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Clitics in Dutch

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Published in:
 Groninger Arbeiten zur germanistischen Linguistik

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
 Publisher's PDF, also known as Version of record

Publication date:
 1991

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):
 Zwart, J.-W. (1991). Clitics in Dutch: evidence for the position of INFL. *Groninger Arbeiten zur germanistischen Linguistik*, 33, 71-92. <https://ugp.rug.nl/GAGL/article/view/30271>

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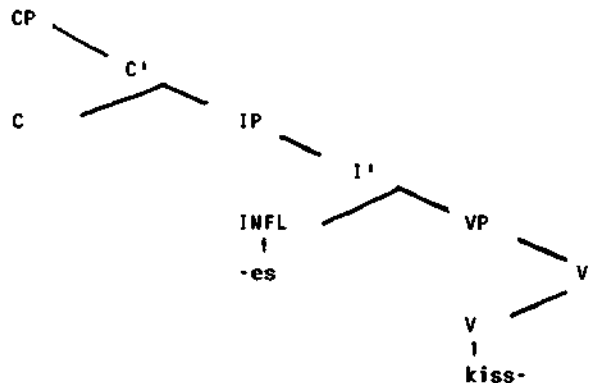
Clitics in Dutch: Evidence for the Position of INFL*

1. Introduction

As has been observed many times, complex linguistic forms can be divided into a lexical and a functional part. Roughly, the lexical part tells you what the word means, and the functional part tells you what syntactic properties the word has. For example, the English inflected verb form *kisses* can be analyzed into a part denoting 'kissing', *kiss-*, and a part carrying syntactic information concerning the person kissing and the tense, *-(e)s*. We can change the part carrying syntactic information without changing the 'meaning' of the word, for instance by changing *kisses* into *kiss* or *kissed*.

In the Principles and Parameters framework of generative grammar (from Chomsky 1981 on), the functional elements of these complex forms are represented separately, yielding their own, *functional*, projections. The heads of these projections contain everything that is syntactically relevant, whereas the heads of non-functional, *thematic* projections merely carry information of a lexical-referential kind. The functional head for tense was originally called *INFL* (Chomsky 1981), combining features for tense and agreement. Later, *INFL* was split into two separate functional categories, *T* (for tense) and *AGR* (for person/number agreement features) (Pollock 1989). The analysis of *kisses* in this framework (sticking to Chomsky 1981 for the time being, but see note 1) would be as in (1).

(1)



In the course of the derivation of a sentence, the thematic head is combined with the functional heads by way of Head Movement, with either the thematic head moving up to the functional head or the functional head moving down to the thematic head (Chomsky 1989). These movements are necessary in order to license the features located in the functional head

positions.

Recent work by a.o. Chomsky (1986), Abney (1987), Pollock (1989), and Kayne (1990) provides ample justification for the structural distinction between functional and thematic projections. But the empirical evidence for the existence of functional heads is not equally clear in all languages. As for Dutch, the lack of clear evidence for a separate INFL position in that language has led several linguists to believe that Dutch has no INFL (see a.o. Reuland 1986, Weerman 1989). In view of the recent developments initiated by Pollock (1989) this would entail that Dutch has no functional heads for tense and agreement either.

In this paper I will argue that clitic phenomena provide independent evidence for the existence of a functional head position to the left of the VP in Dutch. I will also argue that this is the position where the tense features are located, and that the familiar Verb Second phenomenon (in non-topicalized declarative main clauses) consists in Head Movement of the finite verb to this position, which I will call INFL for the time being. This ties in with earlier proposals by Travis (1984, 1986), but contrary to Travis I do not assume that it is the Empty Category Principle (ECP) that triggers Verb Second, but the requirement that the features of INFL be licensed.

2. The Position of the Verb in Dutch

In main clauses in Dutch, the finite verb always occupies the second position. This phenomenon is usually called *Verb Second*. In embedded clauses and in non-tensed main clauses, the verb is in its original D-structure position in the VP. Dutch being an SOV language (Koster 1975), the verb will be sentence-final in these cases (abstracting away from extraposition phenomena involving rightward movement of PPs and clauses). The phenomena are illustrated in (2)-(5).

- (2) *non-embedded finite clauses*
 a. Jan kust Marie
 'Jan kisses Marie'
 b. *Jan Marie kust
- (3) *embedded finite clauses*
 a. *dat Jan kust Marie
 'that Jan kisses Marie'
 b. dat Jan Marie kust
- (4) *non-embedded non-finite clauses*
 a. *Jan kussen Marie? Dat nooit!
 Jan kiss-INF Marie that never
 'Jan kiss Marie? Never!'
 b. Jan Marie kussen? Dat nooit!

- (5) *embedded non-finite clauses*¹
- a. *om PRO te kussen Marie
 COMP to kiss-INF Marie
 'PRO to kiss Marie'
- b. om PRO Marie te kussen

All clauses in (2)-(5) are subject initial. In non-embedded finite clauses, other constituents may occupy the first position as well, again immediately followed by the finite verb. These constructions are called *topicalizations*, illustrated in (6)-(7).

- (6)
- a. Zulke meisjes kust Jan nooit
 such girls kisses Jan never
 'Girls like that Jan never kisses'
- b. *Zulke meisjes Jan kust nooit
- c. *Zulke meisjes Jan nooit kust

- (7)
- a. Gisteren kuste Jan Marie
 yesterday kissed Jan Marie
 'Yesterday Jan kissed Marie'
- b. *Gisteren Jan kuste Marie
- c. *Gisteren Jan Marie kuste

Non-embedded non-finite clauses do not exhibit topicalization (8). Embedded clauses do, but this has no effect on the position of the verb (9).

- (8)
- a. *Zulke meisjes kussen Jan? Dat nooit!
 such girls kiss-INF Jan that never
 'John kiss girls like that? Never!'
- b. *Zulke meisjes Jan kussen? Dat nooit!

- (9)
- a. dat zulke meisjes Jan nooit kust
 that such girls Jan never kisses
 'that Jan never kisses girls like that'
- b. *dat zulke meisjes kust Jan nooit

Wh-movement in Dutch has the same effect on the position of the verb as topicalization. Again, the verb is in second position in main clauses but not in embedded clauses.

- (10)
- a. Welke meisjes kust Jan?
 which girls kisses Jan
 'Which girls does Jan kiss?'
- b. *Welke meisjes Jan kust?

¹Dutch *te* 'to' is sometimes considered as a non-finiteness marker occupying an INFL position to the right of the VP (a.o. Bennis & Hoekstra 1989). In this view, the infinitive has been adjoined to *te* in INFL. However, it can be argued that (in)finiteness markers in Dutch are never physically present in INFL, contrary to English, where *to* demonstrably occupies the INFL position. Thus, *te* is inseparable from the infinitive, cannot bear contrastive stress, etc. Contrary to what is commonly believed, nothing in the theory forces us to represent an inflectional affix in the position of the corresponding feature, given the possibility of head-head agreement between functional and thematic heads. This possibility is independently needed in order to account for suppletive and irregular forms, where no concrete affix can be represented in INFL. See Zwart & Hoekstra (1990).

- (11)
- a. *(Ik vraag me af) welke meisjes kust Jan
'I wonder which girls Jan kisses'
 - b. (Ik vraag me af) welke meisjes Jan kust

According to Den Besten's insightful analysis (Den Besten 1983, 1990), both topicalization and Wh-movement in Dutch involve movement of the finite verb to COMP. Den Besten admits that his evidence is neutral with respect to the proper description of (2a), and he continues

but that doesn't bother me, since the superiority of a grammar of Dutch that accounts for all verb preposings by means of one rule that moves the finite verb from a VP-final position (..) to one specified position in COMP, is evident (Den Besten 1990:25).

However, in the Principles and Parameters framework, where all transformations are subsumed under one non-specific movement rule Move Alpha, rule-counting is no longer an evaluation measure. What we have to ask is, whether topicalizations and Wh-movement constructions have the same properties as non-topicalized declarative constructions. If so, Den Besten's point is well-taken. If not, it may well be the case that independent factors make sure that the verb is in different positions in the two types of constructions.

3. Two Phenomena: Verb Second and Inversion

The verb movement in Dutch topicalizations and Wh-movement constructions is reminiscent of inversion phenomena that are familiar from many languages. See the below examples from as diverse languages as English and Hungarian.

- (12)
- a. John did kiss Mary
 - b. Which girl did John kiss?

- (13) *Hungarian*
- a. János meg-ette a kenyeret
János-NOM PRT ate the bread-ACC
 - b. Ki ette meg a kenyeret?
who-NOM ate PRT the bread-ACC
 - c. JÁNOS ette meg a kenyeret
János-FOCUS ate PRT the bread-ACC

In (12a) *did* is in INFL, and it moves to COMP in (12b), crossing the structural subject position. In (13a), a flat intonation declarative main clause, the Particle-Verb order is fixed, but when the subject is questioned (13b) or focused (13c), the verb crosses the particle. In all these cases some operator-like constituent appears in the Specifier position of CP. It is generally assumed that operators have to move to a position from which they have scope over the entire clause. I assume, with Rizzi (1990) and many others, that this operator in [Spec,CP] triggers head movement to COMP if COMP is not filled already.

- (14)
- *[_{XP} YP X°], where YP is an operator in [Spec,XP], and X° is empty

I suggest that (14), in one form or another, is a universal principle explaining the inversion phenomena that we encounter in so many languages.^{2,3} Obviously, the inversion in Dutch illustrated in (10) follows from (14). On the other hand, in an ordinary Verb Second case such as (2a), no operator occurs. Verb Second cannot be explained by (14) in this case, hence there must be an independent factor involved. This already suggests that the two phenomena that Den Besten (1983, 1990) wants to capture in one rule are really different.

Tomaselli (1990) provides further evidence that the Verb Second phenomenon accompanying Wh-Movement is different from the Verb Second phenomenon in non-topicalized main clauses. Old English (OE) and Old High German (OHG) were both SOV languages and showed the same main clause - subordinate clause asymmetry with regard to the position of the finite verb as illustrated in (2)-(5) for Dutch. Both languages also showed inversion in Wh-constructions. But Tomaselli shows that there is a difference. In Wh-constructions, the position of the finite verb is fixed, whereas in subordinate clauses the position of the finite verb is relatively free.⁴ Tomaselli concludes that

whatever explanation could be provided for the V-2 phenomenon in both OE and OHG, something different - or at least "stronger" - is at work in the WH-construction. (quoted from handout of Tomaselli 1990)

I conclude that in what Den Besten (1983, 1990) describes as one phenomenon invariably involving movement of the finite verb to COMP, two different phenomena are to be distinguished. I will use the term "Verb Second" to refer to one of these two phenomena, viz. the obligatory preposing of the finite verb in non-topicalized main clauses. The other phenomenon, the verb movement related to the presence of an operator, as explained by a principle like (14), I will call "Inversion".

It may well be that in Dutch both Verb Second and Inversion involve movement to COMP, but there is no a priori argument that this should be so, since the phenomena involved are demonstrably different. In short, Verb Second is not related to the presence of an operator and cannot be explained by principle (14). If Verb Second nevertheless happens to involve move-

²For counterexamples from a.o. Polish and Romanian, see Kraskow (1990).

³In embedded questions and relative clauses the [Spec,CP] is filled but COMP appears to be empty. No inversion takes place, as (11b) in the text shows. It is assumed that in these cases an empty complementizer is present in COMP, satisfying (14). In Dutch, the empty complementizer can be overt, as in *Ik vraag me af welke meisjes of Jan kust*, cf. (11b).

⁴Lenerz (1985) shows that in Old High German also in main clauses the position of the finite verb is not fixed. The finite verb sometimes occurs in the final position in the sentence.

ment to COMP, we should consider this as an accidental fact, which needs independent proof.

4. Topicalization

Topicalizations in Dutch (see (6),(7)) show the same inversion as Wh-constructions. This, however, is by no means a universal phenomenon. For example, topicalization in English does not generally yield inversion (15), although topicalization of operator-like elements does (16).

(15)
[Girls like that] John never kisses

(16)
[So in love with you] am I

I assume that the inversion in cases like (16) follows from (14), and that the topicalized constituent is in [Spec,CP] in these cases. On the other hand, in ordinary topicalization cases in English like (15), the topicalized constituent seems to have been adjoined to IP, precluding inversion (Travis 1986, Kosmeijer in prep.). For some reason, Dutch differs from English in this respect. Traditionally (cf. Den Besten 1983), topicalization in Dutch is described as movement to [Spec,CP], again followed by Verb Movement to COMP, as I have assumed above. Alternatively, we may consider an analysis in the line of Koster (1978b), assuming that topicalization is adjunction to CP, accompanied by a so-called d-word in [Spec,CP], which may be empty. This d-word functions as an operator and triggers inversion according to (14) (see also Kosmeijer, in prep.). Note that in some constructions the d-word may be overt (cf. (17),(18) to (6),(7)).⁵

(17)
Zulke meisjes die kust Jan nooit
such girls these kisses Jan never

(18)
?Gisteren toen kuste Jan Marie
yesterday then kissed Jan Marie

If the analysis involving a d-word in [Spec,CP] is correct, the inversion follows from (14). Then the question that remains is, why topicalization in English involves adjunction to IP, and in Dutch adjunction to CP. There is no room to go into this here. Suffice it to say that this difference between English and Dutch appears to be part of an overall difference between the two languages, English being IP-oriented and Dutch CP-oriented.⁶

⁵The judgments in (17),(18) refer to a flat intonation reading of these sentences. With stress on *gisteren*, (18) is perfect.

⁶There are many illustrations of this difference, for instance the fact that INFL can be lexically filled by other elements than the finite verb in English (for instance by *to*) which is impossible in Dutch. Presumably, the circumstance that English is a "I-to-V language" and Dutch a "V-to-I language" is related to this fact. See Koster (1986), who introduces the terms 'weak' and 'strong' to express the difference, INFL being strong in English, and weak in

5. The Triggers for V-Movement and NP-Movement

In section 3, we concluded that Verb Preposing in Dutch comprises two distinct phenomena, viz. Verb Second and Inversion. This in itself does not exclude that both phenomena involve Verb Movement to COMP. What we want to know is, what triggers movement in either case. Note that there are always two movements involved, the movement of the verb and the movement of the subject/topic/Wh-element.

Consider Inversion. Both the Verb Movement and the movement of the Wh-element are well motivated. The Verb Movement is required by principle (14), and the movement of the Wh-element by whatever requires operators to have scope over the clause. Movement of the topic is not obligatory from a syntactic point of view, but if it does occur, the Verb Movement may follow from principle (14), as discussed in section 4.

Next consider Verb Second. There is not much clarity in the literature about the trigger for the Verb Movement. Travis (1984, 1986) assumes that Verb Movement takes place in order to satisfy the Empty Category Principle, according to which all empty categories must be properly governed. In embedded tensed clauses COMP governs the empty head INFL. In non-topicalized non-embedded tensed clauses COMP is empty and cannot govern INFL, hence it must be filled by the finite verb. For this reason, Travis assumes that INFL is generated to the left of the VP, and that Verb Second is movement to INFL (assuming an INFL position to the right of the VP would lead to the prediction that finite main clauses are verb final in Dutch). This approach cannot be correct, however, because in non-tensed non-embedded clauses COMP is also empty and still no Verb Second takes place (see (4b)).⁷ Koopman (1984) assumes that Verb Second takes place for reasons of Nominative Case assignment. Again this cannot be correct in view of the properties of non-embedded non-finite clauses in Dutch, where Nominative subjects do occur and no Verb Second takes place (see (4b) and (19)).

(19)
 En hij maar boeken kopen
 and he-NOM just books buy-INF
 'He was just buying books all the time'

The correct generalization seems to be, that Verb Second is linked to tense. This has been claimed by many authors. Alternatively, one might claim that Verb Second is linked to agreement, since non-tensed verbs in

Dutch.

⁷For more arguments against the ECP approach, see Schwartz & Vikner (1989). The argument given in the text does not carry over to an ECP account involving an INFL position to the right of the VP. Schwartz & Vikner argue that such an account could not work either.

Dutch never show agreement features. We will return to this issue, concluding for the time being that it is some feature of the verbal system (call it 'finiteness') that triggers Verb Movement to COMP (under the hypothesis we are considering).⁸

If there is little clarity in the literature about the trigger for Verb Second, there is no clarity whatsoever about the obligatory NP-Movement to [Spec,CP] in this analysis. (Recall we're still investigating the hypothesis that all Verb Preposing is Verb Movement to COMP.) If this NP-Movement does not take place, the sentence is ungrammatical:⁹

- (20)
 a. Jan kust Marie (= (2a))
 'Jan kisses Marie'
 b. *Kust Jan Marie

If V-movement is invariably movement to COMP, the [Spec,CP] position is a possible landing site for NP-Movement in the sentences in (20). But this doesn't answer the question why the NP has to move to [Spec,CP].

No general principle of the grammar provides the motivation for the obligatory NP-movement, which makes it highly suspect. It is obvious that because of the grammaticality of (21), Nominative Case assignment and external Theta-role assignment do not require the subject to be in [Spec,CP].

- (21)
 Gisteren kuste hij Marie
 yesterday kissed he-NOM Marie
 'Yesterday, he kissed Marie'

One might consider inventing a new and ad hoc grammatical principle, an inversion of principle (14):

- (22)
 * $[_{XP} YP X^{\circ}]$, where X° is filled and YP in [Spec,XP] is null¹⁰

(22) is not generally true in other categorial projections, and neither can it be maintained for CP, in view of the so-called Verb First constructions

⁸We must also conclude that when this movement is impossible because COMP is filled by a lexical complementizer, this has no consequences for the grammaticality of the construction. If we consider this to be an unattractive consequence, we might conjecture that some parametric feature of COMP (its 'strength' or 'prominence') requires COMP to be filled, whether by a lexical complementizer or by a verb (Koster 1986).

⁹(20b) is grammatical as a Yes/No-Question. Yes/No-Questions are generally characterized by inversion, just like Wh-Questions. Cf. the English example Did John kiss Mary? It is generally assumed that in Yes/No-Questions, an operator occupies the [Spec,CP] position. If so, the inversion follows from (14). This Question operator is overt in e.g. Polish. In the sentences in (20), however, no operator occurs.

¹⁰Or, perhaps more successfully, where X° is filled by an element carrying agreement features and YP in [Spec,XP] is null (Roberts, p.c.). This, however, would lead one to expect that there be obligatory agreement of X° and YP in [Spec,XP], which is not the case in Inversion constructions.

illustrated in (23).

(23)

(Er lopen een muis en een olifant op een brug.) Zegt die muis, wat stampen we lekker, hè?

(There's this mouse and an elephant walking on a bridge.) Says the mouse, great stamping, huh?

In (23), the Verb First order is preferred over the Verb Second order, for no apparent syntactic reason. It is far from obvious that there should be an operator in [Spec,CP] preventing NP-Movement to that position. Until the existence of such an operator has been demonstrated, (23) shows that principle (22) is not true for CP, which it was designed to be true for. If one were to maintain a principle like (22), one would have to state that violating it, as in (23), yields a marked word order instead of an ungrammatical one.

I conclude that no principle like (22), requiring the presence of Specifiers, exists. Consequently, the standard approach to Verb Second has no account for the obligatory NP-Movement to [Spec,CP] that it contains.

The overall conclusion to this section must be that, whereas in the case of Inversion Verb Movement to COMP and XP-Movement to [Spec,CP] are well motivated, both movements are not well motivated at all in the case of Verb Second.

6. No Fronting of Object Clitics

There is also some empirical evidence against the Den Besten (1983, 1990) analysis of Verb Second as Verb Movement to COMP accompanied by NP-Movement to [Spec,CP]. This evidence was discussed before by Travis (1984), see also Koster (1978a).

Dutch has a number of subject and object clitics. Below the clitic paradigms are given, along with the paradigms of the corresponding full pronouns.

(24) *Subject clitics*

1SG	'k	1PL	we
2SG	je	2PL	-
3SG	ie/ze/'t	3PL	ze

(25) *Subject full pronouns*¹¹

1SG	ik	1PL	wij
2SG	jij	2PL	jullie
3SG	hij/zij	3PL	zij

¹¹The neutrum 3SG pronoun *het* 'it' seems to always behave as a clitic, except when it acquires a specific lexical meaning, as in *het doen* 'do it, copulate'.

(26) *Object clitics*

1SG	me	1PL	-
2SG	je	2PL	-
3SG	'm/'r/'t	3PL	ze

(27) *Object full pronouns*

1SG	mij	1PL	ons
2SG	jou	2PL	jullie
3SG	hem/haar	3PL	hen, hun

I will discuss the nature of the clitics below. Suffice it to say here that they show a subject-object asymmetry that the full pronouns don't. In particular, both subject and object full pronouns can precede the finite verb in main clauses, whereas of the clitics only the subject clitics can.

(28)

- a. Ik zag hem
I-NOM saw him-ACC
- b. 'k Zag hem

(29)

- a. Hem zag ik
- b. *'m Zag ik

If Verb Second is movement to COMP accompanied by NP-Movement to [Spec,CP], no difference with topicalization construction is expected. In this analysis, there is no structural difference between (28) and (29). And yet, the clitics are allowed in preverbal position only if they are subject clitics. On the other hand, if Verb Second does not involve movement to COMP, we can simply state that clitics (or, more generally, unstressed elements) cannot move to [Spec,CP].^{12,13}

I conclude that there are both conceptual and empirical problems connected with the analysis of Den Besten (1983, 1990) according to which both Inversion and Verb Second involve Verb Movement to COMP.

¹²For attempts to solve the problem discussed in this section, see Schwartz & Vikner (1989), Schwartz & Tomaselli (1991).

¹³The 3SG subject clitic *ie* cannot occur in preverbal position in non-embedded clauses. This is an interesting fact that needs an explanation. However it has no bearing on the issue where the verb is in Verb Second constructions, since other subject clitics can, and there is no object clitic that can appear in preverbal position. I will not have very much to say on subject clitics in Dutch. Below I will argue that object clitics have to adjoin to functional heads, following much recent research. I suggest that this carries over to subject clitics, for which the empty COMP node is a possible adjunction site (see Kayne (1990) for adjunction to empty heads). Subject clitics obviously adjoin to COMP in embedded clauses, considering the ungrammaticality of (i), where the verb in COMP and the clitic are separated, and (ii) where the presence of a subject clitic blocks contraction:

- (i) Morgen kom (*in ieder geval) 'k terug
tomorrow come-1SG in any case SCL-1SG back
- (ii) a. wat is dat > wazdat (Hoeksema 1985)
what is that
- b. wat is 't > *wast

7. The Position of INFL in Dutch

I propose, following Travis (1984), that Dutch has a functional head position to the right of COMP and to the left of VP, which I will call INFL for the time being. I also assume that Verb Second in Dutch involves movement to INFL. In Inversion constructions, an operator (and possibly a topic) appears in [Spec,CP] which attracts V-Movement to COMP, according to principle (14).

Notice how this immediately solves the problems of the traditional analysis I discussed in sections 5 and 6. Recall that Verb Second is linked to finiteness. Assuming that this feature is located in INFL and has to be licensed, it follows that Verb-Movement is triggered in finite clauses. Assuming furthermore that Nominative Case is assigned to the structural subject position [Spec,IP] (Chomsky 1981), it follows that the subject NP has to occupy the [Spec,IP] position in order to escape the effects of the Case Filter.¹⁴ In other words, both the Verb-Movement and the NP-Movement are well motivated in this case.¹⁵ Also, because the subject is not in [Spec,CP], we can account for the subject-object asymmetry in (28),(29) by stating that clitics cannot appear in [Spec,CP]. Finally, the marked character of the Verb First order in (23) can be explained by assuming that something happens (viz. V-Movement to COMP) that doesn't have to happen for syntactic reasons. Its grammaticality is explained by the fact that no grammatical principle is violated (as would be the case if (22) were a real principle).

In spite of these advantages, the proposal that Dutch has a separate INFL position to the left of the VP raises many questions. I would like to treat two of them in the remainder of this article:

1. Is there independent evidence for the existence of a separate INFL position to the left of the VP in Dutch?
2. Why is Verb Second excluded in embedded finite clauses?

I will treat these questions one by one. In the next section I will argue that the behavior of object clitics in Dutch points to the existence of an INFL position to the left of the VP. The answer to the second question will be, that Verb Second in embedded finite clauses violates a requirement of economy of derivation (Chomsky 1989).

¹⁴According to the Case Filter (Chomsky 1981), all lexical NPs must be licensed by Case assignment. According to recent developments (Chomsky, class notes, Fall 1990) all Case assignment takes place as Spec-Head Agreement in functional projections.

¹⁵It is assumed that the subject is generated in a VP-internal position, where it receives its Theta-role. But nothing hinges on this assumption.

8. Clitic Placement vs. Scrambling

Clitics are generally assumed to be heads that have to adjoin to other heads (Baltin 1982), more exactly, to functional heads (Kayne 1990). Object clitics in Dutch cannot remain inside VP, and neither can they adjoin to COMP. Hence they must adjoin to an intermediate functional head.

(30) shows that object clitics in Dutch cannot remain inside VP, contrary to full pronouns.

- (30)
- a. Jan heeft [VP gisteren haar gekust]
 Jan has yesterday her kissed
 'Jan kissed her yesterday'
 - b. Jan heeft haar [VP gisteren gekust]
 - c. *Jan heeft [VP gisteren 'r gekust]
 - d. Jan heeft 'r [VP gisteren gekust]

Full pronouns can either be scrambled out of the VP, as in (30), or remain in the VP (30a).¹⁶ Object clitics cannot remain in the VP (30c). (31) shows that in Dutch, object clitics cannot adjoin to COMP.¹⁷

- (31)
- a. dat Jan 'r [VP gisteren gekust heeft]
 - b. *dat 'r Jan [VP gisteren gekust heeft]

So if Dutch object clitics are true clitics, and if clitics have to adjoin to a functional head, (30) combined with (31) indicates that there must be a functional head between COMP and VP in Dutch.

I assume without discussion that clitics adjoin to functional heads. There is ample evidence for this point of view in work on Romance (a.o. Kayne 1990), and the optimal hypothesis is that it carries over to other languages. However, it must be demonstrated that what I have called 'object clitics in Dutch' are truly clitics, and not just reduced pronouns that for some unknown reason undergo scrambling obligatorily.

There are four major differences between scrambling and 'object clitic movement' in Dutch. First, in double object constructions where the Indirect Object is not expressed in a PP, the order of Indirect Object and

¹⁶The scrambled word order of (30b) is preferred over the word order in which the full pronoun remains in the VP (30a), but the latter order is not ungrammatical, whereas in the case of object clitics, it is. Definite NPs in Dutch tend to scramble out of the VP, so it is expected that (30b) is the preferred word order.

¹⁷The order COMP-object clitic-subject is grammatical in German. This does not necessarily imply that the object clitic is adjoined to COMP in German, as Anna Cardinaletti points out to me. In German, but not in Dutch, the direct object may appear to the left of the subject, as in (i) (cf. Dutch (ii)), which is only a grammatical configuration in case of focus Scrambling, as in (9a) in the text, see Neeleman 1990:

- (i) dass den Brief der Peter ihm gegeben hat
 that the-ACC letter the-NOM Peter him-DAT given has
- (ii) *dat de brief Piet aan hem gegeven heeft
 that the letter Piet to him given has

Direct Object is fixed if the Indirect Object and the Direct Object are full NPs, and free if they are clitics:¹⁸

- (32)
 a. dat ik [VP gisteren [haar][het boek] gaf]
 that I yesterday her the book gave
 'that I gave her the book yesterday'
 b. *dat ik [VP gisteren [het boek][haar] gaf]

- (33)
 a. dat ik [haar][het boek] [VP gisteren gaf]
 b. *dat ik [het boek][haar] [VP gisteren gaf]

- (34)
 a. ?dat ik 'r 't [VP gisteren gaf]
 b. dat ik 't 'r [VP gisteren gaf]

Secondly, again in double object constructions, if the Direct Object has been scrambled out of the VP, and the Indirect Object stays behind in the VP, the Indirect Object must be expressed in the form of a PP if the Direct Object is a full NP, but it may be an NP if the Direct Object is a clitic:

- (35)
 a. dat ik [het boek] [VP gisteren [*(aan) Marie] gegeven heb]
 that I the book yesterday to Marie given have
 'that I gave the book yesterday to Marie'
 b. dat ik 't [VP gisteren [(aan) Marie] gegeven heb]

Thirdly, scrambling cannot cross an embedded subject in an Exceptional Case Marking (ECM) construction. On the other hand, object clitics can:

- (36)
 a. dat ik Jan/hem [het boek] heb zien lezen
 that I Jan/him-ACC the book have see-INF read-INF
 'that I saw him read the book'
 b. *dat ik [het boek] Jan/hem heb zien lezen

- (37)
 a. dat ik Jan/hem 't heb zien lezen
 b. dat ik 't Jan/hem heb zien lezen

As expected, this pattern recurs with multiple embedding:

- (38)
 a. *dat ik [de meisjes][het boek] Jan heb zien proberen te beloven
 that I the girls the book Jan have see try to promise
 'that I saw John try to promise the girls the book'
 b. dat ik 't ze Jan heb zien proberen te beloven

Finally, in certain dialects of Dutch (e.g. Brabants), there is an indefinite clitic 'r corresponding to indefinite objects. Indefinite objects must remain in the VP, but the corresponding clitic can't:

- (39)
 a. Heb je [VP gisteren meisjes gezien]
 have you yesterday girls seen
 'Did you see girls yesterday?'
 b. *Heb je meisjes [VP gisteren gezien]

¹⁸For those speakers who do not consider the order of clitics to be free, it is the inverted order (DO-IO) that is the grammatical one. This forms an additional argument that the clitic placement is not scrambling.

- (40)
 a. *Heb je [VP gisteren 'r gezien]
 b. Heb je 'r [VP gisteren gezien]

These differences in distribution between full NPs and object clitics seem hard to account for if the latter are regarded as reduced pronouns that undergo scrambling obligatorily.

In addition, Jaspers (1989) presents an empirical argument that object clitics in Dutch do not adjoin to VP (as is more or less the traditional view on clitics in Germanic), from dialects that allow Verb Projection Raising. Verb Projection Raising is a rightward movement of a verb projection of a complement clause (possibly an entire VP), crossing the matrix verb. An example is given in (41).

- (41)
 dat Marie t wilde [het boek naar haar baas sturen]
 that Marie wanted the book to her boss send-INF
 'that Marie wanted to send the book to her boss'

If object clitics adjoin to VP, we expect them to show up as part of the VP that is moved to the right. This, however, is impossible:

- (42)
 a. *dat Marie t wilde ['t naar haar baas sturen]
 b. dat Marie 't t wilde [naar haar baas sturen]

On the other hand, object clitics do appear in fronted VPs and Nominal Infinitives (NI). Facts like these, illustrated in (43), (44) seem to suggest that object clitics are part of the VP.

- (43)
 a. ['t 'm geven] (dat) deed ik zelden
 it him give-INF that did I rarely
 'give it to him, I rarely did'
 b. [geven] (dat) deed ik 't 'm zelden

- (44)
 dat vervelende 't 'm telkens na-zeggen
 that annoying-ADJ it him all-the-time after say-INF
 '*this annoying repeating it after him all the time'

However, the phenomenon of VP-Preposing in Dutch is not very well understood. The possibility of a d-word (dat) in [Spec,CP] suggests that the proposed constituent has nominal or clausal properties (Koster 1987:131f). Thus it would seem that some functional projection is preposed along with the VP. This is also suggested by the fact that entire ECM complements can be preposed, as in (45).

- (45)
 [Marie/haar 't 'm geven] (dat) zie je zelden
 Marie/her-ACC it him give-INF that see-2SG you rarely
 '(*)Marie/her give it to him, you rarely see'

ECM complements are generally considered to be clausal, hence in (45) some

functional projection must be preposed along with the VP.¹⁹ As for NIs, there is evidence in many languages that the nominalized part includes some functional projections, for instance in Italian, where Aux-to-COMP takes place within the NI (Rizzi 1982, Zwart 1987).

(46)

l' aver egli scritto questa lettera
 the have-INF he-NOM written this letter
 'the fact that he has written this letter'

Consequently, the facts from VP-Preposing and Nominal Infinitives do not present a strong argument in favor of adjunction of object clitics to VP in Dutch.

In conclusion, object clitics in Dutch have a different distribution from full NPs and don't adjoin to VP. There is no reason to consider object clitics in Dutch as reduced pronouns that undergo scrambling obligatorily, as there is no similarity between the movement of full NPs and the movement of what I have called object clitics. I conclude therefore that these object clitics are not XPs, but truly clitics, that have to adjoin to a functional head. As they cannot adjoin to COMP, there must be a functional head position between COMP and VP which serves as a landing site for the object clitics. This provides independent evidence for the existence of a INFL head to the left of the VP in Dutch.

9. Embedded Verb Second in Dutch

The second question to be addressed is: Why is Verb Second excluded in embedded finite clauses? In answering this question, I will propose the following analysis of Verb Second. In Dutch, the finiteness features are located in INFL, which is to the left of the VP and to right of COMP. These features must be licensed. There are two ways of licensing the finiteness features in COMP. If COMP is lexicalized, the complementizer can license the finiteness features in INFL (Travis 1986). If not, Verb Second licenses these features. Thus if COMP is filled, Verb Second is superfluous, and therefore excluded by principles of economy (Chomsky 1989). The property of COMP that it can license the finiteness features in INFL is an effect of the strength of COMP in German and Dutch, hence subject to parametric variation. This is the reason that other Germanic languages show Verb Second even in the presence of a complementizer.

The question why Verb Second is excluded in embedded finite clauses receives a straightforward answer in the traditional analysis of Verb Second as movement to COMP. In this analysis, no intermediate INFL position is assumed. Hence, if COMP is occupied by a complementizer, there is no

¹⁹If we assume with Vanden Wyngaerd (1989) that Accusative Case assignment takes place in the Specifier position of a functional projection of the matrix clause, (45) seems to suggest that what is actually preposed is the matrix AgrOP.

place for the verb to move to. This analysis predicts that Verb Second takes place only if the complementizer is absent.²⁰ Facts from German indicate that this is correct. Consider the following paradigm.

- (47)
 a. Johann glaubt dass er Maria küsst
 Johann thinks that he Maria kisses
 b. *Johann glaubt dass er küsst Maria

- (48)
 a. *Johann glaubt er Maria küsst
 b. Johann glaubt er küsst Maria

(47) shows that Verb Second is excluded in the presence of a lexical complementizer. (48) in addition shows that Verb Second is obligatory when the complementizer is absent. One could state that COMP must be lexically filled in German, due to its 'strength' or 'prominence' (Koster 1986), or that the finiteness features that trigger Verb Second are located in COMP and can be licensed by COMP.

Of course, the paradigm in (47), (48) only demonstrates what we already knew, that a lexically filled COMP and a fronted Verb are incompatible in certain Germanic languages. This however does not provide a compelling argument for Verb-Movement to COMP. If COMP is somehow prominent in Dutch and German (which must be assumed for the complementarity argument to hold anyway), it may very well be that COMP has some effect on INFL that causes INFL to be filled if COMP is not lexically filled by a complementizer (see Travis 1986). This possibility must be excluded for the complementarity argument to go through, but there seems to be no empirical argument to decide one way or the other.

Schwartz & Vikner (1989) attempt to establish empirical evidence from topicalization and wh-extraction that the finite verb is in COMP in (48b). IP-adjunction is possible in German in embedded clauses, as the following example shows.

- (49)
 Johann glaubt dass gestern [IP er Maria geküsst hat]
 Johann thinks that yesterday he Maria kissed has
 'Johann thinks that yesterday he kissed Maria'

If the embedded clause in (48b) is an IP, we predict that adjunction to this IP is possible. But (50a) is ungrammatical.

- (50)
 a. *Johann glaubt gestern [er hat Maria geküsst]
 b. Johann glaubt gestern hat [er Marie geküsst]

This, however, tells us nothing. The grammatical example, (50b), involves Inversion. Recall that topicalization in main clauses involves adjunction to CP (or movement to [Spec,CP]) in Dutch. As a result, obligatory In-

²⁰ Assuming that incorporation of the finite verb into COMP is somehow excluded.

version takes place. German is like Dutch in this respect.

(51)

- a. *Gestern Johann hat Maria geküsst
 yesterday Johann has Maria kissed
 'Yesterday Johann kissed Maria'
 b. Gestern hat Johann Maria geküsst
 'Yesterday Johann kissed Maria'

Obviously, IP adjunction in German is not allowed across the board. (49)-(50) suggest that it is only possible if COMP is already filled, which for some unknown reason makes CP inaccessible.²¹ In all other cases, topicalization is CP-oriented in German (and Dutch), and triggers Inversion. The facts in (50) follow from whatever explains the facts in (51). Therefore, they tell us nothing about the position of the verb in the embedded clause in (48b).

Schwartz & Vikner (1989) also consider Wh-extraction out of sentences like (48b). These show obligatory Inversion, too.

(52)

- a. *Wo glaubst du [t [Johann hat Maria t geküsst]
 where think you Johann has Maria kissed
 'Where do you think Johann kissed Maria?'
 b. Wo glaubst du [t hat [Johann Maria t geküsst]

This, however, follows from principle (14). Non-local Wh-Movement leaves a trace in [Spec,CP] (cf. Chomsky 1973), which again attracts V-Movement to COMP. Thus, the ungrammaticality of (52a) is explained by general principles of the grammar, and has no bearing on the issue of the position of the verb in embedded Verb Second sentences in German.

I conclude that it is hard to find empirical evidence regarding the position of the verb in the embedded clause in (48b). It might as well be in COMP or in INFL. Consequently, it is unclear what the paradigm in (47),(48) tells us. It may be that the Verb is in COMP in (48b) because COMP must always be filled, or it may be that the Verb is in INFL in (48b) because COMP is empty which for some reason provokes V-Movement to INFL.

The paradigm in (47),(48) is not repeated in Dutch:²²

²¹Cf. the ungrammaticality of (i)

- (i) *Jan denkt [gisteren dat hij Marie küsst]
 Jan thinks yesterday that he Marie kissed

²²(54b) is sometimes heard, but it can be demonstrated that the embedded clause contains direct speech in that case. In (i), the tense of the embedded clause does not vary along with the tense of the main clause, unlike in German (ii).

- (i) a. Ik denk hij komt niet
 I think he comes not
 b. *Ik dacht hij kwam niet
 I thought he came not
 (ii) a. Ich glaube er kommt nicht

- (53)
 a. Jan denkt dat hij Marie kust
 'Jan thinks that he kisses Marie'
 b. *Jan denkt dat hij kust Marie

- (54)
 a. *Jan denkt hij Marie kust
 b. *Jan denkt hij kust Marie

The lexical complementizer *dat* 'that' can never be dropped in Dutch. We don't know why, but as a result, the verb must always remain in sentence-final position in embedded finite clauses. Once again, this suits either analysis of Verb Second.²³

There is a conceptual argument in favor of the analysis of Verb Second I propose in this section. This becomes clear if we look at other Germanic languages. Suppose that the property of COMP that it can license the features in INFL when it is lexicalized derives from the 'strength' or 'prominence' of COMP in Dutch and German. Strength can be considered as an arbitrary feature of functional heads, in short, as a parameter. If Verb Second is movement to INFL when strong COMP fails to license the features in INFL, we predict the existence of a Germanic language that has the Verb Second property, but also a different parameter setting for COMP. That is, we predict the existence of a Germanic language with Verb Second in all finite clauses. Several such languages exist. One example is Icelandic, where the finite verb crosses sentence adverbials in both embedded and non-

-
- b. Ich glaubte er kam nicht

(ib) can only mean 'I thought: he didn't come', not 'I thought that he didn't come', whereas (iib) can have both meanings. Consider also German (iii), which cannot be translated into Dutch without using the complementizer.

- (iii) Das Messer womit du glaubst er hat das Brot gegessen
 the knife with-which you think he has the bread eaten
 (iv) a. *Het mes waarmee jij denkt hij heeft het brood gegeten
 the knife with-which you think he has the bread eaten
 b. Het mes waarmee jij denkt dat hij het brood gegeten heeft
 the knife with-which you think that he the bread eaten has

²³Embedded Verb Second is ungrammatical in Dutch. However, the ungrammaticality appears to be mild, compared to for instance verb final finite main clauses. That is, (3a) **dat Jan kust Marie* is much better than (2b) **Jan Marie kust*. To my ear, embedded topicalization is worse again (**dat Marie kust Jan*). The difference between (3a) and (2b) is unquestionable, but it may be the case that (3a) involves some kind of restart. The crucial data is the embedded topicalization case. If (3a) is only grammatical thanks to a restart, we expect embedded topicalization to be equally possible, but if there is no restart involved, we expect there to be a difference. Embedded Verb Second with *dat* is attested several times in De Rooy (1965:92f,127f), but no embedded topicalization cases are mentioned. If (3a) does not involve a restart, its mild ungrammaticality can be explained by assuming that Verb Second takes place, violating economy (because COMP is present to license the finiteness features in INFL), but violating nothing else. In (2b) on the other hand, the finiteness features end up unlicensed, which makes the sentence seriously ungrammatical. These facts cannot be accommodated if Dutch sentence structure doesn't contain an INFL position to the left of the VP. On the other hand, if COMP is strong in Dutch and INFL weak, we expect INFL to only marginally play a role in Verb Movement when COMP is active, given the assumptions I make in the text.

embedded clauses (Kosmeijer 1986):

(55)

- a. *Hann vissi að ég oft var á Íslandi
 he knew that I often was in Iceland
 b. Hann vissi að ég var oft á Íslandi

Similarly, Yiddish has been claimed to exhibit V-Movement to INFL in both embedded and non-embedded finite clauses (Diesing 1988, Den Besten 1990):

(56)

- a. *az er avek-shikt dem briv
 that he away sends the letter
 b. az er shikt avek dem briv

The existence of Germanic languages of the type of Icelandic and Yiddish is predicted by the analysis of Verb Second as movement to INFL. Of course, the existence of these languages is not excluded by any other analysis of Verb Second in Germanic. However, if Verb Second in German and Dutch is analyzed as V-Movement to INFL, all Germanic languages discussed so far (English, Dutch, German, Icelandic, Yiddish) can be considered to have the same structure, viz. containing a functional head position to the left of VP and to the right of COMP, the differences in word order following from parametric choice for the strength of COMP, and, probably, INFL. I'm inclined to consider this as an advantage of the V-to-INFL analysis over the V-to-COMP analysis.

To conclude, we have proposed the following (cf. Travis 1986).

1. Verb Second in Germanic is triggered by some feature of the verbal system, located in a functional head to the left of the VP ('INFL'); this feature must be licensed.
2. COMP can be either 'strong' or 'weak', where 'strong' means (a.o. things): capable of licensing the features in INFL when COMP is lexicalized.
3. If the features in INFL are licensed by COMP, Verb Second is excluded by the principle of economy (Chomsky 1989).

This explains why Verb Second is excluded in finite embedded clauses in Dutch.²⁴

10. Conclusion and Further research.

Many a topic for further research suggests itself. I'll name just three. First, the proposed analysis predicts that subject initial sentences in Dutch are ambiguous between a non-topicalized and a topicalized construction. The verb can be either in COMP or in INFL. How can we disambiguate subject initial sentences? Obviously, topics must be stressed,

²⁴ I assume that in non-finite sentences there is no feature [-finite] in INFL, but just no feature [+finite]. Consequently, no licensing requirement obtains. Similarly for agreement features, if they should turn out to be the trigger for Verb Second. See Jakobson (1935) for this view on features.

so this could be the disambiguating factor. Subject initial sentences with flat intonation cannot host a d-word, cannot serve as an answer to a wh-question²⁵, and cannot be used as an exclamative. See the examples in (57)-(59) (Upper case means stress):

- (57)
- a. JAN, die komt ook
 Jan that-one comes too
- b. *Jan, die komt ook
- (58)
- Q: Who's coming?
- a. A: JAN komt
- b. A: *Jan komt
- (59)
- a. LEUKE TREINTJES rijden hier!
 nice little-trains ride here
- b. *Leuke treintjes rijden hier.

Further research will have to reveal more differences. Secondly, it must be made precise what exactly it means for COMP and INFL to be 'strong' or 'weak'. As Chomsky (1989) suggests, syntactic parameters should be restricted to the contents of functional heads. This means that if we hypothesize that for instance COMP is strong in a language, it will have a range of effects. Similarly for INFL and other functional heads that may be relevant. We also expect that the interaction of these values for the functional heads will be able to account for the complex patterns of syntactic differences in a group of related languages such as Germanic. In short, lots of conjectures and refutations can be expected, which appears to be a sign of progress in itself. To give an example, I have shown elsewhere that the contexts in which the non-argumental expletive het 'it' can be dropped in Dutch are exactly those in which INFL can be empty (that is: Verb Second does not take place because COMP is present, or Inversion has taken place) (Zwart 1990, see also Bennis 1986). On the other hand, expletive it in English can never be dropped. Given our assumptions here, this leads to the hypothesis that this is one of the effects of strong COMP. From what we know about Icelandic, we can make the prediction that the expletive can only be dropped in one of the two contexts in which it can in Dutch, viz. in Inversion contexts. This is because Icelandic has no strong COMP, so we don't expect the presence of a complementizer to matter. This is in effect what we find (Kosmeijer 1990). Finally, the differences between Germanic and Romance clitics have to be taken up. A major difference is that in French object clitics that are adjoined to INFL are glued to a passing verb and ride along to COMP under Inversion, whereas in Dutch object clitics never show up on the verb in Inversion constructions. It is not clear what this fact tells us, but evidently it needs serious consideration.

²⁵Thanks to Gertjan Postma for this observation.

To conclude, I have argued that Dutch is like English, Icelandic and Yiddish, in that it has an INFL position to the left of the VP. This is the position the finite verb moves to in declarative non-topicalized non-embedded clauses. Secondly, I have argued that Dutch is like Romance in that it has clitics that adjoin to functional heads, and not reduced pronouns that undergo scrambling obligatorily or adjoin to VP. And finally, I have argued that Dutch is like Universal Grammar in that it has a separate functional position for the representation of inflectional features. These features are syntactically very relevant, as their presence may change the order of words radically. If this is correct, we can no longer maintain that there is no empirical evidence for the existence of a separate functional head INFL in Dutch. As all Verb Second (Inversion excepted) involves movement to INFL, the Dutch child has abundant evidence for the position of INFL in the grammar of his language.

Groningen, 20 February, 1991.

- * Earlier versions of this paper were presented at the GISELLE Conference, Girona (July 1990) and the CUNY Syntax Lunch, New York (October 1990). I would like to thank the audiences, as well as Anna Cardinaletti, Marcel den Dikken, Eric Hoekstra, Richie Kayne, Wim Kosmeijer, Jan Koster, Amaya Mendikoetxea, Rene Mulder, Lea Nash, Gertjan Postma, Eric Reuland, Luigi Rizzi, Ian Roberts, Beatrice Santorini, Bonnie Schwartz, Rex Sprouse, Alessandra Tomaselli, and Sten Vikner. All errors are mine. The trips to Girona and New York were made possible by grants from the Nederlandse Organisatie voor Wetenschappelijk Onderzoek, which are gratefully acknowledged.

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