Article

"Subjects Inside Out"

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Revue québécoise de linguistique, vol. 22, n° 1, 1992, p. 45-74.

SUBJECTS INSIDE OUT*

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1. Introduction

The topic in this paper is the syntactic representation of predication and the related notion of subject. It argues in favor of a representation in terms of a Small Clause, a notion which has figured rather prominently in the literature ever since its introduction in Stowell (1981). The Small Clause (henceforth SCs) representation of the subject-predicate relationship implements in a particular way the conception of this relationship found in Chomsky's (1965) **Aspects of the Theory of Syntax**, where the notion of subject was defined in configurational terms, i.e. as [NP,S]. In Stowell's (1981) approach this notion is generalized from [NP,S] to [NP,XP], a generalization captured by the adagio «subjects across categories».

Clear though this conception may be, there are several questions that arise. A central question relates to the traditional ambiguity of the notion «subject». In a sentence such as «John saw his brother», *John* is said to be the subject of the sentence, a notion that corresponds to the [NP,S] definition, as well as the subject of the verb *see*, a notion which is closer to the notion of external argument as it is used in much of the contemporary literature. Indeed, in Williams' (1981) original use of this notion of external argument, it was assumed that the argument designated as the external argument is generated outside the maximal projection of the head assigning this argument role. We might say that from that perspective we have a situation of «subjects outside categories», rather than Stowell's conception of «subjects inside categories». A fundamental question, then, is the relationship

between the subject notion in the sense of «external argument» and the subject notion in the sense of [NP,S]. It is to this question that section 3 is devoted.

The proposal that I will make is that there are indeed two fundamentally distinct notions of subject: a thematic notion, which conforms in a sense to Stowell's «subjects inside categories» notion, and a syntactic notion, which conforms more to the [NP,S] conception. The latter should be generalized, so as to apply not only to the subject of full sentences, but also to less than full sentences, i.e. SCs. The essence of this proposal is that there are two distinct positions, a theta-position and a syntactic subject position. These two positions are held to be related by movement. Let us call this the movement theory of predication. In section 4 a particularly strong argument is put forth in favor of this movement theory.

The best developed alternative to the movement theory of predication is Williams' (1980) theory of predication. In that theory, predication is not handled in terms of movement, but rather in terms of indexing, i.e. predication is more akin to binding than to movement. Although the relationship between the subject phrase and its predicate is defined over configurations, the definition of subject itself is in terms of the index, not in terms of the configuration per se. The contrast between the two theories comes most prominently to the fore in the typical «Small Clause» constructions of the type «I consider John foolish». While under the SC-theory *John* and *foolish* form a constituent, they are sisters in the predication theory, provided with a predication index by the rule of predication (see section 2 for further details).

We see then that the different theories of predication yield two different syntactic structures: while the SC-theory is consistent with the theory of Binary Branching, cf. Kayne (1984), the predication theory must admit of a wider variety of structural types, including at least ternary branching structures. This clearly constitutes a theoretical advantage for the SC-theory. In section 2, I shall briefly discuss some of the empirical arguments that support the syntactic structure which the SC-theory assigns to these constructions. The restrictive nature of the Binary Branching hypothesis has prompted a vast amount of research into various other types of constructions involving more complex complementation, such as double object constructions, object control constructions, verb particle constructions and so on, and various interesting analyses in terms of SC-complementation have been put forth, cf. Kayne (1984, 1986); Hoekstra (1988, 1991); Mulder (1990); Den Dikken (1990). Reasons of space make it impossible to review that work. I

nevertheless refer to it to make clear that the SC-theory finds extensive support in a wide empirical domain.

There is a second alternative to the SC-theory of predication, at least for a certain domain of secondary predication, i.e. the Complex Predicate approach. There are various ways in which this approach is implemented, cf. Hoeksema (1991), for a recent version, but they converge in that they assume that in a construction such as «I consider John foolish» *John* is considered the D-structure object of a complex predicate «consider foolish». I shall have very little to say about this approach in this paper, cf. Hoekstra (in preparation). I want to stress, however, that such an approach should not be confused with theories, such as Stowell's (1991), in which the small clause predicate is argued to reanalyze with the governing verb in the course of the syntactic derivation.

Summarizing: the structure of the paper is as follows: in section 2, more or less standard arguments pro and contra the SC-analysis are briefly reviewed, without much discussion. It merely serves to set the stage for the remaining sections. For more detailed discussion of each of the arguments mentioned I refer to the literature. Section 3 goes into the nature of the notion of SC somewhat deeper. The particular conception of syntactic versus thematic subject is developed in that section. In section 4, an argument in favour of the movement theory of predication is developed, based on the distribution of so-called floating quantifiers. Sections 5 and 6 address two issues that have recently been presented as problematic for the SC-theory and the premises it is built on: section 5 addresses the problem of double theta-marking in resultatives of the type «I painted the barn red», while section 6 provides an analysis of nominal infinitive constructions in Dutch, which seem to contradict one of the diagnostics of SC-constructions, i.e. their resistance against nominalization.

2. Motivation for Small Clauses

In this section, I shall limit myself to a discussion of secondary predication, the standard empirical ground for the discussion of alternative approaches to the representation of subject predicate relations. The discussion will be brief and reference is made to publications that deal with each of the issues in more detail.

Let us start by a consideration of a case of secondary predication as in (1a).
The three alternatives assign different structures to this sentence, as illustrated in
(2).

   (1)   a.   We found John friendly

          b.   We found that John was friendly

   (2)   a.   We found [$_{SC}$ John guilty]   SC-structure

          b.   We found [$_{NP}$ John]$_i$ [$_{AP}$ guilty]$_i$ Predication structure

          c.   We [found guilty] John   CPF-structure

According to (2a), *John* is syntactically the subject of a clausal constituent.
The details of that structure are discussed in section 3. In (2b), *John* and *guilty* are
syntactically sisters, and the subject-predicate relationship between them is repre-
sented by means of indexes, supplied by the rule of predication, cf. Williams
(1980). In (2c) we see that *find guilty* is analyzed as a complex predicate, taking
John as its argument. Some syntactic mechanism is assumed to break up this
complex predicate, cf. Bach (1979); Hoeksema (1991).

2.1 Thematic properties as an argument for the SC-structure

The first argument in favor of the SC-approach is based on the thematic
properties of a construction such as (1a). If we take (1b) into consideration, where
find takes two arguments, *we* and a complement clause, the SC-theory requires only
a minimal difference to be made for (1a): instead of a full clause, the internal
argument is now represented by a small clause. Assuming thematic constancy,
then, the projection principle, cf. Chomsky (1981), would disallow a structure of
the type in (2b), as the postverbal NP does not receive a thematic role from *find*; at
the same time, there is no constituent that could receive the thematic role which
find assigns to the full clause in (1b). In section 6, I shall discuss resultative
constructions which are claimed to involve theta-marking of the postverbal NP.

2.2 Two arguments in favor of the SC-structure based on word order

A further argument in favor of the SC-approach concerns word order. Dutch
being an SOV-language and English an SVO-language, one might expect that the

order of «object» and secondary predicate in these languages would be different. Under the SC-approach, there is no such expectation, as a subject precedes its predicate both in Dutch as in English. (3) shows that the order of the «object» and the secondary predicate in Dutch is the same as in English.

(3)   a.   dat wij Jan aardig vonden
             that we John nice found

       b.   *dat wij aardig Jan vonden

PP-extraposition in Dutch also provides an argument in favor of the SC-structure based on word order. In general PPs may either precede or follow the verb in Dutch. This is true for prepositional objects, predicative adjuncts, as well as adverbial PPs of various kinds. There is one class of exceptions, however. As (4) illustrates, a PP-predicate of a SC-complement may not occur in postverbal position. As the predication theory makes no distinction between predicative adjuncts and predicative complements in either structural or indexing terms, it is not at all obvious how the generalization may be expressed under the predication approach.

(4)   a.   dat wij gisteren over het weer spraken/spraken over het weer
             that we yesterday about the weather talked/talked about the weather

       b.   dat wij gisteren de boeken op de tafel legden/*legden op de tafel
             that we yesterday the books on the table put/put on the table

2.3 Kayne's arguments for the SC structure based on extraction and nominalization

Kayne (1984) develops an argument in favor of SC-representations based on extraction. Postverbal NPs in English that are the subject of a selected secondary predicate show extraction prohibitions of the left-branch variety, as is shown by the contrast in (5): subextraction from the postverbal NP in (5a), where this NP is subject of the secondary predicate, yields an ungrammatical result, while the «non-subject» postverbal NP in (4b) does not block such extraction.

(5)   a.   *Who did you find the brother of t stupid

       b.   Who did you find the brother of t in the attic

Kayne (1984) also argues that SC-complements resist nominalization. (6) illustrates this. In section, 7 we shall discuss Dutch infinitival nominalizations, which seem to contradict this generalization.

(6) a.   the consideration of the student's problem

     b.   *the consideration of the students stupid

2.4 Arguments against the SC-structure based on constituent behavior

Opponents of the SC-approach regularly point out that there is no syntactic evidence for the constituent nature of these SCs. It is not true, however, that there is no such syntactic constituency behaviour. There are at least two contexts where the SC can be shown to form a constituent. The first instance is in the complement of absolute *with*, as illustrated in (7).

(7) a.   with [John in the hospital]

     b.   with [the kitchen dirty]

Beukema & Hoekstra (1984a, 1984b) provide several arguments to show that the NP following *with* is not a direct complement of *with*. Note that a CPF-approach to this construction, involving a complex predicate «with in the hospital» seems very unlikely. This means that adherents of that approach have to allow an alternative representation of secondary predication, which raises the question as to why that alternative is not equally useful in other instances.

A second instance where SCs occur as clear constituents, is the so-called «honarary NP» environment, cf. Stowell (1981); Safir (1983), illustrated in (8). This construction type raises various interesting questions that I shall not discuss here, but it clearly shows that NP and predicate may form a constituent.

(8) a.   [Snakes under the bed] is a scary idea

     b.   [Workers angry about their pay] seems to be the normal situation

It is true, however, that such constituents do not always behave as one might expect from a constituent. As (9) shows, a SC cannot in general be moved by A or A-bar movement. It is unclear, however, what the force of this observation is, given the fact that we find a similar prohibition against movement in the case of ECM-constructions, as is shown by (10).

(9) a. *[John how silly] did they find *t*?

     b. *[Who silly] did they find *t*?

c. *[The students incompetent] was generally considered

(10) a.   They believed [there to have been a riot]

b. *[There to have been a riot] they all believed

c. *[There to have been a riot] was generally believed

Hoeksema (1991) advocates the CPF-analysis by arguing that the verb and the secondary predicate do show constituent behaviour in such examples as those in (11), where the combination is fronted. This argument is without any force, however.

(11) a.   [vervelend vinden] kan ik hem niet *t*
      boring find can I him not
      «I cannot find him boring»

b.   [als een vriend beschouwen] kan ik hem niet *t*
      as a friend consider can I him not
      «I cannot consider him as a friend»

Two questions come up in this context: what is the nature of the sentence initial constituent and how is this constituent generated in this position? Following Den Besten & Webelhuth (1987), one might assume that we are dealing here with VP-topicalization, more specifically, in the cases of (11) with topicalization of the remnant of VP. The idea is that the NP *hem* is first scrambled out of the VP, and hence also out of its SC-subject position, and that the remnant of VP is subsequently topicalized. The examples in (12) illustrate that such V-containing initial constituents are certainly not to be considered simple VPs, however. The constituent may also contain adverbs of various types, pronominal objects as well as the clitical adverb *er*, in short elements that are standardly assumed not to be part of the VP. Clearly then, we are dealing with more than VP.

(12) a.   [(hem) vaak in Amsterdam ontmoeten] zou ik (hem) *t* niet willen
      (him) often in Amsterdam meet would I (him) not want
      «I wouldn't want to often meet him in Amsterdam»

b.   [er morgen met Marie over praten] kan ik niet *t*
      there tomorrow with Mary about talk can I not
      «I cannot talk about that with Mary tomorrow»

I also maintain that the initial constituent is not moved to its surface position, but that instead, we are dealing with a base-generated IP, which is related to

the remainder of the sentence through an empty pronoun in the [SPEC,CP], along the lines of Koster's (1978) proposal for subject sentences. This analysis is supported by the observation in (13). What (13) shows is that *laten* 'let' does not allow this alleged «remnant VP-preposing», contrary to other verbs taking infinitival complements. This correlates with a further property which sets *laten* apart from these other verbs, illustrated in (13a), i.e. its impossibility of combining with a pronominal complement instead of an infinitival. If «remnant VP-preposing», as in (13b), should be analyzed as I suggested, i.e. as «XP$_i$ [$_{CP}$ pron$_i$ ....]», the impossibility in the case of *laten* is immediately explained.

(13) a. Piet kan/wil/hoort/laat een liedje zingen en Jan kan/wil/hoort/*laat
          dat ook
          Peter can/wants/hears/lets a song sing and John can/wants/hears/lets
          that too

      b. [dat liedje zingen] kan/wil/hoort/*laat Jan ook
          that song sing can/wants/hears/*lets John too

What this discussion shows is that no argument for a complex predicate can be built on the examples in (11).

2.5 An argument against the CPF-approach

An argument against the CPF-approach can be built on the examples in (14). The secondary predicates headed by the participle in these examples are passive.

(14) a. We wanted Reagan elected *t* president for a third term

      b. They believed this theorem proven *t* false

      c. They considered the table insufficiently wiped *t* clean

In the case of simple passive constructions, one could assume that the participle is an adjectival passive, and create a complex predicate consisting of the matrix verb and the adjectival passive participle, at least if one assumes a lexical analysis of adjectival passivization. By Wasow's (1977) criteria, however, the passives involved in these examples are non-lexical, i.e. are verbal passives generated by movement. If complex predicates are formed at D-structure, it would seem impossible to deal with examples of this type, as the subject of this complex predi-

cate is still contained within it at that level. In short, the CPF-approach is incompatible with the transformational approach to passives[1].

2.6 Distributional evidence in support of the SC-approach

As a final argument in favor of the SC-approach I would like to mention its success in explaining the distribution of NP-types as subjects of secondary predicates. In (15a), the subject of the secondary predicate, a predicative adjunct in this case, is PRO; in (15b), where the secondary predicate is a complement, we necessarily have a lexical subject, while in (15c), again a secondary predicate in complement position, we have a trace subject, due to the lack of case marking of the subject by the ergative *turn*.

(15) a. John entered the room [(*himself) drunk]

      b. John found [*(himself) sober enough]

      c. My skin turned [*t* red]

Similarly, the SC-approach is successful in accounting for the distribution of resultative secondary predicates: in (16a), the secondary predicate has a PRO-subject, again as a consequence of its being an adjunct, and the predicate has no resultative interpretation. In (16b), on the other hand, the location *under the table* is understood as the position *John* ends up in as a result of his drinking activity. However, a so-called 'fake reflexive' is required to obtain this interpretation. This is a consequence of Simpson's (1983) law, which holds that resulting state denoting predicates may only predicate of (D-structure) objects, a law which follows automatically from the SC-approach, cf. Hoekstra (1988, 1991) for discussion.

(16) a.   John drank [PRO under the table]

      b.   John drank [himself under the table]

      c.   *John worked tired

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[1] There is a variant of the CPF-approach for which these cases do not constitute a problem, i.e. if it is assumed that the complex predicate is formed in the course of the derivation. I consider such an approach as involving reanalysis, rather than a genuine alternative to the SC-approach. Whether SCs undergo restructuring at some later stage in the derivation is an independent issue, which I shall not discuss here. It seems likely, though, that not all instances of SC-complements behave alike in this respect, cf. Rizzi (1986); Stowell (1991).

I would like to end this survey of standard arguments, and proceed with a more detailed discussion of the notion of SC itself.

3. The nature of the SC

In this section, I shall develop a particular notion of SC, which is much broader than what is traditionally understood under this term. Traditionally the concept of SC is restricted to such instances of secondary predication as those that figured in section 2, i.e. non-clausal instances of embedded predication[2]. Stowell (1981) proposed that such SCs should be considered projections of the category of the head of the predicate. He therefore generalized the definition of subject to all lexical categories. The structure he would assign to the VP in (1a) is as in (17a). Chomsky (1981), while also considering (17a) for adjunct cases of secondary predication, argued that the SC in (1a) should be analyzed as a genuine «small clause», i.e. as a S without a filled INFL. As S was not considered a maximal projection at that time, the SC-transparency to government from outside co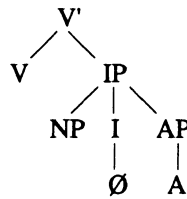uld be reconciled with the idea that maximal projections uniformly constitute barriers to external government, cf. also Hornstein & Lightfoot (1987) for relevant discussion.

(17a)
```
         V'
        /  \
      V      AP
            /  \
          NP    A
```

(17b)
```
         V'
        /  \
      V      IP
            / | \
          NP  I   AP
              |    |
              Ø    A
```
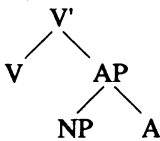
Note that Stowell's proposal was in line with the now generally adopted VP-internal subject hypothesis. Combining this hypothesis with Stowell's yields the possibility of the general hypothesis that thematic roles are always assigned within the projection of the lexical element that assigns these roles, cf. Hoekstra (1984) for a defense of this position. Chomsky's proposal in (17b) needs to be reevaluated in terms of the so-called Split-INFL-hypothesis of Pollock (1989). Pollock argues that the traditional category INFL, hosting features of both agreement and tense,

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[2] The empirical coverage of this notion of secondary predication is a matter of debate, however. Various types of construction have been treated under this heading, cf. particle constructions, cf. Hoekstra (1984); Kayne (1986), double object constructions, cf. Den Dikken (1990); Hoekstra (in prep. a), object control constructions, cf. Kayne (1981); Mulder (1990). In Hoekstra (in prep. b) these various construction types are discussed at great length.

should be split up into two separate functional categories, Tense and AGR, each projecting a full phrase in accordance with the X-bar schema, yielding the alternative structure of IP in (18).

(18) [$_{TP}$ NP TNS [$_{AGRP}$ AGR [$_{VP}$ V ....]]]

Apart from the possibility that SCs are projections of lexical categories, then, there are four other logical possibilities, if we adopt the structure in (18), given in (19).

(19) a. TNS=∅   +   AGR=∅

    b. TNS≠∅   +   AGR=∅

    c. TNS=∅   +   AGR≠∅

    d. TNS≠∅   +   AGR≠∅

The option that SCs could be a simple projection of a lexical category, i.e. (19a), might not exist if we also follow Abney (1986) in assuming that each lexical projection is minimally dominated by one functional category. This is in fact what Guéron & Hoekstra (1990) propose. They argue that traditional SC-constructions are instances of an AGR-projection, i.e. (19c). Traditional IP corresponds to (19d), while (19b) may not exist, if TNS requires AGR.

These developments (i.e. the VP-internal subject hypothesis and the Split-INFL-Hypothesis), make problematic the notion of A-position, as has been noted on several occasions. An A-position was defined in Chomsky (1981) as a potential theta-position. [SPEC,IP] qualifies as an A-position only if it is ever possible to directly assign a thematic role to that position, which is precisely what the VP-internal subject hypothesis excludes. Various alternatives are currently available. Rizzi (1990) provides the definition of A-position given in (20):

(20)   an A-position is a theta-position *or* an agreeing SPEC-position

Notice that this formulation involves a disjunction, which raises the question of what motivates the unification that is attempted by the definition. Such motivation would consist in showing that theta-positions and agreeing SPEC-positions interact in ways that require such unification. It seems to me that such motivation

is not available. Consider for instance A-movement in passives. If the external argument is somehow instantiated in passives[3], A-movement of the direct object to [SPEC,IP] is not blocked by this intervening argument. There are various alternatives, but one way to make this understandable is by saying that while the external argument qualifies as a theta-position, movement of the object is to an agreeing SPEC-position, and these two types of positions do not interact in terms of relativized minimality. Under such a view, passivization in fact constitutes an argument against collapsing theta-positions and agreeing SPEC-positions.

The fundamental distinction between lexical categories (theta-assigning categories) and functional categories (purely syntactic categories) tallies with a fundamental distinction between the two different notions involved in (20). As an alternative to (20) I therefore propose the definitions in (21) and (22):

(21)   subject: an agreeing SPEC-position

(22)   positions within   lexical projections are theta-positions
        position outside   lexical projections are non-theta-positions[4]

The traditional confusion about the notion of subject can now be cleared up: in a simple sentence, some phrase is the subject of the sentence according to (21), and the subject of the verb in terms of (22). Clearly, however, the subject of the sentence need not be one specific argument of the verb, as we can see in the case of different voices. Similarly, the syntactic notion of subject, as defined in (21), is not unique either, as we shall see.

From the definition in (22) it follows that there must be a functional category in some of the SCs that we already encountered, specifically those involving verbal passives in (14), as we need a landing site for the postverbal NP which is not contained in a lexical projection, given (22). Further evidence in favor of the presence of some functional element, even if non-overtly present, can be obtained

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[3] Such an analysis has been proposed by Roberts (1985, 1987); Hoekstra (1986a); Jaeggli (1986) and Baker, Roberts & Johnson (1989), with differences in the exact way in which the external argument is represented.

[4] A reviewer questions whether (21) and (22) accomplish the disjunction between thematic positions and syntactic «subject» positions. «One could imagine that agreement can occur in [SPEC,VP] or a thematic role could be assigned in [SPEC,IP]». I maintain that neither of these two possibilities can arise. On the one hand, functional categories do not assign thematic roles, if I am correct in assuming that only lexical categories assign theta-roles. On the other hand, I regard agreement as an exclusive property of functional categories, even if agreement manifests itself on lexical heads. Both of these assumptions are in line with more or less standard assumptions.

from considering the following asymmetry. SCs without any overt marker cannot be found in the complement of prepositional verbs. Consider the examples in (23):

(23) a. we considered this example

b. we considered this example ungrammatical

c. we thought of this example

d. we thought of this example *(as) ungrammatical

e. we looked upon John *(as) naive

Clearly, *of/upon* do not constitute a PP with the following NP, as is evident from the fact that this alleged PP cannot be moved as a unit. Rather, *of/upon* are followed by a SC, headed by *as*, which I take to instantiate a functional head. How is this systematic fact about prepositional verbs to be explained? Kayne (1984) appeals to a notion of «structural» governor, saying that V differs from P in being a structural governor. Yet, if we are correct in assuming that *of/upon* in these examples take a SC, there is apparently no problem of case assignment across the SC-boundary. So, the lack of structural government should pertain to the head of the SC, which may be empty in the complement of V, but not in the complement of P. The relevant distinction between V and P might be understood in terms of an analysis according to which the empty functional head of a SC incorporates into the governor. It is a general property of P that it does not allow any «morphology», in this case, no incorporation. Therefore, the head of the SC has to be overt in the complement of a prepositional verb.

This line of reasoning may be extended to the observed lack of nominalization, cf. (6), where the presence of *of* similarly would block incorporation of the empty head of the SC. However, if *of* is called for in nominalizations to provide Case, one might expect that application of «passive in NP» could save the SC-structure, contrary to fact, cf. (24b).

(24) a. *our consideration of Bill F incompetent

b. *Bill's consideration incompetent (by us)

c.   consider + ation + F

The explanation for the impossibility of the constellation in (24c) may be similar to Pesetsky's (1991) account of lack of nominal counterparts of causative

psych verbs. The data in (25) are illustrative. While there is a well-formed word *annoyance*, cf. (25c), there is no nominal counterpart to the causative construction in (25a), as is evident from the ungrammaticality of (25b).

(25) a.   the book annoyed Bill

      b. *the book's annoyance of Bill

      c.   Bill's annoyance at the book

      d.   the book annoy+CAUSE Bill *t*

      e. *annoy + CAUSE + ance

Pesetsky (1991) postulates an abstract causative affix, into which the verb is incorporated in (25a). Appealing to Fabb's (1987) generalization, the construct in (25e) is excluded. Fabb's generalization holds that suffixes do not attach to previously affixed forms (apart from a number of designated exceptions). I propose that (24c) and (25e) are similar and that both fall under Fabb's law.

I refer to Guéron & Hoekstra (1990) for further arguments in favor of the presence of a functional category inside the traditional type of SCs.

The notion of subject as defined in (21) is of course not limited to the subject of a SC, but is equally relevant to other instances in which a specifier agrees with its head. Apart from «traditional» syntactic subjects, i.e. [SPEC,IP], which instantiates (19d), we also find subjects in [SPEC,CP], at least under the given definition. Rizzi discusses the well-known asymmetry with respect to the possibility of weak pronouns, such as Dutch *het*, in sentence initial position in main clauses in V-2 languages. If *het* is the subject, it may occupy this position, but not if it is the object. The asymmetry is illustrated in (26).

(26) a   Het is leuk   «it is nice»

      b. *Het vind ik leuk   «I find it nice»

      c. *Het denk ik niet dat leuk is   «I don't think that it is nice»

This asymmetry is sometimes taken as an argument for a non-uniform analysis of V-2, cf. Travis (1984): subject initial main clauses are IP, while non-subject initial main clauses are CP according to that view. The asymmetry can then be accounted for by stating that *het* may not occur in [SPEC,CP]. Rizzi (1990), in

essence following an analysis by Holmberg (1986), opts for a uniform CP analysis of V-2 clauses. In this analysis it is stipulated that a weak pronoun such as *het* does not qualify as an operator. The notion of variable is defined as an operator bound empty category. Sentence (26b) is now excluded: *het* is in an A-bar constituent, binding a variable in object position, but, not being an operator, it cannot bind a variable. In (26a), *het* occupies the same position as in (26b), i.e. [SPEC,CP]. So, what is different in this case? The crucial point is that the finite verb in C agrees with *het* in (26a), which makes the [SPEC,CP] an A-position, and hence the empty category bound by *het* an anaphor, rather than a variable. The analysis also explains why *het* can only occur in initial position if it is the main clause subject, cf. (26c).

A similar situation is found in the pseudo-relative construction in French, according to the analysis of Guasti (1988). In (27a), *Jean* is followed by what appears to be a relative clause, but the structure doesn't have the interpretation of a relative clause, which also is not to be expected given that the head of the «relative clause» may be a proper name. Rather, the interpretation comes closer to a normal sentential complement interpretation. Moreover, there are various properties that set this pseudo-relative apart from normal relative constructions: the «antecedent» (*Jean*) may participate in movement processes, such as clitic movement (27b), A-movement (27c) and A-bar movement (27d) suggesting that *Jean* in (27a) occupies an A-position. The construction is limited to the complement of verbs that in addition to an NP-complement, also allow a clausal complement. Finally, the antecedent must correspond to the local subject inside the «relative» clause, as can be seen in (27e).

(27) a. J'ai vu Jean qui fume une pipe
         I have seen John who smokes a pipe

     b. Je l'ai vu qui fume une pipe

     c. Jean a été vu qui traverse la rue

     d. Qui as-tu vu qui fume une pipe

     e. *J'ai vu Jean qui tu connais

     f. voir [$_{CP}$ Jean qui [$_{IP}$ *t* fume une pipe]

     g. voir [$_{CP}$ Jean qui [$_{IP}$ tu connais *t*]
         |_____X_____|

Guasti is able to explain all these properties by assigning to the relevant part of (27a) the structure in (27f). The fact that such constructions are limited to the complement of verbs like *voir*, which can take both a full CP-complement and an NP-complement, is automatically explained. The status of *qui* in this construction is not that of a relative pronoun, but rather that of an agreeing COMP, cf. Kayne (1984). Due to this agreement with *Jean*, the position occupied by *Jean* is a subject position. Hence, *Jean* may be moved by both A- and A-bar movement. The requirement that *Jean* corresponds to the local subject is also explained. Consider (27g), which represents a non-subject movement to the [SPEC,CP]. If there is agreement in COMP, this movement violates relativized minimality, as the subject *tu* is intervening.

We have seen, then, that there is a general definition of subject, which is not only relevant for SCs, but extends to potentially every functional category in which agreement with the specifier is possible. Looked at from this perspective, a normal IP is not different from a «traditional» SC in any respect: IP, SC, and, as we just saw, CP all instantiate a subject predicate relationship, basically of the same kind.

4. An argument in favor of the movement approach: floated Qs

In the previous section we developed a conception of subject-predicate relations which can be broadly represented as in (28), with LP a lexical projection and F a functional category (AGR) dominating it:

(28) $NP_i F+AGR$ $[_{LP}...t_i... L..]]$

In this approach, then, the subject of a predicate is related to a thematic position in terms of movement. In the predication theory of Williams, in contrast, the thematic role is assigned directly to the subject, which itself is related to the predicate in terms of an indexing relationship. No movement is involved, then, in Williams' system. One might argue that the movement approach is to be preferred, as we can often observe the movement path of a derived subject in terms of local agreements the subject has triggered on its way, but such an argument depends on the way in which agreement is handled. In this section we develop a similar kind of argument for movement, based on the position of so-called floated quantifiers.

Traditionally, the quantifier *all* in (29b) is said to have moved there from the position it occupies in (29a). Sportiche (1988) proposes an alternative analysis, based on the VP-internal subject hypothesis. In his analysis, the Q is stranded in

the position it occupies in (29b) by movement of the NP to the [SPEC,IP] position. (29a) is derived through movement of the entire NP, consisting of Q and NP. The analysis is represented in (29c).

(29) a. *all* the students will come to the party

b. the students will *all* come to the party

c. *e* will [$_{VP}$ [$_{NP1}$ Q NP2] come to the party

This analysis provides an immediate account of the subject-object asymmetry on Q-float: as (30) shows, object NPs do not float their Q, which is a consequence of the assumption that objects remain in their base position and can therefore not strand an adjoined Q.

(30) a. *we saw the men *all* yesterday

b. *they yelled at the students *both* on the campus of MIT

Adopting this analysis, the sentences in (31), all traditional SCs, provide an argument in favor of the SC-analysis as involving a lexical predicate in which the subject originates, as well as a functional category, to the specifier of which the subject has moved, stranding Q in its base position.

(31) a. We saw the students *all* leave the building

b. We considered our friends *all* rather loyal

c. We looked upon the students as *all* very inspiring

d. I thought of my brothers as *both* very good friends

e. We put the books *all* in a separate package

However, this simple argumentation is hampered by a number of problems. I restrict myself here to the observation that NP-movement of internal arguments, as in passive and ergative constructions, does not allow the stranding of a quantifier in the base position *these books have been read all*. One might therefore try to formulate a different analysis which is more in line with the predication approach. Such an analysis might be formulated in the following terms: adjoin Q to XP if XP is a predicate of NP and Q is related to this NP. In (29b), then, Q is adjoined to VP, while VP itself takes *the students* as its subject, and Q is automatically related to *the students*, cf. Belletti's (1982) and Jaeggli's (1982) analyses. The cases in (31)

can be dealt with in the same way, while (30) is automatically excluded. Under such an approach, floated quantifiers do not provide an independent argument for the movement approach to predication.

Such an adjunction approach to floated Qs has been recently advocated by Doetjes (1991). Doetjes argues, however, that her approach still requires that subjects be generated in VP-internal position, and hence that floated Qs indirectly constitute an argument in favor of the movement approach to predication. Her analysis of (29b) is given in (32). The relevant condition on an adjoined Q is not that Q must be related to the subject of the predicate it is adjoined to. Rather, Doetjes maintains that Q may adjoin to some projection if that projection contains an empty category which Q can bind qua variable. In (32), this is the trace of the subject NP.

(32)   the students$_i$ will [$_{VP}$ all$_i$ [$_{VP}$ t_i come to the party]]

That Doetjes' theory is more adequate can be seen by considering the following sample of Q-float constructions in French:

(33) a.   je *les* ai [$_{XP}$ tous [$_{XP}$ lus *t*]]

      b.   Les livres *que* j'ai [$_{XP}$ tous [$_{XP}$ lus *t*]]

      c.   *Les enfants* sont [$_{XP}$ tous [$_{XP}$ venus *t*]]

      d.   *Les enfants* ont [$_{XP}$ tous [$_{XP}$ lu ces livres]]

Under a predication approach, XP in (33a) and (33b) must be coindexed with *je*, i.e. the subject of XP is not identical to the NP to which Q is related. In all four cases, however, XP contains an empty category which the Q may bind. This is clearly so in (33b), where *t* is bound from an A-bar position, and in (33c), where *t* is bound from an A-position, but it is also true in (33d) if the VP-internal subject hypothesis is maintained.

An even more dramatic case is found in so-called long L-tous constructions of the type in (34):

(34) a.   Il a [$_{XP}$ tous$_i$ [$_{XP}$ voulu [*les*$_i$ voir t_i]]]

      b.   Je *veux*$_j$ [$_{XP}$ tous$_i$ [$_{XP}$ t_j qu'*ils*$_i$ viennent t_i]]

Clearly, in these examples *tous* cannot have reached its position through stranding, nor is *tous* related to the subject of the XP it is adjoined to. I conclude therefore that Doetjes' theory is superior to both Sportiche's stranding theory and to the adjunction approach that does not make use of an empty category to which Q is related. Floated Qs therefore constitute a strong empirical argument in favor of the general approach to predication developed in section 3 and to its instantiation in the case of traditional SCs of the type in (31).

5. Two types of resultatives?

In this section, I discuss and discard an argument against the treatment of part of the resultatives in terms of a SC-complementation. There are basically three types of resultatives to distinguish on the basis of the governing verb. These are given in (35)-(37). In (35), we find resultatives in the complement of an unergative intransitive, in (36) in the complement of a transitive verb, but with a postverbal NP which does not normally appear as the object of the verb, while (37) contains examples of transitive verbs, with a postverbal NP which can also normally appear as its object:

(35) a. The joggers ran the pavement thin

b. He cried his heart out

c. They danced their days away

(36) a. He washed the soap *(out of his eyes)

b. They drank the teapot *(empty)

c. He drank himself *(silly)

(37) a. He painted the barn (red)

b. He swept the street (clean)

c. They watered the tulips (flat)

In Hoekstra (1988) I argued for a uniform syntactic SC-analysis for all three cases. The apparent «object» relationship in (37) I took to be a consequence of real world knowledge, not of theta-marking by the verb, arguing that there were no known syntactic properties that set (37) apart from the cases in (35) and (36). For

instance, in all three cases the postverbal NP may float a quantifier, as is shown in (38):

(38)   a.   They danced their days all away

       b.   They drank the teapots all empty

       c.   They painted the barns all red

Rappaport & Levin (1991), following Carrier & Randall (1989), make a syntactic distinction between (35)/(36) and (37): for the former they accept a SC analysis, while the latter is assumed to have a ternary branching structure, with the predicative XP related to the NP-object. They argue that there are three pieces of motivation for this distinct treatment[5].

a. Middle Formation (MF) is applicable to (37), but not to (35)-(36):

(39)   a.   This table wipes clean easily

       b.   This metal pounds flat easily

(40)   a.   *This pavement runs flat easily

       b.   *The baby ticks awake easily

       c.   *The teapot drinks dry in no time at all

b. Adjectival Passive Formation (APF) is possible with (37), but not with (35)-(36):

(41)   a.   a wiped-clean table

       b.   pounded-flat metal

(42)   a.   *the run-thin pavement

       b.   *the ticked awake baby

       c.   *a drunk-dry teapot

c. Nominalization is allowed on the basis of type (37), but not of (35)-(36):

---

[5] The examples and judgements are from Rappaport & Levin 1991.

(43) a.   The watering of tulips flat is a criminal offense in Holland

      b.   The Surgeon General warns against the cooking of food black

(44) a.   *The drinking of oneself sick is commonplace in one's Freshman year

      b.   *The jogging craze has resulted in the running of a lot of pairs of
           Nikes threadbare

Rappaport and Levin assume that these patterns can be explained if it is assumed that MF and APF may only affect direct arguments, and that *of*-insertion is possible only before argument NPs. These assumptions are far from obviously correct. First, Hoekstra & Roberts (1989) argue that an approach to MF based on «externalize direct argument» cannot be upheld in general, given the existence of adjunct-middles in Dutch. Second, APF in Dutch can certainly not be restricted to direct arguments, as examples corresponding to (42) are fully grammatical. English appears to be different from Dutch in this respect, as clear cases of adjectival participles, such as in (45), which involve transitive-based resultatives, are ungrammatical.

(45) a.   *The metal remained unhammered flat

      b.   *The room was left unswept clean

      c.   *The house was unpainted red

Finally, Rappaport and Levin fail to provide an analysis of gerundive nominalizations within which their claim holds, so it is hard to evaluate the claim at the theoretical level. Furthermore, native speakers I consulted uniformly reject the examples in (43).

I conclude therefore that the evidence in favor of the proposed distinction is rather scarce. However, let us assume that the distinction is true, and that we must conclude that the postverbal NP in examples like (37) must be theta-marked by the verb. Does that mean that the SC-approach is misdirected? This is not self-evident. The predicative XP must also theta-mark this NP. Hence, the theta-criterion will have to be changed in order to accommodate this situation of dual theta-marking, whether we adopt the SC-approach or an alternative approach. Various such modifications have been proposed, cf. Williams (1983), Chomsky (1986), Guéron (1986) among others. Usually, the uniqueness requirement is relativized to the theta-assigning element: an argument may receive no more than a single role from a

theta-assigning head. This allows for the situation in which an argument receives two theta-roles, as long as they are assigned by different theta-assigning heads. Let us tentatively adopt such a reformulation. The next question then is under what conditions such dual theta-assignment may be expected. In Rappaport & Levin's view there are at least three configurations of theta-assignment: direct assignment by the verb to its sister NP, for single NP-complements; theta-assignment by the predicate of a SC to its subject, as in the resultatives of the type in (35)-(36); and theta-assignment, under predication, by a predicative XP, as in (37), the latter in addition to another role which the verb assigns to the relevant NP. How could the SC-approach handle such dual theta-assignment?

Consider the structure in (46):

(46)   X [$_{YP}$ NP1 Y NP2]

If sisterhood is a condition on theta-assignment, NP2 may receive a theta-role from Y, and YP may receive a theta-role from X, but NP1 may not receive a theta-role at all. Clearly, then, sisterhood is too strong a condition. In the normal case, NP1 will be theta-marked by Y, certainly under the view on A-positions adopted here, cf. (21)-(22). Let us formulate this more precisely by saying that a lexical head theta-marks all phrases in its projection, and that no head may assign a theta-role in the projection of another lexical head. This can be thought of as a particular instance of minimality.

Recall that we have followed Abney (1986) in assuming that each lexical projection is dominated by a functional projection. Hence, if X and Y in (46) are lexical, there will minimally be some functional head F intervening, yielding (47):

(47)   X [$_{FP}$ F [$_{YP}$ NP1 Y NP2]]

NP1 will move to the specifier of FP, which is not assigned a theta-role by F, as F is not a theta-assigning category. Therefore, if X theta-marks NP1 while it is in [SPEC,FP], it is not penetrating into the domain of another theta-assigning category. I propose that this is precisely the structure which allows for secondary theta-assignment. Note that if FP is L-marked by X, FP does not constitute a barrier for theta-role assignment by X to NP1 in its specifier. One might argue that there is a vicious circularity here in that the notion of L-marking itself is defined in terms of theta-marking, but the point here is that we are opening the possibility of

secondary theta-marking to a chain which is already theta-marked. The circularity therefore doesn't arise.

Although the formulations given here would permit secondary theta-assignment in transitive-based resultatives, at least under the relativization of the theta-criterion, the evidence in favor of this loosening of the theta-criterion is too slender in my view to accept the conclusion. It is conceivable that further research will provide firmer evidence to draw this conclusion. The point of this section was to establish that even if we accept the evidence put forth by Rappaport & Levin (1991) and Carrier & Randall (1989), this evidence does not constitute an argument against the SC-approach.

6. Infinitival nominalizations in Dutch

In section 2, it was mentioned that SC-complements resist nominalization. This was explained in section 3 by an appeal to the presence of a non-overt functional head inside the SC, which needs to be incorporated. Prepositions are unfit to serve as hosts for incorporation, while incorporation into the nominalized predicate is impossible because of Fabb's law. The grammaticality of infinitival nominalizations such as those in (48) may therefore be taken as a potential problem.

(48) a.   het vervelend vinden van je broertje
            the boring find-INF of your brother

      b.   het plat slaan van het metaal
            the flat hit-INF of the metal

      c.   het rood verven van de schuur
            the red paint-INF of the barn

      d.   het aan diggelen smijten van het servies
            the to pieces throw-INF of the dinner set

Whether such cases are indeed a problem depends on the analysis of such nominalizations. It would definitely be problematic if the correct analysis of infinitival nominalizations were as in (49b), where the verb is taken to be nominalized at the lexical level, taking its direct object argument in the way nouns do, i.e. in postnominal position, preceded by the case marker *van* 'of'. Under such a construal, the examples in (48) might even be put forth in favor of a CPF-approach, with the complex predicate nominalized.

(49) a.   het lezen van het boek
           the read-INF of the book

      b.   DET [NP [N V+en] NP]   + *van* 'of' insertion

However, such a simple analysis is untenable in view of the fact that such infinitival nominalizations may take all sorts of PP modifiers in pre-infinitival position, something which is impossible for normal nouns, cf. Hoekstra (1986b) for an extensive discussion of infinitival nominalizations. Interesting instances of such pre-infinitival adjuncts are provided in (50): here we find infinitival adjuncts, containing a parasitic gap. The gap is, directly or indirectly, parasitic on the object, which itself is realized in post-infinitival position, preceded by *van*.

(50) a.   het [[zonder *e* in te kijken] terugbrengen] van *boeken*

           the without into to look return-INF of books
           «the returning of books without looking in»

      b.   het [[alvorens *e* aan elkaar te plakken] eerst glad maken] van *de beide delen*
           the before to each other to stick first smooth make-INF of both parts
           «the smoothening of both parts before glueing them together»

Parallel cases of parasitic gaps are found in (51), where, as argued by Bennis & Hoekstra (1984), movement of the object from preverbal position to a position preceding the adjunct is required in order to license the parasitic gap.

(51) a.   ik heb *die boeken* [zonder *e* in te kijken] *e* teruggebracht
           I have those books [without into to look] back-brought

      b.   ik heb *de beide delen* [alvorens *e* aan elkaar te plakken] *e* eerst glad gemaakt
           I have both parts [before to each other to stick] first smooth made

The simplest theory would therefore hold that the parasitic gaps in (50) are equally licensed by movement. There are two options, then: the relevant movement is again a case of leftward NP-shift, parallel to what we see in (51), or the movement relates directly to the post-infinitival *van*-NP. It turns out that we can provide an argument in favor of the first position, thereby strengthening the particular analysis of nominalizations that I am about to present.

The argument is based on the behavior of infinitival nominalizations under the so-called third construction, cf. Den Besten & Rutten (1989). Dutch infinitival

complements either undergo V-raising, as in (52a) featuring the infinitive-pro-participle (IPP) effect, i.e. that an infinitive occurs where a participle is expected, or extraposition, as in (52b), according to the standard analysis of Evers (1975). Extraposed complements may be optionally introduced by the prepositional complementizer *om*, depending on the matrix verb. In (52b), then, the infinitival complement is extraposed. Den Besten & Rutten (1989) modified the standard analysis, by pointing out that there is a third alternative (hence third construction), in which no verb raising occurs, even though less than the entire infinitival clause is shifted to the right of the governing verb. This third construction is illustrated in (52c). There are two features of this example which are relevant: the matrix verb lacks the IPP-effect, which is now considered an exclusive property of verb raising constructions, and the optional *om* is obligatorily absent. The analysis Den Besten & Rutten (1989) propose is that the object NP is first moved out by the rule of leftward NP-adjunction, after which the remnant of the infinitival clause is extraposed. In (52d), we can see that this remnant may be more than a single verb. The example also illustrates the impossibility of IPP in the third construction.

(52) a.   dat ik die boeken heb proberen te lezen
         that I those books have try+INF to read

   b.   dat ik heb geprobeerd [(om) *die boeken* te lezen]
         that I have tried those books to read

   c.   dat ik *die boeken* heb geprobeerd (*om) te lezen
         that I those books have tried to read

   d.   dat ik *die boeken* heb geprobeerd/*proberen (*om) *in de kast te zetten*
         that I those books have tried/try+INF in the bookcase to put

   e.   het proberen (*om) in de kast te zetten van *die boeken*
         the try-INF in the bookcase to put of those books

   f.   het proberen (om) *die boeken* in de kast te zetten

Relevant for our purposes is the infinitival nominalization in (52e)[6]. The construction bears the signature of the third construction in that the element *om* is obligatorily absent. This is not a general feature of nominalizations, as the grammatical example in (52f) shows. Note that the appearance of the *van*-NP in (52e) is at first sight surprising, as it is the object of the non-nominalized verb *zetten*.
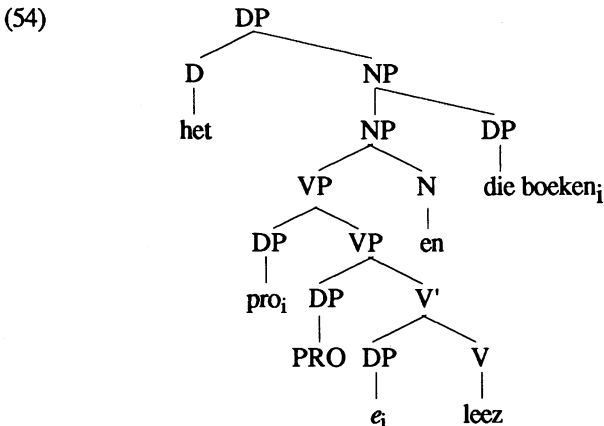
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[6] This example was brought to my attention by Sjef Barbiers and Jan Voskuil.

Combining these observations, then, the most likely analysis is that we are dealing with a nominalization of the third construction, i.e. of (52d), in which the NP *die boeken* has been scrambled out of the infinitival complement.

This conclusion can even be further supported by the contrast in (53): the parasitic gap in the adjunct preceding the nominalized infinitive is dependent on both the absence of *om* and the occurrence of the embedded object in a *van*-PP:

(53) a. het [zonder *e* ingekeken te hebben] wensen (*om) terug te geven van
           die boeken
           the without into looked to have with (for) back to give of those books

      b. *het [zonder *e* ingegekeken te hebben] wensen (om) *die boeken* terug
           te geven

The relationship between the *van*-NP and the argument position in the projection of the verb is less clear. I therefore assume, without further motivation, that the argument in the verbal projection is realized as an empty pronominal, identified by the *van*-NP, much in the same way as in resumptive pronoun constructions. This leads us to the analysis of nominal infinitives given in (54). The nominal infinitival phrase as a whole is a DP, which is consistent with its external distribution. The determiner *het* takes an NP-complement, headed by *en*. The *van*-NP is adjoined to this NP; *en* itself takes a VP-complement (or potentially a higher functional projection, an issue that would take me too far afield to discuss here). Its subject is PRO, while the object of the verb is scrambled to a VP-adjoined position.

(54)

```
                    DP
                 ╱      ╲
               D          NP
               |        ╱    ╲
              het      NP      DP
                     ╱   ╲      |
                   VP     N   die boeken_i
                  ╱  ╲    |
                DP    VP  en
                |    ╱  ╲
              pro_i DP    V'
                    |    ╱  ╲
                   PRO  DP    V
                        |     |
                        e_i   leez
```

Returning to the examples in (48), then, it will be clear that these examples are not at all problematic for the SC-approach to secondary predication in general, nor to the generalization concerning the prohibition against nominalization: the post-infinitival NP is not a direct argument of a nominalized complex predicate; rather, the subject of the SC has been scrambled to a VP-adjoined position, as in (54).

7. Conclusion

In this paper I have argued that the notion of subject is a purely syntactic notion, which only indirectly relates to thematic structure. The syntactic subject is always related to a thematic position internal to a lexical projection. This relationship is a transformational one: the argument is moved from its position inside the projection of the lexical predicate to the syntactic subject position. This movement aspect of the relationship is supported by the distribution of floated quantifiers. The notion of syntactic subject, then, is restricted to specifiers of functional projections. We can think of these functional categories as the elements providing the syntactic framework within which arguments of lexical predicates are realized. The traditional subject, i.e. [SPEC,IP], is not unique in this respect. We equally find such syntactic subjects in small clauses, i.e. clauses without an independent tense, as well as in CPs, under the condition that the NP in the specifier agrees with its head.

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Références

ABNEY, S. (1986) «The English noun phrase in its sentential aspect» diss., MIT.

BACH, E. (1979) «Control in Montague grammar», *Linguistic inquiry*, n° 10, pp. 515-532.

BAKER, M., K. JOHNSON & I. ROBERTS (1989) «Passive arguments raised», *Linguistic inquiry,* n° 20, pp. 219-251.

BELETTI, A. (1982) «On the anaphoric status of the reciprocal construction in Italian», *TLR,* vol. 2, n° 2, pp. 101-138.

BENNIS, H. & T. HOEKSTRA (1984) «Gaps and parasitic gaps», *TLR,* vol. 4, n° 1, pp. 29-88.

BENNIS, H. & T. HOEKSTRA (1989) «Why Kaatje wasn't heard sing a song», in D. Jaspers & al. (réd), *Sentential complementation and the lexicon,* Dordrecht, Foris, pp. 21-40.

BEUKEMA, F. & T. HOEKSTRA (1984a) «MET met PRO of MET zonder PRO», *De Nieuwe Taalgids,* vol. 76, n° 6.

BEUKEMA, F. & T. HOEKSTRA (1984b) «Extraction from WITH-constructions», *Linguistic inquiry,* vol. 15, n° 4.

CARRIER, J. & J. RANDALL (1989) «From conceptual structure to syntax», paper presented at the Groningen conference on Knowledge and Grammar.

CHOMSKY, N. A. (1965) *Aspects of the theory of syntax,* Cambridge, Mass., MIT Press.

CHOMSKY, N. A. (1981) *Lectures on government and binding,* Dordrecht, Foris.

CHOMSKY, N. A. (1986) *Barriers,* Cambridge Mass., MIT Press.

Den BESTEN, H. & J. RUTTEN (1989) «On verb raising, extraposition and free word order in Dutch», in D. Jaspers & al. (réd.), *Sentential complementation and the lexicon,* Dordrecht, Foris.

Den BESTEN, H. & G. WEBELHUTH (1987) «Remnant topicalization and the constituent structure of VP in the Germanic SOV languages», paper presented at the GLOW conference, Venise.

Den DIKKEN, M. (1990) «Particles and the dative alternation», *Proceeding of the Junior Conference in Linguistics,* n° 2, Université de Leiden.

DOETJES, J. (1991) *L-tous. A unifying account of quantifier float in French,* MA-thesis, Université de Leiden.

EVERS, A. (1975) *The transformational cycle in Dutch and German,* Bloomington, IULC.

FABB, N. (1987) «English affixation is constrained only by selectional restrictions», *NLLT*, n° 6, pp.527-539.

GUASTI, T. (1988) «La pseudorelative et les phénomènes d'accord», *Rivista di grammatica generativa,* n° 13, pp. 35-57.

GUÉRON, J. (1986) «Inalienable possession, lexical chains and PRO-inclusion», in J. Guéron, H. Oberhauer & J.-Y. Pollock (réd.), *Grammatical representation,* Dordrecht, Foris.

GUÉRON, J. & T. HOEKSTRA (1990) «Phrases réduites et chaînes temporelles», in H. Obenhauer & A. Zribi-Hertz (réd.).

HOEKSEMA, J. (1991) «Complex predicates and liberation in Dutch and English», *Linguistics and Philosophy* n° 14, pp. 661-710.

HOEKSTRA, T. (1984) *Transitivity,* Dordrecht, Foris.

HOEKSTRA, T. (1986a) «Nominalization and inheritance», *Linguistics,* n° 24, pp. 549-584.

HOEKSTRA, T. (1986b) «Passives and participles», in F. Beukema & A. Hulk (réd.), *Linguistics in the Netherlands 1986,* Dordrecht, Foris, pp. 95-104.

HOEKSTRA, T. (1988) «Small clause results», *Lingua,* vol. 74, n°s 2 et 3.

HOEKSTRA, T. (1991) «Aspect and theta theory», in I. Roca (réd.), *Thematic Structure,* Berlin, Mouton/De Gruyter.

HOEKSTRA, T. (in prep a) «To have to be dative», paper presented at the 7th Workshop on Comparative Germanic syntax, Stuttgart.

HOEKSTRA, T. (in prep b), *Small clauses everywhere.*

HOEKSTRA, T. & I. ROBERTS (1989) «Middles in Dutch and German», paper presented at the Groningen conference on Knowledge and grammar.

HOLMBERG, A. (1986) *Word order and syntactic features,* diss., Université de Stockholm.

HORNSTEIN, N. & D. LIGHTFOOT (1987) «Predication and PRO», *Language,* n° 63, pp. 23-52.

JAEGGLI, O. (1982) *Topics in Romance syntax,* Dordrecht, Foris.

JAEGGLI, O. (1986) «Passive», *Linguistics inquiry,* vol. 17.

KAYNE, R. (1981) «Unambiguous paths», in R. May & J. Koster (réd.), *Levels of syntactic representation,* Dordrecht, Foris.

KAYNE, R. (1984) *Connectedness and binary branching,* Dordrecht, Foris.

KAYNE, R. (1986) «Principles of particle constructions», in J. Guéron, H. Oberhauer & J.-Y. Pollock (réd.), *Grammatical representation*, Dordrecht, Foris.

KOSTER, J. (1978) «Why subject sentences don't exist», in S. J. Keyser (réd.), *Recent transformational studies in European languages*, Cambridge, Mass., MIT Press.

MULDER, R. (1990) «An empty head for object control», NELS 1991.

PESETSKY, D. (1991) Zero-syntax, ms. MIT

POLLOCK, J.-Y. (1989) «Verb movement, UG and the structure of IP», *Linguistic inquiry, n° 20*.

RAPPAPORT, M. & B. LEVIN (1991) «Is there evidence for deep unaccusativity in English?», ms. Bar Ilan University/Northwestern University.

RIZZI, L. (1986) «Null objects in Italian and the theory of pro», *Linguistic inquiry*, vol. 7, n° 4.

RIZZI, L. (1990) *Relativized minimality*, Cambridge, Mass., MIT Press.

ROBERTS, I. (1985) diss USC, published in 1987

ROBERTS, I. (1987) *The representation of implicit and dethematized subjects*, Dordrecht, Foris.

SAFIR, K. (1983) «On small clauses as constituents», *Linguistic inquiry*, n° 14, pp. 730-735

SIMPSON, J. (1983) «Resultatives», in L. Levin, M. Rappaport & A. Zaenen (réd.), *Papers in lexical functional grammar*, Bloomington, IULC.

SPORTICHE, D. (1988) «A theory of floating quantifiers and its corrollaries for constituent structure», *Linguistic inquiry,vol. 19*, n° 3, pp. 425-449.

STOWELL, T. (1981) Origins of phrase structure, diss. MIT

STOWELL, T. (1991) «Small clause restructuring», in R. Freidin (réd.), *Principles and parameters in comparative grammar*, Cambridge, Mass., MIT Press, pp. 182-218

TRAVIS, L. (1984) Parameters and effects on word order, diss. MIT

WASOW, T. (1977) «Transformations and the lexicon», in P. Culicover, T. Wasow & A. Akmajian (réd.), *Formal syntax*, New York, Academic Press, pp. 327-360.

WILLIAMS, E. (1980) «Predication», *Linguistic inquiry*, vol. 11, n° 1.

WILLIAMS, E. (1981) «Argument structure and morphology», *TLR*, n° 1, pp. 81-114

WILLIAMS, E. (1983) «Against small clauses», *Linguistic inquiry*, vol. 14, n° 2.