes possible, just as in the case of Case movement of the direct object *het boek* in (45b).

(45)a. Intermediate stage in the derivation of (41a):
      Jan zal Marie$_i$ wat$_j$ waarschijnlijk t_i t_j geven
      Jan will Marie what probably   give

     b. Jan zal Marie$_i$ het boek$_j$ waarschijnlijk t_i t_j geven
      Jan will Marie the book probably   give

    The *wh*-object can be attracted from its derived pre-adverbial position in (45a) by the *wh*-feature in C since the indirect object has no *wh*-feature, and cannot be legitimately attracted by C. Consequently, the acceptability of the examples in (45b) and (41), with the derivation in (46), supports the

hypothesis in (38d). Therefore, I conclude that the assumptions in (38) are all well motivated, even though much must still be done in order to derive them from the theory of locality.

(46)   Wat$_j$ zat Jan Marie$_i$ t'_j waarschijnlijk t_i t_j geven?   (Dutch)
        what will Jan Marie   probably   give

Having established the assumptions in (38), we can consider the Scandinavian double object constructions. We start with the Icelandic data in (47), which involve two full DPs. Out of the four possible permutations with the adverb, three give rise to a grammatical result (in the normal case: cf. the provision made in fn. 14).[16]

(47)a. Pétur sýndi   oft   Maríu bókina   (Icelandic)
        Pétur showed often Mariú the book

    b. Pétur sýndi Maríu$_i$ oft t_i bókina

    c. Pétur sýndi Maríu$_i$ bókina$_j$ oft t_i t_j

    d. *Pétur sýndi bókina$_j$ oft Maríu t_j

In order to see whether the Icelandic constraint ranking in (33) provides the correct predictions, we have to consider four cases: (i) neither the indirect nor the direct object is part of the focus in the clause, (ii) the indirect object is in focus, (iii) the direct object is in focus, and (iv) both the direct and the indirect object are in focus. The evaluations are given in the tableaux 11 to 14; for clarity, the focused DPs are given in italics. Recall that the 'd'-candidates cannot be derived by the generator (cf. (38c)).

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[16] Recall that the word order changes are the result of Case movement. The two additional word orders in (i) that are discussed in Vikner (1990), from which the data in this section are taken, involve the permutation of the indirect and direct object in pre- and post-adverbial position, and therefore cannot be triggered by Case checking. For this reason, they are not considered here; according to Vikner, they never give rise to a grammatical result, as expected.

(i)a.   SUBJ V adverb DO IO

   b.   SUBJ V DO IO adverb

The evaluation of the candidate set in which neither the indirect nor the direct object is in focus is straightforward: the 'strong' ranking CASE ≫ STAY forces Object Shift of both objects, as in candidate 11c.[17]

Tableau 11: Icelandic (47) No object in focus		AF	CASE	STAY
a. Subj V oft [$_{VP}$ t_v IO DO]			*!*	
b. Subj V IO$_i$ oft [$_{VP}$ t_v t_i DO]			*!	*
c. Subj V IO$_i$ DO$_j$ oft [$_{VP}$ t_v t_i t_j]	☞			**
d. *Subj V DO$_j$ oft [$_{VP}$ t_v IO t_j]		###	###	###

The evaluation of the candidate set in which the indirect object is in focus is probably the most interesting one, as its supports the hypothesis that the generator C_{HL} determines which candidates are included in the candidate set – if candidate 12d competed with the candidates 12a–c, it would have been selected as the optimal candidate as only in this structure is ALIGNFOCUS satisfied. Given the fact that 12d cannot be derived, the evaluation must result in an optimal candidate that violates ALIGNFOCUS: according to our assumption that each constituent that intervenes between the focused element and the right boundary of the clause adds a violation of ALIGNFOCUS, the optimal candidate is 12a, which has only a single violation of this constraint.

Tableau 12: Icelandic (47) IO in focus		AF	CASE	STAY
a. Subj V oft [$_{VP}$ t_v IO DO]	☞	*	**	
b. Subj V IO$_i$ oft [$_{VP}$ t_v t_i DO]		**!	*	*
c. Subj V IO$_i$ DO$_j$ oft [$_{VP}$ t_v t_i t_j]		**!		**
d. *Subj V DO$_j$ oft [$_{VP}$ t_v IO t_j]		###	###	###

[17] One of the *NLLT* reviewers claims that (47b) is actually the unmarked order when neither of the two objects is in focus. (S)he argues that on the basis of the Cleft-constructions in (i), especially the, in his/her terms, "somewhat degraded status" of (ib). Apparently, the presupposition is that the clefted (hence, contrastively focussed) subject *Pétur* does not allow the objects to be in focus. I am not sure whether that is indeed the case; if the reviewer is correct, we would expect non-specific indefinite DPs to be impossible in Clefts, but a Dutch example such as (ii) is fully grammatical under the intended reading.

(i)a.   Það var Pétur sem syndi   Maríu oft   bókina
          it   was Péter that showed Maríu often the book

  b.   ?Það var Pétur sem syndi Maríu bókina oft

(ii)   Het was Peter die Marie vaak een boek toonde
         it   was Peter who Marie often a   book showed

The remaining two evaluations in tableau 13 and 14 are again straightfor-
ward, so that the reader can inspect them himself. When we consider the
optimal candidates from the four tableaux, we find that we have picked out
exactly those constructions that are grammatical.

Tableau 13: Icelandic (47) DO in focus		AF	CASE	STAY
a. Subj V oft [vp t_v IO DO]			*!*	*
b. Subj V IO$_i$ oft [vp t_v t_i DO]	☞		*	*
c. Subj V IO$_i$ DO_j oft [vp t_v t_i t_j]		*!		**
d. *Subj V DO_j oft [vp t_v IO t_j]		####	####	####

Tableau 14: Icelandic (47) IO and DO in focus		AF	CASE	STAY
a. Subj V oft [vp t_v IO DO]	☞	*	**	
b. Subj V IO_i oft [vp t_v t_i DO]		**!	*	*
c. Subj V IO_i DO_j oft [vp t_v t_i t_j]		**!*		**
d. *Subj V DO_j oft [vp t_v IO t_j]		####	####	####

When one of the two objects is a pronoun, the number of acceptable word
order patterns is reduced. The most interesting case is the one in which the
direct object is a pronoun. As can be seen in (48), a direct object pronoun
forces movement of the indirect object.

(48) a. *Pétur sýndi   oft   Maríu hana   (Icelandic)
         Pétur showed often Mariú it

     b. *Pétur sýndi Maríu$_i$ oft t_i hana

     c. Pétur sýndi Maríu$_i$ hana$_j$ oft t_i t_j

     d. *Pétur sýndi hana$_j$ oft Maríu t_j

As we have seen in tableau 12, the direct object is forced to remain in its
base position when the indirect object is in focus. The fact that this is not
the case when the direct object is a pronoun shows that the constraint D-
PRONOUN must outrank the constraint ALIGNFOCUS, so that the constraint
ranking of Icelandic in (33) can now be made more precise as in (49).

(49)   Icelandic: D-PRONOUN ≫ ALIGNFOCUS ≫ CASE ≫ STAY

The evaluations of the two relevant candidate sets are given in the tableaux
15 and 16. Note that if the structure in 16d had been part of the candidate

set, it would have been selected as the optimal candidate since it would violate neither D-PRONOUN nor ALIGNFOCUS. And candidate 16a would be predicted to be acceptable if the constraint D-PRONOUN were below ALIGNFOCUS.

Tableau 15: Icelandic (48) IO not in focus	D-PRONOUN	AF	CASE	STAY
a. Subj V oft [$_{VP}$ t_v IO pron]	*!		**	
b. Subj V IO$_i$ oft [$_{VP}$ t_v t_i pron]	*!		*	*
c. Subj V IO$_i$ pron$_j$ oft [$_{VP}$ t_v t_i t_j] ☞				**
d. *Subj V pron$_j$ oft [$_{VP}$ t_v IO t_j]	###	###	###	###

Tableau 16: Icelandic (48) IO in focus	D-PRONOUN	AF	CASE	STAY
a. Subj V oft [$_{VP}$ t_v *IO* pron]	*!		**	
b. Subj V *IO$_i$* oft [$_{VP}$ t_v t_i pron]	*!		*	*
c. Subj V *IO$_i$* pron$_j$ oft [$_{VP}$ t_v t_i t_j] ☞		**		**
d. *Subj V pron$_j$ oft [$_{VP}$ t_v *IO* t_j]	###	###	###	###

As is illustrated in (50), two word orders are possible when the indirect object is a pronoun. The evaluation of the two relevant candidate sets is given in tableau 17 and 18, respectively. When both objects are pronominal, as in (51), only one word order is acceptable; the evaluation is given in tableau 19. Note that I have omitted from these tableaux the ungrammatical 'd'-structures, in which the direct object is moved across the indirect object in its base position.

(50)a. $^{??}$Pétur sýndi   oft   henní bókina   (Icelandic)
      Pétur showed often her   the book

   b.   Pétur sýndi henní$_i$ oft t_i bókina

   c.   Pétur sýndi henní$_i$ bókina$_j$ oft t_i t_j

(51)a. *Pétur sýndi   oft   henní hana   (Icelandic)
      Pétur showed often her   it

   b.   *Pétur sýndi henní$_i$ oft t_i hana

   c.   Pétur sýndi henní$_i$ hana$_j$ oft t_i t_j

Tableau 17: Icelandic (50) DO not in focus	D-PRONOUN	AF	CASE	STAY
a. Subj V oft [$_{VP}$ t_v pron DO]	*!		**	
b. Subj V pron$_i$ oft [$_{VP}$ t_v t_i DO]			*!	*
c. Subj V pron$_i$ DO$_j$ oft [$_{VP}$ t_v t_i t_j] ☞				**

Tableau 18: Icelandic (50) DO in focus	D-PRONOUN	AF	CASE	STAY
a. Subj V oft [$_{VP}$ t_v pron *DO*]	*!		**	
b. Subj V pron$_i$ oft [$_{VP}$ t_v t_i DO] ☞			*	*
c. Subj V pron$_i$ DO$_j$ oft [$_{VP}$ t_v t_i t_j]		*!		**

Tableau 19: Icelandic (51)	D-PRONOUN	AF	CASE	STAY
a. Subj V oft [$_{VP}$ t_v pron pron]	*!*		**	
b. Subj V pron$_i$ oft [$_{VP}$ t_v t_i pron]	*!		*	*
c. Subj V pron$_i$ pron$_j$ oft [$_{VP}$ t_v t_i t_j] ☞				**

Let us conclude this section on Object Shift in the double object construction with Swedish/Danish. The data are taken from Danish. The Swedish/Danish constraint ranking established in (26) and (37) is given here as (52). Note that we cannot decide on the exact ranking of the constraints ALIGNFOCUS and D-PRONOUN in Swedish/Danish. The data that will be discussed below do not shed any light on this issue either, as ALIGNFOCUS does not play a role in the discussion below. The same holds for AGREEMENT. Therefore, we will not include these two constraints in the relevant tableaux.

(52)   Swedish/Danish: (D-PRONOUN = ALIGNFOCUS) ≫ AGREEMENT ≫ STAY ≫ CASE

When both objects are full DPs, as in (53), there is only one possible order. The same holds when the indirect object is a pronoun, as in (54). The evaluations, which proceed straightforwardly, are given in tableau 20 and 21, respectively.

(53)a.   Peter viste   jo   Marie bogen   (Danish)
         Peter showed indeed Marie the book

    b.   *Peter viste Marie$_i$ jo t_i bogen

    c.   *Peter viste Marie$_i$ bogen$_j$ jo t_i t_j

    d.   *Peter viste bogen$_j$ jo Marie t_j

(54)a. *Peter viste   jo   hende bogen   (Danish)
      Peter showed indeed her   the book

   b.   Peter viste hende$_i$ jo t_i bogen

   c. *Peter viste hende$_i$ bogen$_j$ jo t_i t_j

   d. *Peter viste bogen$_j$ jo hende t_j

Tableau 20: Danish (53)		D-PRONOUN	STAY	CASE
a. Subj V jo [$_{VP}$ t_v IO DO]	☞			**
b. Subj V IO$_i$ jo [$_{VP}$ t_v t_i DO]			*!	*
c. Subj V IO$_i$ DO$_j$ jo [$_{VP}$ t_v t_i t_j]			*!*	
d. *Subj V DO$_j$ jo [$_{VP}$ t_v IO t_j]		###	###	###

Tableau 21: Danish (54)		D-PRONOUN	STAY	CASE
a. Subj V jo [$_{VP}$ t_v pron DO]		*!		**
b. Subj V pron$_i$ jo [$_{VP}$ t_v t_i DO]	☞		*	*
c. Subj V pron$_i$ DO$_j$ jo [$_{VP}$ t_v t_i t_j]			**!	
d. *Subj V DO$_j$ jo [$_{VP}$ t_v pron t_j]		###	###	###

Of great interest is the case in which the direct object is a pronoun, as in (55). Apparently, judgments are somewhat unclear in this case: all orders are rejected, but the judgments in Vikner (1990) indicate that (55a) and (55c) are relatively the best.

(55)a.??Peter viste   jo   Marie den   (Danish)
       Peter showed indeed Marie it

   b. *Peter viste Marie$_i$ jo t_i den

   c.??Peter viste Marie$_i$ den$_j$ jo t_i t_j

   d. *Peter viste den$_j$ jo Marie t_j

Especially the fact that (55c) is judged as relatively good is surprising as Object Shift of full DPs is generally excluded in Danish. However, these

judgments make more sense when we consider the evaluation of this set of examples in tableau 22, where (55c) is selected as the optimal candidate

Tableau 22: Danish (55)	D-PRONOUN	STAY	CASE
a. Subj V jo [$_{VP}$ t_v IO pron]	*!		**
b. Subj V IO$_i$ jo [$_{VP}$ t_v t_i pron]	*!	*	*
c. Subj V IO$_i$ pron$_j$ jo [$_{VP}$ t_v t_i t_j]	☞	**	
d. *Subj V pron$_j$ jo [$_{VP}$ t_v IO t_j]	###	###	###

The fact that the judgments on the examples in (55) are unclear may indicate that something is missing in the present analysis, but the fact that (55c) is judged to be relatively good is certainly encouraging. A final important thing that the judgments in (55) show is that we must indeed assume that candidate 22d is not part of the candidate set: if ever, it would certainly have to show up in this case, as there is no fully acceptable alternative, and it would involve only a single violation of STAY. So, despite the fact that (55) proves problematic, it does seem to support the idea that the C$_{HL}$ determines which structures are part of the candidate set.

3.5. *The Perfect Tense Construction*

According to Holmberg's Generalization, Object Shift is possible only when the *main* verb of the clause has moved as well. The generalization refers to the main verb in order to account for the fact that Object Shift does not occur in, e.g., the perfect tense constructions in (56) and (57).

(56)a. Varför har   studenterna inte alla läst den   (Swedish)
         why   have the students not all read it

    b. *Varför har studenterna den$_i$ inte alla läst t_i

(57)a. Jón hefur ekki keypt   bókina   (Icelandic)
   *Jón has   not bought the book*

    b. *Jón hefur bókina$_i$ ekki keypt t_i

Before we are able to give an account of these facts, we must establish what the structure of the perfect tense construction is. Many options come to mind. For instance, it has been proposed by Zwart (1993) that the AGR-projections are all higher in the tree than the auxiliary verb. A problem with this assumption is that we are not readily able to account for the fact

that the object and the past participle may agree in Φ-features, as in the Italian example in (58).

(58)   Giovanni la ha accusata   (Italian)
         Giovanni her has accused (fem.)

Since the Φ-features of the participle must be checked in AGR_o the participle must move into this head position, and hence the Head Movement Constraint (now reduced to the MLC) will be violated; in fact, since the auxiliary ultimately must be moved to I, this constraint will be violated twice. This is indicated in (59).

(59)   *$[_{IP}$ ... I $[_{AGRoP}$ ... AGR_o $[_{AuxP}$ ... Aux $[_{VP}$ SUBJ Part OBJ $]]]]$
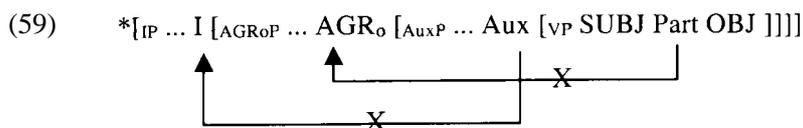
To avoid these problems, we must assume that at least the position in which the agreement features of the participles are checked is lower than the auxiliary verb (cf. also Chomsky 1991, p. 435), as in the structure in (60), which is also preferable to the one in (59) as its allows us to eliminate the functional head AGR from the theory. In other words, AGR_oP in (60) can be considered a convenient label for the extended projection eP, as is discussed in section 2.2. If the derivation is as given in (60), movement of the subject into SpecIP (or SpecAuxP) leads to a violation of the MLC: when we adopt a standard version of the MLC, such as (9b), the derivation is excluded because the movement skips $SpecAgr_o$, whereas there is no minimal domain that contains both SpecIP and $SpecAGR_oP$; when we adopt the revised version of the MLC in (18b), the derivation is excluded because movement of the subject skips the c-commanding $SpecAgr_oP$, which contains another potential attractee, namely the object.

(60)   *$[_{IP}$ ... I $[_{AuxP}$ ... Aux $[_{AGRoP}$ ... AGR_o $[_{VP}$ SUBJ Part OBJ $]]]]$
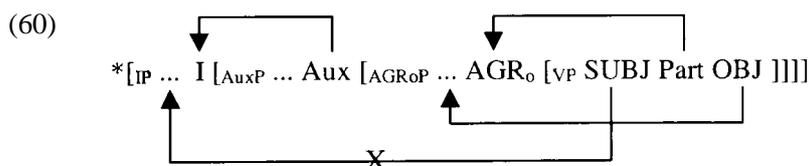
Now, if we assume that Object Shift does not apply, the movement of the subject becomes possible as $SpecAGR_oP$ (if present) would then not be filled by the direct object, and the subject would be the closest DP that could be attracted by the N-feature on I. Recall that I assume that the AGR-projection in (60) is actually an extended projection of the participle, which

is only present when movement of the participle applies (cf. the discussion
of structure (16) in section 2.2).

(61)   [$_{IP}$ ... I [$_{AuxP}$ ... Aux [$_{VP}$ SUBJ Part OBJ]]]

The analyses in (60) and (61) give us a nice account of the impossibility
of Object Shift in the perfect tense construction. The evaluation is as in-
dicated in the tableaux 23 and 24 (for Icelandic, I only give the candidate
set in which the direct object is not in focus as Object Shift would be
blocked in the other case on independent grounds, viz. by the constraint
ALIGNFOCUS). If 23b and 24b were included in the candidate set, they
would certainly be selected as the optimal candidates: the former does not
violate the constraint D-PRONOUN, and the latter has only a violation of
STAY. However, since 23b and 24b cannot be created by C$_{HL}$, they can-
not block the candidates 23a and 24a, which are therefore selected as the
optimal candidates. This properly accounts for the fact that Object Shift is
not possible in the perfect tense construction.[18]

Tableau 23: Swedish (56)		D-PRONOUN	STAY	CASE
a. Subj$_i$ aux [$_{VP}$ t_i V pron]	☞	*		*
b. *Subj$_i$ aux [$_{AGRoP}$ pron$_j$ Part [$_{VP}$ t_i t_{part} t_j]]		####	####	####

Tableau 24: Icelandic (57) direct object not in focus		D-PRONOUN	AF	CASE	STAY
a. Subj$_i$ aux [$_{VP}$ t_i V DP]	☞			*	
b. *Subj$_i$ aux [$_{AGRoP}$ DP$_j$ Part [$_{VP}$ t_i t_{part} t_j]]		####	####	####	####

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[18] One of the reviewers notes that the Remnant VP-Topicalization construction in (ia),
taken from Holmberg (1997), poses a serious problem for the analysis in the main text;
since the participle is moved into SpecCP in isolation, the pronoun must have undergone
Object Shift, contrary to what is predicted to be possible. There is, however, reason to
assume that the pronoun is not extracted from the VP. Consider the Dutch example in (ib).
In this example, the VP-remnant *gekust* has certainly not been moved into clause initial po-
sition, which is clear from the fact that the pronoun *dat* occupies SpecCP, and consequently
the pronoun *haar* has clearly not been extracted from the VP-remnant. See Haider (1990)
for more arguments against a derivational approach to Remnant VP-Topicalization.

(i)a.   Kysst har han henne inte
         kissed has he   her   not

   b.   Gekust [$_{CP}$ dat heeft hij haar niet]
          kissed   that has he her not

3.6. *Conclusion*

In this section, I have given an analysis of Scandinavian Object Shift which is based on the D&E model in (1). It has been shown that Chomsky's (1995) distinction between weak and strong features can be expressed in the form of a constraint ranking, and that the ranking for Case is 'weak' in Swedish/Danish, but 'strong' in Icelandic. Further, it has been shown that the two alternative approaches to 'strength' are not fully equivalent. Whereas Chomsky's distinction between weak and strong features is of an absolute nature, the distinction between 'weak' and 'strong' rankings is not. A 'weak' ranking can be overruled by an additional constraint that forces movement of the relevant sort – it has been shown that the Swedish/Danish Constraint ranking in (62a) has the result that the constraint D-PRONOUN makes Object Shift of pronouns possible even though the movement is not forced by the ranking of CASE and STAY. Similarly, a 'strong' ranking may be overruled by an additional constraint which blocks the relevant movement – the Icelandic constraint ranking in (62b) has the result that the constraint ALIGNFOCUS blocks Object Shift when the DP is in focus, and the same holds for 'short' Object Shift in Swedish/Danish. Finally, it has been shown that the inherent conditions on the operations of C_{HL} (the generator) may block derivations that would otherwise have been selected as the optimal output.

(62) a. Swedish/Danish: (D-PRONOUN = ALIGNFOCUS) ≫ AGREE-MENT ≫ STAY ≫ CASE

b. Icelandic: (D-PRONOUN ≫ ALIGNFOCUS) ≫ CASE ≫ STAY

4. OBJECT SHIFT IN DUTCH

In section 3, I have given an analysis of Scandinavian Object Shift within the D&E framework. In this section, I attempt to extend this analysis to the case of object movement of the Dutch/German type; the relevant data will be taken from Dutch. As my point of departure, I adopt the Universal Base Hypothesis, according to which all languages have the underlying order *specifier-head-complement* (Kayne 1994).[19] As Dutch/German still

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[19] In this respect the present proposal differs from Bobaijik (1995), which also aims at providing a unified account of Scandinavian and Dutch/German object movement; in this work Holmberg's Generalization is considered a morpho-phonological constraint, but in order to extend the analysis to Dutch/German, Bobaijik has to assume that these languages are OV underlyingly. This also holds for later versions of this material, presented at the 1998 GLOW Colloquium (Bobaijik 1998), and during his Tilburg lectures in 1999.

poses a large number of problems for this hypothesis, needless to say the discussion will be of a highly speculative nature and incomplete, and future research should demonstrate whether the conclusions I reach are actually correct. Since my proposal has benefited from the discussion of the same problem by Zwart (1997), I start by reviewing his analysis.

Consider the embedded clause in (63a). When we adopt the traditional assumption that Dutch is a head-final language, we probably need not assume that Dutch has Object Shift as the direct object is assumed to be base-generated to the left of the main verb, as in (63b). However, if we adopt the Universal Base Hypothesis, there is no other alternative than to reanalyze the Dutch OV-orders as in (63c) – the object is base-generated to the right of the main verb and is moved to the left as the result of Object Shift.

(63) a.   dat Jan het boek koopt
          that Jan the book buys

     b.   dat Jan [$_{VP}$ het boek koopt]

     c.   dat Jan het boek$_i$ [$_{VP}$ koopt t_i]

If the derivation in (63c) is correct, we have to conclude that Holmberg's claim that Object Shift requires movement of the verb to I cannot be maintained, and consequently we have to revise our analysis of Object Shift in the Scandinavian languages. In this section, I assume that the Universal Base Hypothesis is basically correct, and try to account for the possibility of the derivations in (63c). If this is possible, it provides support in favor of the Universal Base Hypothesis – if not, the OV-analysis in (63b) must be adopted, which would imply the rejection of this hypothesis.

The problem example (63a) poses for the Universal Base Hypothesis has led Zwart (1997) to the conclusion that, despite appearances, verb movement does apply in Dutch embedded clauses. His argumentation goes roughly as follows.

(64) a.   Movement is triggered by the need of feature checking.

     b.   Feature checking requires movement of the formal features only.

     c.   Economy considerations block movement of features that do not enter into a checking relation.

     d.   Pied piping of the phonological features is therefore blocked, if not needed for independent reasons.

It is therefore claimed that T attracts the formal features of the verb only, and that the phonological features of the verb preferably remain in their base position. In order to account for those cases that involve movement of the complete verb (i.e., of both the formal and phonological features of the verb), Zwart adopts the additional assumption in (65).

(65)　Formal features must be phonologically supported at SPELL-OUT.

Now consider the main clause in (66a) and the embedded clause in (67a). At a certain stage in the derivation, the structure is roughly as in the b-examples (for the moment, we ignore issues that are related to the placement of the object and the subject). T attracts the relevant formal features FF(V) of the verb, and in accordance with (64d), they move to T in isolation, as in (66c) and (67c). The condition in (65) is, however, violated in the resulting structures. Consequently, the formal features FF(V) must look for an element that can phonologically support them. In the main clause in (66), the only candidate is the verb itself, which must hence move and adjoin to FF(V), as in (66d). In the embedded clause, on the other hand, the formal features can move themselves, and adjoin to the complementizer *dat*, as in (67d). This derivation of embedded clauses is supported by the fact that in many Dutch and German dialects, the phenomenon of complementizer agreement occurs, which can be considered a morphological reflex of the movement of FF(V)-T to C.

(66)a.　Jan koopt het boek
　　　　Jan buys　the book

　　b.　Jan T het boek koopt

　　c.　JAN FF(V)-T het boek koopt

　　d.　Jan koopt-FF(V)-T het boek t_v

(67)a.　dat　Jan het boek koopt
　　　　that Jan the book buys

　　b.　dat Jan T het boek koopt

　　c.　dat Jan FF(V)-T het boek koopt

　　d.　FF(V)-T-dat Jan $t_{FF(V)-T}$ het boek koopt

Zwart's assumption that V-to-I applies in Dutch embedded clauses is supported by several other facts; here, I will provide an argument that cannot

be found in Zwart (1997). In Grimshaw (1997) and Vikner (1997b), it has been claimed that V-to-I in embedded clauses forces the presence of a complementizer (see also Doherty 1997). As it is generally assumed that V-to-I does not apply in English, it is correctly predicted that (68a) is grammatical both with and without a complementizer. In Icelandic, on the other hand, V-to-I does apply and the complementizer must be present, as is shown in (68b). In Danish, there is at least no morphological reflex of V-to-I in embedded clauses, and given the impossibility of Object Shift, it is plausible to assume that it is completely absent, so that it is again correctly predicted that the complementizer can be dropped in (68c). In Dutch, finally, Zwart's claim that V-to-I does take place, which is compatible with the fact that Object Shift is possible, correctly predicts that the complementizer must be realized in (68d).

(68)a.   I don't think (that) the actor actually saw the film   (English)

   b.   Ég tel   ekki *(að) leikarinn sjái áreiðanlega
        I think not   that the actor saw really

        myndina   (Icelandic)
        the film

   c.   Jeg tror   ikke (at) skuespilleren virkelig så   filmen (Danish)
        I   think not   that the actor   actually saw the film

   d.   Ik denk niet *(dat) de acteur de film werkelijk
        I think not   that the actor the film actually

        zag   (Dutch)
        saw

When we now summarize the properties of the embedded clauses in these four languages, we see an interesting clustering of properties. If Zwart's claim that V-to-I does apply in Dutch embedded clauses is adopted, Dutch behaves just like Icelandic. If we do not, the properties of Dutch embedded clauses would be totally unexpected. I therefore conclude that Zwart's claim is on the right track.

Although I agree with Zwart's conclusion that V-to-I applies in Dutch embedded clauses, I believe that several aspects of his proposal are problematic. My main objection concerns his assumption that formal features can be overtly moved in isolation. For example, if the morphological reflex of movement is only due to the condition in (65), why does clitic movement in the Romance languages involve Pied-piping of the phonological

TABLE I

Properties of embedded clauses in English, Icelandic, Danish and Dutch

	V-to-I	Object Shift	COMPL-less clause
English	—	—	+
Icelandic	+	+	—
Danish	—	—	+
Dutch	?	+	—

features? Since clitics are generally adjoined to verbs, (65) should allow stranding of the phonological features. Although problems like these can possibly be solved by further elaboration of Zwart's proposal, I want to consider a slightly different approach to the problem.

Above we have assumed that a transitive verb is actually a composite that consists of the verb V, which selects the internal argument, and a 'light' verb v, which selects the external argument and can be held responsible for assignment of accusative Case. When a clause contains a transitive verb, the base structure of main and embedded clauses is roughly as indicated in (69).

(69)a. $[_{TP} \ldots T [_{vP} \text{Subj } v [_{VP} V \text{ Obj}]]]$

    b. $[_{CP} \text{dat} [_{TP} \ldots T [_{vP} \text{Subj } v [_{VP} V \text{ Obj}]]]]$

Now, assume that the Tense feature of T attracts v. The question whether v-to-T is morphologically reflected depends on the question whether V-to-v applies; v-to-T is only morphologically visible if it does. Zwart's analysis can now be easily reformulated. Assume that v is an affix, and that there is a constraint AFFIX which requires that an affix be morphologically supported. In (69a), this constraint can only be satisfied by adjoining V to v. In (69b), however, the alternative option exists that v moves to T in isolation, and is subsequently adjoined to the complementizer *dat*. Provided that the latter option is valued higher in Dutch than adjoining V to v (which would violate Grimshaw's constraint NoLEXM, which prohibits movement of elements that assign internal Θ-roles; cf. also Pollock 1989), the asymmetry between main and embedded clauses follows.

The compositional nature of transitive verbs also provides an account for the fact that the direct object can appear in more than one position in the clause. Consider the examples in (70). The alternation between (70a) and (70b) is related to focus: the direct object *dat boek* is in focus in (70a), but not in (70b). Now, assume that the direct object actually enters into two checking relations; the first is an agreement relation with the element V,

and the second is a Case relation with the 'light' verb v (cf. the discussion in section 3.3, where we assumed the same for Swedish). The derivations of the examples in (70a) and (70b) would then be roughly as indicated in (70a′) and (70b′), respectively.

(70)a. dat Jan waarschijnlijk dat boek koopt
        that Jan probably   that book buys

  a′. C [$_{TP}$ Subj v-T [$_{vP}$ ... t_v [DO$_i$ V [$_{VP}$ t_V t_i]]]]

  b. dat Jan dat boek waarschijnlijk koopt

  b′. C [$_{TP}$ Subj v-T [$_{vP}$ DO$_i$ t_v [t'_i V [$_{VP}$ t_V t_i]]]]

If we adopt the constraint ranking in (71) for Dutch, the two structures in (70a′) and (70b′) would both be predicted to be acceptable: Object Shift in order to check the Agreement features of V would be predicted to be independent of the focus-presupposition assignment in the clause, and must therefore apply both in (70a) and (70b); Object Shift in order to check the Case features, on the other hand, is blocked when the direct object is in focus, as in (70a). The evaluations of these two examples are given in the tableaux in 25 and 26. (We have not included the violations of STAY caused by the movement of the light verb in these tables, but this would not change the result.)

(71) Dutch: AGREEMENT ≫ AF ≫ CASE ≫ STAY

Tableau 25: Dutch (70a) DO in focus	AGR	AF	CASE	STAY
a. .. v-T Adv t_v .. V Obj	*!		*	
b. .. v-T Adv t_v Obj$_i$ V t_i ☞		*	*	*
c. .. v-T Obj$_i$ t_v Adv t_v t'_i V t_i		**!		**

Tableau 26: Dutch (70b) DO not in focus	AGR	AF	CASE	STAY
a. .. v-T Adv t_v .. V Obj	*!		*	
b. .. v-T Adv t_v Obj$_i$ V t_i			*!	*
c. .. v-T Obj$_i$ t_v Adv t_v t'_i V t_i ☞				**

Of course, the analysis of Dutch embedded clauses given above raises many interesting questions which I am not able to extensively go into now. However, I cannot resist the temptation to briefly say something more about unaccusative verbs. The present analysis implies that not only

transitive verbs are composites, but also unaccusatives – if the latter were not accompanied by a 'light' verb, the analysis would collapse, since the assumption that V-to-I also applies in Dutch embedded clauses would then incorrectly predict that it is the morphologically realized element V itself that should raise. I believe that the postulation of a 'light' verb for unaccusatives (which should be of a different nature than the 'light' verb v in (69), of course), is not too far-fetched as many unaccusatives are able to assign dative Case, as to the DP *het meisje* in the examples in (72). Since I have argued in section 3.4 that dative Case is a structural Case, it seems reasonable to hold an unaccusative 'light' verb responsible for that (cf. also the discussion of the unaccusative/raising verb *seem* in Chomsky 1995, chapter 4, ex. (98)).

(72) a.   dat   het meisje$_{dat.}$ de ergste rampen$_{nom.}$ overkomen
         that the girl   the most   terrible disasters happen
         that the most terrible disasters happen to the girl.

    b.   dat de ergste rampen$_{nom.}$ het meisje$_{dat.}$ overkomen

A conspicuous property of the unaccusative verbs is that the (derived) subject need not be moved into SpecTP in Dutch (which is also known as Nominative-Dative Permutation), as in (72a). As is correctly predicted by the constraint ranking in (71), this follows from the focus-presupposition assignment in the clause. The internal argument *de ergste rampen* must undergo Object Shift in both examples in (72) in order to check its agreement features with the V *overkomen.* As the internal argument is in focus in (72a), it cannot be moved into SpecTP in order to satisfy CASE as this would violate the higher ranked constraint ALIGNFOCUS. In (72b), on the other hand, the internal argument is not in focus, and movement into SpecTP is forced in order to avoid a violation of CASE. This analysis therefore provides a nice alternative for the traditional analysis of example (72a), according to which the nominative argument *de ergste rampen* is assigned nominative Case in its base position (cf. Den Besten 1985; Broekhuis 1991/1992 and the references cited there). It is actually superior to it as it accounts for the fact that the order in (72a) is excluded when the full DP is replaced by a definite pronoun, as is shown in (73) – as definite pronouns are never in focus, the strong ranking of CASE is not overruled by ALIGNFOCUS in this case and movement into SpecIP becomes compulsory (cf. Diesing 1997, p. 380 on German).

(73) a.   *dat   het meisje$_{dat.}$ zij$_{nom.}$ overkomen
         that the girl   they   happen
         that they happen to the girl.

b.   dat zij$_{nom.}$ het meisje$_{dat.}$ overkomen

The discussion above shows that the hypothesis that all verbs are actually composites consisting of V and a 'light' verb v does not only provide an alternative for Zwart's original hypothesis that V-to-I in Dutch embedded clauses involves movement of the formal features of V, but may also have interesting ramifications for other long-standing problems in the description of the syntax of Dutch, such as the phenomenon of Scrambling in (70) and Nominative-Dative permutation in (72).[20]

For the moment, I conclude that v-to-T applies in Dutch embedded clauses, and that this licenses Object Shift. For the Scandinavian languages, this analysis implies that we must force movement of V to v. The constraint AFFIX could take care of that, provided that the alternative way to satisfy it (viz. movement of v to the complementizer) would be blocked. Although it is not immediately clear how to obtain this result, the assumption that the alternative option is not available in the Scandinavian languages is supported by the fact that they do not exhibit complementizer agreement (Zwart 1997, p. 225ff.).

In this section, I have attempted to extend the analysis of Scandinavian Object Shift to Dutch. This attempt has led to the conclusion that, despite appearances, we have to conclude that verb movement does apply in Dutch embedded clauses. I did not discuss the problem that, contrary to Scandinavian Object Shift, Object Shift is also possible in the Dutch perfect tense construction. This problem can be solved if we adopt a version of the analysis of this construction in Broekhuis and Van Dijk (1995); this would, however, have repercussions for the account we gave for the impossibility of Object Shift in the Scandinavian perfect tense construction (see Broekhuis 1999 for discussion of this).

5. CONCLUSION

In this article, I have given an analysis of the Scandinavian Object Shift construction that adopts the derivation-and-evaluation model of grammar in (1). In section 3, I established that Chomsky's weak/strong distinction may be captured by means of a ranking of constraints. I have shown that this is not just a reformulation of the original distinction but has various empirical consequences. Further, it has been shown that the computational

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[20] For completeness' sake, note that the proposal in the main text has nothing to say about the kind of 'Scrambling' which is called 'Focus Scrambling' in Neeleman (1994) and which has properties not of A- but of A'-movement.

system acts as an OT-generator, but that, contrary to what is assumed in 'standard' OT, its operations are subject to inviolable conditions. In section 4, finally, I have shown that the analysis of Scandinavian Object Shift can in principle be extended to Dutch 'Object Scrambling'.

REFERENCES

Ackema, Peter, Ad Neeleman and Fred Weerman. 1992. 'Deriving Functional Projections', in Amy J. Schafer (ed.), *Proceedings of the North East Linguistic Society (NELS)* 23, vol. 1, University of Ottawa, Ottawa, pp. 17–31.

Anagnostopoulou, Elena. 1999. 'On Double Object Alternations and Clitics', unpublished manuscript, University of Tilburg.

Archangeli, Diana. 1997. 'Optimality Theory: An Introduction to Linguistics in the 1990s', in Archangeli and Langendoen 1977, pp. 1–32.

Archangeli, Diana and D. Terence Langendoen (eds.). 1997. *Optimality Theory. An Overview*, Blackwell, Malden and Oxford.

Besten, Hans den. 1985. 'The Ergative Hypothesis and Free Word Order in Dutch and German', in Jindřich Toman (ed.), *Studies in German Grammar*, Foris Publications, Dordrecht, pp. 23–65.

Bobaljik, Jonathan. 1995. 'Object Shift as a Morphological Phenomenon: Single Output Synttax', unpublished manuscript, MIT (available at http://www.mcgill.ca/Linguistics/faculty/bobaljik).

Bobaljik, Jonathan. 1995. 'The Autonomy of Syntax and the Typology of Movement', *GLOW Newsletter* **40**, 22–23.

Bobaljik, Jonathan and Dianne Jonas. 1996. 'Subject Positions and the Role of TP', *Linguistic Inquiry* **27**, 195–236.

Broekhuis, Hans. 1991. 'Chain-government', *The Linguistic Review* **6**, 297–374.

Broekhuis, Hans. 1992. *Chain-government. Issues in Dutch Syntax*, dissertation, University of Amsterdam, HIL Dissertations 2.

Broekhuis, Hans. 1999. 'Theoretische aspecten van de generatieve grammatica II. Lichte werkwoorden: het werkwoord als samenstelling', to appear in *Gramma/ttt* **7**.

Broekhuis, Hans and Leonie Cornips. 1994. 'Undative Constructions', *Linguistics* **32**, 173–189.

Broekhuis, Hans and Joost Dekkers. 2000. 'The Minimalist Program and Optimality Theory: Derivations and Evaluation', in Joost Dekkers, Frank van der Leeuw and Jeroen van de Weijer (eds.), *Optimality Theory: Phonology, Syntax and Acquisition*, Oxford University Press, Oxford, pp. 386–422.

Broekhuis, Hans and Kees van Dijk. 1995. 'The Syntactic Function of Auxiliaries of Time', in Marcel den Dikken and Kees Hengeveld (eds.), *Linguistics in the Netherlands*, John Benjamins, Amsterdam, pp. 37–48.

Burzio, Luigi. 1986. *Italian Syntax. A Goveniment-Binding Approach*, Reidel, Dordrecht.

Chomsky, Noam. 1991. 'Some Notes on Economy of Derivation and Representation', in Robert Freidin (ed.), *Principles and Parameters in Comparative Grammar*, MIT Press, Cambridge, Massachusetts, pp. 417–454.

Chomsky, Noam. 1995. *The Minimalist Program*, MIT Press, Cambridge, Massachusetts.

Chomsky, Noam. 1996. *Some Observations on Economy in Generative Grammar*, unpublished manuscript; MIT.

Collins, Chris and Höskuldur Thráinsson. 1993. 'Object Shift in the Double Object Constructions and the Theory of Case', in Colin Phillips (ed.), *Papers on Case and Agreement II. MIT Working Papers in Linguistics* 19, MIT, Cambridge, Massachusetts, pp. 131–174.

Collins, Chris and Höskuldur Thráinsson. 1996. 'Internal Structure and Object Shift in Icelandic', *Linguistic Inquiry* **27**, 391–444.

Costa, João. 1996. 'Optimality and Word Order', talk given at the "Stafseminar Grammaticamodellen", 31 October 1996, Tilburg.

Costa, João. 1998. *Word Order Variation. A Constraint-based Approach*, dissertation, University of Leiden, LOT Dissertations 14.

Dekkers, Joost. 1999. *Derivations and Evaluations. On the Syntax of Subjects and Complementizers*, unpublished Ph.D. dissertation, University of Amsterdam, LOT Dissertations 21.

Diesing, Molly. 1997. 'Yiddish VP Order and the Typology of Object Movement in Germanic', *Natural Language and Linguistic Theory* **17**, 369–427.

Dikken, Marcel den. 1995. *Partictes*, unpublished Ph.D. dissertation,

Dikken, Marcel den. 1995. *Particles. On the Syntax of Verb-Particle, Triadic, and Causative Constructions*, Oxford University Press, New York and Oxford.

Doherty, Cathal. 1997. 'Clauses without Complementizers: Finite IP-complementation in English', *The Linguistic Review* **14**, 197–220.

Grimshaw, Jane. 1991. 'Extended Projections', unpublished manuscript, Brandeis University, Waltham, Massachusetts.

Grimshaw, Jane. 1997. 'Projection, Heads and Optimality', *Linguistic Inquiry* **28**, 373–422.

Grimshaw, Jane and Vieri Samek-Lodivici. 1995. 'Optimal Subjects', *University of Massachusetts Occasional Papers* 18, University of Massachusetts, Amherst, pp. 589–605.

Haegeman, Liliane. l991. 'Scrambling, Clitic Placement and Agr Recursion in West Flemish', unpublished manuscript, Université de Genève.

Haider, Hubert. 1990. 'Topicalization and Other Puzzles of German Syntax', in Günther Grewendorf and Wolfgang Sternefeld (eds.), *Scrambling and Barriers*, Benjamins, Amsterdam and Philadelphia.

Hale, Kenneth and Samual Jay Keyser. 1993. 'On Argument Structure and the Lexical Expression of Syntactic Relations', in Kenneth Hale and Samual Jay Keyser (eds.), *The View from Building 20. Essays in Linguistics in Honor of Sylvain Bromberger*, MIT Press, Cambridge, Massachusetts and London, pp. 53–109.

Holmberg, Anders. 1986. *Word Order and Syntactic Features in the Scandinavian Languages and English*, unpublished Ph.D.dissertation, University of Stockholm.

Holmberg, Anders. 1997. 'Remarks on Holmberg's Generalization', *Studia Linguistica* **53**, 1–39.

Johnson, Kyle. 1991, 'Object Positions', *Natural Language and Linguistic Theory* **9**, 577–636.

Jonas, Dianne and Jonathan Bobaljik. 1993. 'Specs for Subjects, the Role of TP in Icelandic', in Jonathan Bobaljik and Colin Phillips (eds.), *Papers on Case and Agreement I. MIT Working Papers in Linguistics* 18, MIT, Cambridge, Massachusetts, pp. 59–98.

Kayne, Richard. 1985. 'L'accord du participe passé en Français et en Italien', *Modèles Linguistiques* **7**, 73–89.

Kayne, Richard. 1989. 'Facets of Romance Past Participle Agreement', in Paola Benincà (ed.), *Dialect Variation and the Theory of Grammar*, Foris Publications, Dordrecht, pp. 85–103.

Kayne, Richard. 1994. *The Antisymmetry of Syntax*, MIT Press, Cambridge, Massachusetts and London.

Kitahara, Hisatsugu. 1997. *Elementary Operations and Optimal Derivations*, MIT Press, Cambridge, Massachusetts and London.

Koizumi, Masatoshi. 1993. 'Object Agreement Phrases and the Split VP Hypothesis', in Jonathan Bobaljik and Colin Phillips (eds.), *Papers on Case and Agreement I. MIT Working Papers in Linguistics* 18, MIT, Cambridge, Massachusetts, pp. 99–148.

Nash, Lea and Alain Rouveret. 1996. 'Functional Heads and Proxies: An Asymmetric Set', *GLOW Newsletter* **36**, 50–51.

Nilsen, Øystein. 1997. 'Adverbs and Argument Shift', *Working Papers in Scandinavian Syntax* 59, 1–31. Department of Scandinavian Languages, University of Lund, Sweden.

Neeleman, Ad. 1996. *Complex Predicates*, unpublished Ph.D. dissertation, University of Utrecht.

Pesetsky, David. 1997. 'Optimality Theory and Syntax: Movement and Pronunciation', in Archangeli and Langendoen 997, pp. 134–170.

Pesetsky, David. 1998. 'Some Optimality Principles of Sentence Pronunciation', in Pilar Barbosa et al. (eds.), *Is the Best Good Enough*, MIT Press, Cambridge, Massachusetts, pp. 337–383.

Pollock, Jean-Yves. 1989. 'Verb Movement, Universal Grammar and the Structure of IP', *Linguistic Inquiry* **20**, 365–424.

Riemsdijk, Henk van. 1978. *A Case Study in Syntactic Markedness*, Foris Publications, Dordrecht.

Vikner, Sten. 1990. *Verb Movement and the Licensing of NP-positions in the Germanic Languages*, unpublished Ph.D. dissertation, Université de Geneve (draft version).

Vikner, Sten. 1994. 'Scandinavian Object Shift and West Germanic Scrambling', in Norbert Corver and Henk van Riemsdijk (eds.), *Studies on Scrambling. Movement and Non-movement Approaches to free Word-Order Phenomena*, Mouton de Gruyter, Berlin and New York, pp. 497–517.

Vikner, Sten. 1997a. 'The Interpretation of Object Shift, Optimality Theory, and Minimalism', in *Working Papers in Scandinavian Syntax* 60, Department of Scandinavian Languages, University of Lund, Sweden, pp. 1–24.

Vikner, Sten. 1997. 'V-to-I Movement, Do-Insertion, and Negation in Optimality Theory', talk given at "ATW op Vrijdag", 6 June 1997, University of Amsterdam.

Zwart, Jan-Wouter. 1993. *Dutch Syntax. A Minimalist Approach*, dissertation, University of Groningen.

Zwart, Jan-Wouter. 1997. *Morphosyntax of Verb Movement. A Minimalist Approach to the Syntax of Dutch*, Kluwer, Dordrecht.

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