9

Dutch as an OV/VO language

9.1 Preliminaries

A language can be characterized as a VO or an OV language based on its dominant surface word order or based on the order of elements in its hypothesized deep structure. As we saw in chapter 4, Dutch surface word order can be both VO (in finite main clauses) and OV (elsewhere), or in fact SVOV (in finite clauses with an auxiliary–verb combination). The characterization of Dutch as a VO or an OV language, therefore, is not straightforward.

Typological surveys typically characterize Dutch as an SVO language, based on the unmarked main clause word order (e.g. Čermák 1978: 99). In line with this, adpositions in Dutch are (mostly) prepositions and adjectives precede the noun, which Greenberg (1963: 77) finds to be atypical properties of SOV languages. In addition, auxiliaries do not invariably follow the main verb (not even in the OV embedded clauses), as they should in an SOV language by Greenberg's Universal 16 (Greenberg 1963: 85). Also, Dutch has clause-initial complementizers, and embedded clauses follow the verb (even the verb in final position).

On the other hand, the VO order of neutral main clauses is also marked, in that it emerges only in very precise circumstances, namely when the clause is finite and not subordinated. In all other situations (including nonfinite main clauses and nominalizations), the verb will end up following the object.

The Germanic proto-language is generally taken to have been an SOV language (e.g. Lehmann 1972), but the verb-second pattern of main clauses is already well established in the earliest 'Dutch' texts (Van der Horst 2008: 329f). In fact, deviations from the modern Dutch pattern are found mainly in the embedded clause, where the finite verb did not settle in its present-day clause-final position before the sixteenth century (Van der Horst 2008: 1051). In Middle Dutch, VO orders in embedded clauses were common enough for Gerritsen (1978: 27) to conclude that the Middle Dutch embedded clause was predominantly SVO.

First language acquisition data are not particularly revealing as to the question of the basic word order of Dutch. As in the target system, the position of the verb can be described as a function of finiteness in combination with

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(±embedded) clause type (see Wijnen and Verrips 1998: 231), and objects appear in the middle field, preceding or following adverbs, from the start (Wijnen and Verrips 1998: 245).

In the pregenerative structuralist tradition, the question of a basic order did not come up. Remarkably, De Groot (1949: 156) appears to acknowledge that the finite verb in main clauses is displaced, and his notation betrays that he locates the clausal core in the final verb position. However, when making the structure explicit, De Groot (1949: 184) reverts to a head-initial representation. Van der Lubbe (1958: 78) stresses the marked character of the embedded clause and its syntax, and Paardekooper (1963: 16) discusses the VO and OV patterns without raising the question of a basic order.

The question of the basic word order of a language takes on a new meaning in the framework of transformational generative grammar, where various surface orders are ideally derived from a common deep structure. As Bach (1964: 66) notes about High German, where the finite verb shows the same distributional pattern as in Dutch, "it would be extremely uneconomical to derive the patterns separately." In the earliest attempts to set up a transformational grammar of German, Bach (1962) and Bierwisch (1963) propose a set of rewrite rules that yield the OV order of the embedded clause directly, with the V1 and V2 orders of the main clause derived via transformations shifting the verb to the left (e.g. Bach 1962: 268–269).

This analysis was not adopted for Dutch until Koster (1975) proved its correctness (see section 9.2). Throughout the 1960s, the transformational analysis of Dutch was modeled on the example of English, not German (see Klein 2008: 2.7). This is probably due to the circumstance that embedded clauses in German show a typical characteristic of OV languages that embedded clauses in Dutch lack, namely a fixed order of main verb and auxiliary, with the main verb preceding the auxiliary:

(9.1) *German vs. Dutch auxiliary position*

a. … dass Von Humboldt die Quelle des Amazonas
C Humboldt DEF.PL source DEF.M.SG:GEN Amazon
{find-en woll-te / *woll-te find-en} (German)
find-INF want-PAST.3SG want-PAST.3SG find-INF
'…that Humboldt wanted to find the source of the Amazon.'

b. … dat Tasman het Zuidland {wou vind-en/
C Tasman DEF.N.SG South Land want:PAST.SG find-INF
?vind-en wou} (Dutch)
find-INF want:PAST.SG
'…that Tasman wanted to find the South Land.'

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In German (9.1a), the auxiliary must follow the main verb, whereas in Dutch (9.1b), both orders are possible, with a preference for the non-German order. As noted in section 4.2, the German order is excluded in Dutch with clusters of more than two verbs.

The rewrite rules proposed for German in Bach (1962: 266) are ordered in such a way that the verb phrase is first rewritten as a sequence of a verbal element VB and an auxiliary, and the OV order is the outcome of a later rewrite rule decomposing VB:

(9.2) *Rewrite rules for German (simplified from Bach 1962: 266)*

1. S → NP VP
2. VP → VB Aux
3. VB → NP Verb

In other words, to get to rule (9.2,3), yielding basic OV order, one would have to pass through rule (9.2,2), which does not obviously hold for Dutch.

The standard generative analysis of Dutch clause structure around 1970 can be appreciated from the discussion in Klooster *et al*. (1969, part III), where a simple sentence like (9.3) receives the structural analysis in (9.4) (Klooster *et al*. 1969: 121).

(9.3) We heb-ben een sonate ge-speel-d
1PL:NOM have-PL INDF.SG sonata GE-play-D
'We played a sonata.'

(9.4) [$_{S}$ [$_{NP}$ we] [$_{PRED}$ [$_{AUX}$ PRES hebben] [$_{VP}$ spelen [$_{NP}$ een sonate]]]]

As Klooster *et al*. (1969: 121) state, "grammatical rules of Dutch ensure that the sequence *we* PRES *hebben spelen een sonate* is converted into a sentence *we hebben een sonate gespeeld*" (=(9.3)). The nature of these rules is not further discussed (Kraak 1966: 118 proposes a simple inversion transformation generating the OV order), nor is the derivation of embedded clauses.

An early generative study of clausal complementation in Dutch (De Geest 1972) also proposes to generate embedded clauses to the right of the embedding verb, yielding the structure in (9.6) for example (9.5):

(9.5) Ik hoor-de Kaatje een lied-je zing-en
1SG.NOM hear-PAST.SG Cathy INDF.SG song-DIM sing-INF
'I heard Cathy sing a song.'

(9.6) [$_{S}$ ik [$_{VP}$ horen [$_{NP}$ [$_{S}$ Kaatje [$_{VP}$ zingen [$_{NP}$een liedje]]]]]]

As we saw in section 4.2 (see (4.41–42)), the complement clause of a perception verb is transparent, in the sense that the arguments belonging to the complement

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clause are realized in the middle field of the matrix clause. This can be seen from the word order in the embedded version of (9.5):

(9.7) … dat ik Kaatje een lied-je hoor-de zing-en
C 1SG.NOM Cathy INDF.SG song-DIM hear-PAST.SG sing-INF
'… that I heard Cathy sing a song.'

But although De Geest (1972: 77f) does note the matrix scope of adverbials and negation inside perception verb complement clauses (see (4.42)), the embedded clause type (9.7) is not mentioned and the complicated questions it raises for the analysis of Dutch word order are not discussed.

A very interesting early discussion of the OV/VO status of Dutch is Kooij (1973). Kooij (1973: 22f) highlights the Dutch/German contrast in (9.1) and finds the coincidence of hierarchical and linear order in the Dutch verb cluster to be typical of VO languages. The only argument for a basic OV order, then, lies in the order of object and verb in the embedded clause. But Kooij (1973: 24f) observes that the object and the verb are not necessarily adjacent, so that the grammar of Dutch must have a leftward object shift rule. Consider Kooij's examples (also (9.7)):

(9.8) a. Hij heeft het boek ge-lez-en
3SG.M.NOM have:3SG DEF.N.SG book GE-read-N
'He read the book.'

b. … dat hij het boek heeft ge-lez-en
C 3SG.M.NOM DEF.N.SG book have:3SG GE-read-N
'…that he read the book.'

In (9.8b), *het boek* 'the book' is not adjacent to the verb *gelezen* 'read,' suggesting that *het boek* 'the book' is shifted to the left. But if the grammar of Dutch has this object shift rule, we might as well assume that the base position of the object is to the right of *gelezen* 'read,' making the basic order VO.

In a further comment, Kooij (1973: 26) sounds a warning against confusing the concepts 'unmarked order' and 'base order' (presumably echoing contemporary thinking along the lines of generative semantics): deep structure is more abstract and linear order is not one of its significant properties.

Kooij (1973) does not discuss the rules needed to account for the distribution of the verbs in Dutch, and development of ideas in this domain obviously affects the argument. One rule, familiar from Paardekooper (1961) and soon to be adopted in the generative analysis of Dutch (see section 9.2 and chapter 10) is the verb-second rule, moving the finite verb to the position after the first constituent. Adding this rule to the package of Dutch transformations actually strengthens Kooij's argument: it would account for the position of *heeft* in (9.8a), so that the object shift rule can be stated without making reference to the type of clause

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(main or embedded). Another rule, however, would affect Kooij's argument, as it comes to the rescue of the hypothesis of the basic OV order of Dutch. This rule, somewhat confusingly called Verb Raising, takes the lexical verb and adjoins it to the auxilary (see chapter 11), allowing (9.8b) to be derived from an OV base as in (9.9) (Evers 1975).

(9.9) [het boek gelezen] heeft ⇒ [het boek **[e]**] heeft+**gelezen**

The impact of Kooij's analysis (Kooij 1973 is the printed version of his inaugural address, delivered on February 2, 1973, but presumably written somewhat earlier) was severely limited because of the presentation, just days earlier (January 20) of a lecture by Jan Koster on the very same topic. This lecture at the fourth annual meeting (called *TIN-dag*) of the Dutch linguistic association AVT, later published as Koster (1975), established an immediate and lasting consensus regarding the OV nature of Dutch.

9.2 Dutch as an OV language

9.2.1 Koster (1975)

The analysis of German as an SOV language, proposed by Bach (1962) and Bierwisch (1963), gained further, theoretical, support in Emonds (1970). Emonds argued that there can be only three types of transformations, listed in (9.10).

(9.10) *Types of transformations (Emonds 1970: 1)*
1. root transformations
2. structure-preserving transformations
3. minor movement rules

A root transformation is one where the manipulated element ends up being immediately dominated by the root node (Emonds 1970: 7). A structure-preserving transformation is essentially a substitution transformation, moving an element in a pre-existing slot (Emonds 1970: 28), and a minor movement rule is a local inversion operation moving an element across an adjacent constituent (Emonds 1970: 158). Prototypical examples of the three types of operations are wh-movement, passive, and particle movement in English (see (9.11)), respectively.

This inventory of transformations predicts that there will be certain operations that apply in root clauses only (namely root transformations), but that there will be no operations that apply in nonroot clauses only (i.e. there are no nonroot transformations). Emonds (1970: 8–9) notes that this supports the Bach/Bierwisch analysis of verb placement in German: if the OV order is basic, we need verb movement in root clauses only, whereas if the VO order were basic, we

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would need a nonroot transformation to put the verb in final position in embedded clauses. In other words, the verb placement transformation proposed by Bach (1962) for German is a bona fide root transformation.

Koster (1975) basically transfers Emonds' argument from German to Dutch, enriching it with compelling empirical arguments. As Klein (2008: 2.7) notes, Koster's analysis marks a shift in orientation, modeling the description of Dutch on German instead of English.

Koster's first and best-known argument involves the placement of particles in Dutch. Superficially, it looks as if Dutch and English share a rule of particle placement, a minor movement rule in Emonds' system:

(9.11) a. Cook looked up the reference
b. Cook looked the reference up

(9.12) a. *Cook zocht op de verwijzing
Cook seek:PAST.SG up DEF.SG reference
(intended) 'Cook looked up the reference.'

b. Cook zocht de verwijzing op
Cook seek:PAST.SG DEF.SG reference up
'Cook looked up the reference.'

Modeling Dutch on English, one might think that both languages start out with the order *verb–particle–object*, and that the optional particle placement rule deriving the order of English (9.11b) is obligatory in Dutch. But Koster (1975: 116f) shows that this cannot be right, mainly because particle placement in Dutch could not be formulated as a simple minor movement rule. For example, the particle *terug* 'back' would have to cross several constituents in (9.13) (the noun phrases *Tasman* 'Tasman' and *het journaal* 'the log,' and the adverb *weer* 'again'), making it different from a minor movement rule (which could only invert two adjacent elements):

(9.13) Cook gaf Tasman het journaal weer terug
Cook give:PAST.SG Tasman DEF.N.SG log again back
'Cook returned the journal to Tasman.'

These and other complications in the formulation of particle placement in Dutch can be avoided if (a) Dutch is OV at deep structure, and (b) Dutch has no rule of particle placement at all (Koster 1975: 118).

Koster's alternative entails the adoption of a root transformation moving the verb from clause-final to clause-initial position in root clauses (the Verb Placement transformation proposed in Bach 1962: 269). Since this transformation is restricted to the root clause environment, we explain that the verb and the particle stay together in embedded clauses:

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(9.14) … dat Cook de verwijzing op zocht
C Cook DEF.SG reference up seek:PAST.SG
'… that Cook looked up the reference.'

Koster then shows that the particle in main clauses has the same distribution as the verb in embedded clauses: elements that must (or may not) appear to the left (or right) of the verb in final position must (or may not) appear to the left (or right) of the particle as well. In terms of the topological fields analysis (see chapter 4): the verb in final position occupies the right bracket, and the particle occupies the right border separating the middle field and the right bracket (see (4.56)). Therefore, elements appearing in the middle field precede, and elements appearing in the final field follow, both the verb and the particle (see also Paardekooper 1955).

Koster (1975: 124) notes that the argument based on the distribution of particles may be repeated for other material that is left-adjacent to the verb in final position: secondary predicates (as in *schoon maken* [clean make] 'clean') and nonspecific indefinite bare nouns (as in *piano spelen* [piano play] 'play the piano'). The thinking here is that particles, secondary predicates, and nonspecific indefinite bare nouns form a lexical unit with the verb (a compound verb), requiring that they are inserted with the verb as a single unit, to be broken up only by the Verb Placement transformation; see the examples in (9.15–16):

(9.15) a. … dat Tasman het dek schoon maak-t
C Tasman DEF.N.SG deck clean make-3SG
'… that Tasman is cleaning the deck.'

b. Tasman maak-t het dek schoon
Tasman make-3SG DEF.N.SG deck clean
'Tasman is cleaning the deck.'

(9.16) a. … dat Tasman prachtig piano speel-t
C Tasman beautiful piano play-3SG
'…that Tasman plays the piano beautifully.'

b. Tasman speel-t prachtig piano
Tasman play-3SG beautiful piano
'Tasman plays the piano beautifully.'

Assuming a VO base order would require additional transformations regulating the placement of secondary predicates and nonspecific indefinite bare nouns, whereas no such (suspect, nonroot) transformations are needed if we start from an OV base order.

To this set of arguments, Koster (1975: 134) adds another, involving the distribution of preposition phrases (PPs) in main and embedded clauses. The relevant facts are illustrated in (9.17–18):

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(9.17) *Order of PPs in embedded clauses*

a. … dat Jan tijdens de pauze aan z'n vader denk-t
C John during DEF.SG break on POSS:3SG.M father think-3SG
'… that John thinks of his father during the break.'

b. *… dat Jan aan z'n vader tijdens de pauze denk-t
C John on POSS:3SG.M father during DEF.SG break think-3SG
(intended: same as a.)

(9.18) *Order of PPs in main clauses*

a. Jan denk-t tijdens de pauze aan z'n vader
John think-3SG during DEF.SG break on POSS:3SG.M father

b. Jan denk-t aan z'n vader tijdens de pauze
John think-3SG on POSS:3SG.M father during DEF.SG break
(both) 'John thinks of his father during the break.'

Why are the PPs freely ordered in main clauses (9.18) but not in embedded clauses (9.17)? The answer is simple if Dutch is underlyingly SOV, provided that the deep structure V-position be located *between* the two PPs. Dutch has an independently needed rule of PP extraposition moving a PP to the final field. This rule can derive (9.19) from (9.17a):

(9.19) … dat Jan aan z'n vader denk-t tijdens de pauze
C John on POSS:3SG.M father think-3SG during DEF.SG break
(same as (9.17a))

Verb placement then derives (9.18b) from (9.19), not from (9.17b).

This analysis shows that the final verb position is relevant to the description of Dutch word order in main clauses as well: the free ordering of PPs in main clauses must involve extraposition of a PP across a vacant verb position. If the main clause order is the base order, the final verb position is not employed and the PP extraposition rule cannot be formulated. But if the embedded clause order is the deep structure order, and PP extraposition is ordered before Verb Placement, the pattern follows automatically.

Koster's analysis of Dutch as an SOV language had a profound effect on the generative treatment of Dutch syntax. The SOV hypothesis, in conjunction with the rule of Verb Placement (verb second, chapter 10), provided the frame in which all later analyses of Dutch syntax would be cast. I discuss briefly in the next subsection how the major patterns of Dutch clause structure were described in the years following the publication of Koster's analysis. Here, I would like to finish by asking how well Koster's arguments stand up.

First of all, we now know that verb placement is not a root transformation, as it occurs in embedded clauses in closely related languages like Yiddish and

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Icelandic (Den Besten 1986, Vikner 1995). Den Besten (1977) effectively reanalyses verb placement as a structure-preserving transformation, moving the verb into COMP (see chapter 10). However, Koster's idea that the verb moves from a clause-final position to a clause-initial position is now supported by a more general theoretical desideratum, namely that a moved category should c-command its trace. Furthermore, the idea that a verb is generated in a sisterhood configuration with its internal argument (a basic assumption of Government and Binding theory, e.g. Chomsky 1986a: 14) also forces us to think of the position of the finite verb in main clauses as a derived position.

The argument based on the distribution of particles assumes a complex predicate analysis (see section 8.3), raising the question of how a verb could be excorporated from the verbal compound under Verb Placement. A principle of 'lexical integrity' (going back to Chomsky 1970) prohibits that transformations manipulate subparts of words. Still, even if the verb–particle combination is not a lexical compound, most analyses (including small-clause analyses) would locate the base position of the particle somewhere in the vicinity of the base position of the verb, so that the particle may still be taken to signal the verb's base position. Likewise, the argument based on the distribution of PPs in main and embedded clauses is still very effective, as the facts follow straightforwardly if we assume that a trace of the verb is present between the two PPs in (9.18b).

So we see that theoretical developments have scarcely affected Koster's analysis, which may in fact have contributed significantly to the theory of grammar in demonstrating that verb movement is invariably upwards.

9.2.2 *Derivation of the major patterns*

This section demonstrates briefly how the most significant word-order phenomena of Dutch were dealt with after Koster (1975). The key elements of Koster's analysis of Dutch were:

(9.20) *Key elements of Koster's analysis of Dutch*
- a. Dutch is an SOV language (i.e. the verb phrase is head-final)
- b. Dutch has a rule of verb placement fronting the finite verb in main clauses

The two positions of the verb (the deep-structure position, visible in the embedded clause word order, and the surface-structure position, visible in finite main clauses) mark the left and right brackets separating the initial, middle, and final fields of the structuralist analysis of the Dutch clause (Paardekooper 1955; see (4.1)).

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Functional heads

The rule of verb placement (9.20b) in the history of the analysis of Dutch is discussed in chapter 10. Here, it must be mentioned that Koster's hypothesis that the verb phrase in Dutch is head-final raised a question about the status of what came to be known as the 'extended projections' (Grimshaw 1991) of the verb phrase: IP and CP.

'I' in IP stands for INFL, the complex of inflectional morphemes (or features) which had been analyzed as a separate syntactic element since the earliest days of generative grammar (essentially going back to Bloomfield's immediate constituent analysis). By 1980, arguments were developed suggesting that INFL be considered the head of the clause (Stowell 1981, Pesetsky 1982). This entailed that the phrase structure rules of X-bar theory (Jackendoff 1977) also applied to functional elements like INFL and the complementizer (C), leading to a structure of the clause where at least two projections appeared on top of the verb phrase: IP and CP (Chomsky 1986a). In later work in the 1980s, INFL and C were decomposed into a series of functional heads, each heading its own functional projection (e.g. Chomsky 1989), until a more contracted analysis with just TP (=IP) and CP was adopted again in the minimalist approach of the 1990s and beyond (Chomsky 1995, 2001).

These developments did raise the question whether the extended projections of the Dutch verb phrase (IP/TP and CP) are likewise head-final. Since complementizers in Dutch are clause-initial, CP had to be head-initial, creating a tension in the directionality of heads in Dutch (C taking its complement to the right, and V taking its complement to the left). What about IP?

Recall that in Bach's (1962) rewrite rules (see (9.2)), the element *AUX* was generated to the right of the verbal group VB, motivated by the clause-final position of auxiliaries in embedded clauses. AUX is the precursor of INFL, so the natural transfer of the English clause structure in (9.21a), from Chomsky (1981: 21) to German is (9.21b) (adapted from Den Besten and Edmondson 1981: 22; also Safir 1982: 426).

(9.21) a. S → NP INFL VP
b. S → NP VP INFL

(9.21b), then, became the standard analysis of Dutch clause structure as well (Reuland 1981: 163, Bennis and Haegeman 1984: 40), naturally developing into an analysis with head-final IP (as evident from treatments in Dutch-language textbooks, e.g. Bennis and Hoekstra 1989a: 102, Droste and Van Eynde 1991: 153, Model 1991: 60, Bennis 2000: 94, Sybesma 2002: 156).

Empirically, clause-final INFL was motivated by the position of the finite verb in embedded clauses, on the assumption that an inflected verb appears in INFL.

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However, since inflected verbs do not appear in INFL in English, the assumption was somewhat arbitrary, prompting Koopman (1984: 214) to remark: "I know of no independent arguments for this analysis [in (9.21b)] in Dutch."

Reuland (1990: 140f) provides an empirical argument against rightward V-to-INFL movement in Dutch: assuming the possibility of right-adjunction of adverbs to VP, V-to-INFL movement across the right-adjoined adverb would turn the adverb adjunction into a vacuous movement; we then predict that a sequence of adverbs *A B* would admit of two scope interpretations, A > B and B > A (the latter resulting from vacuous movement of B to a hierarchically higher position), contrary to fact.

Consequently, various alternative analyses have been proposed, in which INFL either does not exist as a separate functional category (Koster 1986a: 136, Reuland 1986, Weerman 1989: 99; cf. Bayer 1984: 241 for German) or is conflated with COMP (Platzack 1983, Koopman 1984: 215, Bennis and Haegeman 1984: 41, Van de Koot 1984: 49, Haegeman 1986: 123; cf. De Haan and Weerman 1986: 89 for Frisian). A more radical alternative, according to which Dutch and German have the structure in (9.21a), was proposed in Travis (1984: 120f) (see chapter 10).

The conflation of INFL and COMP in Dutch (and German) was seen to be supported empirically by the phenomenon of complementizer agreement (Den Besten 1983: 119–120, Bennis and Haegeman 1984: 41), present in many Dutch and German dialects (as well as in Frisian), where the complementizer agrees with the subject in person and/or number features:

(9.22) *Complementizer agreement (South Hollandic dialect)*

a. … dat-**te** ze kom-me
   C-PL 3PL come-PL
   '… that they are coming.'

b. … dat-(*te) ze kom-t
   C-PL 3SG.F.NOM come-3SG
   '… that she is coming.'

Bennis and Haegeman (1984: 41) take the phenomenon of complementizer agreement to indicate that INFL is contained within COMP. See chapter 10 for further discussion of the phenomenon of complementizer agreement and its relevance to the analysis of verb second.

Koster (1986b) proposed yet another take on INFL in Dutch, namely that it is 'weak' (as opposed to the 'strong' INFL of English). As a weak functional head, INFL is unable to host lexical material, yet it may shield the subject position off from government by COMP (Koster 1986b: 14). As a result, the subject position (Spec,IP) may remain unfilled in Dutch in certain constructions (i.e. Dutch is a 'semi-prodrop' language), unlike in English, where INFL is 'strong.' That the

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subject position may remain empty in Dutch was argued on the basis of the phenomena illustrated in (9.23–25).

(9.23) er *placement*

a. … dat (***er**) Tasman (**er**) Cook **[e]** mee ge-plaag-d heeft
C LOC Tasman LOC Cook GAP with GE-tease-D have:3SG
'… that Tasman teased Cook with it.'
(*er* is the locative variant of the inanimate pronoun *het* 'it')

b. … dat (**er**) Tasman (**er**) een medaille **[e]** voor ge-gev-en
C LOC Tasman LOC INDF.SG medal gap for GE-give-N
werd
AUX.PASS:PAST.SG
'… that Tasman was given a medal for it.'

In (9.23a), we see that *er* 'there,' the complement of the stranded preposition *mee* 'with,' cannot be placed before the subject *Tasman*. But in the passive construction (9.23b), *er* 'there' does precede *Tasman*, suggesting that *Tasman* is not in the subject position and that the subject position (to the immediate right of the complementizer) may remain empty.

(9.24) wat–voor *split*

a. ***Wat** heb-ben **[e]** voor mens-en Tasman ge-holp-en?
Q:INAN have-PL GAP for human-PL Tasman GE-help-N
(intended) 'What kind of people helped Tasman?'

b. **Wat** zijn hem **[e]** voor ramp-en overkom-en?
Q:INAN be:PL 3SG.M.OBJ GAP for disaster-PL GE:happen.to-N
'What kind of disasters happened to him?'

In (9.24a), we observe that *wat* 'what' cannot be subextracted from the subject *wat voor mensen* 'what kind of people.' That the subextraction is felicitous in (9.24b) then suggests that *wat voor rampen* 'what kind of disasters' is not in the subject position, leaving the subject position empty (see Den Besten 1985).

(9.25) het-*drop*

Duidelijk is (het) dat Tasman te ver ging
clear be:3SG it C Tasman too far go:PAST.SG
'It is clear that Tasman went too far.'

In (9.25), we see that the expletive subject *het* 'it' may be (in fact, preferably is) left out in inversion constructions, showing again that the subject position may remain empty in certain constructions (*het* 'it' cannot be left out in subject-initial main clauses).

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Koster's analysis of the difference between Dutch and English in terms of the 'strength' of INFL marks a new direction in the study of parametric variation, restricting parametric variation to the feature make-up of functional heads (see also Borer 1984). This would later become standard within the Principles and Parameters approach, especially after Pollock (1989) and Chomsky (1989), and in the Minimalist Program (Chomsky 1995).

Verb clustering

The analysis of the verb clusters occupying the right bracket in Dutch (see section 4.2 and (4.56)) is discussed in chapter 11. Following Koster's analyses of Dutch as an OV language, a cluster results automatically when one head-final VP embeds another. As this yields the typical German order with the hierarchically higher verb last in the string, the Dutch order must be derived by further operations, essentially rightward verb-to-verb adjunction (as proposed by Evers 1975).

Extraposition

On the analysis of Dutch as an SOV language, one would expect complement clauses to precede the verb in final position. But as we saw in section 4.5, complement clauses in Dutch appear in the final field. Only very rarely do we find complement clauses in the middle field, and these are invariably selected by factive verbs (Koster 1989: 273–274, referring to Koperberg 1987):

(9.26) a. Tasman heeft [dat hij het Zuidland niet
Tasman have:3SG C 3SG.M.NOM DEF.N.SG South Land NEG
kon vind-en] altijd betreur-d
can:PAST.SG find-INF always GE:regret-D
'Tasman always regretted not having been able to find the South Land.'

b. Tasman heeft altijd betreur-d [dat hij
Tasman have:3SG always GE:regret-D C 3SG.M.NOM
het Zuidland niet kon vind-en]
DEF.N.SG South Land NEG can:PAST.SG find-INF
(same as a.)

In (9.26a), the complement clause is arguably not in its base position, as it is not adjacent to the verb, and cannot be extracted out of:

(9.27) *Wat heeft Tasman [dat hij [e] niet
Q:INAN have:3SG Tasman C 3SG.M.NOM GAP NEG
kon vind-en] altijd betreur-d?
can:PAST.SG find-INF always GE:regret-D
(intended) 'What did Tasman always regret not having been able to find?'

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In fact, the complement clause cannot be adjacent to the verb, suggesting it is in some marked adjunction position:

(9.28) *Tasman heeft altijd [dat hij het Zuidland
Tasman have:3SG always C 3SG.M.NOM DEF.N.SG South Land
niet kon vind-en] betreur-d
NEG can:PAST.SG find-INF GE:regret-D
(intended) 'Tasman always regretted not having been able to find the South Land.'

Ironically, the complement clause in the final field is transparent for extraction, suggesting that the position in the final field is in fact its base position:

(9.29) Wat heeft Tasman altijd betreur-d
Q:INAN have:3SG Tasman always GE:regret-D
[dat hij [e] niet kon vind-en]?
C 3SG.M.NOM GAP NEG can:PAST.SG find-INF
'What did Tasman always regret not having been able to find?'

The analysis of Dutch as an SOV language therefore raised a problem for the description of clausal complementation. The head-final status of the VP requires that the complement clause be generated to the left of the verb, and ends up in the final field as the result of a rightward movement (extraposition). But the transparency of the complement clause in the final field suggests that the clause is base-generated to the right of the verb-final position.

The extraposition analysis was proposed in Evers (1975: 17f) for both finite and nonfinite complement clauses. As discussed in more detail in chapter 11, nonfinite complement clauses can either appear in the final field (9.30) or remain to the left of the verb-final position when the nonfinite verb is adjoined to the matrix verb via Verb Raising (9.31).

(9.30) *Extraposition*
… dat Tasman ge-probeer-d heeft het Zuidland te vind-en
C Tasman GE-try-D have:3SG DEF.N.SG South Land to find-INF
'… that Tasman tried to find the South Land.'

(9.31) *Verb Raising*
… dat Tasman het Zuidland heeft prober-en te vind-en
C Tasman DEF.N.SG South Land have:3SG try:INF to find-INF
(same as a.)
(*proberen* is an infinitive replacing a past participle; see section 4.2)

Evers (1975: 69) notes that extraposition is not a structure-preserving transformation (see (9.10)), which prompts him to consider a base-generation alternative for

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complement clause extraposition. But an ingenious argument shows that extraposition is needed anyhow (Evers 1975: 72).

Suppose that a verb that triggers verb raising (like a perception verb) embeds a clause that contains an extraposed complement clause, as in *Cook heard [verb-raising verb] Tasman claim that he had found the South Land*. Then since Dutch is an OV language, the embedded clause (*Tasman claim that he had found the South Land*) must be generated to the left of the verb in final position (i.e. *heard*), after which the verb-raising verb (*heard*) triggers verb raising of the verb of the embedded clause (*claim*). Then even if we assume that the finite complement clause to *claim* is base-generated in the embedded clause's final field, extraposition is needed to make sure that the complement clause ends up in the final field of the matrix clause. The hypothetical base structure is in (9.32a), the order after Verb Raising is in (9.32b), and the correct surface order is in (9.32c).

(9.32) a. *Hypothetical deep structure*

… dat	Cook	[Tasman	bewer-en	[dat	hij	
C	Cook	Tasman	claim-INF	C	3SG.M.NOM	
het	Zuidland	ge-vond-en	had]		hoor-de]	
DEF.N.SG	South Land	GE-find-N	have:PAST.SG		hear-PAST.SG	

b. *Verb raising*

*… dat	Cook	Tasman	**[e]**	[dat	hij	het
C	Cook	Tasman	GAP	C	3SG.M.NOM	DEF.N.SG
Zuidland	ge-vond-en	had]		hoor-de		**bewer-en**
South Land	GE-find-N	have:PAST.SG		hear-PAST.SG		claim-INF

c. *Extraposition needed*

… dat	Cook	Tasman	**[e]**	hoor-de	bewer-en	**[dat**
C	Cook	Tasman	GAP	hear-PAST.SG	claim-INF	C
hij	**het**	**Zuidland**	**ge-vond-en**	**had]**		
3SG.M.NOM	DEF.N.SG	South Land	GE-find-N	have:PAST.SG		

This argument returns in slightly different form in Bennis and Hoekstra (1989a: 134). Assuming that Dutch has a head-final IP, and that the finite verb moves to INFL, Bennis and Hoekstra conclude that base-generation of the complement clause to the right of the verb is pointless: the complement clause would still end up to the left of the verb after V-to-INFL movement, necessitating extraposition after all.

That extraposition is independently needed was also clear from the distribution of relative clauses, which may remain next to their head noun (9.33a) or appear in the final field (9.33b).

(9.33) a.

… dat	Tasman	[een	Maori	[die	op	een
C	Tasman	INDF.SG	Maori	REL:CG	up	INDF.SG

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trompet blies]] zag
trumpet blow:PAST.SG see:PAST.SG
'… that Tasman saw a Maori who blew a trumpet.'

b. … dat Tasman [een Maori] zag [die op
C Tasman INDF.SG Maori see:PAST.SG REL:CG up
een trompet blies]
INDF.SG trumpet blow:PAST.SG
(same as a.)

Unlike complement clauses (see (9.29)), extraposed relative clauses are opaque:

(9.34) ***Waar op** heeft Tasman een Maori ge-zie-n [die
Q:LOC up have:3SG Tasman INDF.SG Maori GE-see-N REL:CG
[e] blies]?
GAP blow:PAST.SG
(intended) 'What did Tasman see a Maori that blew?'

Contra Evers (1975), De Haan (1979a: 40f) argues for base-generation of all types of complement clauses in the final field, mainly on the basis of their transparency (see (9.30)). (This required a new approach to verb clustering, which De Haan 1979a: 52 proposes to describe as verb lowering instead of Verb Raising.) The base-generation analysis was taken up by Bennis (1986: 105) for finite complement clauses, and by Koster (1989: 274) for finite complement clauses and nonfinite complement clauses introduced by a complementizer (for transparent nonfinite complement clauses, Koster proposed to maintain the traditional verb raising derivation; see chapter 11).

Bennis (1986: 104) shows that a complement clause in the final field is opaque when it is associated with a pronoun in the middle field (also T. Hoekstra 1983: 99; cf. (7.224)):

(9.35) a. **Wat** heeft Tasman betreurd dat hij **[e]**
Q:INAN have:3SG Tasman GE:regret-D C 3SG.M.NOM GAP
nooit ge-vond-en heeft?
never GE-find-N have:3SG
'What did Tasman regret that he never found?'

b. ***Wat** heeft Tasman *het* betreurd *dat*
Q:INAN have:3SG Tasman 3SG.INAN GE:regret-D C
hij ***[e]*** *nooit* *ge-vond-en* *heeft*?
3SG.M.NOM GAP never GE-find-N have:3SG
(intended: same as a.)

Bennis (1986) argues that *het* 'it' in (9.35b) cannot be the spell-out of a trace of the extraposed clause, as this would leave the contrast between (9.35a) and

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(9.35b) unexplained. Instead, *het* 'it' in (9.35b) must be the internal argument of *betreuren* 'regret,' and the extraposed clause must be an adjunct associated with *het* 'it.' In contrast, the extraposed clause in (9.35a) must be the internal argument of *betreuren* 'regret,' base-generated in the final field.

Extraposition of prepositional phrases (PP) shows an interesting mirror effect discussed in Koster (1974). A PP that is selected by the verb must always appear closer to the verb than a nonselected PP, whether the PPs appear in the middle field or in the final field. Compare (9.36) with (9.17) above.

(9.36) a. … dat Jan denk-t aan zijn vader tijdens de pauze
C John think-3SG on POSS:3SG.M father during DEF.SG break
'… that John thinks of his father during the break.'

b. *… dat Jan denk-t tijdens de pauze aan zijn vader
C John think-3SG during DEF.SG break on POSS:3SG.M father
(intended: same as a.)

In Koster's analysis, the verb in final position acts as a mirror. The PPs are all generated in the middle field; PP extraposition then adjoins a PP to the right of the verb, and the rule can be applied more than once. The mirror effect is derived if the extraposition rule targets the selected PP first.

The question of base-generation vs. movement did not come up as much with PPs, since PPs in the final field are invariably opaque:

(9.37) **Waar** heeft Tasman **[e]** naar) ge-zoch-t (***[e]** naar)?
Q:LOC have:3SG Tasman GAP to GE-seek-D GAP to
'What was Tasman looking for?'

Koster (1978a: 54) takes PP extraposition to be a stylistic rule (see also Chomsky 1986a: 41), because it is not subject to the expected locality conditions (see also Zwart 1990). Thus, a PP may be extraposed from out of a definite noun phrase, which normally blocks extraction:

(9.38) a. Duiker-s heb-ben het anker van een schip **[e]**
diver-PL have-PL DEF.N.SG anchor of INDF.SG ship GAP
ge-borg-en **uit 1642**
GE-salvage-N out 1642
'Divers salvaged the anchor of a ship from 1642.'

b. ***Uit welk jaar** heb-ben duiker-s het anker van
out which year have-PL diver-PL DEF.N.SG anchor of
een schip **[e]** ge-borg-en?
INDF.SG ship GAP GE-salvage-N
(intended) 'What year did divers salvage the anchor of a ship from?'

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A syntactic account of the mirror-image effect of PP extraposition was proposed by Barbiers (1995: 109f), who takes PPs to be generated in the middle field, and derives PP extraposition via movement of the VP (or a more inclusive category) into the specifier position of a PP. The mirror-image effect is achieved via 'roll-up movement,' when the (reordered) VP–PP combination moves into the specifier position of the next higher PP. (For (9.38a), the VP-movement analysis requires that we take the extraposed PP to be generated as a clausal adjunct c-commanding the object, such that either the object or the object–VP combination can move into the specifier position of that PP; cf. Barbiers 1995: 124.)

Scrambling

On the SOV analysis of Dutch, noun phrase objects are generated in the middle field. In the technical literature on Dutch syntax, the term *scrambling* is used for the entire complex of phenomena showing variable word order of middle field elements (see section 4.3). It usually does not refer to subject–object permutation, which is a marked, focus-related phenomenon in Dutch (for which Neeleman 1994a: 396, 1994b: 84 coined the term *focus scrambling*; see (4.108)).

It was noted early on (Kerstens 1975) that objects that are not adjacent to the verb (in final position) have special properties: nonadjacent indefinite objects must have a specific interpretation, and the nuclear pitch accent shifts away from the object when the object is not adjacent to the verb (both facts illustrated in (4.74–75)). For this reason, it appeared natural to think of the verb-adjacent position as the object's deep-structure position, and of the nonadjacent position as a derived position.

In the framework of Government and Binding theory (Chomsky 1981), it was assumed that the object receives Case (i.e. is licensed as having the grammatical function 'object') from the verb under a condition of adjacency. This again suggested that the object is generated in a position left-adjacent to the verb, and comes to precede adjuncts as the outcome of a movement rule (Hoekstra 1984: 116). Bennis and Hoekstra (1984: 79) noted that the same leftward object shift rule is needed to account for the distribution of objects in ('exceptional case-marking') perception verb constructions like (4.42).

An alternative, by Stowell (1981: 120), took the verb-second nature of Dutch to show that Dutch has a double-headed VP, with verbal heads on both ends of the middle field. This would allow a scrambled object to be assigned case under adjacency from the left-side verbal head (the verb-second position). But, as discussed by Hoekstra (1984: 110f), it wrongly predicts that the object in the middle field cannot be *surrounded* by adverbs, breaking up the adjacency with both heads of the double-headed VP (see (4.64a)).

The nature of the rule moving the object to the left, but inside the middle field, proved difficult to determine. On the one hand, Bennis and Hoekstra

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(1984: 68f) showed that object shift licenses parasitic gaps (see (7.239)), suggesting that the object moves to an A′-position (i.e. an operator position). On the other hand, Vanden Wyngaerd (1989a) showed that object movement is local (8.6) and creates a configuration from which the object can bind anaphors and variables (8.7). That would suggest that the object moves to an A-position (i.e. a grammatical function position). Vanden Wyngaerd (1989a: 269) proposed a solution by suggesting that parasitic gaps are not licensed by standard object shift, but by an additional short A′-movement to the left (see also Mahajan 1994: 324), but the issue remained essentially unresolved. In view of this, Webelhuth (1989: 410) suggested that the A/A′-distinction needed to be revised, an issue that also preoccupied Noam Chomsky at the time, ultimately leading him to abandon the distinction between deep structure and surface structure in his 1991 class lectures.

The movement analysis of scrambling was motivated by a strict adherence to conditions on thematic role assignment (defining argument positions) and case assignment (defining grammatical function positions) (see section 8.1). In the standard analysis of English within the Government and Binding theory, both internal arguments and objects are licensed under adjacency with the verb. Relaxing the adjacency condition, Weerman (1989: 77f) paved the way for a base-generation analysis of scrambling explored more fully by Neeleman (1994a).

Neeleman (1994a: 396) noted that scrambling (unlike focus scrambling; cf. (4.108)) is not associated with focus (i.e. the 'moved' object is not focused), and therefore should not be regarded as the outcome of an A′-movement rule. Neeleman (1994a: 400) doubts that constructions with object-shift-induced parasitic gaps (7.239) are truly acceptable, but Neeleman notes that to the extent that they are, there is also reason to doubt that these are standard parasitic gaps licensed by A′-movement, as parasitic gaps are also licensed by raised subjects in passive constructions (licensing by A-movement; see (7.242)) and occur in nominalizations (licensing without movement; see (7.243)).

The structure of the middle field was charted in an important article by Daalder and Blom, who used anaphor binding tests to show that the indirect object (*die mensen* 'those people' in (9.39)) c-commands the direct object (*elkaar* 'each other' in (9.39)) (Daalder and Blom 1976: 404; see also section 4.3.1):

(9.39) … dat ik die mens-en elkaar gun
C 1SG.NOM DEM:DIST.PL human-PL RECP grant:1SG
'… that I am happy that these people have each other.'

But Schermer-Vermeer (1991: 238) showed that leftward-shifted objects may appear in either order, when the pitch accent resides with the verb:

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(9.40) a. Tas^{3}man^{3} heeft^{2} de^{2} Ma^{2}o^{2}ri-s^{2} de^{2} ko^{2} kos^{2}no^{2}t-en^{2}
Tasman have:3SG DEF.PL Maori-PL DEF.PL coconut-PL
he^{2}laas^{2} ge^{2}-gev^{4}-en^{1} (in plaats van verkocht)
regretfully GE-give-N in place of GE:sell:D

b. Tas^{3}man^{3} heeft^{2} de^{2} ko^{2} kos^{2}no^{2}t-en^{2} de^{2} Ma^{2}o^{2}ri-s^{2}
Tasman have:3SG DEF.PL coconut-PL DEF.PL Maori-PL
he^{2}laas^{2} ge^{2}-gev^{4}-en^{1} (in plaats van verkocht)
regretfully GE-give-N in place of GE:sell:D
(both) 'Regretfully, Tasman GAVE (instead of SOLD) the coconuts to the Maoris.'

Schermer-Vermeer (1991) also showed that the double object construction and the prepositional dative construction differ not just formally but also semantically, suggesting that the indirect object and the prepositional dative object are not two instantiations of a single category (Schermer-Vermeer 1991: 223; see also Balk-Smit Duyzentkunst 1968). Indeed, prepositional dative objects behave much more freely in that they can precede or follow the direct object and can also be extraposed. For this reason, Dutch prepositional dative objects have not generally been treated as transformationally related to indirect objects (for an exception, see Hoekstra 1978: 63).

The interpretation of the various word orders in scrambling was studied more extensively in Verhagen (1986) and De Hoop (1992). Verhagen (1986) defends a nontransformational analysis of scrambling, focusing on the function of word order for interpretation. Verhagen's position was that interpretation is a function of linear order, having to do with the relative freedom of interpreting pieces of information independently of pieces of information presented later (Verhagen 1986: 248). Presented outside the generative grammar current, Verhagen's analysis and observations enjoyed little impact (but one could see Neeleman and Van de Koot 2008 as continuing this line of research).

De Hoop (1992) adopted the A-movement analysis of scrambling, but proposed that nonspecific indefinite objects are licensed in their deep-structure position (i.e. left-adjacent to the final verb position). These, then, are strictly speaking not objects but part of the predicate (De Hoop 1992: 105) and they receive a 'weak' case (De Hoop 1992: 66f), as opposed to regular 'strong' case. A morphologically indefinite object need not stay in its deep-structure position, but when it moves, the nonspecific interpretation is lost, giving rise to various alternative (referential, partititive, generic, generic collective; De Hoop 1992: 50) interpretations. De Hoop (1992: 158f) showed that these specific interpretations typically require that the predicate be interpreted as contrastive (see (4.74) for

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an example, with contrastiveness expressed through pitch accent on the particle *weg* 'away').

Fronting

Koster's (1975) analysis of Dutch syntax (cf. (9.20)) allowed for a simple and unified treatment of all fronting processes: they target the position to the left of the verb after verb placement (9.20b). This position was initially identified as COMP, and after the articulation of the functional domain in Chomsky (1986a) as the specifier position of CP.

COMP/Spec,CP, then, hosted both subjects and nonsubjects, raising questions about its status as either a grammatical function position (A-position) or an operator position (A′-position). In view of this, Travis (1984, 1991) argued that the left periphery in languages like Dutch hosts two specifier positions, Spec,IP (an A-position) and Spec,CP (an A′-position), and that subjects occupy Spec,IP in all clause types. This entailed a nonuniform description of verb placement: to INFL in subject-initial main clauses, and to C in inversion constructions (see chapter 10).

Travis' (1984) analysis was motivated by the observation that weak subjects can appear in first position, but weak objects cannot:

(9.41) a. *Weak subject in first position*

{Zij / Ze} heb-ben Tasman niet ge-zie-n
3PL.STR:NOM/WK have-PL Tasman NEG GE-see-N
'THEY/They didn't see Tasman.'

b. *Weak object in first position*

{Hun / *Ze} heeft Tasman niet ge-zie-n
3PL.STR:OBJ/WK have:3SG Tasman NEG GE-see-N
'Tasman didn't see THEM.'

If the distribution of weak pronouns is sensitive to the A/A′-distinction, the contrast in (9.41) may be taken to indicate that the subject in (9.41a) is in an A-position (Spec,IP), whereas the object in (9.41b) is in an A′-position (Spec,CP).

On the other hand, Rizzi (1991: 46) suggested that the status of Spec,CP is dependent on whether there is person/number agreement between the specifier and the head of CP: this has the effect that if the subject is fronted to Spec,CP, and the verb moves to C, Spec,CP is an A-position. On this more flexible definition of the A/A′-distinction, the facts in (9.41) lose their significance. (Note also that the prohibition against fronting of weak objects has been called into question by Weerman 1989: 62 for Dutch and Gärtner and Steinbach 2003: 470 for German.)

A further set of facts relevant to the determination of the status of the subject position was first discussed by Höhle (1983) for German, and then applied to

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Dutch in Zwart (1991b). The facts suggest that conjunction reduction in Dutch requires that the deleted subject and its antecedent be in the same structural (as opposed to linear) position:

(9.42)

a. **Deze** **trein** rijd-t verder als intercity naar Groningen
DEM.PROX:CG train ride-3SG further as direct service to Groningen
en **[e]** zal alleen stop-pen te Assen
and GAP will:SG only stop-INF at Assen
'This train will continue as direct service to Groningen and will stop only at Assen.'

b. ?Na Zwolle rijd-t **deze** **trein** verder naar Groningen
after Zwolle ride-3SG DEM.PROX:CG train further to Groningen
en **[e]** zal alleen stop-pen te Assen
and GAP will:SG only stop-INF at Assen
(same as a.)

In the inversion construction (9.42b), Spec,CP is occupied by *na Zwolle* 'after Zwolle,' and the subject *deze trein* 'this train' must be in Spec,IP. Then if the gap must be in the same structural position as the antecedent *deze trein* 'this train,' the gap must also be in Spec,IP in (9.42b), and it follows that the subject in subject-initial main clauses may be in Spec,IP. (That the gap in (9.42b) must be located to the left of the auxiliary *zal* was shown by Bakker 1968: 217; see also Sturm 1995.)

Crucially, (9.42b) becomes ungrammatical when the second conjunct involves inversion (i.e. the gap corresponds to a fronted nonsubject):

(9.43) a. ?**Deze** **trein** rijd-t verder als intercity
DEM.PROX:CG train ride-3SG further as direct service
en **[e]** kun je dus beter niet nem-en
and GAP can:SG 2SG thus better NEG take-INF
'This train continues as a direct service, so you'd better not take it.'

b. *Na Zwolle rijd-t **deze** **trein** verder als intercity
after Zwolle ride-3SG DEM.PROX:CG train further as direct service
en **[e]** kun je dus beter niet nem-en
and GAP can:SG 2SG thus better NEG take-INF
'After Zwolle, this train continues as a direct service, so you'd better not take it.'

In (9.43), the gap is a fronted topic, corresponding to a subject in a subject-initial main clause in (9.43a) and to a subject in an inversion construction in (9.43b). In (9.43b) the subject in the first conjunct must be in Spec,IP and the gap must be in Spec,CP, yielding a positional mismatch between the gap and its antecedent.

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It then follows from the grammaticality in (9.43a) and (9.42b) that there cannot be a positional mismatch in (9.43a) and (9.42b). In other words, the clause-initial subject is sometimes in Spec,CP (9.43a) and sometimes in Spec,IP (9.42b).

However, discussion of similar facts in Sturm (1995) showed that (9.42) and (9.43) involve different kinds of deletion, so that (9.43b) has no bearing on (9.42b). Sturm (1995) showed that the construction in (9.42) involves an asymmetric coordination (cf. Kehler 2002). That is, the state of affairs in the second conjunct is interpreted as a continuation of the state of affairs in the first conjunct. In contrast, (9.43a) involves a simple juxtaposition. Zwart (1997b: 266) concludes from this that (9.43a) involves no deletion but coordination at the level of the subject's sister, and that the deciding factor in (9.42) is not structural position but linear position.

Fronted elements in Dutch, including subjects, can generally be followed by a resumptive demonstrative pronoun (see Zwart 1998b):

(9.44) *D-words resuming fronted constituents*

a. Tasman **die** ontdek-te Tasmanië
Tasman DEM.DIST:CG discover-PAST.SG Tasmania
'Tasman discovered Tasmania.'

b. Dat Tasman een held was **dat** is bekend
C Tasman INDF.SG hero be:PAST.SG DEM.DIST:N be:3SG known
'It is well-known that Tasman was a hero.'

c. Tasman **die** ken ik niet
Tasman DEM.DIST:CG know:1SG 1SG.NOM NEG
'Tasman, I don't know him.'

The first extensive study of these facts is by De Vries (1910–1911), who argued that the demonstrative element is a dependency marker belonging to the predicate, on a par with agreement endings (De Vries 1910–1911: 31–32). In more recent times, the resumptive demonstratives have gained notoriety because of Koster (1978b), who argued that in (9.44b) the demonstrative is in the subject position. From this it followed that the subject sentence is in a more peripheral ('satellite') position, and hence that subject sentences do not exist.

9.3 Dutch as a head-initial language

9.3.1 Zwart (1994)

The standard analysis of Dutch syntax sketched in section 9.2 continued to enjoy unanimous support until the early 1990s, when certain developments in theoretical syntax called for a re-evaluation.

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First of all, one of the starting points of syntactic analysis in the Minimalist Program (Chomsky 1995) was that movements are triggered by a feature-checking requirement. Since unchecked features cause ungrammaticality (a 'derivation crash'), feature-triggered movement cannot be optional. Transferred to Dutch, this means that the object shift movement identified by Vanden Wyngaerd (1989a) as movement to Spec,AgrOP (see (8.8)) is obligatory, and hence that noun phrase objects in Dutch are always in a derived position. It follows that the base position of the object might just as well be to the right of the verb (yielding SVO at the base) as to its left (yielding SOV).

Second, Kayne (1992) presented arguments of a typological nature against the existence of rightward movement. More precisely, Kayne showed that head-final languages (like Japanese) never show rightward movement counterparts to well-established leftward movements in head-initial languages. Thus, languages like Japanese have no rightward verb second, no rightward preposition stranding, no rightward wh-movement, etc. All well-studied, regular movements appear to target head positions and specifier positions to the left. This finding made the rule of extraposition, taking complement clauses into the final field (section 9.2.2), even more suspicious, strengthening the base-generation alternative (recall that base-generation of complement clauses in the final field had been proposed early on to account for the fact that complement clauses in Dutch are not islands for extraction).

These two developments (obligatory object shift and no rightward movement) suggested to Zwart (1994) a different approach to Dutch syntax, summarized in (9.45):

(9.45) *Key elements of Zwart's analysis of Dutch*
- a. Dutch is head-initial
- b. Dutch has a rule of object shift deriving embedded clause OV order
- c. Dutch has a rule of verb placement deriving main clause VO order

Point (9.45a) was further supported by a third theoretical development, the idea that linear order is a function of hierarchical structure (the Linear Correspondence Axiom [LCA] of Kayne 1994). As Kayne (1994: 47f) argued, the LCA leaves no room for a parameter governing the directionality of the head–complement relation (see also Chomsky 1995: 340). If the LCA is correct, head-finality of the Dutch verb phrase could no longer be taken for granted: it had to be argued for.

As Zwart (1994: 381) showed, phrases in Dutch are generally clearly head-initial: the top projections CP and DP are invariably head-initial (see (2.12–13)); there are no phrases where the complement can only appear to the left of the head (the only candidate, the verb phrase, has clausal complements to the right of the

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verb); and complements appearing to the left of the head are never obligatorily adjacent to the head (see (5.46) for AP and (5.75) for PP). Typologically, then, Dutch is clearly a head-initial language, suggesting that the OV order of embedded clauses is derived from a more basic head-initial order that surfaces only when the complement of the verb is a clause.

The typological argument implied that the Dutch IP could not be head-final either, and Zwart (1991c, 1993a) proposed an analysis of verb second, building on Travis (1984, 1991), in which the verb in subject-initial main clauses moves to INFL instead of COMP/C (see chapter 10). On that analysis, IP is obviously head-initial. Likewise, the standard derivation of clause-final verb clusters of Evers (1975), involving rightward V-to-V movement, could not be maintained if the VP is head-initial, leading to a new derivation of this complex of phenomena, involving only leftward movement (chapter 11).

The analysis of Dutch as a head-initial language raised a question about the status of the elements appearing to the immediate left of the final verb position (in what we called the middle-field left border in (4.56)): verbal particles, secondary predicates and stranded prepositions. Adopting a small-clause analysis, Zwart (1994: 399) proposed that particles and secondary predicates (e.g. *neer* 'down' in (9.46a)) are generated as predicates of a small-clause internal argument of the verb (see (9.46b)). The small-clause subject (*de sloep* 'the dinghy' in (9.46a)) is raised to Spec,AgrOP, and the predicate (*neer* 'down' in (9.46a)) is raised to the specifier position of PredP, a designated functional projection in which small-clause predicates are licensed (see (9.46c)).

(9.46) a. … dat Tasman de sloep neer liet
C Tasman DEF.SG dinghy down let:PAST.SG
'… that Tasman lowered the dinghy.'

b. $[_{VP}$ liet $[_{SC}$ [de sloep] neer]]

c. $[_{AgrOP}$ [de sloep] AGRO $[_{PredP}$ neer PRED $[_{VP}$ liet $[_{SC}$ [e] [e]]]]]

The movement of the small-clause subject *de sloep* 'the dinghy' to Spec,AgrOP was the object shift identified by Vanden Wyngaerd (1989a) as the operation responsible for scrambling. But the movement of the predicate *neer* 'down' to Spec,PredP was new and in need of empirical and conceptual support.

Empirically, Zwart (1994: 400) suggested that the predicate-raising analysis was supported by the distribution of stranded prepositions. Stranded prepositions can appear between the predicate and the final verb position (as well as further to the left, which is more preferred, but not in the final field):

(9.47) het touw waar Tasman de sloep (mee) neer
DEF.N.SG rope REL:LOC Tasman DEF.SG dinghy with down

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(?mee) liet (*mee)
with let:PAST.SG with
'the rope that Tasman lowered the dinghy with'
(*waar* is the locative variant of relative *dat/wat* 'which')

Assuming that the stranded preposition *mee* is generated as the head of an instrumental PP *daar mee* [there with] 'with that,' and that the instrumental PP is an adjunct to the verb phrase, the position of *neer* 'down' to the left of *mee* 'with' in (9.47) indicates that the small-clause predicate must be outside the verb phrase, hence must have moved.

Conceptually, the predicate-raising hypothesis allowed an analysis of Dutch syntax in which all elements of argument structure are licensed in separate grammatical function positions. That is, predicates, like subjects and objects, are generated inside and realized outside the verb phrase, a culmination of the development sketched in (8.1).

Neither argument is compelling. We simply do not know enough about the distribution of stranded prepositions for the empirical argument to stand, and the conceptual argument depends on the small-clause analysis of particles and secondary predicates, which might be wrong (see section 8.3). Note, however, that if the small-clause analysis of particles and secondary predicates must give way to a complex predicate analysis, the head-final character of the complex predicate might be a lexical property (just as compounds in Dutch are head-final), not affecting the status of Dutch as a head-initial language (Zwart 2009a).

9.3.2 Some consequences

This subsection revisits the topics addressed in section 9.2.2, sketching briefly how their analysis was affected by the hypothesis that Dutch is head-initial. For larger issues, such as the analysis of verb placement and verb clustering, see chapters 10–11.

Functional projections

If Dutch is head-initial, the clause-initial position of the complementizer (the head of CP) is as expected. More importantly, we may now expect IP to also be head-initial, so that a second functional head, INFL, becomes available in the left periphery of the clause. How this affected the analysis of verb second in Dutch (allowing a revival of the analysis of Travis 1984) is discussed in chapter 10.

Kayne (1990: 257) had advanced the hypothesis that clitics invariably adjoin to functional heads. This provided a new tool for diagnosing functional heads, which Jaspers (1989) and Zwart (1991c) used to provide evidence for the position of INFL

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in Dutch. We noted in section 4.3.4 that Dutch has a set of weak pronouns that must precede elements (including full pronouns) that occupy the middle field proper (see (4.103–4), and appendix 1 for the inventory of pronoun forms). These weak pronouns also have ordering restrictions that are different from full noun phrases (see (2.42)). These facts prompted Van Riemsdijk (1978: 33) to postulate a separate position for unstressed pronouns in Dutch (see Koster 1978a: 14 for discussion). A flavor of the special distribution of weak pronouns in Dutch can also be taken from (9.48):

(9.48) a. … dat Tasman (*dat) de Maori-s (dat)
C Tasman DEM:DIST.INAN DEF.PL Maori-PL DEM:DIST.INAN
hoor-de roep-en
hear-PAST.SG call-INF
'... that Tasman heard the Maoris calling that.'

b. … dat Tasman (het) de Maori-s (het)
C Tasman 3SG:WK.N DEF.PL Maori-PL 3SG:WK.N
hoor-de roep-en
hear-PAST.SG call-INF
(same as a.)

In (9.48a), both arguments of *roepen* 'call' (*de Maoris* 'the Maoris' and *dat* 'that') are shifted to the left, but the order may not be reversed. In (9.48), the internal argument *dat* 'that' is replaced by the weak pronoun *het* 'it,' and the order may be reversed.

Berendsen (1986) used various tests to show that the weak pronouns in question are clitics and not phonetically reduced pronouns (see also Zwart 1996b). This suggested to Jaspers (1989) and Zwart (1991c) that the special position proposed for unstressed pronouns by Van Riemsdijk (1978) was in fact a functional head (AgrS/INFL) hosting clitics in accordance with Kayne's hypothesis.

The validity of this argument was later questioned by Cardinaletti and Starke (1996: 43), who proposed a finer distinction between weak pronouns and clitics, and argued that the unstressed pronouns in Dutch (with the exception of 3SG.M.NOM *ie*) are in fact weak pronouns and not clitics (see also Gärtner and Steinbach 2003). That unstressed pronouns are different from clitics is suggested by the fact that the unstressed pronouns are not incorporated in the verb and appear to the right of the subject in inversion constructions (cf. Koster 1978a: 23 note 41):

(9.49) Heeft (*het ze) Tasman (het ze)
have:3SG 3SG.WK:INAN 3PL.WK Tasman 3SG.WK:INAN 3PL.WK
hor-en roep-en?
hear-INF call-INF
'Did Tasman hear them calling it?'

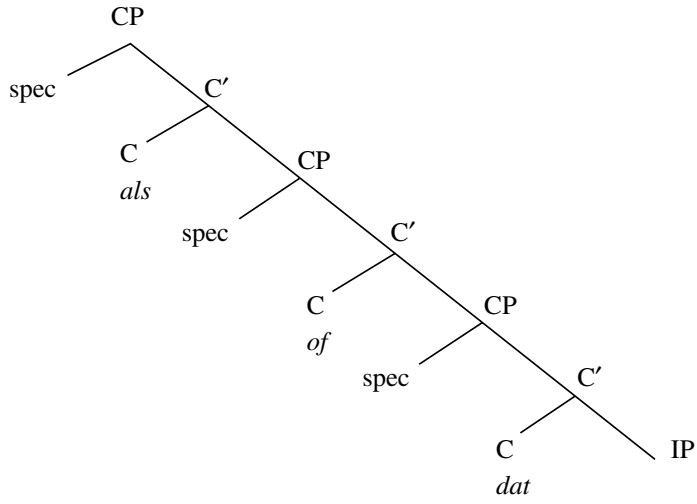
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In the system of Cardinaletti and Starke (1996), weak pronouns are phrases, and their distribution cannot be used to reveal the position of functional heads.

If IP is present in Dutch clause structure (or the more articulated structure where IP is split into AgrSP, TP and AgrOP; see (8.8)), one may assume that complementizer agreement (see (9.22)) arises when INFL moves to C. This was proposed for Frisian in Hoekstra and Marácz (1989), and carried over to Dutch in Zwart (1993a,b,c) (see chapter 10). An alternative assumes that agreement features are generated inside the CP system (e.g. Shlonsky 1994, Carstens 2003, Van Koppen 2005).

The structure of the Dutch CP was argued to be complex by E. Hoekstra (1993) and Hoekstra and Zwart (1994), mainly on the basis of material from colloquial Dutch and Dutch dialects, where complementizers may be combined according to the template in (2.11) (see (9.67); cf. De Rooy 1965; for similar analyses, see Müller and Sternefeld 1993 and Rizzi 1997). The ordering restrictions on multiple complementizers suggest that an interrogative CP, headed by *of* 'if/whether,' dominates a noninterrogative CP headed by *dat* 'that,' and that the *of*-CP attracts wh-phrases whereas the *dat*-CP attracts topics. Dominating the interrogative CP appears to be a third type of CP, headed by *als* 'as/if,' which introduces comparative and conditional clauses:

(9.50)



Verb clustering

The hypothesis that Dutch is head-initial made it possible to do away with the rule of Verb Raising needed to derive the right order of the verbs in the verb cluster. See chapter 11 for a fuller discussion.

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Extraposition

The head-initial analysis of Dutch entails that complement clauses need not move in order to appear in the final field. Recall, however, that the rule of extraposition (rightward movement to the final field) was also needed to account for the distribution of relative clauses in examples like (9.33b) ('optional extraposition'). This now created a problem, if Kayne (1994) was correct in denying the existence of rightward movement.

Kayne (1994: 118) proposed that optional extraposition of a relative clause (extraposition out of a noun phrase) is in fact movement of the 'head noun,' stranding the relative clause. This idea, combined with the hypothesis that Dutch is head-initial, might account for the pattern in (9.33): in (9.33a) the object is raised to Spec,AgrOP as a whole, and in (9.33b) only the head noun *een Maori* 'a Maori' is raised, stranding the relative clause in the final field (the object's base position).

However, Kaan (1992), Koster (2000), and De Vries (2002: 241f) showed on the basis of Dutch that the stranding analysis cannot be right (see also Büring and Hartmann 1997 for German). First of all, stranding is possible in the final field (the object's argument position on the head-initial analysis) but not in the middle field (the object's grammatical function position). Compare (9.51) and (9.52):

(9.51) a. Tasman heeft verschillend-e eiland-en ontdek-t
Tasman have:3SG different-PL island-PL GE:discover-D
die niet bewoond war-en
REL:PL NEG inhabited be:PAST-PL

b. Verschillend-e eiland-en heeft Tasman ontdek-t
different-PL island-PL have:3SG Tasman GE:discover-D
die niet bewoond war-en
REL:PL NEG inhabited be:PAST-PL
(both) 'Tasman discovered several islands that were uninhabited.'

(9.52) a. Tasman heeft verschillend-e eiland-en die niet
Tasman have:3SG different-PL island-PL REL:PL NEG
bewoond war-en ontdek-t
inhabited be:PAST-PL GE:discover-D
(same as (9.51))

b. *Verschillend-e eiland-en heeft Tasman die niet
different-PL island-PL have:3SG Tasman REL:PL NEG
bewoond war-en ontdek-t
inhabited be:PAST-PL GE:discover-D
(intended: same as a.)

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On the stranding analysis, the noun phrase *verschillende eilanden die niet bewoond waren* 'several islands that were uninhabited' is generated to the right of *ontdekt* 'discovered,' and the 'head noun' *verschillende eilanden* 'several islands' may be moved to the middle field, stranding the relative clause in the final field (9.51a). (9.51b) then shows that the 'head noun' may also be fronted. Alternatively, the entire noun phrase may be moved to the middle field, pied-piping the relative clause, yielding (9.52a). But in that case, the 'head noun' *verschillende eilanden* 'several islands' cannot be fronted, stranding the relative clause in the middle field. Instead, the entire noun phrase must be fronted (9.53).

(9.53) Verschillend-e eiland-en die niet bewoond war-en
different-PL island-PL REL:PL NEG inhabited be:PAST-PL
heeft Tasman ontdek-t
have:3SG Tasman GE:discover-D
(same as (9.51))

If stranding is an option, it is not clear why it cannot take place in the middle field.

Moreover, the stranding analysis leads one to expect that the verb and the stranded relative clause can be fronted as a constituent, contrary to fact (see Kaan 1992: 40, Koster 2000: 11):

(9.54) a. Ontdek-t heeft Tasman verschillend-e eiland-en
GE:discover-ED have:3SG Tasman different-PL island-PL
die niet bewoond war-en
REL:PL NEG inhabited be:PAST-PL
(same as (9.51))

b. *Ontdek-t die niet bewoond war-en
GE:discover-D REL:PL NEG inhabited be:PAST-PL
heeft Tasman verschillend-e eiland-en
have:3SG Tasman different-PL island-PL
(intended: same as a.)

Thirdly, the 'head noun' *verschillende eilanden* 'several islands' moved in (9.51a), stranding the relative clause in the final field, is not a constituent (on the stranding analysis). Kayne (1994: 124) argued that relative clause extraposition (i.e. stranding) in English is possible with indefinite 'head nouns' only. Kayne's stranding proposal is part of his analysis of relative clause formation as involving raising of the head noun from out of the relative clause. On that analysis, the definite determiner selects the relative clause and is never a constituent with the head noun (predicting that no stranding/extraposition is possible with definite noun phrases), but indefinite determiners are generated with the head noun and raise out of the

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relative clause together with the head noun (predicting the possibility of further raising, i.e. stranding of the relative clause). But in Dutch, no such definiteness effect applies (see De Vries 2002: 242):

(9.55) … dat Cook de eiland-en meed die Tasman
C Cook DEF.PL island-PL avoid:PAST.SG REL:PL Tasman
ontdek-t had
GE:discover-D have:PAST.SG
'… that Cook stayed away from the islands that Tasman had discovered.'

Moreover, the extraposed clause can be associated with a more deeply embedded noun phrase:

(9.56) … dat Cook de nam-en van de eiland-en ken-de
C Cook DEF.PL name-PL of DEF.PL island-PL know-PAST.SG
die Tasman ontdek-t had
REL:PL Tasman GE:discover-D have:PAST.SG
'… that Cook knew the names of the islands that Tasman had discovered.'

On the stranding analysis, *de namen van de eilanden* 'the names of the islands' must have moved into the middle field as a nonconstituent.

The Dutch facts, then, call for an alternative to the stranding analysis of relative clause extraposition. Barbiers (1995: 128) argued that relative clause extraposition is different from PP extraposition, so that his leftward 'roll-up movement' analysis of PP extraposition could not be carried over to relative clause extraposition. While some researchers (Büring and Hartmann 1997) took this state of affairs to call for a revival of rightward extraposition, Koster (2000) came up with a solution that stayed within the Kaynean paradigm.

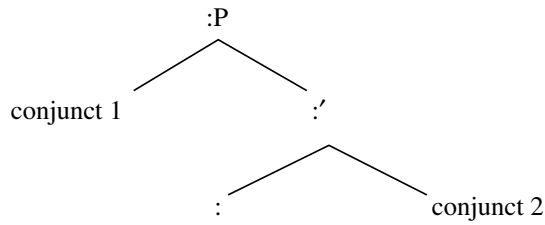
The basic idea of Koster's proposal goes back to Kaan (1992: 115), who observed a fundamental left–right asymmetry in Dutch clause structure:

> The right side of the V-to-C projection line is subject to completely different constraints [from the left side, where we find feature-triggered movement]. Elements can be adjoined freely and need not be engaged in a strictly local relationship with (a projection of) V. Instead, right-adjoined elements can be interpretatively related to any element in the left domain …

Koster (2000) formalized Kaan's observation by proposing the notion of parallel construal, according to which elements in the final field (other than base-generated complements of the verb) are essentially coordinated with the rest of the clause in what he calls a 'colon phrase,' i.e. a binary branching coordination structure (cf. Munn 1993 and Kayne 1994: 12) headed by an element with the semantics of the orthographic colon sign:

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(9.57)



The important step allowing Koster to account for Kaan's observation was that the first conjunct in (9.57) could be a more inclusive category than the second, i.e. the second conjunct could specify an element contained within the first conjunct. Thus, while an extraposed clause is coordinated with some projection of the verb (or some functional head), it may be interpreted as a further specification of a category dominated by that projection.

Koster's analysis has been applied to gapping (Koster 1998), to extraposition of PPs (Koster 2001a, 2001b, deriving the mirror effect of (9.36)), relative clauses (De Vries 2002: 268) and result clauses (Rijkhoek 1998), and to backgrounding (Zwart 2001b). This research has shown that the specification relation realized in the colon phrase structure is subject to a locality constraint, namely that the term of the first conjunct specified by the second conjunct may not be embedded in a clause, deriving the upward boundedness effect of Ross (1967: 166):

(9.58) a. Dat Cook al-le eiland-en meed die Tasman
C Cook Q.UNIV-PL island-PL avoid:PAST.SG REL:PL Tasman
ontdek-t had is duidelijk
GE:discover-D have:PAST.SG be:3SG clear
'That Cook stayed away from all the islands that Tasman had discovered is clear.'

b. *Dat Cook al-le eiland-en meed is duidelijk
C Cook Q.UNIV-PL island-PL avoid:PAST.SG be:3SG clear
die Tasman ontdek-t had
REL:PL Tasman GE:discover-D have:PAST.SG
(intended: same as a.)

In (9.58b), the relative clause *die Tasman ontdekt had* 'that Tasman discovered' cannot be taken to specify the noun phrase *alle eilanden* 'all the islands,' which is contained within the subject clause *dat Cook alle eilanden meed* 'that Cook avoided all the islands.'

Scrambling

If the Dutch verb phrase is underlyingly head-initial, the OV order of embedded clauses must be the result of object shift into the middle field. Object

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shift had already been proposed in Vanden Wyngaerd (1989a) (see sections 8.1 and 9.2), and was adopted by Zwart (1993a), now assuming that the base position of the object was to the right of the (final) verb.

On this analysis, the scrambling effect (free ordering of objects and adjuncts) arises when adverbs may be merged both higher and lower than the objects (Zwart 1993a: 313). That is, even though there is a clear hierarchy in the ordering of objects and adverbs among themselves (see Cinque 1999 on adverbs), there is no fixed hierarchy when members from the two hierarchies are combined (Bobaljik 1999, Zwart 2009b; see also Verhagen 1986).

Since there may be more than one object, the number of AgrOPs must be adjustable. This is needed in particular when arguments of a transparent embedded infinitival clause are moved into the matrix clause middle field, as in:

(9.59) … dat de Maori-s Tasman hun nakomeling-en Cook
C DEF.PL Maori-PL Tasman POSS:3PL descendant-PL Cook
kokosnot-en beloof-d-en te lat-en gev-en
coconut-PL promise-PAST-PL to CAUS-INF give-INF
'… that the Maoris promised Tasman to let their descendants give Cook coconuts.'

In (9.59), *Tasman* 'Tasman' is the indirect object of the matrix verb *beloven* 'promise,' *hun nakomelingen* 'their descendants' is the clause-internal argument of *laten* 'let,' *Cook* is the recipient-internal argument of the most deeply embedded verb *geven* 'give,' of which *kokosnoten* 'coconuts' is the theme. All these arguments are realized as objects in the matrix clause middle field, suggesting that the number of AgrOPs needed for licensing the objects is not fixed.

Zwart (2001a) showed that there is reason to believe that the AgrOPs may not be collapsed with the little *v*P, as proposed in Chomsky (1995: 353). When a transparent infinitival clause is selected by an unaccusative verb like *schijnen* 'seem,' there should be no *v*P associated with the VP, as unaccusative verbs do not license an object. Yet the arguments of the embedded clause are both moved into the matrix clause (cf. (8.11)):

(9.60) … dat Cook Tasman niet scheen te ken-nen
C Cook Tasman NEG seem:PAST.SG to know-INF
'… that Cook did not seem to know Tasman.'

In (9.60), *Cook* is raised to the matrix clause subject position, as is normal in raising constructions, but in addition, *Tasman* is raised to an object position in the matrix clause, which is unexpected if the object licensing position is dependent on the presence of little *v*. What seems to be the case in (9.60) is that the transitivity of the embedded verb *kennen* 'know' suffices for the projection of an

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object-licensing position in the matrix clause, but then the object-licensing position cannot be a specifier position of little *v*P.

The applicability of the adverb hierarchy of Cinque (1999) to Dutch was studied in IJbema (2002), raising a problem for the hypothesis that Dutch is head-initial. Cinque (1999) showed that adverbial notions of various types may be expressed by adverbs, but also by (modal/aspectual) verbs and verbal morphemes, and that these elements crosslinguistically appear in a single linear order, suggesting a universal hierarchical organization of adverb projections. On this analysis, adverbs are specifiers of adverb phrases, which may be headed by verbs or verbal morphemes.

IJbema (2002) tracked the grammaticalization process by which verbs in Dutch assume a modal meaning, and may shift from one modal meaning to another (cf. Haspelmath 1989). As it turns out, the direction in which modal verbs change is invariably upwards in the Cinque hierarchy. For example, *moeten* shifted over time from a verb of permission to a verb of obligation and on to a verb of volition, in accordance with the Cinque hierarchy, where the relevant modal adverbial notions are ordered as VOLITION > OBLIGATION > PERMISSION (IJbema 2002: 55).

From this perspective it makes sense to think of the modal verbs in Dutch as being generated in the middle field, as the heads of adverbial phrases. But modal verbs appear in the right-bracket verb cluster (in embedded clauses; see (4.56)), which is *lower* than all other adverbial phrases on the hypothesis that Dutch is a head-initial language.

Another problem of the analysis of Dutch as a head-initial language is that material moving out of a transparent infinitival clause into the middle field includes not just objects and small-clause predicates (i.e. particles and secondary predicates, including directional and resultative PPs), but in fact everything that belongs to the embedded clause, including selected (nonpredicative) PPs, selected adjuncts, and depictives:

(9.61) a. … dat Cook aan Tasman moest denk-en
C Cook on Tasman must:PAST.SG think-INF
'… that Cook had to think of Tasman.'

b. … dat Tasman de proef glansrijk wil-de
C Tasman DEF.SG trial with flying colors want-PAST.SG
doorstaa-n
pass-INF
'… that Tasman wanted to pass the test with flying colors.'

c. … dat Tasman naakt wil-de slap-en
C Tasman nude want-PAST.SG sleep-INF
'… that Tasman wanted to sleep in the nude.'

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In (9.61a), the PP *aan Tasman* 'of Tasman' is selected by the embedded verb *denken* 'think,' and it is moved into the matrix clause middle field. However, *aan Tasman* 'of Tasman' is not a noun phrase, so it cannot be licensed in Spec,AgrOP, nor is it a small-clause predicate, so it cannot be licensed in Spec,PredP either. The trigger for the movement into the matrix clause, then, is unclear. Likewise, the adverb *glansrijk* 'with flying colors' (in 9.61b) is idiomatically selected by *doorstaan* 'pass,' and the depictive *naakt* 'nude' modifies the embedded infinitive *slapen* 'sleep' in (9.61c), and their appearance in the matrix clause middle field is unaccounted for on the analysis of Dutch as a head-initial language. (On the traditional analysis where Dutch is head-final, the infinitives in (9.61) are generated to the left of the verb and adjoin to the right of the matrix verb via 'verb raising'; see chapter 11.)

A final issue relevant to the analysis of Dutch as a head-initial language concerns the location of the nuclear pitch accent. It was established as early as Kraak (1970) that the nuclear pitch accent in Dutch falls on the most deeply embedded complement (see section 2.6), in accordance with the Nuclear Stress Rule of Chomsky and Halle (1968) (see also Cinque 1993: 245). As we saw in (2.60), an embedded clause in the final field carries the nuclear pitch accent, which is as expected if the embedded clause appears in a complement position. This is consistent with the analysis of Dutch as a head-initial language, but we also saw in (2.58a) that a noun phrase object preceding the verb carries the nuclear pitch accent, suggesting that it is in a complement position (as in the OV analysis), and not in a specifier position (as in the VO analysis).

Connected with this is the observation that a noun phrase object separated from the verb by other material tends to be defocused, with the pitch accent (indicated by small capitals) shifting further to the right:

(9.62) Tasman heeft Nieuw Zeeland in 1642 ontDEK-t
Tasman have:3SG New Zealand in 1642 GE:discover-D
'Tasman discovered New Zealand in 1642.'

Indeed, object shift is often considered to be connected with defocusing (e.g. Lenerz 1977, Von Stechow and Sternefeld 1988: 466, Neeleman and Reinhart 1998).

However, the facts in Dutch are not as clear-cut as the defocusing theory of scrambling predicts. A noun phrase separated from the verb by an adverb does not have to be defocused (9.63) and a noun phrase adjacent to the verb need not carry the nuclear pitch accent (9.64):

(9.63) a. Tasman heeft Nieuw ZEEland gisteren ontdek-t
Tasman have:3SG New Zealand yesterday GE:discover-D

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b. Tasman heeft Nieuw Zeeland gisteren ontDEK-t
Tasman have:3SG New Zealand yesterday GE:discover-D
(both) 'Tasman discovered New Zealand yesterday.'

(9.64) a. Tasman heeft gisteren Nieuw ZEEland ontdek-t
Tasman have:3SG yesterday New Zealand GE:discover-D

b. Tasman heeft gisteren Nieuw Zeeland ontDEK-t
Tasman have:3SG yesterday New Zealand GE:discover-D
(both: same as (9.63))

Furthermore, it can be shown using the association-with-*only* test (see Selkirk 1995) that the stress on the verb in the b-sentences is marked. (The association-with-*only* test makes the alternative to the focused constituent explicit, allowing a determination of the size of the focused constituent; this tells you whether the focus is narrow or wide; cf. (4.70).) In (9.65), the focus alternatives are bracketed in the translation, and while wide focus is natural in (9.65a) with the accent on the shifted object noun phrase *Nieuw Zeeland* 'New Zealand', it is not felicitous in (9.65b) with the accent on the verb.

(9.65) a. Ik zei alleen maar dat Tasman Nieuw ZEEland
1SG.NOM say:PAST.SG only just C Tasman New Zealand
gisteren ontdek-t heeft
yesterday GE:discover-D have:3SG
niet dat hij een held is
NEG C 3SG.M.NOM INDF.SG hero be:3SG
'I only said that Tasman [discovered New Zealand yesterday], not that he [is a hero].'

b. #Ik zei alleen maar dat Tasman Nieuw Zeeland
1SG.NOM say:PAST.SG only just C Tasman New Zealand
gisteren ontDEK-t heeft
yesterday GE:discover-D have:3SG
niet dat hij een held is
NEG C 3SG.M.NOM INDF.SG hero be:3SG
(intended: same as a.)

This shows that object shift does not force defocusing, and hence that the nuclear pitch accent cannot be used to identify the object's base position.

Fronting

The idea that Dutch is head-initial does not automatically affect the analysis of the various fronting phenomena in Dutch. However, if it follows that IP (or the split-IP projections AgrSP, TP, AgrOP) is also head-initial, a different analysis

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of the verb-second pattern becomes available, where the finite verb moves to INFL in subject-initial main clauses and to C in inversion constructions (see chapter 10). Fronting, then, is no longer uniform movement into COMP (Spec,CP), but movement into various designated licensing positions: Spec,IP for subjects and Spec,CP for nonsubjects (Travis 1984, 1991, Zwart 1993a).

Theoretically, this new approach to fronting brought a simplification of the analysis of phrasal movement, as each phrase moves to its own designated landing site. This was in line with the description of movement processes of the Minimalist Program (Chomsky 1995), where movements are supposed to be triggered by a morphological feature-checking requirement. Since features reside in functional heads, different functional heads attract different types of categories. From this perspective, it must be the case that the subject is in a different structural position than a fronted nonsubject, even if both subject and nonsubject are immediately followed by the finite verb. It follows, then, that the rule describing the placement of the verb is of a flexible nature, moving the verb into the head position of the projection hosting the fronted category (regardless of its nature).

To appreciate the change in perspective, consider the pair of sentences in (9.66).

(9.66) a. Tasman heeft Nieuw Zeeland ontdek-t
Tasman have:3SG New Zealand GE:discover-D
'Tasman discovered New Zealand.'

b. In 1642 heeft Tasman Nieuw Zeeland ontdek-t
in 1642 have:3SG Tasman New Zealand GE:discover-D
'In 1642, Tasman discovered New Zealand.'

In the earlier analysis, the finite auxiliary *heeft* 'has' is in C in both (9.66a) and (9.66b). It follows that the subject *Tasman* 'Tasman' is in Spec,CP (COMP) in (9.66a) and in some lower position, perhaps Spec,IP, in (9.66b). In the later analysis, the subject *Tasman* 'Tasman' is in Spec,IP in both (9.66a) and (9.66b). It follows that the finite auxiliary *heeft* 'has' is in INFL (or AGRS, or T) in (9.66a) and in C in (9.66b).

Empirical arguments relevant to the question of where the subject is were discussed above (9.41–42). For the treatment of verb placement, the development entailed that the position of the verb is a reflex of another operation, and no longer the centerpiece of the analysis of Dutch syntax. This development was further continued in Anderson (1993), Chomsky (2001) and Zwart (2005a), where verb placement is described as a 'phonological' linearization process, i.e. not a rule of 'narrow syntax' (see chapter 10).

The idea that fronting targets a designated landing site led to a further articulation of the functional domain described originally as COMP and later (Chomsky 1986) as CP, distinguishing projections for interrogative and noninterrogative

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fronted categories (see (9.51)) (E. Hoekstra 1993, Hoekstra and Zwart 1994, Zwart 2000; cf. Culicover 1991 for English, Müller and Sternefeld 1993 for German, and Rizzi 1997 more generally).

One argument for separating two projections within CP is illustrated in (9.67), adapted from Hoekstra and Zwart (1994: 194) (cf. (7.191–201)):

(9.67) a. Welk eiland denk je (of) dat Tasman
which island think:2SG.INV 2SG C:INT C:DEM Tasman
ontdek-t heeft?
GE:discover-D have:3SG
'Which island do you think Tasman discovered?'

b. Dat eiland denk ik (*of) dat Tasman
which island think:1SG 1SG.NOM C:INT C:DEM Tasman
ontdek-t heeft
GE:discover-D have:3SG
'That island, I think Tasman discovered.'

In Hoekstra and Zwart's analysis, the wh-phrase *welk eiland* 'which island' in (9.67a) is generated as the internal argument of *ontdekt* 'discovered,' and moves first to the edge of the embedded clause, and then on to the edge of the matrix clause. The fact that the complementizer *of* is possible in the embedded clause indicates that the embedded clause is an interrogative CP (WhP), with a head *Wh* licensing the fronted wh-phrase in its intermediate landing site. The fact that the interrogative complementizer *of* is excluded in (9.67b) indicates that the WhP is absent and the embedded clause is just a noninterrogative CP (TopP) headed by *dat*. The presence of *dat* in (9.67a) then indicates that CP here consists of two projections, WhP and TopP.

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