SMALL CLAUSES AND RELATED OBJECTS *

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1. Introduction

The following list gives an overview (not intended to be complete) of the constructions of English for which a small clause analysis has been proposed within the GB literaure:

Epistemic Verb
1a) I believe [her intelligent]
b) I consider [her my best friend]
c) He seems [*t* sick]
d) He is believed [*t* sick]

Causative Verb
2a) It made [him tired]
b) I had [him arrange that]

Perception Verb
3a) I saw [her killed]
b) I saw [her be killed]

Result small clause (Hoekstra 1988)
4a) We drank [the pub dry]
b) We wiped [the table clean]

Copula Verb (Stowell 1978, 1983)
5a) She is [*t* sick]
b) She remained [*t* sick]
c) She became [*t* sick]

Ergative Verb + Result clause (Hoekstra 1988)
6a) The plan went [*t* wrong]
b) The milk turned [*t* sour]

There-Construction (Stowell 1978)
7a) There is [a boy sick]
b) There is [a mouse in my room]

With-Construction (Beukema/Hoekstra 1984)
8a) With [John sick] , ...
b) With [a mouse in the bath], ...

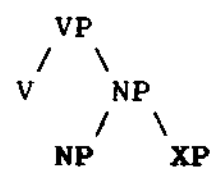
Particle constructions / double objects (Kayne 1984,1985)
9a) I looked [the information up]
b) I gave [her the information]

* *This material was presented in Leipzig (January 1991) and London (February 1991): thanks are due to both audiences for helpful discussion.*

All these constructions are analysed as complement small clauses, i.e. small clauses selected by the governing verb (or preposition) in question.

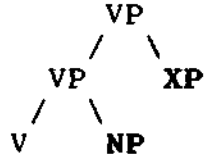
These constructions all contain a string of the form: *V + NP + Predicate* (where NP can be lexical or NP-trace). [1] Such strings are in principle is compatible with a variety of syntactic analyses. If syntactic structures are constrained by a binary branching requirement (cf. Kayne (1984)), the structures that come into consideration are (10), where the predicate phrase functions as an adjunct to the NP; (11), with the predicate functioning as an adjunct to VP; and (12), where the NP and predicate together form a small clause constituent governed by the verb:

10)



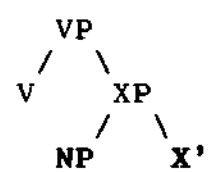
XP adjoined to NP

11)



XP adjoined to VP:

12)



NP as subject of XP
(XP = complement small clause)

The constructions about which I have something specific to say here are the resultative construction in (4), and the existential construction in (7). In particular, I contest Hoekstra's (1988) uniform small clause approach to resultatives, and propose that the examples he analyses do not in fact form a syntactically homogenous class: there is evidence that at least some of his examples form instances of the structure (11). The second argument I make concerns the debate about whether the "coda" (*NP + Pred*) of <u>there</u>-sentences is a small clause complement, as Stowell (1978) has proposed, or, as argued by Williams (1984), a Noun Phrase - i.e. an instance of structure (10). I conclude on the one hand that Williams is correct in claiming that <u>there</u>-sentence codas are never small clauses, but on the other, but that a uniform NP-analysis cannot be correct either - instead, <u>there</u>-sentences are also a syntactically heterogenous class, some codas necessarily being NPs, others necessarily involving a NP plus VP-adjunct configuration.

The wider purpose behind these arguments will be on the one hand to show that a uniform small clause approach to

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1. *Here and below, "V" may also stand for the preposition <u>with</u>.*

these constructions is too simplistic, and on the other, to develop a battery of tests for uniquely determining structures (where possible) for such *V + NP + Pred* strings.

2. Complement small clauses

To begin with, I review some standard arguments for adopting the small clause hypothesis for constructions like those in (1-9).

A major conceptual motivation for assuming the existence of small clauses, as pointed out by Stowell, is that it enables the X'-theory to be generalised, such that all major categories project a subject position (Stowell assumes the subject to be the specifier of the category in question).

As Stowell shows, the properties of these subjects largely fall out from the theories of Case and government. Although it is not a thematic object of the verb, the subject of the small clauses in (1-9) is governed by the verb. It will either receive accusative Case from the verb, or it will undergo NP-movement to the main clause subject position, to receive Nominative Case (in which case, the subject of the small clause itself will be NP-trace). The choice depends on whether the governing verb has ergative or transitive properties.

Other arguments used to justify a small clause analysis for *V + NP + Pred* strings relate to selection facts, and asymmetries between verbal and nominal constructions.

2.1 Objects not selected by the verb

Intuitions about selection can be brought to bear to identify small clause subjects, as these need not be semantically compatible with an argument of the matrix predicate. Where the NP in question is a potential direct object of the matrix verb, intuitions about the interpretation of the sentence can be used to distinguish a thematic object of a verb from a NP that can only sensibly be analysed as a thematic argument of the following predicate.

Well-known cases of this sort involve epistemic and causative verbs (cf. (1-2) above). In sentences like "I believe them sick" or "I made them tired", the accusative object him does not denote an entity that is caused, or believed, even though the NP can function as thematic object of the verb in "I believe them" or "I made them". In the former, we want to say a "proposition" is believed; in the latter, we want to say that an "event" or "state of affairs" is caused.

A less well-known case concerns the result predicates investigated by Hoekstra (1988). Consider the sentence (13).

13) We drank the pub dry -/-> *we drank the pub*
---> *the pub is dry*

The pub cannot be the thematic object of the verb - the sentence does not state that we drank the pub. It makes perfect sense though to say that the pub is an argument of the adjective dry in this sentence. Observing that the small

clause in this construction describes the result of the action described by the verb, rather than a participant in the action itself, Hoekstra suggests that a result clause is not a thematic complement of the verb itself, but is the product of a general process that licenses an additional complement with verbs denoting actions or processes.

2.2 Non-selected objects: idiom part NPs

A second case where the subject of the small clause cannot be selected by the verb involves examples with idiom part NPs, such as those underlined in (14):

14a) There was advantage taken of John
  b) He wanted more heed paid to his proposal

A common assumption is that such NPs are licensed at D-structure only as objects to a certain unique verb: so that a NP headed by the noun heed will only appear at that level in a VP of the form pay more heed (to), etc. In the examples (14), the underlined NP could only have be generated as direct object of the participle verb, to subsequently undergo NP-movement to its position left of the participle, where it is Case-marked by the matrix verb.

I shall call the initial assumption into question below. However, if correct, this approach provides an argument that the subject position in complement small clauses has the property of ordinary subject positions, that it may be a nonthematic position at the level of D-structure.

2.3 Non-selected objects: expletives

A further type of example where a small clause structure is motivated involves the occurrence of pleonastic it in (15):

15a) I consider it certain that he will come
  b) This makes it unlikely that he will come

If it is true that nonarguments cannot appear in subcategorised positions, the expletive pronoun it must occupy an argument position that is not a θ-position, i.e. a subject position. [2]

2.4 Derived nominals

An additional source of evidence for the small clause analysis comes from the observation that complement small

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2. *It seems that the expletive pronoun there is not licensed except as subject to certain verbs, primarily be, with the result that there occurs only in small clause Verb Phrases:*

*i) * I consider [there a man sick]*
ii) I saw [there be a riot near the station]

clauses do not occur as complements to nominals derived from the relevant verbs.

16a) * His belief of John sick
vs His belief of that story

b) * My expectation of John in my room
vs My expectation of a visit

c) * The making of it unlikely that he would come
vs The making of the film

d) * His appearance [*t* dead] ...
vs He appeared [*t* dead]

The failure of nominalisations with small clauses is attributed to the defective nature of Nominals as governors. Nouns do not govern the structural case necessary for ECM, but only an inherent Case (*cf.* Chomsky (1986)) - i.e. Genitive, realised by the preposition <u>of</u> postnominally, with the result that NPs can appear inside Noun Phrases only when they are true thematic objects of the noun head. Also, Nouns are held not to possess the ability to function as head-governors for the ECP, necessary for the trace in raising structures like (13d).

3. Adjunct small clauses

A second type of small clause often cited is the so-called "adjunct small clause". The main property of adjunct small clauses which separates them from complement small clauses is that they are not governed by the verb, hence never have governed (Case-marked or NP-trace) subjects. [3] Instead, they are assumed to have a null pronominal subject (PRO is standardly assumed).

There are two cases to be considered here: so-called "secondary predicate" phrases in VP; and predicates adjoined to NP, i.e. postnominal modifiers. Adjunct small clauses occurring right-adjoined to NPs as post-Noun modifiers, like those in (17) are interpreted as restrictive modifiers.

17a) They searched for a boy [PRO proud of himself]
b) They searched for ...
the man [PRO believed t to have died]

Secondary predicates - which I analyse as VP-adjuncts - differ in that they are not interpreted as restricting the reference of the NP they modify. Further properties distinguishing the two types are the inability of the NP-

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3. *Note that if we adopt Hoekstra's assumptions concerning result small clauses, which are clearly governed, though apparently not selected, by the verb, it seems that the non-government of adjunct small clauses does not follow in simple fashion from the absence of selection. I do not explore this issue here.*

adjuncts to modify proper names and pronouns, and the inability of the VP-adjuncts to modify NPs inside PPs.

3.1 Secondary predication: interpretative properties

As well as consistently failing the "tests" discussed in the previous section for complement small clauses (selectional asymmetry between NP and Pred, etc.), [4] the interpretation of secondary predications involving VP-adjuncts (illustrated in (18)) deviates in typical ways from that of complement small clause constructions.

18a) I loaded the hay onto the wagon [PRO green]
b) I eat them [PRO raw]
c) I met her [PRO angry with herself]
d) I left her [PRO likely *t* to explode at any moment]

Clearly the verb selects neither a "proposition" nor a "state of affairs", nor is the predicate phrase interpreted as a resultative. On the other hand, there is a clear intuition that the object NP is an argument of the verb (although of course it is also compatible with the "external argument" slot of the secondary predicate, as it must be, for predication - here understood as "control" of the PRO subject - to be possible).

The interpretation can be described approximately as follows (cf. Rothstein (1983)): (i) the AP attributes some property to the referent of the NP; (ii) this property is understood to obtain of the referent at the time referred to by the main clause.

There is moreover a sense in which the temporary nature of the relation between object-referent and property attributed is focussed in these examples. They form good answers to questions such as:

19a) What state was the hay in when you loaded it?
b) What state was he in when you met him?
c) What state was she in when you left her?
d) In what state are the carrots when you eat them?

In fact, the predicates in (18) fit the characterisation of "stage-level" predicates given by Kratzer (1988): this observation becomes significant below.

Among secondary predicates, we can distinguish "object-oriented" and "subject-oriented" phrases. The latter, illustrated in (20), share essentially the same properties as the object-oriented examples in (18), except of course that they modify the main clause subject:

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4. *Secondary predicates seem able to occur inside NPs - i.e to be predicated of genitive arguments of derived nominals:*

i) He cried on learning of her arrival dead at the hospital
ii) ... the arrival of the girl dead at the hospital ...

20a) John left the room [PRO angry with himself]
b) John left her [PRO likely *t* to explode at any moment]

3.2 Syntactic arguments for null subjects

There are several strong reasons for wishing to adopt a small clause structure with empty subject position for these three classes of adjunct - there are a number of syntactic phenomena which receive a natural account if we assume the presence of a null subject, and which would require considerable complication (or rebuilding) of the theory if we do not (see Williams (1983,1987) for the alternative view).

For example, adjunct APs may contain reflexive pronouns (17a,18c,20a). If we assume a null subject in these phrases (which is controlled by the external subject of the predication), then no problems arise for the binding theory.

A similar argument can be made for NP-trace which can occur in all three classes of adjunct AP, as shown in (17b), (18d) and (20b). The theory requires that this trace be bound in an A-chain by a suitable NP in an A-position. Any theory that operates without a null subject in these APs is incompatible with the GB theory of NP-movement. The external NP which the predicate phrase modifies does not qualify as a suitable antecedent alone on the grounds that it receives a θ-role inside the matrix sentence; so that if it forms an A-chain with the NP trace in its modifier, a violation of the θ-criterion would result.

4. Predication & θ-Theory

The two "modules" of the grammar with the most fundamental part to play in constraining the possible analyses for the constructions under discussion are predication theory and θ-theory. Various authors (cf. Williams (1980), Chomsky (1986)) have suggested that θ-theory and predication theory interact in various ways. In particular, it is assumed that the syntactic predication relation constitutes one possible mode of θ-role assignment. As shown in (21), the predication relation between NP-VP is what licenses the assignment external θ-role of the verb to the subject of the VP:

21) John [VP met her] angry
Predication & θ-role assignment <---

It is also assumed that the adjective angry can assign a secondary θ-role in this structure: this assignment is likewise mediated by a predication relation - in (22), the relation between the clausal subject and the secondary predicate AP:

22) John [met her] angry
Predication & θ-role assignment <---

Notice that the θ-role assignment depicted in (22) represents the assignment of a second θ-role to the subject NP John, in contravention of the (version of the) Theta Criterion (23):

23) (i) Each argument bears one and only one θ-role
(ii) Each θ-role is assigned to one and only one argument

(Chomsky (1981:36)

Secondary assignments of this type a compatible with a redefinition of (23) in terms of a one-to-one relation not between θ-roles and arguments, but between θ-positions and arguments (Chomsky (1986:97).

The extension of the small clause hypothesis to ordinary clausal structures under what has become known as the "subject-in-VP" hypothesis, coupled with the assumption that secondary predicates contain internal null pronominal subjects, makes it possible to pursue a different (and plausibly more constrained) theory, in which syntactic predication and θ-role assignment are completely divorced from one another. This approach, which I adopt here, involves two crucial assumptions: the biuniqueness of the θ-role-argument pairing, and no θ-role assignment under predication.

The evidence mentioned above for assuming a null subject inside secondary predicates seems to me to render the notion of secondary θ-role assignment superfluous. Once a null subject is assumed, the θ-roles of the adjective (here: the "external" role) are all satisfied inside the predicate phrase. There is no motivation by (23i) to assume that the predicate phrase assigns a θ-role to John in (22). Neither is there motivation from (23i), since John is assigned a θ-role by the main clause verb in any case. [5] It seems therefore reasonable to dispense with the notion of secondary θ-role and retain the θ-Criterion in the form (23).

It is also possible to dispense with the first example of θ-role assignment under predication, i.e. the assignment of a θ-role by VP to the clausal subject in (21), if the "subject-in-VP" hypothesis is adopted. If the clausal subject is base-generated inside the VP, then all clausal subjects in IP-specifier position are derived by NP-movement and bind NP-traces inside VP: i.e. subjects of ordinary transitive verbs are derived by NP-movement just as passive and other derived subjects:

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5. *Moreover, the recognition of secondary θ-roles causes complications for the definition of θ-role assignment - cf. the discussion in Chomsky (1986:97-8) surrounding the example:*

*i) * John seems that it is raining angry*

- which dissolve if the approach advocated here is adopted (see Wilder (1989:187-8)).

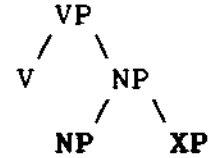
24) John [t met her]
: *NP-movement*
: *θ-role assignment*

Adopting this hypothesis not only allows the weak claim to the effect that all θ-assigning heads may include subject positions inside their maximal projections; it also enables us to eliminate θ-roles assignment by phrasal constituents, and to make the stronger claim that all θ-role assignment takes place within the maximal projection of the θ-assigning head. Hence, we are able in principle to dispense with one mode of θ-role assignment, namely, phrase-external assignment under syntactic (NP - XP) predication.

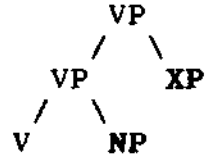
It should be clear that θ-role assignment and the syntactic predication relation are then strictly independent of one another; syntactic predication being a relation between maximal projections (i.e. between a noun phrase argument and a predicate phrase of any category). The syntactic predication relation (expressed as coindexation) holds between a predicate XP, which has (and needs) no θ-role, and a NP argument - which must bear a θ-role independently of the predication relation, to satisfy the θ-criterion. (25) illustrates how the predication relation between the adjective phrase and the object of the verb, is completely divorced from the θ-relations.

25) John [met her] [AP PRO angry]
: *Predication*
: *θ-Assignment*

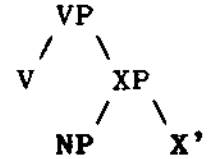
Consider once more the possible structural analyses for *V + NP + Pred* strings (10-12) (repeated here):

10)


XP adjoined to NP

11)


XP adjoined to VP:

12)


NP as subject of XP
(XP = complement small clause)

Only the complement s.c. structure (12) permits θ-assignment of NP not by V but by the predicate X. In (10) and (11), the XP is not selected by the verb and will have a null subject. The post-nominal modifier phrases of (17) are instances of structure (10); object-oriented predicates occur in the configuration (11). Here, the coindexation of

predicate and NP will account for the "control" of the null subject by the NP.

The syntactic predication relation is constrained by some type of locality condition. Some authors assume that strict c-command of the predicate by its subject is not required: I do not make this assumption here, as NP in (11) clearly does not c-command the adjunct. [6] Nevertheless, the predicate has to be close to its subject in some sense, for a predication relation to be well formed. It appears to be sufficient if no maximal projection dominating the NP excludes the predicate. We can formulate a condition such as (26):

26) XP can be the subject of a predicate of YP if no maximal projection dominating YP excludes XP.

These assumptions impose strict constraints on possible analyses of our *V + NP + Pred* strings. For instance, it rules out a small clause complement analysis of examples like (27) - i.e. an analysis in which the infinitive forms a small clause with the NP:

27) With Mary [to talk to] ... you won't be bored

A small clause analysis for this type of example is implied, for instance, by Beukema/Hoekstra (1984) and Hoekstra (1988).

The infinitive in (27) is a CP derived by internal wh-movement of an empty operator, of the type also called purposive infinitives, illustrated in (28):

28) John [[built it] [CP *Op* to live in *e*]]

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6. *If recent proposals to the effect that direct objects raise out of the VP in English are correct (cf. Johnson (1990), Ouhalla (1991), then NP will c-command the VP-adjoined predicate of (11) at S-structure. In that case, a condition on predication requiring simple c-command at that level suffices for all cases. Independent evidence that the object does in fact c-command the secondary predicate at S-structure is provided by the relative acceptability of (i), where the negative polarity item any inside a secondary predicate is linked to the direct object few students:*

i) ?John met few students in the bar angry with any of his friends

Also there appears no reason to believe that subject-oriented secondary predicates are not c-commanded by the subject (e.g. through being located in IP-adjoined position): such APs can be pied-piped with a topicalised VP, for instance:

ii) [leave the room angry] though he might ...

By our assumptions, the NP in (28) cannot be θ-marked by the CP, so it must be an argument of the verb. This seems intuitively correct - the sentence says that a house, or whatever it refers to, was built. The infinitive is an adjunct functioning as a secondary predicate of the object NP - the null operator being controlled much like the empty subject of an adjunct small clause.

The CP cannot head a complement small clause, since its specifier position is an A'-position. An argument in this position is not able to be identified by Case-assignment from the matrix verb. This means that we must conclude that the NP in (27) receives its θ-role from the preposition with, and that the infinitive is adjoined to the PP, functioning as a secondary predicate. (27) forms an instance of the configuration (11), not (12). [7]

This approach also accounts for why example (29) cannot be interpreted as a causative. Here, the sentence says that it (the house, or whatever) was constructed, and describes the purpose of this action. It does not say that a certain state involving the house is brought about, which is the interpretation of the example (30).

29) He made it [$_{CP}$ *Op* to live in *e*] (= *he made it*)

30) He made [it inhabitable] (≠ *he made it*)

The relation between the verb and NP in (31) and (32) differs in a similar fashion. Only the second example has a small clause reading:

31) We considered him [to talk to]
(= *we considered him*)

32) We considered [him easy to talk to]
(≠ *we considered him*)

The first has the reading where him is the object of the verb consider: the sentence says that "he" was the object of our consideration, with the infinitive describing the purpose with respect to which this consideration was directed. Only in the second is it a proposition that is entertained.

Finally, note that it is clear that the verbs make and consider may govern either a small clause or a NP complement. What about the preposition (absolutive) with ? I take the possibility for pleonastic it to occur as a clear indicator of a "governed small clause":

33) With [it likely that Mary will come]
... you won't be bored

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7. *The possibility that the infinitive is adjoined to the NP as an infinitival relative in (27) is ruled out, since the NP is a proper name.*

If examples like (33) are grammatical, it seems we must make a similar assumption about absolutive with - it may govern either a NP or a small clause.

This situation of syntactic heterogeneity is not restricted to verbs like make and consider, where it is, presumably, uncontroversial, and (perhaps more controversially) the with-construction. Raposo & Ugiareka (1990:530) suggest a general strategy for approaching predication structures of the sort discussed here:

> In principle, structures of predication can be freely analysed either as [complement] small clauses or as secondary predications, unless some independent semantic or syntactic factor excludes one or the other...

The next two sections provide some further evidence for taking this suggestion seriously.

5. Result clauses

In this section, I dispute Hoekstra's claim that all result predicates are small clauses (i.e. have the structure (12)). It appears that Hoekstra is forced to this conclusion in part by his assumption that an NP subject must c-command its predicate, which a priori excludes consideration of the VP-adjunction structure (11) (but see note 6).

The strongest argument for treating result clauses as small clause complements is to my mind the failure of the verb to select the NP "subject" of the result clause, as in examples (34):

34a) They drank the pub dry ≠ *they drank the pub*
b) They danced the weeks away ≠ *they danced the weeks*

Though a small clause structure is well-motivated where NP is not a possible direct object of the verb, not all cases considered by Hoekstra have this property. Many "result predicates" are predicated of an NP that is semantically a possible direct object of the verb - cf. (35), for instance:

35a) He wiped the table clean = *he wiped the table*
b) He hammered the metal flat = *he hammered the metal*

Hoekstra claims the verb is used intransitively in such examples as these, so that the NP is only intepreted as the subject of the small clause denoting the result of an intranstive (repetitive) action.

There is reason to suppose that adjunction structure is available in these cases, the evidence coming from the possibility of forming middle constructions from these examples. Most accounts of the formation of English middle sentences (illustrated in (36)) hold that the externalisation of the internal argument is the result not of a syntactic movement process, but of an operation on lexical entries that singles out the internal direct argument of the verb (cf. Roberts (1985), Fagan (1988:138)).

36a) Bureaucrats bribe easily.
b) This book translates easily.

This assumption supplies a way of accounting for systematic differences between middle formation and ordinary passivisation, illustrated in the following examples. (37) shows that middle formation does not permit preposition-stranding, which is possible in syntactic passives.

37a) * This bed sleeps in well
b) * This prison breaks out of easily

a') This bed was slept in t
b') This prison was broken out of t

(38) shows that ECM constructions, including small clause complements to causative and epistemic verbs, do not form middle sentences in English, although of course they can be passivised:

38a) * German children make happy easily
b) * That boy considers handsome easily
c) * That girl believes to be intelligent easily

a') They were made t happy
b') He was considered t handsome
c') She is believed t to be intelligent

It would follow from a uniform complement small clause analysis of result predication, such as Hoekstra's, that these fail to form middles across the board. The prediction is not met, though - a subclass of Hoekstra's resultatives form good middle sentences:

39a) This table wipes clean easily
b) This metal hammers flat easily

These examples have to be considered genuine middles, since they show the restriction to a non-eventive reading that distinguishes middles from ergative verbs, which allow a specific event reading (cf. (41)). The only reading available for the sentence in (40) is one under which the table is understood to have had a certain property on the preceding day.

40) ?The table wiped clean yesterday ≠ *event*

41) The river froze yesterday = *event*

The distinction is important, since subjects of ergative verbs are generally held to be syntactic objects that have undergone movement, and, as discussed by Hoekstra, resultatives can be governed by ergative verbs:

42a) The river froze [t solid] yesterday
b) The plan went [t wrong] yesterday

Of course, the data could in principle be construed in the other direction, as an argument against the lexical restriction on middle formation in English. The following considerations suggest that this would not be the correct step, though.

It seems that sentences containing result predicates only form good middles, if the externalised NP is a possible thematic object of the verb. Sentences such as (35), with result predicates where the NP is not a plausible argument of the verb, but can only be analysed as the subject of the result predicate, appear not to form good middle sentences, as (43) shows:

43a) *? This pub drinks dry with difficulty
b) *? The weeks dance away easily

I propose that the VP-adjunction structure is available in the cases that form good middle sentences; it is thus possible to retain the lexical analysis of middle formation without recourse to analysis of result constructions as complex predicates already present in the lexicon. [8]

Further evidence for this correlation is found in the behaviour of these constructions in nominalisations. Recall that complement small clause predicates do not appear in nominalisations, owing to the defective governing capacity of

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8. *While revising this paper, I discovered that Johnson (1990:12), also citing J. Gueron, makes similar observations to those discussed in this section, concerning some Verb + Particle constructions, which were analysed by Kayne (1985) as small clause complement structures. Here too, a uniform small clause analysis is put in doubt by the ability of certain particle constructions to enter middle formation, and to form -ing nominalisations - Johnson's examples are:*

i) His looking up of the reference is a trying affair
ii) Her calling out of his name is heart-wrenching
iii) Bridges blow up easily
iv) His car breaks down easily

For these case, the alternative to the small clause analysis would surely not be to assume that the particle is a VP-adjunct, but forms a complex head with the verb itself of the form [v V P], which then θ-governs the NP marked with of in (i-ii) and externalised in (iii-iv). I have not considered the possibility of analysing V + NP + Adjective strings as involving complex verbs of the form [v V A]. Nevertheless, the ability of the adjective to head a phrase containing more than one word (e.g. when the adjective is modified or compared) makes a complex head analysis here seem far less plausible - cf (44b.) and (v-vi):

v He will wipe the table as clean as possible
vi This perspex wipes cleaner than any glass

Nouns. The same pattern emerges in the contrast between (44) and (45). Nominalisations of result predications are only possible if the NP is a possible thematic object of the nominalised verb.

44a) The hammering of this metal straight
..took us a long time.
b) The wiping of the table any cleaner
...would be no easy job.

45a) *? The drinking of the pub dry ...
b) *? The dancing of the weeks away ...

These data suggests that the result clauses investigated by Hoekstra do not form a unitary class. The small clause analysis is supported only for a subset of resultative constructions.

6. *There*-sentences

6.1 Small clause vs. NP-Adjunct.

The coda of there-sentences (where "coda" refers to the overt NP plus the predicate which follows it) is claimed to be a small clause by Stowell (1978), among others. This analysis is supported by the parallel between existential sentences and copula sentences, for which a small clause structure is also claimed:

46a)	There is [a mouse in the bath]	*PP*
b)	A mouse is [*t* in the bath]	
c)	There are [several boys sick]	*AP*
d)	Several boys are [*t* sick]	
e)	There were [several boys drowned *t*]	*VP*
f)	Several boys were [*t* drowned *t*]	
g)	There are [several boys smoking]	*VP*
h)	Several boys are [*t* smoking]	

Williams (1984) makes a counter-claim to the effect that the coda of there- sentences is actually a Noun Phrase; that is, the predicate is to be analysed as an adjunct of the NP. In our terms, Williams claims the coda is to be analysed not as an instance of structure (12) but of structure (10). One argument which Williams makes for this claim is that the parallel between copula sentences and existential sentences is incomplete: as example (47a) shows, the NP in an existential sentence cannot be followed by another NP as predicate, a fact which receives no explanation under the small clause analysis of the there-construction.

47a) * There are [two boys musicians]
b) Two boys are [*t* musicians]

48) * [two boys musicians] came into the room

Given that NPs do not occur as postnominal modifiers (48), Williams is able to explain the ungrammaticality of (47a) by claiming that the coda is an impossible Noun Phrase.

A second piece of evidence for the NP hypothesis comes the existence of examples like (49) which have no predicate in the coda, i.e. which contain only a NP: [9]

49a) There is a God
b) There are no small clauses

6.2 Idiom-VPs as NP-adjuncts

There is a further argument supporting the NP-analysis that is based on the following type of existential sentence with coda consisting of idiom part NP plus corresponding passive VP:

50) There was <u>little heed</u> paid to these matters

As mentioned above, it is often assumed that an idiom part NP such as this is restricted to being base-generated in the object position governed by the verb with which it forms an idiom expression. It follows that in (50), the NP and participle phrase must constitute a complement small clause, in which the subject (underlined NP) has been derived by NP-movement from within the participle phrase, no other analysis being compatible with the initial assumption. The derivation of example (50) would be as in (51):

51) There was [VP <u>little heed</u> paid t to these matters]

This is equivalent to the derivation of an ordinary passive sentence (52), except that the highest subject position is occupied by <u>there</u>, and the object only moves to an intermediate A-position, presumably the specifier of VP.

52) <u>Little heed</u> was [VP t paid t to these matters]

The analysis in (51) violates a generalisation concerning expletive-argument pairs - CHAINs in the sense of Chomsky (1986). Chomsky makes the observation that the expletive NP always occupies the highest position (the Case position) of the CHAIN, and the argument NP always occupies the deepest position in the CHAIN (the θ-position). The generalisation is illustrated in (53):

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9. *This type of example cannot be claimed to represent a further asymmetry between copula sentences with and without <u>there</u>, to the extent that sentences like (i) (with existential interpretation, and excluding elliptical interpretations) are acceptable:*

i) God is (and always shall be)

53a) A monster seems to be considered to be in Loch Ness
b) * There seems to be considered a monster to be in L. N.
c) * There seems a monster to be considered to be in L. N.
d) There seems to be considered to be a monster in L. N.

The generalisation may be stated to the effect that an NP-movement operation, if it occurs in the syntax, may not strand the moved NP "halfway up" the chain (53b,c), but must move it to the highest possible subject position (53d).

Applied to the small clause complement-plus-raising analysis of passive sentences illustrated in (52), this generalisation predicts that if the there-insertion option is taken, the expletive is inserted in the matrix subject position and the object of the passive verb is left in situ - i.e. at the root of its chain, giving a sentence like (54):

54) * There was [VP paid little heed to these matters]

Although this type of passive sentence is grammatical in other SVO languages, for example Italian (Belletti (1988)) and Norwegian (Åfarli (1989)), (54) and its equivalents are by and large unacceptable in English.

The original, grammatical sentence with there, of course, violates this generalisation, under the analysis (51). An analysis of (50) which obeys the generalisation must treat the idiom part NP as occupying the θ-position of its CHAIN. If such an analysis is correct, we must assume that the idiom part is not in the same chain as the trace in the passive VP, but that it is θ-marked by the verb be. Our assumptions lead us to conclude that the idiom NP must be an internal argument of be in (50). [10]

The drawback to this analysis is that it is not compatible with the assumption we have already mentioned, that idiom parts are only generated as complements to their verbs. This assumption is supported by the observation that idiom parts cannot function as ordinary R-expressions, i.e. occupy positions θ-marked by predicates other than the idiom predicate itself, as indicated in (55):

55a) * The heed was insufficient
b) * The advantage upset me

However, the fact is often overlooked that if such an idiom NP includes a restrictive modifier containing this verb, it gains the ability to refer independently:

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10. *A conceivable alternative might be that the idiom phrase is in the subject position of a small clause headed by the participle phrase, under the assumption that the participle phrase θ-marks it there as its "external" argument. This alternative must be rejected on the basis of examples like (i), where it is no longer possible to analyse the position of the idiom NP as θ-marked by the relevant participle phrase:*

i) There was little heed likely to be paid to these matters

56a) The heed paid to this matter was insufficient
b) The advantage taken of John upset me

The passive participles in (56) must be analysed as adjuncts to the subject NP in the configuration (10) discussed above. In other words, they are adjunct small clauses, containing a null category in subject position. I assume the empty subject in these examples to have been NP-moved, so that (56a) will have the representation (57):

57) [The advantage [PRO taken t of John]] ...

The availability of this substructure in general enable us to analyse the participle in the in the coda of the there-sentences in (50) in the same fashion. These examples now receive representations in which the participle phrase is a restrictive modifier of the NP headed by the idiom noun: [11]

58) There was ...
[NP little heed [PRO paid t to these matters]]

It is interesting to note further that this small clause only licenses the idiom NP as an indepedently referring expression if it is a restrictive modifier of the NP. The contrast in (59) can be explained by noticing that the NP containing the idiom part can only function as a referring expression if the idiom part NP is associated with its verb inside the NP which functions as referring expression.

59a) [The advantage being taken of John] upsets me
b) [The girl standing there] upsets me

c) * The advantage upsets me [being taken of John]
d) The girl upsets me [standing there]

e) * [Being taken of John], the advantage upsets me
f) [Standing there], the girl upsets me

We can conclude therefore that the only analysis available for these sentences is the one in which the participle phrase functions as an adjunct small clause, adjoined to the NP. So for these examples, Williams analysis of there-sentences is supported.

6.3 VP-adjuncts with proper names and pronouns

However, there is also evidence that Williams' claim that all codas in there-sentences are NPs is actually

11. *Perhaps it is worth pointing out that under this analysis, which eschews the possibility of a small clause structure for there-sentences with passive codas, sentences of the type "there was a man killed" quite generally have a different structure from their counterparts without there, e.g. "a man was killed".*

incorrect. The NP analysis would be excluded if we were able to insert a pronoun or a proper name into the coda of the there sentence; the reason being of course, that modifiers cannot be adjoined to pronouns or proper names.

Normally, the well-known definiteness effect excludes both pronouns and proper names from there-sentences, together with NPs with definite articles and certain quantifiers such as the one in example (60):

60) * There is every mouse in the bath

However, both pronouns and proper names are permitted in there- sentences with a certain reading, the so-called "presentational" or "list" reading. [12] Examples are given in (61) which form good replies to a question such as "is there anyone here who I can talk to?":

61a) There's John
b) There's only him

These NP's permit codas of the sort claimed by Stowell to form small clause complements, in examples that cannot be analysed according to Williams' NP-adjunction analysis:

62a) There is only John sick
b) There is only him available
c) There was only Peter in the kitchen
d) There was still him to consider

The question that arises now, of course, is whether these examples should be associated with a complement small clause or VP-adjunct structure.

6.4 Stage-level vs. individual-level predicates

At this point, we return to the observation concerning VP-adjuncts made earlier. It was suggested that the subject-oriented and object-oriented predicates that form prototypical VP-adjuncts were stage level predicates in the sense discussed by Kratzer (1988). It seems that the distinction between stage and individual level predicates might be relevant in choosing whether the codas in examples like (62) form small clause or VP-adjunction structures. Raposo & Ugiareka (1990:530) make the interesting suggestion that only stage level predicates can be VP-adjuncts, whereas both types may head small clause structures. If this is correct, we can use (63) as an additional (semantic) probe for syntactic structure.

63) Semantic generalisation (Raposo & Ugiareka):
Individual-level predicates may not occur as secondary predicates [= VP-adjuncts].

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12. *Presumably, (60) can be rendered acceptable if a plausible context can be found which admits a list of which "every mouse" or "every mouse in the bath" can be a member.*

It has often been observed that a certain class of adjectives give bad results as codas in there-sentences - adjectives such as those in example (64) intelligent and altruistic.

64) *? There are several men intelligent / altruistic

Indeed, the ability to occur in this position is cited by Kratzer as one good test for the distinction between stage and individual predicates - cf. the contrast in (65):

65a) There are firemen available
b) *? There are firemen altruistic

Suppose then that Williams was correct and that the coda of there-sentences cannot be a small clause. The failure of these predicates (intelligent / altruistic) to occur in the coda is then attributable on the one hand to their inability to form good VP-adjuncts and on the other, to the absence of the small clause structure. This claim is upheld for there-sentences with proper names or pronouns:

66a) * There is John intelligent
b) * There is only him altruistic

For the examples with indefinite noun phrases, we must also check that the adjectives cannot occur as postnominal modifiers elsewhere. The judgements in (67) show that this is so:

67a) * Some people intelligent came into the room
b) * Some people altruistic came into the room

It is interesting to observe that when these adjectives occur in longer, or heavier adjective phrases, they become acceptable as postnominal modifiers, as shown in (68):

68) Some people [more intelligent than Mary]
...came into the room

The ungrammaticality of (69), on the other hand suggests that these adjective phrases still form bad VP-adjuncts, even when made "heavier":

69) *? John came into the room [more intelligent than Mary]

In (70), finally, we see that the same long adjective phrase forms a perfectly acceptable coda in a there-sentence:

70) There are few people [more intelligent than Mary]

So where a VP-adjunct analysis is excluded by the generalisation in (63), the correlation between possible post-nominal modifier and possible there-sentence coda appears to be upheld. Taken together, these data support the wider claim that both NP-adjunction and VP-adjunction

variants are available for the analysis of there-sentences, but that these sentences never have true small clause complements.

If it is true that individual-level predicates only occur in NP-adjuncts and true small clause complements, then the data in (71) also support the availability of a true small clause analysis for, for example, sentences with epistemic verbs and ordinary copula sentences:

71a) She is / seems intelligent
b) She considers John intelligent
c) She thinks John altruistic

Finally, it is worth asking why no small clause complement is available in there-sentences, when one is available with ordinary copula sentences. One possible answer is provided in Belletti (1988) with the suggestion that the Case assigned to the NP in there-sentences is not Nominative, a structural Case - as implied, if we accept Chomsky's (1986) Case Transmission Hypothesis, for example - but that it is in fact an inherent Case (Partitive, according to Belletti). Such a Case would only be available for thematic objects of the verb be, which is the source of the Case, and so could not be assigned to a small clause subject.

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