# APPLYING GOVERNMENT-BINDING THEORY: A CASE STUDY*

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## INTRODUCTION

In this article I would like to discuss a possible new way of treating what Quirk et al. (1972:850ff, 1985:1195ff) and others have called *complex transitive complementation*. This involves constructions in which a postverbal Noun Phrase is followed by a predicative phrase XP, where the X can take the form of a Noun, an Adjective, a Preposition or an Adverb, and possibly a Verb. Here are some examples:

(1) We consider [$_{NP}$ the chairperson] [$_{NP}$ a fool]
(2) He thinks [$_{NP}$ the government] [$_{AP}$ incompetent]
(3) She wants [$_{NP}$ the kids] [$_{PP}$ in the car]
(4) He put [$_{NP}$ the car] [$_{AdvP}$ there]
(5) a I saw [$_{NP}$ them] [$_{VP}$ leave]
b She heard [$_{NP}$ him] [$_{VP}$ whistling]
c We had [$_{NP}$ the CD player] [$_{VP}$ repaired]

Here I want to concentrate on a discussion of the constructions in (1)—(4). In most reference grammars of English and in most pedagogical grammars, as well as in most learners' dictionaries the constructions under investigation have been analysed as involving a direct object which is followed by what has been called an *object complement* (see e.g. Matthews 1981:184f, Aarts and Aarts 1982:141-142, Huddleston 1984:194f, Wekker and Haegeman 1985:79, Quirk et al. 1985:1195f, Burton-Roberts 1986:81f and Brown and Miller 1991:333). A conceptually similar analysis can be found in theoretical work dealing with these constructions (cf. Williams 1980, 1983). This treatment is unsatisfactory from a semantic point of view. What is considered, for example in the case of (1), is not the chairperson, but rather the proposition that s/he is a fool. This can be shown by paraphrasing (1) as in (6a) or (6b):

(6) a We consider that the chairperson is a fool.
b We consider the chairperson to be a fool.

Similarly, in (2)—(4) it is not the case that the person denoted by the subject is 'thinking the government', 'wanting the kids' or 'putting the car'. There is a very strong reason, then, for not analysing the postverbal NPs in (1)—(4) as direct objects. But if they are not direct objects, what are they? A plausible way of analysing these constructions has been proposed in the transformational-generative literature. The essence of this proposal is that the postverbal NP and XP in (1)—(4) taken together form a clausal constituent, a *Small Clause* (SC), which complements the matrix verb. The analysis of (1)—(4) is then as in (7)—(10):

(7) We consider [$_{SC}$ the chairperson a fool]
(8) He thinks [$_{SC}$ the government incompetent]
(9) She wants [$_{SC}$ the kids in the car]
(10) He put [$_{SC}$ the car there] [1]

The idea of having constituents like Small Clauses is not new. It goes back to Jespersen's notion of *nexus* (Jespersen 1909—1949, part V:5 and 7—9). For more recent treatments see Stowell (1981), Chomsky (1981, 1986) and other work. Aarts (1992) provides an overview of some of the analytical proposals made in the theoretical literature regarding the syntactic status and internal composition of SCs.

Apart from the structures in (7)—(10) there is a related construction that needs to be mentioned here, exemplified in (11):

(11) We appointed her president

Here the postverbal NP clearly *is* a direct object. One way of analysing this type of sentence is to say that the verb is followed by a direct object NP and by a Small Clause with an empty subject which is coreferential with the direct object. The sentence in (11) would then be analysed as below:

(11') We appointed [$_{NP}$ her$_i$] [$_{SC}$ $\Delta_i$ president]

$\Delta$ denotes a phonetically null subject, and the indices indicate coreferentiality

In the theoretical literature the subject of the SC in (11') is said to be *controlled* by the direct object of the matrix clause. The functional status of the SC above is not immediately obvious, but it seems reasonable to analyse it as an adjunct as it has an adverbial interpretation.

Semantically the Small Clause analysis makes very good sense. The question arises, however, whether there are also syntactic reasons for analysing (1)—(4) as in (7)—(10). In the next section we will see that this question can be answered in the affirmative. In the third section I will argue that this new proposal regarding the analysis of sentences like (1)—(4) should have an implementation in the field of English language teaching.

## SMALL CLAUSES AS SYNTACTIC UNITS

In this section, which is an abridged version of a part of Aarts (1992), we will see that there are at least five types of syntactic evidence in favour of the claim that Small Clauses exist as syntactic constructs. Here I will mainly be concentrating on nominal (i.e. *[NP NP]*) and adjectival (i.e. *[NP AP]*) Small Clauses, as instantiated in (7) and (8).

The first piece of evidence concerns the fact that in sentences like (12) and (13) below the highlighted strings can be coordinated:

(12) We thought *his article a disgrace* and *his thesis a failure*
(13) We considered *these women competent* and *those men incompetent*

It is standardly assumed that only constituents can be coordinated. [2] This suggests that the strings in italics in (12) and (13) are units. As there is a subject-predicate relation between *his article* and *a disgrace* as well as between *his thesis* and *a failure* in (12) and between *these women* and *competent* as well as between *those men* and *incompetent* in (13) we must conclude that the strings in italics are in fact clauses.

As a second piece of evidence supporting the claim that SCs exist, notice that it is possible to have a semantically empty *it*-pronoun following the verb:

(14) She considered *it* a beautiful day.
(15) He found *it* rather cold.

Elements like non-referential *it* and *there* cannot be analysed as arguments of the verbs they follow precisely because they are semantically and thematically without content. This means that the *it*-pronouns in (14) and (15) must be taken to be the subjects of the clausal complements *it a beautiful day* and *it rather cold.* Notice also that in (14) what is being considered is clearly not *it* but the proposition that it is a beautiful day. A similar consideration holds for (15).

A third argument in favour of positing the existence of Small Clauses concerns the fact that other than as complements to verbs predicative *[NP XP]* strings occur in at least four other types of position: independently, as adjuncts, as complements to prepositions and as subjects. The fact that in these cases the NP and XP are in a subject-predicate relationship again points to a clausal analysis. An example of an independent nominal Small Clause is given in (16), and (17) gives an example of an independent adjectival Small Clause:

(16) A Do you consider that man a fool?
B That man a fool? You must be nuts!
(See Akmajian, 1984:2f and Radford, 1988:330 who discuss sentences of this type)
(17) *Doors open now*

(17) is a type of sentence which I have elsewhere called an *announcement SC* because they typically occur on signs and notices. It could be objected that the NPs *that man* and *a fool* in (16), and the phrases *doors* and *open* in (17) are syntactically unrelated separate constituents, but this is unlikely in view of the fact that *that man a fool* in (16) and *doors open* in (17) are pronounced without an intonational break. [3]

Small Clauses can also occur as adjuncts, as in the sentence below:

(18) *Its hands free*, Moscow could turn to the great regional problem that had long defied solution: the Arab-Israel conflict and the Palestinian issue. (*The Independent*, 13.2.89)

The string in italics in (18) is an adjectival adjunct SC.

As a further example of Small Clauses occurring other than as complements to verbs, consider the sentences in (19) and (20) where the SCs complement a preposition:

(19) With *Jonathan the conductor* the recital could not go wrong.
(20) With *Laura happy* we were set to go.

Finally, as was noted in Safir (1983), predicative *[NP XP]* strings may occur as subjects in copular (21a) and Raising (21b) environments, but not elsewhere (21c):

(21) a *Workers angry about the pay* is just the sort of situation that the ad campaign was designed to avoid.
b *Workers angry about the pay* does indeed seem to be just the sort of situation that the ad campaign was designed to avoid.
c **Workers angry about the pay* pleases Maybelle immensely.

What is interesting about these sentences is that the highlighted subject strings in (21a) and (21b) trigger singular verb agreement. What this means is that we cannot regard the APs in these sentences as postmodifiers. Safir comments that "[w]hen agreement is singular, even though the NP *workers* is plural, *workers angry about the pay* must be interpreted as a situation" (1983:732). It would seem plausible, then, to analyse the italicised sequences in (21) as clauses, not as simple NPs. [4]

We have so far looked at three different pieces of evidence supporting a Small Clause analysis of *[NP XP]* strings the NP and XP of which are in a subject-predicate relationship. The fourth piece of evidence concerns sentences like those in (22) and (23):

(22) I thought *it perhaps a pity* at the time, but his motivation was pessimism (unnecessary in his case) about academic job prospects. (W.17.2.74) [5]
(23) I must admit that I have found *these summer international schools probably the most rewarding part of my work.* (W.7.6.82)

Notice that in these sentences the elements *perhaps* and *probably* occur between two NPs which are in a predicative relationship with each other. That is, *it* in (22) and *these summer international schools* in (23) are subjects, whereas *a pity* in (22) and *the most rewarding part of my work* in (23) are predicates. *Perhaps* and *probably* are sentence adverbials. This means that they have scope over sequences of words which syntactically form a clause. These facts strongly suggest that the strings in italics in (22) and (23) are clauses. [6] This is supported by the fact that we can paraphrase the first part of (22) as in (24a) or (24b), but not as in (25a), (25b) or (25c):

(24) a I thought that *it was perhaps a pity* at the time, but his motivation was pessimism...
b I thought that *perhaps it was a pity* at the time, but his motivation was pessimism...

(25) a Perhaps I thought *it a pity* at the time, but his motivation was pessimism...
b Perhaps I thought that *it was a pity* at the time, but his motivation was pessimism...
c I thought perhaps that *it was a pity* at the time, but his motivation was pessimism...

Similarly, (23) can be paraphrased as in (26a) or (26b), but not as in (27a) or (27b):

(26) a I must admit that I have found that *these summer international schools are probably the most rewarding part of my work.*
b I must admit that I have found that *probably these summer international schools are the most rewarding part of my work.*

(27) a I must admit that probably I have found *these summer international schools the most rewarding part of my work.*
b I must admit that I have probably found *these summer international schools the most rewarding part of my work.*

Notice that because we can paraphrase (22) and (23) as in (24) and (26) respectively the possibility of analysing *probably* and *perhaps* as NP adjuncts of some sort is ruled out.

A fifth and final way of proving the clausal status of predicative *[NP XP]* strings is to demonstrate that the NP in such sequences is a subject. Radford (1988:324—327) follows this tactic. Let us look at three of the arguments he uses. He cites the following sentences from Napoli (1989:319):

(28) a The president is coming himself.
b *We put the president in our car himself.
c *I looked behind the president for guards himself.

It is concluded on the basis of such sentences that what is called a *floating*

*emphatic reflexive* can only be linked to a subject expression. This observation was first made in Postal (1974:196). If it is correct, then the highlighted NP in (29) must be a subject:

(29) I thought [*the prime minister herself* a controversial person]

And if the NP *the prime minister herself* is indeed a subject then the bracketed sequence must be a clause.

Radford's other two arguments concern Postal's *not*-initial (1974:94—99) and *alone*-final (1974:99—102) tests: *not*-initial and *alone*-final NPs are claimed to occur only in (derived) subject position (cf. *Not many houses* were built here/*I like *not many houses*; *That house alone* was painted/*I ate *that cake alone*). If Postal is right then the highlighted NPs in (30) must be subjects:

(30) a The head of department considers [*not many students* good PhD students].
b The head of department considers [*MA students alone* good PhD students].

Here again, if *not many students* and *MA students alone* are subjects, then the bracketed strings are necessarily clauses. The *not*-initial and *alone*-final arguments are less convincing than the floating emphatic reflexive argument. We can have, for example, (31):

(31) I gave the waiter alone a tip.

where clearly *the waiter alone* is not a subject expression. [7]

Having demonstrated that Small Clauses are linguistically (semantically and syntactically) viable we now turn to the question whether or not they can be employed in the area of English Language teaching.

## SMALL CLAUSES AND THE TEACHING OF ENGLISH

The question I want to address in this section is whether the notion Small Clause should have a pedagogical implementation. That is, should Small Clauses be adopted in the classroom, in grammars of English (be they pedagogical grammars or reference grammars) and in (learners') dictionaries? I will argue that they should. The general reason for doing so is that, as has been extensively argued in the previous section, SCs make sense both at the semantic and at the syntactic levels of grammar. Adopting the theoretical notion of Small Clause in the applied field is therefore linguistically well motivated. It has a number of practical advantages too. One of them is that making use of SCs would fit well in current language teaching methodologies. Another is that in the fields of grammar writing and lexicography Small Clauses enable grammarians and dictionary writers to provide clearer information about the patterns

in which certain verbs can occur. In what follows I will first discuss teaching methods and then move on to deal with teaching materials.

To begin, let us dwell for a moment on the question how grammatical functions (subjects, objects etc.) are being taught. It is common practice in ELT, and it seems in language education in general, to teach functional concepts by making use of so-called notional definitions. Under this approach the way in which constituents in certain syntactic positions behave thematically is criterial for assigning those strings of words to a particular grammatical function class. For example, subjects of sentences can be defined notionally as those constituents which are in some way the agents of the action denoted by the verb. Similarly, direct objects can be regarded as constituents which undergo the action of the main verb, and indirect objects can be regarded as constituents that express the role of goal or beneficiary. Although notional definitions are not unproblematic, as has been pointed out in the literature, their use by teachers even up to a high level, is extremely effective in getting learners to understand the grammatical functions operative in languages. [8] However, notice that when dealing with constructions like (1) and (2), repeated here as (32) and (33), the notional pedagogical approach runs into serious problems if it is argued that the postverbal NPs are direct objects:

(32) We consider [$_{NP}$ the chairperson] [$_{NP}$ a fool]
(33) He thinks [$_{NP}$ the government] [$_{AP}$ incompetent]

As we have seen, the chairperson is not what we are considering in (32), but rather the fact that s/he is a fool, and in (33) the government is not the object of thinking but rather the proposition that it is incompetent. Therefore, if we stick to the notional approach it doesn't really make sense to regard the postverbal NPs in these sentences as direct objects, as do proponents of the complex-transitive persuasion. The pedagogical advantage of positing such entities as Small Clauses should now be clear. If we analyse these sentences using notional definitions we are automatically led to a Small Clause analysis in which the direct object of the matrix verbs is semantically and syntactically clausal, i.e. *the chairperson a fool* in (32) and *the government incompetent* in (33). There is then no conflict between the notional and syntactic analyses of sentences like (32) and (33). In an educational environment in which notional definitions of grammatical functional categories are used and in which the postverbal NPs in these sentences are treated as direct objects students are very likely to become confused, especially at more advanced levels of learning where these constructions are usually dealt with. The point I am making is valid also for grammar textbooks. Let me illustrate this by looking at an example of how the constructions under investigation are treated in a recent practical introductory text to English grammar, Morenberg (1991). This author defines direct objects notionally by observing that "[o]ften the subject of a transitive verb 'does something to' the object noun phrase" (Morenberg 1991:6). In discussing complex transitive constructions he offers the reader the following sentences by way of illustration:

(34) American analysts *consider* Kaddafi a terrorist.
(35) Soviet music critics *consider* the Rolling Stones decadent.

He then observes that

> In the first example, *consider* is followed by a noun, *Kaddafi*, that functions as a direct object, and that is in turn followed by a noun phrase, *a terrorist*, that functions as a COMPLEMENT. Similarly, the Vc [=*consider*-type verb, BA] in the second example is followed by a noun, *the Rolling Stones*, and then by an adjective, *decadent*. Whether it is an adjective or noun, by the way, this type of complement that follows a direct object in a sentence with a Vc is called an OBJECT COMPLEMENT. (Morenberg 1991:8—9)

Apart from the bad style and the mystifying and pedagogically unfortunate fact that Morenberg labels *Kaddafi* a Noun, *a terrorist* a Noun Phrase, *the Rolling Stones* again a Noun (!) and *decadent* an Adjective, when clearly *all* the nominal constituents are Noun Phrases and *decadent* an Adjective *Phrase*, this is a reasonable exposition of the structures exemplified by (34) and (35). However, consider now the passage that immediately follows:

> A complement in grammar is rather like one in mathematics: it completes something, not a 90° angle, but an idea. In the example sentences above, "American analysts" don't simply "consider Kaddafi", but they "consider him *a terrorist*"; nor do Soviet music critics "consider the Rolling Stones", but they consider the Rolling Stones *decadent*". (Morenberg 1991:9)

It is here that the reader will become hopelessly confused: if the American analysts don't consider Kaddafi, and the Soviet critics don't consider the Rolling Stones why are these constituents analysed as direct objects? Morenberg's observations in the second quotation constitute strong evidence against his analysis of (34) and (35) as expounded in the first quotation. What we have, then, is a conflict between the notional approach which, if applied consistently, would take *Kaddafi a terrorist* and *the Rolling Stones decadent* to be Small Clauses and the complex transitive analysis of these constructions which takes the postverbal NPs to be Direct Objects and the XPs that follow them to be Object Complements. This conflict is unnecessary if complex transitive constructions are analysed as involving Small Clauses.

Adopting Small Clauses as a pedagogical tool is useful not only in language teaching and grammar books, their implementation also has distinct advantages in dictionaries, especially learner's dictionaries. Consider the following verb pattern for the complex transitive *[V NP NP]* construction, taken from the fourth edition of the Oxford Advanced Learner's Dictionary (OALD/4), one of the best English language learner's dictionaries, certainly in terms of the grammatical information it supplies:

*Pattern [Cn.n] :*

Complex transitive verb + direct object NP + object complement NP

The dictionary gives the following example sentences for this construction (page 1565):

(36) We made Frank chairman.
(37) The club elected Mr Jones membership secretary.
(38) We declare Holroyd the winner.
(39) The court considered Smith a trustworthy witness.
(40) The rebels are holding her prisoner.

It is explained in a note that "the object complement is a noun or noun phrase which indicates the role, name, status, etc of the direct object". Four observations are in order here. Firstly, what is labelled an object complement is syntactically a Noun Phrase in *each* of these cases, even in (36) and (40). In other words, the object complement can never be just a noun. [9] Secondly, OALD/4 fails completely to convey the semantic fact that what is here regarded as a direct object is the *subject* of the NP that follows it. Thirdly, syntactically the second postverbal NP in each of the sentences above is not a complement but a predicate. And finally, OALD/4 does not distinguish between the construction in (37) and the other structures. There are clearly important differences: in (37) the postverbal NP is an argument of the matrix verb, whereas in the other sentences it is not (cf. (11)/(11')). As OALD/4 is an *advanced* learner's dictionary it should make these distinctions clear. How can we improve on OALD/4's treatment of so-called complex transitive constructions? Small Clauses again provide the answer: in the case of (36) and (38)—(40) we can posit the following pattern:

(41) *Pattern [Tsc]*

The notation is consistent with the OALD/4 system: 'T' stands for transitive verb and 'sc' denotes a Small Clause complement. For the pattern in (37) we have (42):

(42) *Pattern [Tnp.sc]*

Here we have a transitive verb complemented by a Noun Phrase, followed by a Small Clause adjunct. The patterns in (41) and (42) can be further refined by specifying the type of Small Clause complement or adjunct. Thus for (35) we could have (43), for (36) we could have (44), and for (37) we could have (45):

(43) *Pattern [Tsc$^{a}$]*
(44) *Pattern [Tsc$^{n}$]*
(45) *Pattern [Tnp.sc$^{n}$]*

(43) indicates that the matrix verb takes an adjectival Small Clause as its complement (i.e. an SC of the form *[$_{SC}$ NP AP]*), and (44) shows that the verb subcategorises for a nominal Small Clause (i.e. *[$_{SC}$ NP NP]*). Finally, in (45) the matrix verb takes a direct object argument which is followed by a nominal Small Clause functioning as an adjunct.

## CONCLUSION

In this article I have been concerned with *[NP XP]* sequences in so-called complex transitive *[V NP XP]* constructions (i.e. constructions in which the NP and XP are in a subject-predicate relationship with each other). I have shown that there are semantic as well as syntactic reasons for adopting the proposal put forward in the theoretical literature to analyse the *[NP XP]* strings as syntactic units, called Small Clauses. I have argued that these findings should have consequences for the way in which English is taught and for the way teaching materials such as grammars, coursebooks and dictionaries are designed.

**Notes**

* I would like to thank Ine Mortelmans, And Rosta and Helge Schwartz for comments on an earlier draft of this paper.

1. If we regard the adverb *there* as intransitive preposition, then this sentence too involves a Small Clause of the type *[NP PP]*.
2. It should be noted here, however, that coordination evidence is not unproblematic. In the following sentence the string *James a book* is obviously not a constituent, nor is the string *Milly a CD* despite the fact that these sequences can be coordinated, as in (i) below:
   (i) I gave James a book and Mary a CD.
3. Incidentally, the string in (17) is ambiguous; *open* can also be taken to be a verb.
4. Safir's claim that Small Clauses may occur as subjects only in copular and Raising environments is wrong, as (i) below shows:
   (i) Will President Botha set him free to take part in that process? Or does he fear that *Mandela free* would pose a greater threat than Mandela behind bars? (*The Independent*, 11.6.88)
   Here the SC *Mandela free* occurs as the subject of a Verb Phrase headed by a non-copular, non-Raising verb.
5. Sentences marked in this way are taken from the Survey of English Usage at University College London.
6. See also Suzuki (1986:61) who has independently made the same observation.
7. Though see Kayne (1984:133ff).
8. On notional definitions see Crystal (1967:43) and Lyons (1966, 1968:317f).
9. I made a similar criticism of Morenberg's treatment and having looked at a number of (pedagogical) books on English grammar it seems to be a fairly widespread practice to label a nominal constituent 'Noun' if it is a bare noun, but 'Noun Phrase' if there is a determiner present. The same is true for the other parts of speech. I believe this is a rather curious and, what's worse, inaccurate practice.

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