# Approaches to the Structure of English Small Clauses

Vivien Tomacsek

## 1 Introduction[1]

The topic of small clauses did not become a target of much research until the 1980s — before that, predicative [NP XP] sequences occurring after main verbs were not really tackled by linguists. Within the Government and Binding framework, two main opposing ideas were formulated concerning small clauses, but there is disagreement from many aspects even among those working in the same theoretical framework.

Small Clause theorists claim that the [NP XP] string in [V NP XP] constructions should be considered a single constituent; however, there has been no conclusion on the categorial status of small clauses. Various proposals have been made to solve the issue and provide a synthesised resolution to this problematic issue; however, none of them has been accepted entirely yet.

The general aim of this paper is to demonstrate the complexity of the small clause construction analysed in frameworks which rely mostly on the Government and Binding and earlier frameworks, before the rise of Minimalism. The thesis attempts to represent both the theory that supports the existence of small clauses and the one that rejects it in chapter 2. This part will also argue for the acceptability of the clausal interpretation of the postverbal [NP XP] strings where the NP and the XP are in a subject-predicate relationship, and then chapter 3 will review the major proposals for the categorial status of small clauses, providing counterarguments for each. Finally, chapter 4 will summarise the most important points of the paper.

## 2 Previous approaches to small clauses

Before the emergence of Chomsky's Government and Binding Theory (GB) (1981), during the period of the frameworks based on the Standard Theory (about 1957–1970) and the Extended Standard Theory (1970–1980), small clauses had received very little attention. Since the rise of the GB framework, they have been dealt with more deeply; however, there is no agreement on their analysis. Linguists' opinions about these structures are very diverse, even among those who work in the same theoretical framework. Small clauses are associated with the postverbal [NP XP] strings, i.e. strings that follow a matrix verb, where the NP and the XP have a subject-predicate relation, and the X can be N, P, A or V (Aarts 1992).

Within the framework of Government and Binding Theory (Chomsky 1981), two major proposals have been made in connection with the interpretation of [NP XP] sequences occurring after a verb. On the one hand, Small Clause theorists suggest that the mentioned string should have a clausal interpretation, since the NP and the XP are in a subject-predicate relationship (Stowell 1981, 1983; Chomsky 1981, Safir 1983). On the other hand, those who favour Predication Theory claim that the NP and the XP are two distinct complements of the main verb; therefore they do not form a single constituent (Williams 1980, 1983).

In section 2.1, proposals made preceding Government and Binding Theory will be summarised; section 2.2 will introduce Small Clause Theory; in section 2.3, Williams's (1980, 1983) Predication Theory will be examined; and finally, section 2.4 will sum up the most common arguments appearing in the literature in support of the existence of small clauses.

### 2.1 Earlier proposals

Before the GB-framework (Chomsky 1981), the earliest proposals approached the phenomenon differently. A sentence like (1) was analysed as a complex unit: *consider-intelligent* as a complex predicate and *John* as the object (Chomsky 1964 In: Chomsky 1986a).

(1)   I consider John intelligent.

So the analysis of (1) would be:

(2)   I consider-intelligent John.

This idea was not developed further (Aarts 1992), but it appeared in later works, for instance in Stowell (1988). Stowell (1988) argues for a similar head-to-head adjunction in small clauses, which takes place only at Logical Form (LF), and refers to it as 'restructuring'. In this paper, Stowell goes along with Chomsky's Logical Structure of Linguistic Theory (1975 In: Stowell 1988), where Chomsky also suggests the analysis in (2). However, such an analysis is problematic, because the main verb is unable to assign Case to the small clause subject.

The verbal version of (1) received far more interest among linguists (*I consider John to be intelligent*) (Aarts 1992). Rosenbaum (1967 In: Aarts 1992) proposed that some kind of raising takes place in such sentences: the postverbal NP from the subordinate clause raises to the matrix clause and becomes the direct object of the main verb, as shown in (3) (deep structure) and (4) (surface structure):

(3)   I [$_{VP}$ believe       [Tom to be a fool]]

(4)   I [$_{VP}$ believe Tom] [to be a fool]                                   (In: Aarts 1992: 10)


Rosenbaum termed it "Pronoun Substitution"; the name "Raising" was given to it later by Kiparsky and Kiparsky (1970 In: Aarts 1992). Aarts (1992) emphasises that by raising, the Raising-to-Object rule[2] is meant.

To account for the pairs *I consider John intelligent* and *I consider John to be intelligent*, some linguists, for example Stockwell, Schachter and Partee (1973 In: Aarts 1992), proposed the "*To be*-Deletion" rule, which has the effect of erasing the *to be* from the latter sentence and the result is a verbless subordinate clause of the former one.

## 2.2 Small Clause Theory

In the framework of Government and Binding Theory (Chomsky 1981), the supporters of Small Clause Theory accepted the existence of small clauses (SC). They insist that in the construction [V NP XP] the NP and the XP are in a subject-predicate relationship. The subject, in their view, is defined structurally, i.e. as the NP directly dominated by S (Safir 1983). As Chomsky (1986a: 91) points out, 'the main verbs appear to s-select (semantic

---

[2]Rasing-to-Object rule: when the subject of the subordinate clause raises to the matrix clause and becomes its direct object (Aarts 1992).

select) a proposition', so that the mentioned [NP XP] sequence 'should be some clauselike element'. Thus, the matrix verb assigns a propositional theta role to the [NP XP] string as a whole, rather than assigning two theta roles to two distinct arguments. Hence, the above mentioned string forms a single constituent and has to have a clausal interpretation, even if this clause is tenseless. Linguists who are for the SC Theory, such as Stowell (1981, 1983), Chomsky (1981, 1986b), Safir (1983), etc., have listed several arguments to support their claim that small clauses exist (cf. section 2.4). However, there has been no consensus reached related to the categorial status and the internal structure of SCs in the literature yet. Many proposals have been made for these; the most important ones are detailed in chapter 3. Before dealing with the phenomenon of small clauses in greater depth, section 2.3 will elaborate on the analysis which claims that SCs are not propositions in their own right.

### 2.3 An opposing approach: Predication Theory

Against Small Clause Theory, Williams (1980, 1983) proposed the so-called Predication Theory, which approaches the postverbal [NP XP] part from a different perspective.

According to Williams (1980), there is a predication relation between an NP inside the matrix clause and another element, i.e. the predicate (In: Aarts 1992), which is marked by coindexing by applying the rule of predication:

(5)   Coindex NP and X.                                                      (Williams 1980: 206)

The rule of predication only applies if the condition in (6) is satisfied:

(6)   The C-Command Condition on Predication:
      If NP and X are coindexed, NP must c-command X or a variable bound to X.

                                                                             (Williams 1980: 206)

About the possible categories of the predicate, Williams claims that it can be an AP, an NP, a PP, a VP or even S and S'. The environments of predication can be of two kinds: grammatically governed or thematically governed. The grammatically governed cases are as in (7):

(7)   (a) NP VP

    (b) NP VP X

    (c) NP be X                                          (Williams 1980: 207)

According to (7), the coindexing would work as follows:

(8)   (a) $John_i$ $died_i$

    (b) $John_i$ left $nude_i$

    (c) $John_i$ is $sick_i$                                          (Williams 1980: 207)

For thematically governed cases the example is in (9).

(9)   John gave Bill the $dog_i$ $dead_i$                              (Williams 1980: 207)

It can be seen from the coindexing in (9) that *dead* is predicated of *the dog* (the theme of *give*) but not *Bill*; however, both *Bill* and *the dog* c-command *dead* (Williams 1980). Thus, the predicate inside the VP (*dead*) and the theme (*the dog*), which is usually the direct object, enter into a relation (In: Aarts 1992). Therefore, the rule can be generalised as in (10):

(10)   If X is in the VP, then X is predicated of the theme of V.        (Williams 1980: 207)

By coindexing the mentioned elements, Williams (1980) introduces a new level of representation, Predicate Structure (PS). PS is a distinct level of representation derived from surface structure by applying the rule of predication in (5). Thus, in (9) *the dog* is a direct object at surface structure but is a subject at the PS level, i.e. the subject of the predication relation with *dead*.

    The third characteristic of Predication Theory is the definition of subject, which is different from the one in Small Clause Theory. While Small Clause Theory states that 'All subjects are structural subjects' (Safir 1983 In: Williams 1983: 289), Predication Theory denies this claim. The other view on the definition of subject defines it as an external argument (Williams 1983).

(11) Subject as an external argument

The subject of a predicative phrase XP is the single argument of X that is located outside of the maximal projection of X.                                   (Williams 1983: 287)

In sum, the major difference between Small Clause Theory and Predication Theory is that they analyse the postverbal [NP XP] structure differently, as the examples in (12) demonstrate:

(12) (a) I [$_{VP}$ consider [$_{SC}$ John silly]]

(b)   I [$_{VP}$ consider [$_{NP}$ John] [$_{AP}$ silly]]                        (Safir 1983: 731)

(12a) serves as an example for the SC analysis and (12b) illustrates Williams's (1980, 1983) Predication Theory. As it can be seen from the sentences in (12), SC theorists consider *John silly* a single constituent, while Predication theorists as two distinct complements of the main verb. The subject in the two theories is defined in different ways; in SC theory it has a structural definition, that is, an NP dominated by S, as opposed to Predication Theory, where the non-structural subject is an external argument and is interpreted as a relation between an NP and any predicative phrases (Williams 1983). As Aarts (1992) points out, the relation between the subject and the predicate in Williams's view only holds at his newly introduced PS level due to coindexing, whereas the SC theory subject NP is a subject at all levels of representation. According to Williams (1983: 307), the difference between the two theories lies in the answer to 'the question "Which is the primitive notion, the subject-predicate relation or the clause?"'. Predication Theory takes the former, Small Clause Theory takes the latter as its basic notion.

## 2.4 On small clauses as constituents

In this section, the main reasons for the existence of small clauses will be summarised, according to Stowell (1983), Safir (1983), Radford (1988b) and Aarts (1992). They argue that in the [V NP XP] constructions the predicative [NP XP] sequence forms a unit in a sentence like *Peter considers Mary tall*, and inside the string the NP and the XP are in a subject-predicate relation, therefore *Mary tall* is interpreted as a clausal complement.

The first piece of evidence for the existence of small clauses as constituents can be captured with coordination. Consider (13a-c):

(13)   (a) I consider [this man an idiot]

    (b) I consider [that man a genius]

    (c) I consider [this man an idiot] *and* [that man a genius]          (Aarts 1992: 37)

Coordination is a test for structure, with the help of which constituents can be identified, as generally assumed (Newson et al. 2006). Hence the bracketed strings in (13c) have to be constituents with an equal status (Aarts 1992); however, it also has to be pointed out that coordination is not the most reliable test for equal status.

    The second piece of evidence is the possibility to have a nonreferential *it*-pronoun in the structure. See (14) as an example:

(14)   I consider it a beautiful day.                                    (Aarts 1992: 38)

In (14), *it* neither has semantic content, nor receives a theta-role from the matrix verb; therefore, it cannot be the direct object of *consider*. What is considered is not *it* but the proposition that it is a beautiful day. Thus, the main verb gives the propositional theta role to the whole sequence; hence, it has to be considered a clausal element in the structure. It is pointed out, however, that this supporting argument would be stronger if small clauses were grammatical with existential *there* as well, since that is also a semantically empty element, but a sentence like *\*I consider there a problem* seems to be syntactically wrong (Aarts 1992). Though Aarts does not mention the verbal counterpart of the previous example, it should be noted that the sentence *I consider there to be a problem* does seem to be grammatical, which could lend further support to the above argument including expletive *it*.

    The third reason for considering predicative [NP XP] strings small clauses is the possibility to have sentential adverbials like *perhaps* or *probably* within the structure:

(15)   I thought [it perhaps a pity] at that time, but his motivation was pessimism about academic job prospects.                                    (Aarts 1992: 45)

The bracketed sequence can be paraphrased in the same environment as in (16a-c):

(16)   (a) [it was perhaps a pity]

    (b)  [perhaps it was a pity]

(c)  [it was a pity perhaps]                                    (Aarts 1992: 46)

Thus, the presence of the sentence adverbial in (15) provides further evidence for the clausal status of the examined sequence (Aarts 1992).

The fourth argument for the existence of small clauses is that they can not only occur as complements to verbs, but, in fact, in further four types of environments: independently, as adjuncts, as complements to prepositions and as subjects (Aarts 1992), as illustrated by the examples in (17a-d), respectively.

(17)  (a) A: I think Bronsky is such a clever author.

B: What! [$_{SC}$ Bronsky clever]?! Ha!    (Akmajian 1984 In: Radford 1988b: 330)

(b) [$_{SC}$ PRO$_i$ a journalist by profession], Mr. Cosmos$_i$ has written an excellent book on the behaviour of British tourists on Portuguese beaches.          (Aarts 1992: 39)

(c) With [$_{SC}$ Dick Cavett on television], what's the point in going out?

(Radford 1988b: 328)

(d) [$_{SC}$ Workers angry about the pay] is just the sort of situation that the ad campaign was designed to avoid.                          (Safir 1983: 732)

Of these, the example that is relevant for the purposes of the present paper and the one that has received more attention in the literature is a structure like (17d), where the SC appears as a subject. Stowell (1981) assumes that phrasal categories may occur in subject position, but only in copular or Raising constructions. Safir (1983), according to Stowell (1981), suggests that those phrases which have this ability are so-called honorary NPs, in his terminology, and he adds the observation that small clauses are honorary NPs in this respect, because they may appear as subjects, as the example in (17d) proves.

The fifth piece of evidence Aarts (1992) lists is the assumption that the postverbal NP in the [V NP XP] construction is syntactically a subject, which can be captured by means of floating emphatic reflexives. See examples (18a-b):

(18)  (a) The president is coming himself.

(b)  *We put the president in our car himself.

(Napoli 1987 In: Radford 1988b: 325)

According to Napoli (1987 In: Radford 1988b), floating emphatic reflexives need a subject antecedent. If this is so, then *the president* in (19) has to be a subject, i.e. the subject of the small clause.

(19)  I consider [the president entirely responsible himself]

(Napoli 1987 In: Radford 1988b: 325)

As additional support for the above claim, Radford (1988b) mentions two other tests of subjecthood. He states that, according to Postal (1974 In: Radford 1988b), *not*-initial and *alone*-final NPs can be found only in subject position. If this assumption is true, the postverbal NPs in (20) and (21) have to function as subjects.

(20)  I consider [*not many people* suitable for the post]
(21)  I consider [*Gronzmeyer alone* responsible for the collapse of Arc Pair Grammar]

(Postal 1974: 95–100 In: Radford 1988b: 326)

If the italicised phrases are subjects, then the bracketed sequences should be clauses. In (22) and (23) *not*-initial and *alone*-final phrases are not in subject position, hence the ungrammaticality of the sentences.

(22)  *I bought kangaroos from *not many Australians*.
(23)  *I believe *that alone*.                              (Radford 1988b: 326)

Finally, let us consider Stowell's (1983) argument related to the subcategorisation of verbs. He claims that only syntactic constituents are subcategorised for and they are also assigned theta roles by the main verbs. This observation can be an account for the constituenthood of small clauses, since they receive the propositional theta role, hence are syntactically constituents.

In this section, the main arguments were summed up to support the claim that verbs like *consider* do not subcategorise for two separate complements, but rather for a proposition; consequently, the postverbal [NP XP] strings should be labelled to have a clausal status (Aarts 1992).

Taken the above discussion into consideration, I find the arguments of Small Clause Theory sounder and more convincing than the ones in favour of Predication Theory; therefore, in this thesis Small Clause Theory is preferred. If the bracketed sequences in (24a) and (24b) are clauses, then the one in (24c) should also be a proposition.

(24) (a) I consider [that Mary is pretty].

    (b) I consider [Mary to be pretty].

    (c) I consider [Mary pretty].

After synthesising the previous approaches to small clauses and the reasons for their existence, in chapter 3, the proposals for their categorial status and internal structure will be presented.

## 3 The categorial status of small clauses

Small clause phenomena are considered to be a very controversial issue in linguistics, and, as mentioned in chapter 2, there is no consensus about the analysis of SCs even among those who work in the GB framework. Linguists who accept the existence of small clauses as constituents have very different opinions about their categorial status and internal structure, and no unified analysis has been proposed so far (Aarts 1992).

In the following sections, the most influential proposals in the literature related to the categorial status of SCs will be presented, such as Stowell (1981, 1983), Chomsky (1981, 1986b), Hornstein and Lightfoot (1987), Radford (1988a, 1988b), Aarts (1992), Haegeman (1994), and Haegeman and Guéron (1999).

### 3.1 Stowell (1981, 1983)

### 3.1.1 Small clause as an XP

The first major proposal in connection with the categorial status and the internal structure of small clauses within the Small Clause Theory was made by Stowell (1981).

Stowell (1981) argues that small clauses are maximal projections, i.e. are of the form XP. The head of the SC is the predicate X, hence small clauses are endocentric constituents and are the X-bar projections of their predicates. It is stated that all maximal projections may

have subjects, therefore SCs conceived of as maximal projections can also contain them. The subject NP of a small clause is in the Specifier position of XP. Thus, the representations would be as in (25) and (26):

(25) [$_{XP}$ [$_{Spec}$ NP] [X']]                                    (In: Aarts 1992: 171)

(26) Peter considers [$_{AP}$ [$_{Spec=NP}$ Mary] [$_{A'}$ nice]]

In (26) *Mary* is the subject NP of the small clause, *nice* is the predicate, and *Mary nice* together is the small clause, i.e. the phrasal expansion of the predicate.

Stowell (1981) assumes that the matrix verb of the sentence imposes subcategorisation restrictions on its small clause complement, i.e. different verbs select different kinds of small clause as complements. The type of the small clause is determined by the category of its predicate; according to that, the SC complement can occur with an Adjectival Phrase, a Noun Phrase, a Prepositional Phrase or a Verb Phrase. Stowell (1981) lists the following examples to illustrate his claim with adjectival, verbal and prepositional small clauses, and an example for nominal ones is added taken from Aarts (1992):

(27) (a) I consider [$_{AP}$ John very stupid].

    (b) *I consider [$_{PP}$ John off the ship].

(28) (a) We feared [$_{VP}$ John killed by the enemy].

    (b) *We feared [$_{AP}$ John very stupid].

(29) (a) I expect [$_{PP}$ that sailor off the ship (by midnight)].

    (b) *I expect [$_{AP}$ that sailor very stupid].                     (Stowell 1981: 257–259)

(30) (a) I declare [$_{NP}$ Mary the winner].

    (b) *I declare [$_{PP}$ Mary off the ship].                              (Aarts 1992: 21)

It is argued that since *consider* is grammatical with an AP but ungrammatical with a PP complement, *expect* is grammatical with a PP but not with an AP, etc., it is obvious that the main verb is sensitive to what occurs inside the small clause.

According to Stowell (1983), the categorial status of SCs as AP, VP, PP and NP should be accepted, because if the categorial status was supposed to be S, the verb would be 'indifferent' to the categorial status of the SC predicate. However, as shown in (27)-(30), that is not the case. Therefore, he assumes that 'small clauses are X-bar projections of the lexical

predicates that they contain' and 'the verb is simply subcategorising for the category of small clause as a whole' with the syntactic status of an AP, VP, PP or NP (Stowell 1983: 301). If this is so, Stowell (1983) suggests that the subject position has to be generalised across syntactic categories. Hence, the AP, VP, PP and NP complement phrases in (27a), (28a), (29a) and (30a), respectively are semantic arguments of the main verb, and their subjects are in Specifier position (Stowell 1983 In: Aarts 1992). Stowell's (1983) assumption sounds somewhat contradictory, exactly because on the one hand, he proposes that the syntactic status of SCs is AP, VP, PP or NP, on the other hand, he assumes that the verb subcategorises for small clauses as a whole.

In sum, in Stowell's (1981, 1983) view, small clauses have the form of XP, i.e. maximal projection; the predicate phrase is an X' projection, and the subject of the small clause is in Specifier position, see (31):

(31)

      X''=XP
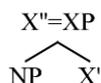
    NP   X'                                                (In: Radford 1988b: 517)

### 3.1.2 Criticism

Though Chomsky (1981) adopts Stowell's (1981, 1983) model (cf. section 3.2.1), it has received much criticism in the literature. However, it was clearly the most dominant analysis of SCs even up to the beginning of the 1990s (Aarts 1992).

Hornstein and Lightfoot (1987) criticise Stowell for three 'unnecessary' and two 'unacceptable' complications. In their view, it is unnecessary to alter the Projection Principle, though in Stowell's (1981, 1983) analysis it should be, because '*Susan in New York* is a PP at S-structure but is treated as a proposition at LF, and propositions at LF are normally identified as S' (Hornstein—Lightfoot 1987: 32). Secondly, since Stowell's SCs are XPs, maximal projections should be transparent to government[3], otherwise the subject of the small clause, which is directly dominated by the XP, would not be able to receive Case from the left and be

---

[3]      The version of the definition of government used is as follows: 'α properly governs β iff α θ-governs, Case-marks, or antecedent-governs β' (Chomsky 1986b: 22).

governed. Thirdly, a sentence like *I want [PP him all the way off my ship]* would contain two elements in the Specifier position of the PP, which is obviously a wrong analysis.

The two reasons for the unacceptability of Stowell's model pointed out by Hornstein and Lightfoot (1987) are even more serious. First, they argue against Stowell's (1981) statement about the main verbs' subcategorisation properties. As noted, the ungrammaticality of (27b) does not come from the subcategorisation restriction of *consider*, but is due to semantics. If we change the context, (27b) can become grammatical, as in (32):

(32) As soon as he sets foot on the gangplank, I'll consider John off my ship.

(Hornstein—Lightfoot 1987: 33)

Additionally, in Stowell (1983) it is also noted that the (b) sentences in (27)-(30) become grammatical if we insert *to be* before the predicates in the bracketed sequences. By this suggestion, the support given to subcategorisation restrictions is weakened.

The second unacceptable consequence for Hornstein and Lightfoot (1987) is that in (33) the verb *consider* subcategorises for an NP whose head is a maximal projection.

(33)   I consider [NP [NP John] [NP a friend]]                    (Hornstein—Lightfoot 1987: 33)

Such an analysis would require the phrase structure rules to be amended.

Radford's (1988b) observation is similar to the previous one. Considering a sentence like (26), where the predicate phrase is a single-bar projection of the head and the SC is the double-bar projection of it (cf. (31)), it is concluded that Stowell's (1981) analysis cannot be right. For one thing, according to Stowell, the predicate phrases of small clauses are not maximal projections but X-bar constituents, which seems to be unlikely for Radford (1988b). To support the argument, the examples in (34) are given:

(34) (a) I've always considered [SC John [NP *THE best player in the team*]]

   (b)   I've never considered [SC John [NP *MY best friend*]]          (Radford 1988b: 517)

It is pointed out that in (34), 'the italicised predicate phrases contains a capitalised determiner, and since the function of determiners is to expand an X-bar (…) into a maximal projection,

then it seems clear that the predicate phrase must be a maximal projection' (Radford 1988b: 517).

However, if we consider the current reanalysis of Nominal Phrases as Determiner Phrases, Stowell could be defended, since under the DP analysis of the small clause in (33), the determiner would not be generated in a Specifier but in a head position taking an NP complement, which is the predicate of the small clause. That way the D head and the NP complement together would form a bar-level constituent, namely D', and the subject could be assumed to sit in the Specifier position of the DP. So, the DP-analysis could provide a way round the criticism related to the phrasal status of the predicates in nominal small clauses.

## 3.2 Chomsky (1981, 1986b)

### 3.2.1 Adopting Stowell's (1981) assumptions

Chomsky (1981) also argues for the existence of small clauses by saying that every clausally interpreted construction at LF must be a constituent in syntax. As for the analysis, Stowell's (1981) model is adopted with the alternation that SCs are not XPs.

In Chomsky (1981), small clauses are analysed with the help of two assumptions: (I) in the lexicon, there are uniform entries, and (II) the categorial component lacks relevant rules related to these issues.

(35) John considers i) the problem

               ii) that S

               iii) Bill to be foolish

               iv) Bill foolish

               v) it impossible that S                    (Chomsky 1981: 106)

As the data show in (35), *consider* takes an NP or a clausal complement, as in (i)-(iii). By the first assumption, (iv) and (v) also have to be clausal complements, and 'by the second assumption of lack of structure in the categorial component, the underlying deep and surface structures of (iv) and (v), projected from the lexicon, should be *John considers [CLAUSE]*, as in (ii) and (iii)' (Chomsky 1981: 106). For the embedded subject to be governed (cf. footnote 2)

and Case-marked, Chomsky (1981) assumes that S'-deletion is obligatory for small clauses. Thus, the principle is as follows:

**(36)**  Small clauses are not maximal projections.                  (Chomsky 1981: 107)

If they were maximal projections, they would be unable to receive Case and be governed, since the maximal projection of any category is a barrier to such mechanisms.

    Instead of labelling a small clause to be an XP, Chomsky (1981) supposes that in (37), α is some projection of the adjective but not maximal.

**(37)**  They consider [$_\alpha$ each other foolish]                  (Chomsky 1981: 169)

However, he does not specify the projection. Thus, he considers α to be A[i] and simply calls it A\*. Generally speaking, the small clause is some projection of its head and has the label X\*.

    In the *Barriers*–model (1986b), Chomsky modifies the earlier assumptions in connection with government (cf. footnote 2) and Case-assignment of the subject. It is suggested that XP is transparent to government if it is L-marked (lexically-marked), i.e. theta-governed. The rule of theta-government is that 'X theta-governs Y if and only if X governs Y and X theta-marks Y' (Chomsky 1986b In: Stowell 1988: 188). As a consequence, the restriction on small clauses that they must not be maximal projections is cancelled in Chomsky (1986b).

    In the new model, Chomsky (1986b) proposes that small clauses are of the form XP but are analysed as adjunction structures, as the configuration in (38) illustrates.

**(38)**

```
        X"=XP
        /\
    NP    X"=XP
```
                                                (In: Radford 1988b: 518)

As (38) shows, both the small clause and the predicate phrase are maximal projections. By means of this new analysis, the SC is permitted to be a maximal projection, but at the same time its predicate is not an X-bar constituent, as in Stowell (1981, 1983). Given the assumption that L-marked maximal projections are not barriers to government (and SCs

satisfy this condition), there is no longer a problem for the SC subject to receive Case from the matrix verb.

### 3.2.2 Criticism

Radford (1988b) criticises Chomsky's (1986b) proposal that the structure of the small clause is [$_{XP}$ NP XP] for having 'problems of overgeneration, i.e. the generation of lots of structures which are in fact ungrammatical' (Radford 1988b: 519). Radford points out that assigning the categorial status of XP to both the overall small clause and to its predicate phrase can result in ill-formed sentences, such as (39b). *Consider* subcategorises for an AP small clause complement, but given Chomsky's assumption, both (39a) and (39b) could be generated.

**(39)** (a) I consider [$_{AP}$ John [$_{AP}$ highly intelligent]]

    **(b)** *I consider [$_{AP}$ highly intelligent]                    (Radford 1988b: 518)

### 3.3 Hornstein and Lightfoot (1987)

### 3.3.1 Small clauses with INFL$_0$

According to Hornstein and Lightfoot (1987), whose criticism of Stowell (1981, 1983) is elaborated in section 3.1.2, the small clause is not of the form of XP but S. The S contains a zero INFL node, INFL$_0$, which is the head of the small clause. Their SC analysis is as in (40):

**(40)** [$_{SC(=S)}$ NP INFL$_0$ XP]

    where X = N, A or P                                        (In: Aarts 1992)

When INFL is marked for tense, i.e. has the feature [± tense], the complement is a VP. But if INFL is empty, it may take NP, AP or PP complements. As Hornstein and Lightfoot (1987) remark:

> INFL$_0$ – which has no morphological realisation, and hence no *to* – can be followed by any maximal category except VP; and INFL$_0$ occurs only where S' (i.e. INFL'') is absent. (…) [S]mall clauses with INFL$_0$ heads occur only in governed positions, hence inside S. (Hornstein—Lightfoot 1987: 35)

To summarise this proposal, there are two kinds of INFL node. One is the 'ordinary' INFL marked for [±tense] for VP complements (as in a sentence like *John INFL [$_{VP}$ ate the meat]*),

but since there can be AP, PP or NP complements of INFL as well, as in small clauses, another INFL is required, the zero INFL, which has the ability to introduce other than verbal elements, namely AP, PP or NP in small clauses. Hornstein and Lightfoot do not discuss verbal small clauses.

### 3.3.2 Criticism

Aarts (1992) criticises Hornstein and Lightfoot (1987) for complicating the theoretical framework by introducing a new 'kind' of INFL. The two types of INFL take different complements: the regular INFL a VP complement, the zero INFL AP, NP or PP complements. According to Aarts (1992), this is an unnecessary complication, because as it is generally accepted across the theory, functional heads subcategorise for only one type of complement.

Another problem with the present analysis is that it specifies small clauses to be neither finite, nor non-finite (Aarts 1992). However, clauses must be marked for the feature [±finite] in English.

The final doubt about the proposal of Hornstein and Lightfoot (1987) is in connection with the agreement relation between the subject and the predicate of the small clause. The evidence for the necessity for such a relation can be captured in (41):

**(41)** *They considered [$_{SC}$ the man fools].                              (Aarts 1992: 178)

Since in (41), *the man* is singular but *fools* is plural, the SC structure is ungrammatical (Aarts 1992). It is suggested that this agreement relationship has to be present, but given that the zero INFL node is an empty element it cannot provide any agreement for the SC subject and predicate (Aarts 1992) (cf. section 3.5.1). However, as we will see in section 3.6.1, Haegeman (1994) and Haegeman and Guéron (1999) find evidence for the existence of the person and number agreement in adjectival SCs proved by examples from French.

**3.4 Radford (1988a, 1988b)**

**3.4.1 Small clauses as exocentric phrases**

Radford (1988b) claims that small clauses are simple subject-predicate structures with the form of [NP XP]. By that assumption, SCs lack both complementisers and inflections.

 As small clauses may not contain a C node, they cannot bear the status of S-bar. This suggestion is proved by the example in (42):

(42)  *I didn't consider [*that/if/whether/for* it suitable].          (Radford 1988b: 327)

Given that complementisers are positioned in C, the example in (42) is obviously ungrammatical because of the presence of any of the overt complementisers. Consequently, small clauses are not S-bar constituents (Radford 1988b).

 The absence of the COMP node is also important for Case-assignment. A phrase with C being a barrier to government (cf. footnote 2), it would be impossible for the SC subject to receive Case (Radford 1988b).

 According Radford (1988a, 1988b), small clauses not only lack a COMP node, but also an INFL node. To support this idea, the examples in (43) are provided:

(43) (a) *I consider [your attitude *to* deeply offensive].
   (b)  *I consider [your attitude *can* deeply offensive].          (Radford 1988b: 327)

(43a) and (43b) are syntactically wrong structures — the former because of the infinitive particle *to*, the latter due to the containing modal auxiliary. Both mentioned elements would be I heads, therefore the implication of the data is the obligatory absence of inflections in small clauses (Radford 1988a, 1988b). If this is so, in Radford's view SCs do not have the S status either.

 By denying the presence of inflections in small clauses, which carry the tense and agreement properties in ordinary clauses, SCs are assumed to contain tenseless and agreementless verbs, i.e. verbs which are marked neither for the feature [±tense], nor for the feature [±agreement] (Radford 1988a).

 So far, it has been argued that, according to Radford (1988a, 1988b), small clauses are neither S-bar nor S constituents, because S-bar has the status of ordinary clauses and S has

that of exceptional clauses[4]. Furthermore, he also rejected Stowell's (1981, 1983) and Chomsky's (1986b) proposals; therefore, for him the SC structures such as $[_{XP} [_{Spec} NP] X']$ (Stowell 1981, 1983) and $[_{XP} [_{Spec} NP] XP]$ (Chomsky 1986b) are unacceptable (cf. sections 3.1.2 and 3.2.2).

For the small clause construction, Radford (1988a, 1988b) provides the label SC. Thus, the analysis of the bracketed sequence in (44) would be as in (45):

(44) I consider $[_{SC}$ the issue extremely important]

(45)
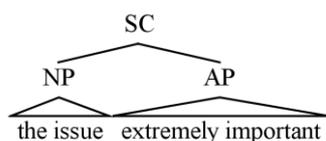


(Radford 1988b: 515)

As demonstrated, the categorial status of the overall small clause is totally different from that of its subject or its predicate phrase. This means that under this analysis, small clauses are exocentric constructions, whose categorial status is different from that of any of their immediate constituents. Radford (1988b) adds that the small clause is a 'primitive category', meaning that it is a category that is not itself a projection of any other category.

Obviously, such an analysis as detailed above does not suit the X-bar framework, which is endocentric. As Radford himself points out:

> [The] Small Clause cannot be a primitive zero level category, since it is not a word-level category. Moreover, since Small Clauses function as the Complements of certain Verbs and Prepositions, and since the Modifier Maximality Constraint tells us that only Maximal Projections can function as Complements, then it follows that Small Clauses must be Maximal Projections. (Radford 1988b: 516)

Therefore, it is assumed that small clauses must be projections of a word-level category, but Radford (1988a, 1988b) does not commit himself to further speculations about it. He avoids this problematic question and leaves his own reasoning contradictory by using the SC label, more exactly the labels AC, PC, VC and NC (adjectival, prepositional, verbal and nominal small clauses, respectively), and ends the discussion of the issue by stating that 'much

---

[4]      Exceptional clauses: clauses which lack a C node and have the status of IP.

research remains to be done concerning the internal structure of Small Clauses, and how they fit into the X-bar framework' (Radford 1988b: 519).

## 3.4.2 Criticism

Aarts (1992) criticises Radford (1988a, 1988b) for the same reason that Radford also realises — the incompatibility of the analysis with the principles of X-bar theory. The exocentric structure cannot be an accepted resolution for the categorial status of small clauses.
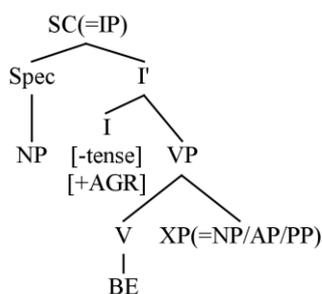
The other problem with Radford's assumptions is the same as with that of Hornstein and Lightfoot's (1987) (cf. section 3.3.2). The obligatory absence of the INFL node brings about the lack of agreement between the SC subject and predicate, as Radford (1988a) himself observes as well, so an example like (41) would be problematic for him, too. However, for reasons detailed in section 3.3.2, the tenseless small clause is unacceptable for Aarts (1992).

## 3.5 Aarts (1992)

### 3.5.1 Small clauses as IPs

Aarts's (1992) proposal tries to make a synthesis of the suggestions listed above and some other linguists' ones. In his analysis, small clauses are taken to be unmarked structures instead of marked structures 'as it is the null hypothesis' (Aarts 1992: 180), and it is argued that they are not phrasal expansions of lexical categories but are sentential constituents. They cannot have the S-bar status, i.e. may not be CPs, otherwise it would be impossible for the SC subjects to be Case-assigned, the CP being a barrier to government (cf. footnote 2). Thus, small clauses have to be IPs (Aarts 1992). The structure of SCs is as in (46):

(46)

```
              SC(=IP)
             /      \
          Spec       I'
            |       /  \
           NP      I    VP
              [-tense]  / \
               [+AGR]  V   XP(=NP/AP/PP)
                       |
                       BE
```

                                                                    (Aarts 1992: 181)

(For verbal SCs, see the end of the present section.)

147

From the configuration in (46) it can be seen that the SC contains an I node as well as a VP node, which is assumed to contain an unpronounced *be*. Given that small clauses are sentential constituents, they must be marked for the feature [±tense], because clauses must be either finite or non-finite (cf. sections 3.3.2 and 3.4.2), therefore they must have an I node, i.e. they have to be IPs. However, the I head cannot be marked as [+tense], because in that case it would assign Nominative Case instead of Accusative Case to the SC subject, but is rather marked as [–tense]. In other words, the postverbal [NP XP] strings, where the NP and the XP are in a subject-predicate relationship, are not tenseless but non-finite clauses (Aarts 1992). (The Case assigned by the I head is important in the case of small clauses functioning as subjects, but the operation of this kind of Case-assignment is not discussed as it is beyond the scope of this paper. In small clauses as complements the subject receives Case from the main verb, hence the IP status of SCs as mentioned above).

The SC subject is base-generated in Spec, IP; however, Aarts (1992) does not deny that it might originate in Spec, VP, remaining rather neutral in this respect. The structure also includes the copular verb *be*, which is positioned under the V node, taking an NP, AP or PP complement, but is not phonetically realised (however, he does not make a note on the status of the versions that include *to be*). What is located between the subject NP and the empty *be* is the I head, which is also marked for the [+AGR] feature (cf. (46)), and has an essential role in bringing about the agreement relation between the subject and the predicate — this is what Aarts (1992) criticises in Hornstein and Lightfoot (1987) and Radford (1988a, 1988b) as a defect (cf. sections 3.3.2 and 3.4.2). Aarts provides the examples in (47) as evidence for such a relation:

(47) (a) I consider [this teacher a megalomaniac]

    (b)  I consider [these teachers megalomaniacs]                    (Aarts 1992: 181)

The argumentation of the account for the phenomena is as follows. According to Spec-Head Agreement (Chomsky 1986b), which is 'a form of "feature sharing" similar to theta-government — in fact, sharing of the φ-features', i.e. person, number, gender, Case, etc. (Chomsky 1986b: 24), the SC subject and the I head agree in certain features. These are lowered onto the unpronounced *be* in the V head position, and then transmitted to the

predicate phrase. Thus, as a basic assumption, Aarts (1992) claims that it is not the verb that moves up, but the other way round — the features lower.

Aarts (1992) makes a distinction between two classes of small clauses: verbal and non-verbal, i.e. nominal, adjectival and prepositional small clauses. The two SC types have different internal structures. In the non-verbal type, there is a copular relationship between the subject and the predicate — that is why the structure is proposed to contain the verb *be* —, but in the verbal type that relationship is absent. Basically, verbal SCs are beyond the scope of Aarts's (1992) paper, but it is noted that three types of small clauses exist with VPs, containing a gerund, bare infinitive or participle verb forms.

### 3.5.2 A reflection on Aarts' (1992) analysis

In the split–INFL hypothesis (Pollock 1989 In: Aarts 1992), the Inflectional Phrase is reanalysed as a separate Tense Phrase and Agreement Phrase. According to that, it could be argued that in Aarts' (1992) proposal, the small clause is untensed, since there is no realisation of tense, thus the Tense Phrase is redundant, and only the Agreement Phrase is relevant. Hence, the IP analysis of small clauses is not well-established. However, Aarts (1992) points out that there is a [–tense] feature, which has to be located somewhere in the structure, i.e. in the Tense Phrase, therefore the IP analysis is relevant.

### 3.6 Small clauses as functional projections
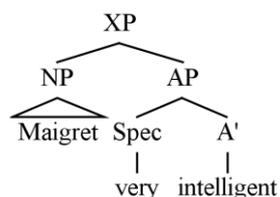
### 3.6.1 Haegeman (1994)

Haegeman (1994) makes use of the split of the Inflectional Phrase and finds evidence in French for labelling adjectival small clauses as AgrPs.

First, Haegeman (1994) argues against the exocentric analysis of SCs, such as (49) given the sentence in (48):

(48)  I consider [Maigret very intelligent].                         (Haegeman 1994: 123)

(49)



                                        (Haegeman 1994: 124)

In the configuration in (49), two maximal projections are sisters to each other, which does not conform to the requirements of the X-bar framework according to Haegeman (1991), since X-bar theory does not allow such structures. In order to solve this problem, Haegeman proposes that the small clause might be a maximal projection of a functional head F. F is an abstract head that does not seem to dominate any overt element. See (50):

(50)
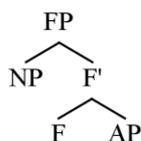


                                        (Haegeman 1994: 124)

FP is the projection of F and the NP in Spec, FP is the subject of the small clause.

    To account for such a functional analysis, Hageman gives examples from French, consider (51a-d):

(51) (a) Je considère   le garçon très intelligent_

        I consider      the boy very intelligent

    (b)                 la fille très intelligent**e**

                        the girl very intelligent

    (c)                 les garçons très intelligent**s**

                        the boys very intelligent

    (d)                 les filles très intelligent**es**
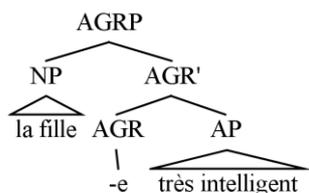
                        the girls very intelligent              (Haegeman 1994: 125)

It can be seen from the French examples above that the adjectival predicate *intelligent* has different overt agreement morphemes in each case, i.e. in French small clauses the adjectival

head agrees with the subject in number and gender. The adjectives are in masculine singular, feminine singular, masculine plural and feminine plural, respectively. Considering the data in (51), Haegeman (1994) assumes that SCs contain an AGR head that dominates the agreement morphology. Thus, the representation of (51b) would be as in (52):

(52)

```
            AGRP
           /    \
         NP      AGR'
        /  \    /    \
   la fille AGR     AP
             \    /    \
             -e  très intelligent
```

(Haegeman 1994: 125)

If this is so, we have to accept that the agreement morpheme lowers onto the adjective, because movement the other way round would result in the wrong word order (*intelligente très*). Despite the fact that English, as opposed to French, lacks overt adjectival agreement morphology, it could be argued that the AGR node is posited for English small clauses as well. However, it is noted that the adjectival AGR is not identical to the verbal AGR, because the latter combines person and number features, while the former combines number and gender features. The SC subject is still in the Specifier position of the functional phrase, i.e. in Spec, AGRP (Haegeman 1994).

### 3.6.2 Haegeman and Guéron (1999)

In Haegeman and Guéron (1999) the line of argumentation is the same as in Haegeman (1994) with the exception that now small clauses are given the label IP. Providing evidence from French, as in Haegeman (1994) (cf. (51)), they argue in support of the covert agreement morphology in English small clauses, therefore it is claimed again that SCs contain functional projections. However, here the IP is not split into a separate AgrP and TenseP, because the assumption is that both tense and agreement are present; hence they have to head Inflectional Projections. Therefore, small clauses include the category INFL, whose head selects an AP complement. Thus, the representation of (51b) is as follows:

(53)
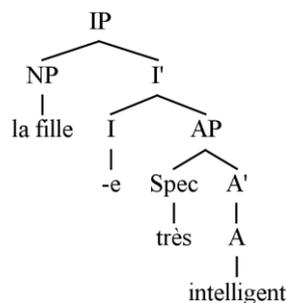


                                                    (Haegeman—Guéron 1999: 111)

Again, the adjectival agreement lowers onto A, as in section 3.6.1, to achieve the correct word order (Haegeman—Guéron 1999).

By means of verbal small clauses, Haegeman and Guéron (1999) justify the functional analysis of small clauses. If we passivise the sentence in (54a), the infinitival *to* appears in the structure as in (54b).

(54) (a) I made him leave the building.

   (b)  He was made to leave the building.          (Haegeman—Guéron 1999: 111–112)

Given that in the passive form I is realised overtly by *to*, the assumption is that in active small clauses there is an abstract I node present, see (55):

(55)  I made [$_{IP}$ him [$_I$] [$_{VP}$ leave the building]].          (Haegeman—Guéron 1999: 112)

### 3.6.3 Criticism

The major weakness of the analyses in Haegeman (1994) and in Haegeman and Guéron (1999) is that they deal only with the adjectival small clauses, and in Haegeman and Guéron (1999) the verbal ones are added, but the analyses of nominal and prepositional SCs are ignored. Hence, their supporting ideas are only adequate for SCs with APs and VPs, but they seem to expand the functional analysis to all types of small clauses. However, this generalisation is not relevant, given the lack of evidence of functional elements in small clauses with NP or PP complements.

Newson et al. (2006) do not agree with Haegeman (1994) and Haegeman and Guéron (1999) for two reasons. First, what is criticised is that under the above analyses, the head of the predicate is not the head of the clause (Newson et al. 2006), but what is even more problematic is that the inflectional head can select 'a whole set of different complements, ranging from DPs to PPs' (Newson et al. 2006: 290). This is not permitted in Newson et al. (2006), because in their framework the I head can only select a verbal phrase, thus VP or vP (light verb phrase). (The second problem of Newson et al. (2006) with Haegeman (1994) and Haegeman and Guéron (1999) is similar to Aarts' (1992) criticism related to the zero INFL in the analysis of Hornstein and Lightfoot (1987), see section 3.3.2.)

## 4 Conclusion

The aim of this thesis was to discuss support for the claim that the postverbal [NP XP] strings where the NP and the XP have a subject-predicate relation should be considered clauselike constituents, and to point out that deciding on the categorial status of small clauses is a highly problematic issue.

After summarising the earliest approaches to small clauses, the main characteristics of Small Clause Theory and Predication Theory were introduced. Then in chapter 2, the most important pieces of evidence for the existence of small clauses were presented as well, according to Stowell (1983), Safir (1983), Radford (1988b) and Aarts (1992). Chapter 3 provided a detailed discussion on the categorial status and the internal structure of small clauses, including the most influential proposals before the rise of Minimalism. Stowell (1981, 1983) argued that small clauses are phrasal expansions of their predicates with the form of XP, and Chomsky (1981) supported this idea with the exception that the label used for SCs was X* remaining neutral in the question of the exact extent of the projection. Then, in Chomsky (1986b), the analysis was altered and SCs were considered XPs, since given the *Barriers*–model, SC subjects became able to receive Case. Hornstein and Lightfoot (1987) analysed them as including $INLF_0$, which is an I node distinct from the 'ordinary' one introduced by them. Radford (1988a, 1988b) did not commit himself to provide an adequate label for small clauses and left them to be exocentric sequences. Aarts (1992) claimed that (non-verbal) SCs are IPs with a covert *be* in the structure, and finally Haegeman (1994) assumed that small clauses are AgrPs, which was slightly changed in Haegeman and Guéron

(1999), where they were suggested to be IPs. In conclusion, small clauses are very controversial phenomena in linguistics, and in the Government and Binding framework no entirely accepted analysis has been proposed.

## References

Aarts, Bas (1992) *Small Clauses in English: The Nonverbal Types.* Berlin — New York: Mouton de Gruyter.

Chomsky, Noam (1981) *Lectures on Government and Binding.* Dordrecht: Foris.

Chomsky, Noam (1986a) *Knowledge of Language: Its Nature, Origin and Structure.* New York: Praeger.

Chomsky, Noam (1986b) *Barriers.* Cambridge: M.I.T. Press.

Haegeman, Liliane (1994) *Introduction to Government and Binding Theory.* Oxford: Blackwell.

Haegeman, Liliane and Jacqueline Guéron (1999) *English Grammar: A Generative Perspective.* Oxford: Blackwell.

Hornstein, Norbert and David Lightfoot (1987) Predication and Pro. *Linguistic Inquiry* 63. 23–52.

Newson, Mark, Marianna Hordós, Dániel Pap, Krisztina Szécsényi, Gabriella Tóth, and Veronika Vincze (2006) *Basic English Syntax with Exercises.* Budapest: ELTE.

Radford, Andrew (1988a) Small Children's Small Clauses. *Transactions of the Philological Society* 86. 1–43.

Radford, Andrew (1988b) *Transformational Grammar: A first course.* Cambridge: Cambridge University Press.

Safir, Ken (1983) On Small Clauses as Constituents. *Linguistic Inquiry* 14. 730–735.

Stowell, Tim (1981) *Origins of Phrase Structure.* Ph.D. Dissertation. Massachusetts: MIT.

Stowell, Tim (1983) Subjects across Categories. *The Linguistic Review* 2. 285–312.

Stowell, Tim (1988) Small Clause Restructuring. In Freidin, Robert (ed.) *Principles and Parameters in Comparative Grammar.* Cambridge, Mass.: MIT Press. 182–218.

Williams, Edwin (1980) Predication. *Linguistic Inquiry* 11. 203–238.

Williams, Edwin (1983) Against Small Clauses. *Linguistic Inquiry* 18. 287-308.