

SMALL CLAUSES AND PARTICIPIAL CONSTRUCTIONS

A. PARTICIPIAL CONSTRUCTIONS

The first part of the chapter sketches the syntax of the Accusative + Participle and the Nominative + Participle constructions, which are related to the raising infinitive constructions through the syntax of their subjects. Both the present participle and the past participle constructions will be examined:

- (1) We found him sleeping. (Acc + Pr(esent) P(a)rt(icip)le)
We found him killed by a bomb. (Acc + P(a)s(t) P(a)rt(icip)le)
He was found sleeping. (Nom + PrPrt)
He was found killed (Nom + PsPrt)

The second part of the chapter is devoted to a brief presentation of the major problems in the syntax of English small clauses.

1. The categorial status of participial clauses. Their temporal interpretation

Unlike infinitives, participial clauses cannot be viewed as CPs because there is never any evidence (external or internal) of a CP projection. Unlike infinitive clauses, participial clauses cannot be headed by any C^0 . Furthermore, participial clauses cannot be interrogative, differing from infinitives, which allow *wh*-complementation. The possibility of subordinate interrogative clauses is strong evidence of a CP, since *wh*-phrases always move to SpecC. But, as mentioned, there are no participial questions. While the declarative finite clause in (3c) allows a participial paraphrase, the finite interrogative (3a) does not. There is a good question corresponding to (3b), but the *wh*-DP moves to the SpecCP of the main clause, i.e., to the *first* Spec CP position available. Thus the impossibility of participial interrogatives indicates that participial clauses do not have a complementizer layer.

- (2) a. I didn't remember [which book_i [[PRO_j-to take t_i]].
b. He doesn't know [where [PRO-to go]].
- (3) a. I saw [which men were sleeping].
b. *I saw [which men sleeping].
c. I saw that those men were sleeping.
d. I saw those men sleeping.
- (4) Which men_i did you see [t_i sleeping]?

On the basis of such facts, it may be accepted that participial clauses are not CPs, but IPs i.e., projections headed by the Inflections *ing* or *ed*. As known, I^0 is a bundle of verbal and nominal features. Taking into account the role that *Ving* and *Ved* play in English finite clauses, it is plausible to assume that *ing* and *ed* indicate *Aspect*, rather than Tense. Therefore, *participial clauses* are in fact *Aspect Phrases*, and there is no Tense projection inside the Participle Clause. This hypothesis, is corroborated by the fact that participial clauses do not contain auxiliaries, since auxiliaries indicates the presence of a T node, given that auxiliaries always move to T.

- (5) They found him sleeping. (Acc + PrPrt)
 They found him to be sleeping. (Acc + Inf)

However, as stressed in Guéron & Hoekstra (1989, 1994), there is a biunique relation between verbs and Tenses, which amounts to the requirement that each verb should be integrated into a Tense chain, which identifies the verb.

The present participle clause is integrated into the Tense chain of the matrix, the matrix RT, serving as an anchor for the participle. The role of the *ing* morpheme should be clear. Remember that as hypothesized by Guéron (1995), the verb stem is [+ Perf] in English and cannot be anchored to a punctual event. *Ing* recategorizes the verb into a state or activity which can be mapped onto the anchoring event of the matrix (Gueron & Hoekstra (1994), Giorgi & Pianesi (1997)).

Consider the Past Participle now. As its name shows the Past Participle is a Past, which identifies the event as anterior. The Past of the Past Participle is like a definite article which picks out one point, the final one of the time interval denoted by the predication. The Past Participle is interpreted as anterior to the main clause, through its temporal / aspectual value.

2. The syntax of the participial clause

The most characteristic group of verbs that illustrate the Acc + Pr Prt construction is that of groups of physical perception, in examples (6a) and (7a).

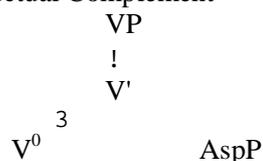
These verbs have an alternative infinitive complement construction, which contrasts aspectually with the participle construction. The bare infinitive suggests completion of the event, while the participial construction presents the event as unfolding. This difference is apparent in the contrast between (6a) and (6c), or (7a) and (7b):

- (6) a. Carol heard Francine knocking on the back door.
 b. Francine was knocking on the back door.
 c. Carol heard Francine knock on the back door.
 d. Francine knocked on the back door.
- (7) a. I saw her drowning, but I rescued her.
 b. I saw her drown (* but I rescued her.)

2.1. *An ambiguity in the Acc + Ving construction under perception verbs.* It has long been known that the Acc + Ving construction under perception verbs is systematically ambiguous, since it can either represent a clausal complement, similar to the Acc + Infinitive, or an ordinary Direct Object followed by a reduced relative clause (cf. Akmajian 1977) or by a "pseudo relative", more exactly an adjunct clause controlled by the Direct Object, as proposed by (Radford (1975), Tunstall (1998), among others). The two interpretations represent different syntactic configurations (see (9,10)) and the distinction between them is supported by distributional as well as by semantic facts. An example like (8) may represent either the complement structure in (9) or the pseudo-relative structure in (10b):

- (8) Wayne saw Mona stealing oranges.

- (9) a. Aspectual Complement



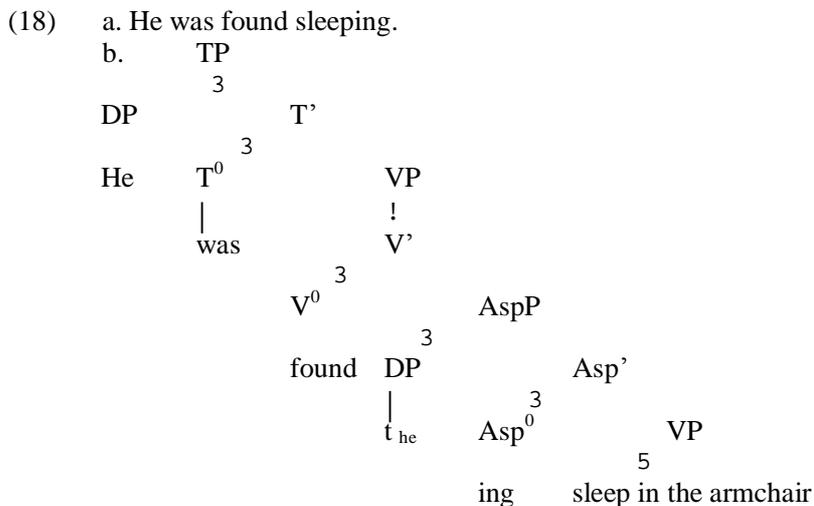
The pseudo relative structure is by no means restricted to these verbs, since there are many instances of adjunct clauses controlled by the DO. Sentence (17a) may be continued as in (17b) or in (17c). The interpretation felicitous in context (17b) requires control of the subject of the adjunct clause by the Direct Object.

- (17) a. You can't hit him sitting on the ground
 b. ...That's not fair. Let him get up!
 c. ...You won't be able to reach him without standing up.

We will tentatively accept that the Acc+ Ving structure under perception verbs is an ambiguous structure, involving either an object small clause, AspP, or a Direct Object + controlled adjunct small clause.

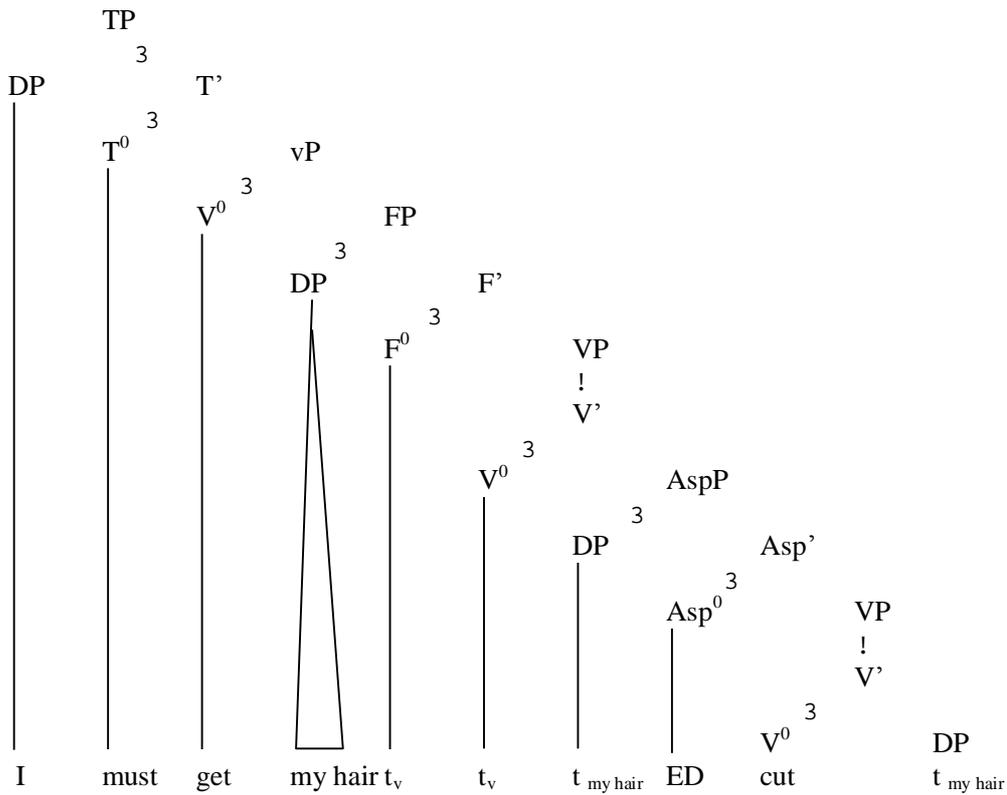
2.2. Case in the present participle constructions. Consider the Acc + Part first. The present participle clause shows no internal position where the subject could check its case feature. The subject of the small clause depends for Case on the verb in the main clause. As with raising infinitives, either Case is assigned under Agree by the main clause verb to the small clause subject in situ, or, when necessary (because Agree is blocked) the small clause participial subject raises into the main clause.

Consider the Nom + Prt now, where the main verb is passive. If the main verb is passive, the small clause subject checks case by subject to subject raising, as in (18) below.

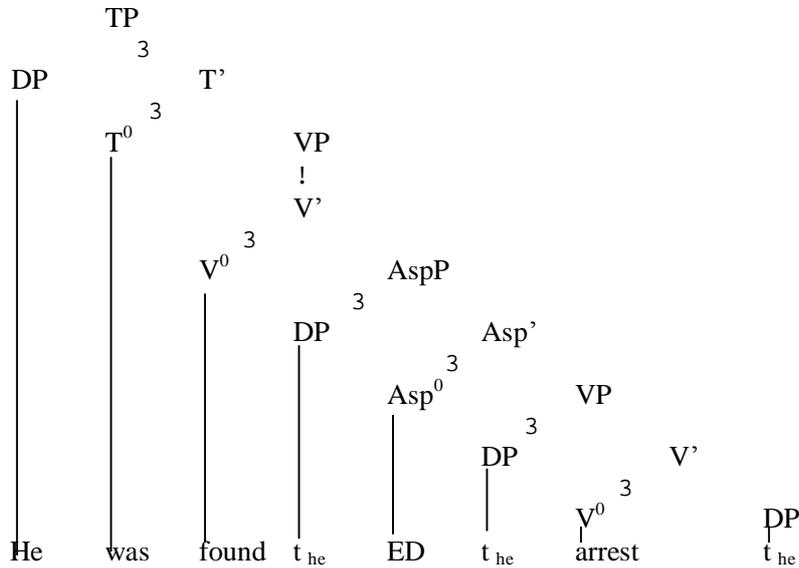


2.3. The Past Participle clause. The past participle clause also does not possess any clause internal head that might check the case of the subject. The past participle is unable to assign case, since it is a passive participle, likely to have agreement features as well. Moreover, the past participle clause is ergative, the participle licenses an internal object, which must check its case feature. The subject moves to Spec I, i.e., Spec AspP in observance of Minimize Chain Links, and then raises to the case position of the matrix verb or gets case by Agree. A raising derivation is represented below. If the main verb also is in the passive, the subject of the small clause must raise to the SpecT position of the main clause. The resulting construction is a Nominative + Past Participle one, an infrequent construction, illustrated in (19b) below:

- (19) a. I must get my hair cut.



b. He was found arrested by the local police.



3. The distribution of the Acc + Pr Prt and the Nom + Pr Prt constructions.

There are few verbs that allow these constructions, but they are central verbs of the English vocabulary, so the structures are very frequent. The verbs that select these constructions are, largely, a subset of those that allow the corresponding infinitive constructions.

a. Verbs of physical perception: *see, hear, feel, watch, smell, behold, notice, perceive, find* (in the physical, concrete meaning).

- (20) a. I heard him singing.
b. I felt her trembling.
c. I can smell the milk burning.
d. He watched us coming.

The contrast Accusative + Infinitive / Accusative + Participle is aspectual with these verbs. The bare infinitive is [+ perfective], while the participle is imperfective.

- (21) a. I saw him cross the street.
b. I saw him crossing the street.

b. Causative verbs: *get / have* (also Accusative + Infinitive); *set, start, prevent*.

The list of causative verbs allowing the Acc + Part is significantly different from that of verbs allowing the Acc + Inf. The verbs *make, let, cause* are absent, the verb *have* appears with a double meaning, 'cause', as in (22a ,b), and 'experience' as in (22c)). The verbs *start, set* have no corresponding infinitive construction:

- (22) a. I'll have you all speaking fluent English.
b. I can't have you doing this.
c. I had never had a police officer searching my house before.
d. He will soon get things going.
e. He started the engine running.
f. What can prevent us getting married?

c) *Verbs of mental perception that nevertheless imply 'sensory' content* and are close to the verbs of physical perception in meaning: *remember, recollect, imagine*

- (23) a. I recollect two buttons bursting to the opposite side of the parlour while she was hugging me.
b. They kept me waiting.
c. We found ourselves being looked after by a young lady.
d. They caught him stealing.
e. Imagine him sun-bathing on the beach.

The Nominative + Present Participle may represent the passive of the preceding construction with most of the verbs listed above (exception: *have*, etc.)

- (24) a. The man was seen saving the child from drowning.
b. The president was heard cursing below his breath.
c. He was found writing anonymous letters.

There are also a couple of propositional ergative verbs, including the aspectual verbs *begin, start, continue, cease* which should be analysed as raisers in examples like those below:

- (25) a. It started raining.
b. The woman never ceased being harassed by her boss.

7. Related constructions

There is another group of verbs that frequently appear with an Acc + Ving construction: *catch*, *keep*, *find* (in its physical, concrete meaning), *set*, *send* (*packing* / *flying*), *start* (when the matrix and complement have different subjects), *prevent*. In the Acc + Ving construction, they have the following properties:

a) The Acc + Ving construction does not alternate with an Acc + Inf. This distinguishes them from the verb of physical perception discussed above.

- (26) a. I heard him walk into the house.
b. I heard him walking into the house.

- (27) a. I kept him waiting in the room.
b.*I kept him to wait in the room.

b) The Acc + V ing does not alternate with a Poss-Ing structure; this shows that they are not gerundial complements, since in the case of gerundial complements there is a systematic alternation between an Acc-ing and a Poss-ing construction (see chapter on gerunds)

- (28) a. I resent him/his hitting the child
b. I deplore his hitting the child.
a. I found him chopping the wood.
b. * I found his chopping the wood.
a. I kept him waiting in the room.
b. *I kept his waiting the room.

c) The third relevant property is the pronominalization pattern that they evince. Their DO cannot be a sentence substitute. They pattern like object control verbs, rather than like raisers:

- (29) I caught Carl reading Barriers and Nancy caught him too.
I tried to persuade Carl to read barriers and Nancy tried to persuade him, too.
I believe Carl to be reading Barriers and Nancy believes *him / it / so, too.

d) Finally, they do not accept expletive objects, again contrasting with verbs of perception and other raisers.

- (30) We expect it to be raining outside.
We saw it to be raining outside and remained inside.
*We caught it raining and didn't go out.

The data just reviewed strongly argue for the hypothesis that with verbs like *catch*, *keep*, *send*, the Acc+Ving instantiates a DO+ pseudo-relative construction.

Other facts that go against a raising analysis and in favour of pseudo relative structure are supplied by the *Not-Initial* test and the *Alone-final* test. According to the *Not Initial* test, *not* is frequent in subject, rather than object, DPs. The infelicity of sentence (31a) shows that the Acc of the verb *keep* is a basic DO, and it is not a subject at any level of analysis. The *Alone* final NP test says that *alone* is felicitous in subject, rather than object, phrases, while *only* is not sensitive to the function of the DP. The infelicity of (32a) suggests that the DO of *keep* is not an underlying subject.

- (31) a. *He kept me alone waiting. (*Alone-Final* NP)
b. He kept only me waiting.

- (32) a. *He kept not many of us waiting. (The *Not Initial* NP Test)
b. He didn't keep many of us waiting.

We conclude that the Acc + Ving construction of these verbs is a pseudo-relative construction, illustrated in (10) above. Here are a few examples from literary texts.

- (33) a. Doro was so astounded that she was oblivious of everything except her task of *keeping* the bell ringing. b. She had the secret horror of being *kept* conspicuously waiting in a public place. c. Lastly Paul Overt had a vague sense that if the gentleman with the expressionless eyes bore the name that had *set* his heart beating faster he would have given him a sign of recognition. d. “The pretty women themselves may be sent flying!” Lord Warburton exclaimed. e. What can prevent us getting married?

7.3. **Prepositional raisers.** A rather special case is that of a few prepositional verbs which exhibit all the raising properties. These are the negative causative verbs: *prevent/ keep / stop / prohibit from*. Note that the verb *stop* is also used without *from*, in the same negative causative meaning: *Stop them having babies by hook or by crook.* (Pt)

- (34) a. She knew them all, all the right phrases, but her modesty prevented her from using them. b. He could not keep himself from bursting out laughing again. c. You had better stop him from going down. d. There was, as yet, no Act of Parliament, prohibiting English functionaries in India from profiting by this Asiatic usage. (Pt)

These verbs radically differ from obligatory *object control* verbs like: *discourage, dissuade, deter, refrain*, etc., although both share the surface context $V \wedge NP \wedge Prep \wedge Ving$, and both share the same negative causative meaning. Postal (1974) shows that verbs like *prevent, keep* are SOR triggers, arguing as follows:

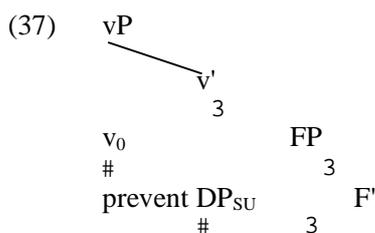
a) No selectional restrictions hold between *prevent* etc. and their surface Direct Object, the latter position can even be filled by formal and idiomatic nominals.

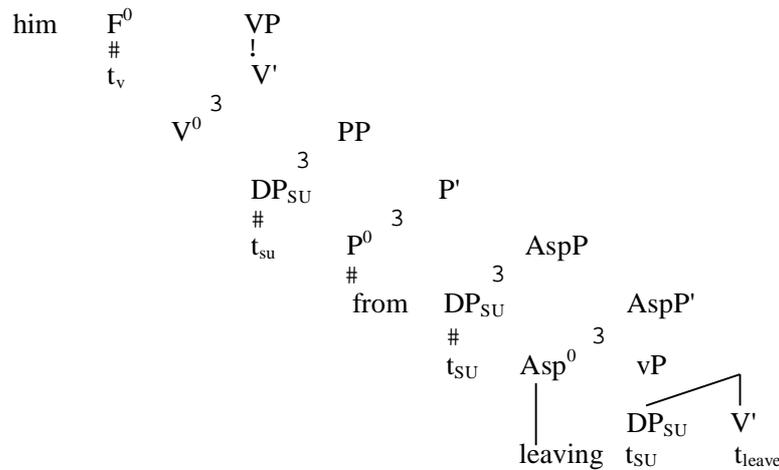
- (35) a. He prevented / *dissuaded there from being a riot in London / the bomb from going off.
b. Harry prevented / *discouraged tabs from being kept on Tom’s movements.
c. Nobody can stop it from snowing in the arctic region.

b) There is cognitive synonymy of the raising (36a, b) pair versus the difference in meaning in the control pair (36c, d) under Passivization of the subordinate clause verb.

- (36) a. I prevented John from visiting Bill.
b. I prevented Bill from being visited by John.
c. I prevented John from visiting Bill / Bill from being visited by John.
d. I prevented Bill from being visited by John.

Given Postal’s argument, we conclude that *prevent* etc. are SOR triggers. As to the derivation, in this case, there *must* be movement out of the subordinate clause to the Accusative case position of the main verb, since Agree is blocked by the intervening preposition. The subject of the small clause indeed shows up to the left of the preposition; it probably moves through the Spec of the preposition to the case position of the verb. Movement through the specifier of the preposition is plausible in as much as these prepositions are actually devoid of meaning representing functional categories, akin to complementizers. The final structure might look as in (37) below.





4. The distribution of the Acc + Past Participle and the Nom + Past Participle Constructions

Here are some of the triggers of these constructions:

a. Verbs of physical perception: *see, hear, feel*.

- (38) a. I saw him thrown out of his chair.
 b. I've heard it said.
 c. I felt an arm slipped under mine.
 d. I perceived him led through the outward hall as a prisoner.
 e. We see various kinds of bills voted by substantial majorities.

b. Verbs of propositional attitude: *imagine, remember, recollect, know, confess, find*.

- (39) a. He imagined himself sought after by the English.
 b. Elena knew herself dismissed.
 c. He confessed himself obliged to leave the regiment.

Some of the verbs listed in a) and b) above have Nominative + Past participle counterparts, but the structure is infrequent. Here are a few examples:

- (40) a. He was seen led to the prison by a police squad.
 b. The bridge was found blown up by an explosion.

c. Causative verbs: *have* (the causative 'have' construction), *get, make*.

- (41) a. I must get my hair cut.
 b. You must get it seen to.
 c. He couldn't make himself understood
 d. He had his rival poisoned by a professional killer.
 e. I had my tooth extracted.
 f. The poor have the Gospel preached to them.
 g. Is it not provoking to have the most ill-natured things said of one?
 (*Have* = experience)

d. Exercitive verbs of permission and command: *order, allow, etc*.

- (42) a. I ordered my bill made out.
 b. He had ordered a big wreath laid on the grave.

- c. I will not ever bear a lie told to another in my presence.
 - e. Verbs of affective stance (verbs of liking and disliking).
- (43)
- a. At what time would you wish the ceremony performed?
 - b. I want him sent to prison.
 - c. Men like shopping made easy.
 - d. These farmers want repairs done.
- As with the infinitive constructions, and probably for the same reasons, the verbs in c), d), e) are not used in the passive construction.
- (44)
- a. He commanded the bridge to be lowered.
 - b. *The bridge was commanded to be lowered.
 - c. Hastings ordered the fallen minister to be set at liberty.
 - d. The fallen minister was ordered to be set at liberty.
 - e. I ordered my bill made out.
 - f. *My bill was ordered made out.

B. SMALL CLAUSE CONSTRUCTIONS

1. Categorial status and functional structure

A small clause is a propositional construction that lacks some/ all verbal functional categories. The predicate of the small clause may be an A, P or N.

The label “Small Clause” introduced by Williams (1975) suggests the essential fact that small clauses are incomplete sentences. Stowell (1983) proposes that small clauses are maximal projections of predicates of any lexical category, the subject being situated in the Spec of the lexical projection. This view represented an attempt to generalize the VP internal subject hypothesis, relying on a principle like (1) below, which states conditions on thematic licensing:

- (1) All θ -roles are assigned within the maximal projection of the θ -assigning head.
- (2)
 - a. I consider [him foolish]_{AP}.
 - b. I want [him out of the room]_{PP}.
 - c. I consider [him a genius]_{DP}.
 - d. I consider [him George's best friend.]

Stowell is thus a defender of the position that small clauses are lexical projections. Though representing a significant generalization, Stowell's analysis proved inadequate on empirical as well as conceptual grounds. On empirical grounds, while the analysis could deal with examples like (2a, b), it was less clear how to handle other examples such as (2d), since the latter would represent a phrase which would appear to have two specifiers, the Genitive (in SpecDP) and the Accusative. A further problem arises even for adjectival small clauses, in questions of the following type, where, if the subject is in SpecA, then a non-maximal constituent of type A' has been displaced.

- (3) How foolish do you believe [_{AP}the new leader t_{A'}]?

One cannot, in fact, accept that a non-maximal projection was moved to Spec CP. Therefore, at the point where wh-movement applied, the subject is out of the AP which undergoes movement.

On the conceptual side, if small clauses were merely lexical projections, they would

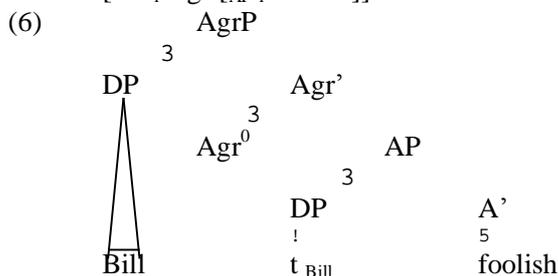
depart from a generally accepted minimalist principle claiming that:

- (4) Each lexical projection is dominated by functional categories, which provide the licensing domain of the lexical projection.

In other words functional projections help to integrate the small clause within the main clause. Guéron & Hoekstra (1994), Legendre (1997) argue that small clauses have functional structure, representing agreement projections. “A particular hypothesis that we would like to endorse is that each predication involves a node Agr. If a lexical projection is to be construed as a predicate, its head is checked by Agreement, which itself is checked by the subject of the predication.” (cf. Guéron & Hoekstra (1994).

- (5) We consider Bill foolish.

[Bill_i Agr [AP_{t_i} foolish]]



The trace is motivated by θ - assignment, while Agr is motivated by the principle of predication. Legendre specifically argues that the Agr projection should be viewed as a Gender Phrase, a plausible analysis for AP and DP small clauses, which certainly show agreement (cf. *Le ştiu pe fete ruşinoase*). Other analysts go further claiming even that the functional structure of small clauses is complete, including a TP, and a CP layer (cf. Starke (1994)). Striking a middle ground position, *we argue that SCs do not contain verbal projections (tense, aspect, mood)*.

The analysis of small clauses as purely lexical projections appeared to be supported by language acquisition facts. It is argued that since SCs do not have functional structure, in particular, since they lack Tense, they never occur as independent clauses

- (7) a. *[her intelligent]_{AP}
 b. *[John in the garden]_{PP}
 c. *[them my best friends]_{NP}

Yet Radford (1990) reports a number of examples of the type illustrated in (31) (children's ages in months), which appeared as independent utterances.

- (8) a. Baby eat cookies. (Allison, 22 months)
 b. Mummy busy. Baby busy. (Kathrin, 21)
 c. Mouse in window. It in bag. (Hayley, 22)
 d. That bushy. (Claire, 24)

Following Stowell's (1983) approach to small clauses, Radford analyzes children's sentences of this type as small clauses, i.e., as projections of lexical categories:

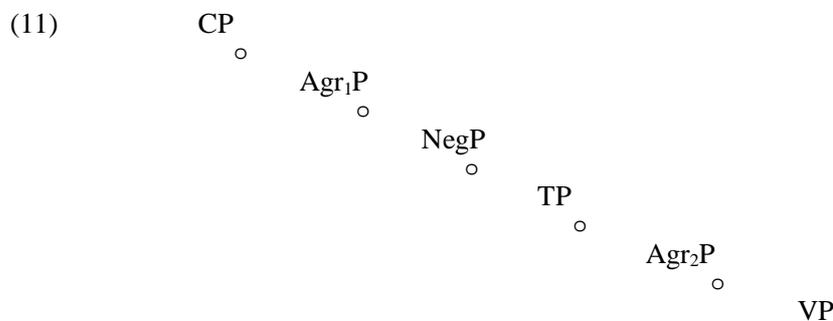
- (9) a. [Baby eat cookies.]_{VP}
 b. [Mummy busy.] [Baby busy.]_{AP}
 c. [Mouse in window.]_{PP} [It in bag.]_{PP}

d. [That bushy.]_{NP}

Other researchers in the field of language acquisition have argued against the lexical small clause hypothesis. They provide evidence that clauses in early child language cannot be pure instantiations of lexical projections. This evidence consists of distributional facts, as well as a correct use of agreement, as in Italian (10).

(10) Bimba questa (E una bimba questa)

Wexler (1993) has shown that there is a period in linguistic development during which children use infinitives as main verbs, despite the fact that they know the difference between a finite and an infinitive verb; other studies have confirmed this finding, regarding an infinitive stage, accounting for it by proposing that the structure of these clauses is somewhat deficient or is not present. Rizzi (1993) proposes that optional infinitives are truncated structures. He assumes that a full clause is hierarchically organized as in (34), with CP being the root.



In adult language, a clause must start from the CP and take all the projections below it. This requirement may be traced back to the necessity of anchoring the event or state expressed by the verb to Tense. Spec CP contains a Tense operator (TO) that binds a tense variable located in TP. The verb, a predicate, is related to Tense by providing it with the event role; i.e., the verb provides the lexical content which is constructed as an e-role. These three elements form a T-chain.

Children in the optional infinitive stage are not sensitive to tense values, i.e., for them "there is no substantive tense variable; hence no need for a binder" If children can dispense with a tense operator and do not need to start a clause from the CP level, they may choose any other category (in the schema above) as root, thus producing truncated structures in which the event expressed by the verb does not need to be anchored to Tense.

If children choose Agr₂P as a starting point, then one gets optional infinitives, i.e., structures in which a tense variable is not present. Optional infinitives share with small clauses the absence of tense. Optional infinitives are small clauses. Thus we can conclude that although not all children's clauses are small clauses, at least some of them are. On the other hand *the optional infinitive stage merely signals the lack of Tense, not the complete absence of functional structure.*

The absence of a Tense syntactic position in small clauses is indicated by the fact that Negation is missing:

(12) *I consider John not happy.
*I consider John never happy.

Zanuttini (1991) posits a close relation between sentence negation and Tense. Whenever

a Tense projection must be assumed, clausal negation is present. The absence of negation may be further proof that TP is also absent.

The temporal interpretation of small clauses (in adult language)

We have concluded that SC do not contain Tense. Since Tense is required to make a linguistic entity complete, Guéron & Hoekstra (1994) propose that small clause predicates enter a T(ense)-chain whose foot is the matrix verb.

Looking back on what we have said so far, the main feature of a small clause is the fact that predication is obtained in the absence of a verbal inflected form (Tense, Mood, Aspect). The inflected verbal counterparts of SCs are copular constructions. The presence vs. absence of lexical BE structures correlates with the presence / absence of Tense.

The hypothesis that SCs contain a functional projection is supported by distributional facts. The problems raised by nominal clauses like (2d) above, and adjectival clauses like (6) have already been mentioned. The distribution of floating quantifiers is also significant. Remember that they attach to syntactic predicates, entities c-commanded by their subjects. The possibility of using *all* in front of the AP *wide open* in (13a, b), in contrast to its impossibility in (13c), suggests that in the small clause examples, PRO has raised out of the lexical projection to a c-commanding position. Remember that in PRO-to construction, PRO does not automatically raise out of the vP.

- (13) a. I consider _{AGR}[these girls_{AP}[all [t satisfied with their jobs]]].
b. I kicked the doors all wide open.
b'. I kicked the doors_{FP}PRO_F⁰ [all [_{APT} wide open]].
c. *They tried [_{CP} [_{IP}all to [_{VP}PRO leave]]].

As expected adverbs may adjoin to SCs which are predicative constituents, the small clause subject appearing at a distance from its predicate. (Whether multiple adjunction or multiple specification is involved is less important in this discussion.

- (14) I consider [_{FP}those students_i [_{AGR} probably [_{AGR} already all [_{AP}completely [t_i convinced]]]]]

In the following, the principle of minimal structure will be strictly observed, essentially adopting the view that FPs are last resort strategies, projected only if no other means of integrating the clause exists. We have already presented the example of Bare Infinitives small clauses, where no FPs appeared to be necessary.

2. The classification of small clauses

SCs exhibit considerable variety: Several criteria might be pursued regarding the classification of SCs: the type of the predicate and the role of the clause, the manner of integration, the type of subject. Their semantic properties are also diverse.

So far SCs have been classified in terms of their predicate: AP, NP, and PP clauses. It is also important to classify them in terms of their function in the sentence, and their semantic properties. As will appear below, in terms of the manner in which they relate to the main clause, there are *Subject related* SCs, those that refer to the Subject of the main clause, and *Object related* small clauses, those whose predication refers to the main clause Direct Object. Some of the Direct Object related small clauses may also be viewed as predicate related. They are instrumental in modifying the aspectual and even the syntactic type of the main predicate. In each case, regarding the syntactic function of the clause, it is further possible to distinguish between argument / and adjunct clauses. Here are examples illustrating some of these categories.

- (15) Subject related – argumental.
He looks out of place in this environment.
(16) Subject-related – adjunct.

- He entered the room, angry and upset.
- (17) Object-related, argumental.
I want that chair out of my way at once.
I appointed her president.
- (18) Object - predicate related.
I dyed my hair red.
I shouted myself hoarse.
- (19) Object-related, adjunct.
They wouldn't eat the meat raw.

From a semantic perspective, we distinguish, in the terminology proposed by Halliday (1967), between, *resultative and depictive SCs*: Resultatives show the final state of an accomplishment. Depictives, as the name shows, describe the participants during the predication:

- (20) They elected her president. (resultative)
They hammered the metal flat.
- (21) He drank the coffee cold. (depictive)
They drank the milk hot.

Notice the different entailment and paraphrase relations allowed by each type:

- (22) Bill drank the coffee cold → Bill drank the cold coffee. (depictive)
They ate the meat raw → They ate the raw meat.
- (23) He rubbed the plate dry → *He rubbed the dry plate. (resultative)

A subtype of the depictive class might be that of the SCs expressing conditional attributes. While the depictive reading usually allows a 'while....' paraphrase, the conditional attribute reading allows a conditional paraphrase 'only if....' or 'provided that...'

- (24) a. I can carry it empty. (while it is empty, provided that it is empty)
b. I will look at your essay typed.(provided that it is typed).

An examination of the possible categorial realizations of these types reveals an asymmetry which is easy to justify. Subject-related SCs are depictive, but not resultative, object related SCs are either depictive or resultative.

Subject related SCs:

NP headed.

Resultative *
Depictive Professor Jones retired a happy man

AP headed

Resultative *
Depictive John faxed his newspaper a story, delighted / ill

PP headed

Resultative *
Depictive Jim left the hospital on cloud nine

Object –related Secondary predicates

NP-headed

Resultative They appointed her managing director.
Depictive I met her the same age I met you.

AP-headed

Resultative We sprayed our hair pink.
Depictive He drinks his tea cold/flavoured.

PP-headed

Resultative She pushed him out of the house.
Depictive We found him in tears.

There are instances of ambiguity, where the SC could be related to the Su to the DO or to both:

- (25) For much of the story we could be anywhere: in the sphere where writers meet their readers naked, and draw them into the free world of their imagination.

One more criterion regards the subject of the small clause, PRO or lexical. This brings up the problem of case-checking the subject, by raising or control. Incidentally Baltin (1994) claims that the occurrence of PRO in small clauses offers one of the strongest argument that PRO receives case from non-finite Inflection by SHA, as proposed in Chomsky and Lasnik (1991). As will be seen, Landau's insightful control theory can successfully be extended to PRO small clauses.

In the following we pay particular attention only to the argumental small clauses of propositional verbs, suggesting however an analysis for other types of small clauses as well.

3. Propositional small clauses

In this section we present small clauses which denote propositions and may be paraphrased by *that* clauses or by infinitives. A first class are subcategorized small clauses which alternate with infinitive constructions.

3.1. Small clauses may appear with epistemic verbs, desiderative verbs, verbs of affective stance, as well as exercitive verbs, functioning as objects of transitive or ergative verbs. Here are the groups of verbs mentioned, with examples illustrating the different types of predicates allowed in the small clause: N, A, P. Where feasible, passive counterparts are also mentioned, with the small clause object becoming subject of the main clause.

1. Verbs of propositional attitude: *consider, declare, acknowledge, show, prove, remember, imagine, find, think* etc.

Active construction (Accusative + Object Complement)

- (26) a. He acknowledged himself incapable of giving the young people a decent support.
b. He proved himself a man of genius.
- (27) a. I've known her ill. (AP small clause)
b. They found him dead in a cave. / He was found dead in a cave.
c. They proved him wrong. He was proved wrong.
d. He discovered his brother hunched over a drawing table.
e. I don't consider [it so].
j. She showed herself suspicious of their notebook.
k. I thought their mirth ill timed and in dubious taste.
l. The president deemed it necessary.
- (28) a. those who find [themselves in my situation]... (PP small clauses)
b. He found himself utterly at a loss.
c. Imagine [yourself with her on a desert island].
d. The questionnaire showed [nothing amiss].

- e. I think myself slightly in her debt.
- f. He considered himself well out of the whole affair.
- (29) She considers you a man of unusual means. (NP small clause)

Passive Structures - Nominative + Subject Complement

- (30) a. ... until I_i am proven [t_i wrong].
- b. The requirement was declared illegal by the Chief Justice.
- c. Back home it wouldn't have been thought necessary.
- d. This desire_i was judged [t_i morally wrong].
- e. The execution_i of persons accused as witches had been deemed. [t_i murder by the Church].
- f. She had always been considered [t attractive] by the opposite sex.

2. Causative verbs: *make, get, keep, (have), render.*

- (31) a. We must make things easy.
- b. You must get it under way.
- c. You must get it ready by tomorrow.
- d. Things cannot be made [t easier than that].
- e. They keep it secret.
- (32) a. You must make [yourself at home].
- b. They keep prices high. / The room was kept [t cool].
- c. I must have left *the door open*.

Passive

- (33) a. Dixon was left [t alone with Margaret].
- b. It was kept [t a secret].
- c. Nothing was left [t unsaid].

3. Verbs of physical perception: *feel, see, hear, etc.*

- (34) a. I've never seen her like this.
- b. We had seen the same process at work with other subjects.
- c. He could hear the attack under way.
- d. I saw him angry / red in the face.
- e. I saw him [a shadow of his former self].
- f. The businessman does not feel entirely secure.

4. Verbs of affective stance (liking and disliking)

- (35) a. They want him dead / the letter ready by tomorrow.
- b. I like my peanuts salty.
- c. Some like it hot.
- 5. Small clauses with intransitive (ergative) SSR triggers.

- (36) a. He appeared sad. He seems unhappy.
- b. He looks out of the place in this room.

3.2. *Analysis.* All of these examples represent cases of raising into the main clause, subject to object in examples (26) (27) (31) (32) (34) (35), and subject to subject raising in the other examples. The fact that the subject raises into the main clauses explains why it may be separated from its predicate by preverbs, or by adverbs adjoined to the small clause, as in the examples below:

(37) I consider [_{FP}those students_i[_{AgP}probably [_{AgP}already all [_{AP}completely [_{t_i}convinced]]]]]

As already mentioned, *wh* movement may displace the predicate phrase in its entirety, as in examples of the following sort.

(38) How silly did he appear to the public?

Given this, we may adopt the view, that these predicates are lexical projections, and the small clauses, is produced by Merge by virtue of a relation of predication, as represented in (41) below. This would explain the movement of the full AP in (38), but would depart from the requirement that θ -roles are assigned in the projection of the lexical head. It would also entail a departure from Merge, which requires one of the categories that project to transmit its label.

A better alternative is to assume that lexical projections are embedded in some functional projection(s), as already proposed above. Bowers (1993) suggests that small clauses are Predicate Phrases (PredP). The subject of the small clause raises to the SpecPredP, in a position where it c-commands the maximal phrase of the predicate. (Remember that according to Rothstein's configurational definition of predication, the subject must asymmetrically c-command the predicate). This explains why the predicate phrase is allowed to move in examples like (38). The same requirement explains why the subject of the lexical phrase must move out of the lexical phrase, where it receives the θ -role, to the Spec position of the Pred Ph, where it c-commands the predicate. The subject in SpecPrP will then check case in the main clause by one of the available ways (Agree, SOR, SSR).

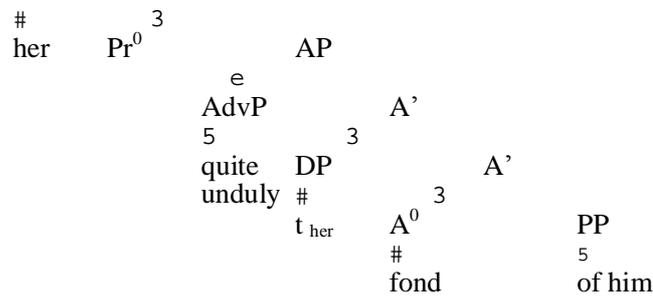
Empirical evidence in favour of the Pred P is the fact its head may be lexicalized by the particle *as*. (cf. Moro (2000)). The Particle *as*, precedes the lexical predicate, following the movement of the subject into the main clause. Some predicates necessarily take *as* small clauses, for many, *as* is optional: *As* apparently selects stative predicates.

- (39) a. I consider him as stupid.
 b. I deem it (as) an error.
 c. I consider it as out of the way.
- (40) a. I regard it as a mistake.
 b. I regard it as out of the way.
 c. I see him as a genius.

An advantage of the analysis is that Predication Phrases may express propositions, and moreover, the verbs listed above, which generally select various types of small clauses in terms of their predicate, might be subcategorized for [--PredP] rather than for [--AP], [--PP], [--NP].

In (41b), there is a possible representation of *I consider her quite unduly fond of him*. The adjectival phrase was allowed to have multiple specifiers. The subject raises to satisfies the requirement of the Pred head.

- (41) a. V'
 3
 V⁰ SC
 3
 DP AP
- b. V'
 3
 V⁰ PrP
 3
 DP Pr'



From an interpretative perspective, small clauses of epistemic verbs (i.e., *know*, *consider*, *judge*, *seem*, *appear*, etc.) express generic properties. The small clauses in (39), (40), etc. above are individual level predicates. One piece of evidence in support of this contention has to do with the interpretation of bare plurals. They allow only a generic reading of the bare plural subject, while the existential reading is not available. This means that the predicate of the small clause is interpreted as individual-level.

- (42) John considers students boring.

Small clauses of this type are themselves selected by main clauses containing individual level predicates. Generally the interpretative difference between stage level and individual level predicates correlates with the type of temporal operator in SpecC:

- (43) Stage-level predicates are associated with a deictic operator in SpecCP, while individual-level predicates are associated with a non-deictic operator.

A verb which selects an epistemic small clause is necessarily individual-level and thus bound by a non-deictic operator. The individual level small clause is thus successfully integrated into the individual level interpretation of the main clause. The same type of individual level reading of the main, as well as of the small clause predicate is apparent in (44):

- (44) He looks pale. (*He is looking [t pale])
 Roses smell sweet.
 Coffee tastes bitter.

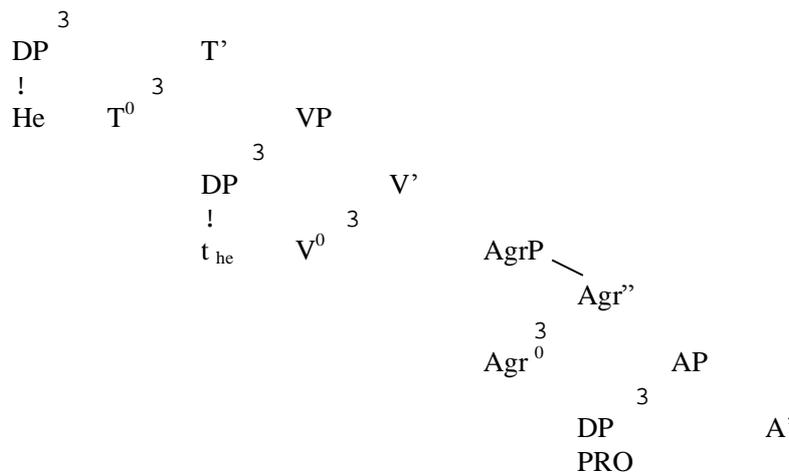
3.3. **Argumental propositional PRO small clauses.** Iveland (1993) cites the existence of the following types of small clauses with the verb *want*.

- (45) a. He wants [PRO promoted].
 b. He wants [PRO to be promoted].

She comments that the interpretation of the small clause is in line with the interpretation of the PRO-TO complement. This suggests that we are dealing with a PRO small clause. The problem is to explain the way in which obligatory control is secured in this case, accepting the same general principles that PRO has case, checked by anaphoric agreement features, and that obligatory control obtains if the PRO-clause and the controller are co-arguments of the same predicate.

We propose that PRO small clauses are AgrPs and that the Agr head has anaphoric agreement features which check the case of PRO. If this is accepted, the analysis of control is standard.

- (46) TP



Agr^0 agrees with PRO, the matrix subject *he* agrees with T^0 ; T^0 checks the anaphoric features of the anaphoric agreement head.

4. Resultative small clauses

The analysis that we propose for resultative, starts from the following considerations:

- a) Resultative clauses are always object-related, designating the final state / condition of the object, produced by the complex event. There are no subject-related resultative constructions
- b) Resultative sentences are always accomplishments. The addition of the small clause may recategorize an activity into an accomplishment.
- c) There are important selectional restrictions between the main verb and the predicate of the small clause, which have to do with the inherent normativity and teleological nature of the resultative construction (Dowty (1978), Higginbotham (1999)).

4.1. *Why are there no resultative Su related SCs?*

4.1.1. *Resultative clauses are always object-related*, designating the final state / condition of the object, produced by the complex event. There are no subject-related resultative constructions. Clauses of the following type, where the adjective expresses the result of the main clause process are absent:

- (47) a. *Jim travelled the world confident.
- b. *Jim was day-dreaming happy.

These are unacceptable with the meaning ‘Jim traveled the world resulting in his becoming confident’ or ‘Jim was day-dreaming and became happy as a result’. The following ‘direct object restriction’ (cf. Levin and Rappaport, 1989, and Rothstein, 1992) was then formulated:

- (48) Resultative predicates can only be predicated of direct objects.

The following sentences further illustrate this:

- (49) The committee appointed her senior lecturer.

We named her Catherine.

- (50) a. *Jim cooks his meals happy.
b. "Jim cooks his meals and he becomes happy as a result".
c. *Phil sold his car rich".
d. Phil sold his car and got rich as a result.

Of course these sentences are unacceptable only on the resultative reading. Expectedly, ergative verbs allow subject-related SCs, because the initial function of the nominal is that of internal object:

- (51) a. The door slammed shut.
b. The river froze solid.

Notice that the DO is sometimes an implicit prototypical object:

- (52) a. Concentrated washing powders wash [] whiter.
b. These revolutionary new brooms sweep [] cleaner than ever. (Aarts, 1995: 85)

As to their semantic type, resultatives are stage level predicates, this may explain why nominal predicates are not resultatives.

4.1.2. *Resultative sentences are always accomplishments.* The addition of the small clause may recategorize an activity into an accomplishment. Here are examples of recategorization:

- (53) a. The joggers ran the pavement thin.
b. John drank his cup empty.

Resultatives are restricted to *adjectival* and *prepositional* predications. Nouns and past participle verbs are not possible.

- (54) a. John beat him black and blue.
b. John kicked him into the street.
c. *They tied him a prisoner.
d. *They kicked the door opened.

The restriction on nouns follows immediately: resultatives require stage-level predicates. Nouns denote individual-level predicates. The exclusion of the past participles follows from an inherent contradiction:

- (55) a. He kicked the door open.
b. *He kicked the door opened.

While both *The door open* and *The door opened* may denote the same state, the latter does so while at the same time denoting that this state is the accomplishment of an opening event. Yet according to the semantics of the resultative construction, the state in the complement results from the matrix event.

These categorial restrictions suggest that the predicative structure in the complement of resultatives is integrated into the matrix T-chain. More specifically, the small clause structure is integrated into the event structure of the matrix verb. Resultatives are possible only with *dynamic* main verbs, whose denotation can be regarded as a linearly ordered sequence of slices or

moments. The state denoted by the complement small clause is integrated into this event structure by identifying the final slice of the activity with the state denoted by the small clause, as in (56).

- (56) John T drive [P_{red}P Mary mad]_i
 E = { s₁ s_i }

As explained above, the integration of the state (= s_i) of madness, denoted by the small clause (a PredP) into the event structure of *drive*, turns the activity *drive* into an accomplishment. Capturing the integration in these terms accounts for the fact that such integration is impossible if the governing verb is inherently bounded. A perfective verb, as in the examples below, inherently binds its final slice. Adding one more slice yields a violation of the θ -Criterion.

- (57) a. *John destroyed the town into a ruin.
 b. *John killed Mary dead.
 (58) Stage-level predicates are associated with a deictic operator in SpecCP, while individual-level predicates are associated with a non-deictic operator.

A verb which selects a resultative small clause is necessarily stage level and thus bound by the deictic operator, (by (58) above). If the operator which binds the main verb also binds the SC subject governed by this verb, then (58) accounts for the existential interpretation of the bare plural in (59a) or (59b):

- (59) a. John threw books out of the window.
 b. John talked students out of their wits.

As known, accomplishments have a complex temporal structure, consisting of an activity (state), ending in a change of state. Lexically simple accomplishments like *kill*, *destroy*, *build* lexically specify the result, without specifying the activity. The resultative construction differs from lexically simple accomplishments in that both the activity and the result state are lexically specified, each by a different predicate. For example in *Terry wiped the table clean*, the verb *wipe* specifies the activity and the AP *clean* specifies the result state. The recategorization effect of resultative may be noticed in pairs like the ones below:

- (59') a. The blacksmith pounded the metal.
 b. The blacksmith pounded the metal flat.

As is well known, the NP that denotes an entity that changes state is always expressed as a direct object. This generalization is often stated as a linking rule that specifies that arguments bearing the Patient or Theme semantic roles are expressed as DOs. Generalizing over the transitive/unaccusative and unergative configurations, we might formulate the following linking rule (cf. Levin and Rappaport Hovav, 1995:51)

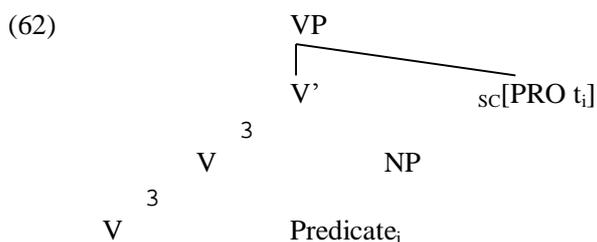
- (60) **The Change of State Linking Rule**
 An NP that refers to the entity that undergoes the change of state in the eventuality described in the VP must be governed by the verb in the heading VP.

4.2. *A fact that has been remarked for causative resultative SCs is the selectivity holding between the two predicates.* As Aarts (1995: 95) puts it (sometimes) “object related secondary predicates seem to behave more like elements of the verb than like true adjuncts.”

The case for lexical selection can be made in examples like:

- (61) a. John hammered the metal flat.
 b. *John hammered the metal beautiful / solid / tubular.
 c. John wiped the table dry.
 d. *John wiped the surface damp / dirty / stained.
 e. She shot him dead.
 f. *She shot him lame/ paranoid.

To do justice to this phenomenon, it has been proposed that at LF, the secondary predicate adjoins to the main predicate forming a complex unit:



Another restriction that has been noted is that if a sentence contains both a resultative and a depictive construction, the resultative must precede the depictive.

- (63) a. I dyed my hair red unwashed.
 b.* I dyed my hair unwashed red.

The ordering above indicates a tighter relation between verbs and resultatives than between verbs and depictives. Resultatives are essential in defining the aspectual class of the sentence, therefore they are in some sense argumental. Depictives are more like adjuncts. (In the example above, DYE is an activity, DYE-RED is an accomplishment). When the resultative does not change the aspectual class, the order of the two SCs may be different:

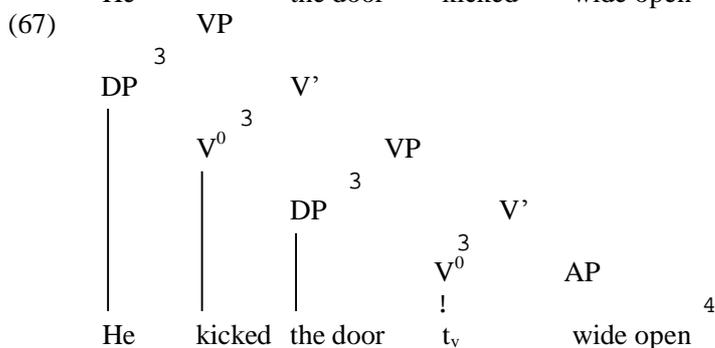
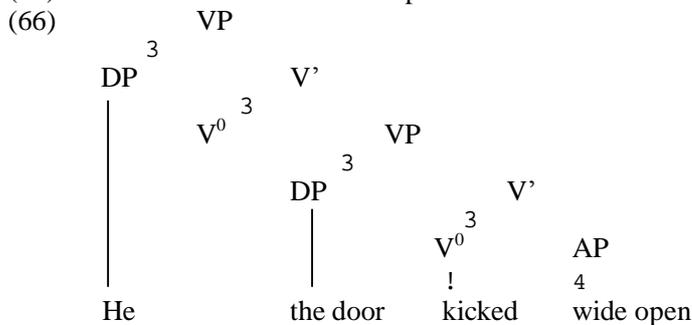
- (64) a. She pushed him naked out of the house.
 b. She pushed him out of the house naked

Push a person, unlike, say, *push a cart*, is an accomplishment even without the accompanying SC. Notice also that the order in (89a) has a disambiguating function, since sentence (89b) may be taken to contain either a subject-related or an object-related SC.

4.3. **Analysis.** The analysis that we propose starts from the lexical selection often remarked between particular verbs and particular small clause predicates, and revives an old idea in Chomsky (1995), used in Dowty (1979) as well, namely the suggestion that the main clause predicate and the small clause predicate actually form a complex lexical unit, a phrasal accomplishment which is then predicated of the main clause direct object. This analysis accounts at once for the essential properties of resultatives: a) resultatives are true of DOs; actually they cannot be formed on subjects; b) resultative are closely integrated into the main clause, actually the main clause has a complex predicate; c) resultatives precede depictives; this is natural since depictives will be adjuncts of the complex predicate; d) there is selectivity between the units of the complex predicate. The DO is the inner subject of the complex predicate.

This analysis is made possible by the demise of X' theory. We are not obliged to develop a head to its maximal projection.

(65) He kicked the door wide open:



4.4. **The variety of resultative constructions.** We briefly review the distribution of resultative phrases and the syntax of resultative constructions based on transitive, unergative and unaccusative verbs. A resultative SC denotes the state achieved by the referent of the action denoted by the verb in the resultative construction.

Let us review the range of resultative constructions:

4.4.1. *RC appear with a variety of transitive verbs, with reference to the DO:*

- (68)
- Woolite safely soaks all your fine washables clean.
 - The music is violent and mindless, with a fast beat like a crazed parent abusing a child, thrashing it senseless.
 - And when her father finally did come home and kiss them, he was like the handsome prince, [kissing them all alive].

4.4.2. *Resultative constructions are also found with passives and with unaccusative verbs as expected.* The surface subject of a passive or of an unaccusative is an underlying object, in accordance with the DOR.

- (69)
- The floor had also been swept clean of debris...
 - She was shaken awake by the earthquake.
 - In marked contrast with the outside land which had been eaten bare by goats and horses, the enclosed area was almost massed with native shrubs and grasses.
- (70)
- The river froze solid.
 - The prisoners froze to death.
 - The bottle broke open.
 - This time the curtain rolled open on the court of the Caesars.

4.4.3. *Resultative constructions based on unergative verbs form an interesting and unexpected class.* The DOR that we mentioned above predicts that if a verb has no object, then it cannot appear with a resultative clause.

(71) *Dora shouted hoarse.

Unergative may be followed by resultative phrases when they may be constructed with fake reflexives; the expanded sentence below means what the starred sentence (71) might have mean:

(72) Dora shouted herself hoarse.

The fake reflexive DP could be viewed as a syntactic device for allowing a resultative phrase to be interpreted as if it were predicated of the subject of an unergative verb, while still conforming to the DOR, because the resultative phrase is predicated of the reflexive, which is in turn co-referential with the subject. Here are literary quotations:

- (73) a. We searched the woods and cliffs, yelled ourselves hoarse, and imagined you drowned.
b. Well, the conclusion was that my mistress grumbled herself calm.
c. The commander stands by grinning awkwardly and the other officers laugh themselves helpless.
- (74) a. *We yelled hoarse.
b. *My mistress grumbled calm.

Unergative verbs are also found in a second type of resultative construction, where the resultative phrase is again predicated of a post-verbal NP; but in this type of construction, the NP is not a reflexive pronoun.

- (75) a. I ruthlessly roused Mr. Contreras by knocking on his door until the dog barked [him awake].
b. You may sleep it [= the unborn baby] quiet again.
c. The system does not hallucinate [arbitrary meanings into an expression]

The resultative phrase describes the state achieved by the DO as a result of the action in the main clause, just as with transitive verbs. The difference is that the post-verbal DPs found with unergative verbs are not arguments of the verbs, as shown by the unacceptability the examples below:

- (76) a. *The dog barked him.
b. *You may sleep it.
c. *The system hallucinates meanings.

Both types of constructions with unergative verbs involve resultative verbs predicated of non-subcategorized NPs. Related to these types is a third type in which the NP following the unergative verbs is an inalienably possessed NP, generally denoting a body part, where the possessor is co-referential with the subject of the verb.

- (77) a. Sylvester cried his eyes out.
b. Sleep your wrinkles away.
c. Valentino winds up strutting his life away in the town square with his sister's blessing.

- (78) a. *Sylvester cried his eyes.
 b. *Sleep your wrinkles.
 c. *Valentino strutted his life.

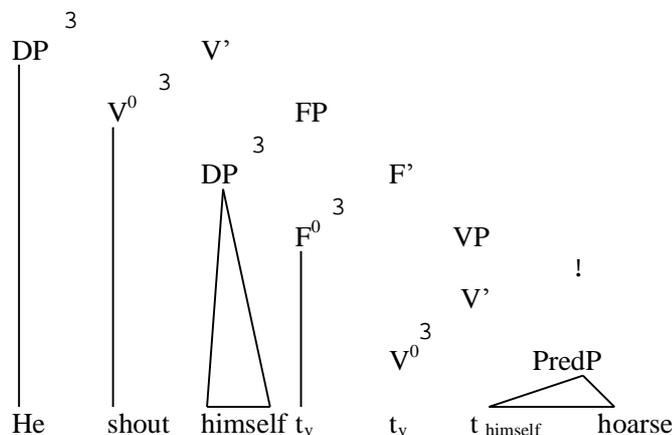
These constructions are intermediate between the first two types. The NP is not a reflexive, but it does include a possessive pronoun which establishes the connection with the main clause subject. What is interesting is the presence in all variants of an uncatagorized object, an object which will not receive a θ -role from the main verb.

There is also a group of transitive verbs which may appear with uncatagorized objects in resultative constructions. In this case these transitive verbs are understood as also having an incorporated prototypical object:

- (79) a. He ate [himself sick]
 b. They drank the teapot dry.
 c. Drive your engine clean.

4.5. **Analysis.** The analysis presented so far cannot be adopted for these constructions as well. What made possible the formation of the complex lexical predicate was precisely the fact that both predicates were θ -related to the DO argument, which was a Theme in relation to either of them. In contrast, with unergatives, the DO is θ -marked by the small clause predicate and case assigned by the main ergative. This is a typical situation of structural case assignment. We will allow the small clause to be the complement of the main clause predicate, while the small clause subject will undergo SOR, as sketched in (80). The unergative, an activity, is re-analyzed as an accomplishment acquiring the characteristic structure of the latter.

- (80) a. He shouted himself hoarse.
 b. VP



Resultative phrases do not appear with obliques. The following minimal contrast proves this point:

- (81) a. Joan loaded the waggon full with hay.
 b. *Joan loaded the hay into the waggon full.
 (82) a. The silversmith pounded the metal flat.
 b. *The silversmith pounded on the metal flat.

Another variety of resultatives include the class of operative illocutionary verbs: *appoint, elect, choose, name, nominate*. There are *as* variants as well: We are clearly dealing with complex predicate formation:

- (83) They appointed him (as) president.
He was nominated man of the year.

4.6. To summarize, this survey of resultative constructions shows that the distribution of resultative phrases can be simply characterized by the DOR together with the assumption that English has a class of unaccusatives and that complex predicates are allowed to be formed in syntax.

The simplest account of resultative SCs is that the verbs do not change their subcategorization and projection properties. All that the formation of a resultative construction involves is the addition of a resultative XP, and the formation of a complex phrasal accomplishment predicate.

For unergatives, we have assumed that the verb is complemented by small clauses. The subject of the SC is θ -marked by the SC's predicate and acquires structural case from the unergative verb. The unity of the resultative constructions lies in their semantics. As noted by many researchers (Dowty (1979), Tenny (1987)), sentences with resultative phrases denote *accomplishments*, moreover the addition of a resultative phrase is a means of deriving an accomplishment from an activity. This is the function of the resultative phrase in unergative cases.

5. Adjunct Small Clauses

Adjunct small clauses may be subject related or object related, but they are all PRO clauses, since raising is possible only from argument clauses. They will be AgrPs as already shown.

It will be assumed the projection of Agr is adjoined to the structure it modifies, and that it is interpreted via conjunction with the object modified.

One important empirical fact is that, if both an object related and a subject related small clause appear at the end of the sentence, the object related clause must precede the subject related one, as in (109). This is evidence that the subject related clause must attach higher than the object related clause. A first assumption (to be modified later) might be that subject related small clauses adjoin to AgrS/TP, while object related adjunct clauses adjoin to Agr-O/vP. These hypotheses derive the correct relative order of object-related, followed by subject-related, adjuncts, apparent in (84).

- (84) John_i ate the salad_j undressed_j, [naked as a jailbird]_i

A further difference between these two is that subject-related adjuncts may occur in sentence-initial position, unlike object-related adjuncts. The difference is immediately captured under the assumption that subject-related adjuncts are adjoined to the AgrS/TP projection.

Finally, another difference is that under VP ellipsis, subject-related adjuncts survive, but object-related adjuncts do not. This is further evidence that the object related small clause is more dependent on the verb

- (85) a. John_i read the letter outraged_i and Bill_j did upset_j.
b. ??John submitted his text_i finished_i and Bill did unfinished_j.

5.1. Subject-related depictive secondary predicates

These small clauses have several properties which a correct analysis should capture:

a) They may appear sentence initially, as well as sentence finally.

- (86) a. Angry, John entered the room. (SL)
b. ?Intelligent as ever, John hesitated before opening the door. (IL)
c. John entered the room angry.

A subject-related depictive secondary predicate can occur sentence-finally if a semantic/pragmatic relationship can be established between it and the predication expressed by the containing VP

b) As for the interpretation, all adjuncts are interpreted as conjuncts. So, *John entered the room angry* is interpreted as the conjunction of John being angry and John entering the room, both occurring at the same reference time. There is a differentiation in interpretation between stage-level (SL) and individual-level (IL) adjuncts: SL adjectives allow a neutral contemporaneous interpretation, IL adjectives require a more modalized interpretation of causality or concession, and they are infrequent, though not impossible in adjunct small clauses.

c) Even if they are higher in the structure than object related small clauses, subject related small clauses appear to be in the vP, as confirmed by a variety of well-known tests:

VP-Preposing

- (87) a. Jim said he left his house angry and *leave his house angry* he did.
b. **Jim said he left his house angry* and leave his house he did angry.

Though-Movement

- (88) a. Leave his house angry though Jim did, he was much calmer at lunch time.
b. *Leave his house though Jim did angry, he was much calmer at lunch time.

Pseudo-clefting

- (89) What Jim did was *leave his house angry*.

Roberts (1988) offers further evidence, based on scope of negation data in English, for the claim that subject-related depictives secondary predicates are in VP:

- (90) Bill didn't leave [angry at John].

Roberts claims that (90) has only two readings, namely where the scope of negation extends over the proposition as a whole (representation 91a)), or over only the AP (representation (91b)); the sentence cannot have the reading in (91c) below, where the AP is outside the scope of negation:

- (91) a. not [Bill left angry at John].
b. Bill left [not angry at John].
c. [not [Bill left]] angry at John.

Aarts (1995: 89) claims that by virtue of being inside VP, the small clause predicates of the subject at the time of the main predication. This might explain the various (in)-compatibilities below:

- (92) a. ?*The waiter smiled naked.
b. The waiter danced naked.

The first sentence is odd because it is hard to envisage how to link the waiter's nudity with his smiling. For the well formed (92b) sentence, prototypical knowledge is sufficient to establish this relation. The connection between the main VP and the SC predicate can often be made explicit by using a manner adverbial instead of the SC:

- (93) Tom read his paper absent-minded(ly).
 Antoinette sang on public transport unconcerned(ly).
 Jerry wrote his essay complacent(ly).

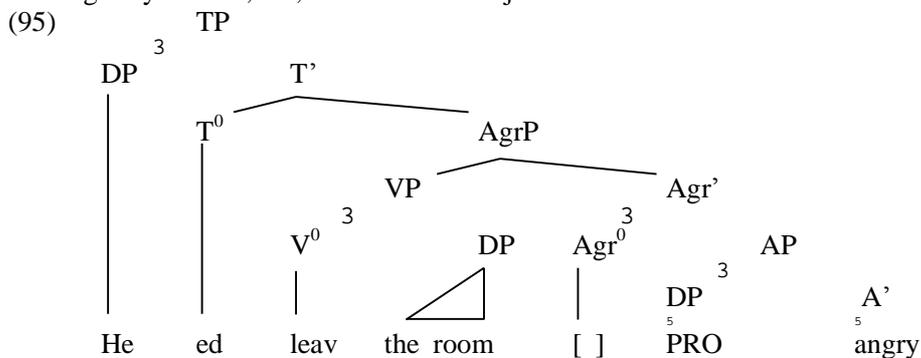
The SC predicate tells us something about the subject and at the same time it modifies the verbal action. However one should not believe that adjective / adverb sentences are synonymous; compare.

- (94) a. John left the house angry, (but nevertheless showed no emotion).
 b. John left the house angrily, (??but nevertheless showed no emotion).

Sentence (94b) characterizes not only the subject's feeling (anger) but also the overt manner of the action, hence the infelicity of the proposed continuation.

Analysis

Subject related depictive clauses are integrated into the matrix clause by means of their functional structure. They are at least AgrP. Consider sentence initial subject related first. We will assume that the PRO small clause and the main clause are the arguments of the Agr phrases that links them. Since arbitrary readings of PRO are not possible, we will take as basic a configuration of obligatory control, i.e., sentence-final adjunct small clauses. Consider the following pair:



- (96) He left the room, angry.
 Angry, he left the room.

The mechanism of control works without problems:

Agr⁰ agrees with PRO and checks its case. T⁰ agrees with the main clause subject which is thus the only legitimate controller. T⁰ and Agr⁰ agree in a head-head relation, so that the features of the controller and of PRO are the same. This is the desired mechanism of control.

The correct word order is also predicted. The constituent which is focussed in clefts, etc. is the AgrP, including the VP and the depictive predicate. If the small clause alone bears a topic / emphatic feature, the small clause alone may topicalize, i.e., move to SpecCP, or to a higher SpecT, this resulting in the fronted subject related small clause construction. The lower copy will be responsible for interpreting PRO.

Object depictive clauses will be analyzed in the same manner, adjoined to the projection that licenses the Accusative case of the object. This will result in the desired configuration of obligatory control by the DO.

5.2. Object-related depictives

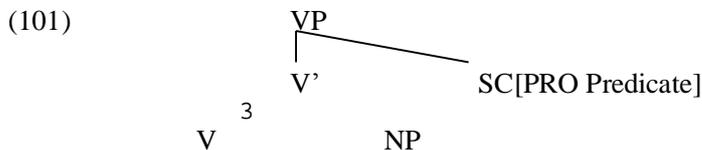
Object related SCs are again resultative and depictive:

- (97) a. Jim rinsed the cup clean (resultative)
 b. Jim usually drinks his whisky neat.

Let us start by saying that both depictive and resultative object related SC are VP constituents, as confirmed by the usual tests:

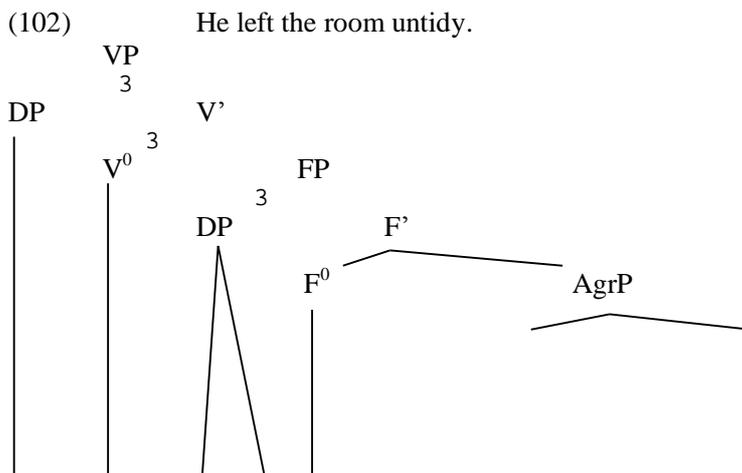
- (98) *VP-Preposing*
 a. Jim said he would eat the meat raw, and eat the meat raw he did.
 b. *Jim said that he would eat the meat raw, and eat the meat he did raw.
- (99) *Though-Movement*
 a. Eat the meat raw though Jim did, he didn't get sick
 b. *Eat the meat though Jim did raw, he didn't get sick.
- (100) *Pseudo-Clefting*
 What Jim did was rinse the cups clean.
 *What Jim did clean was rinse the cups.

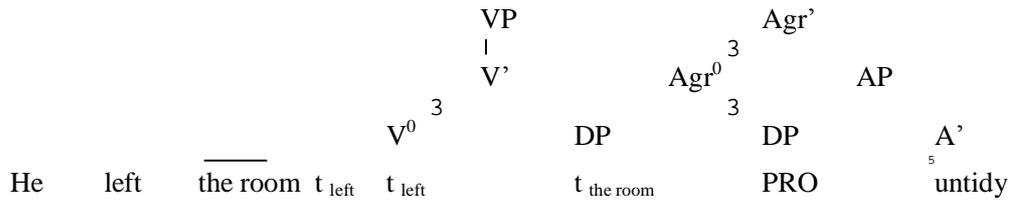
Thus three standard constituency tests show that depictive SCs are inside the VP. As to the precise location of the SC in the VP, several proposals have been made (Hornstein and Lightfoot (1987), Aarts (1992), Roberts (1987)). Here is the representation proposed in Aarts (1995)



It was assumed that PRO is governed, and therefore controlled by the direct object. This structure can account for most of the productive cases of SC based on verbs that subcategorize for nominal DOs. As clearly seen in the phrase marker, in these instances the SC is not a subcategorized constituent.

The control theory we have adopted prompts a different representation of such examples, where the following relations obtain, as seen in (102): i) Agr^0 agrees with PRO and checks its default case. Agr^0 and PRO share their ϕ -features; ii) F^0 is, the Acc assigning head F^0 and the object DP controller Agree, sharing features. iii) F^0 and Agr^0 Agree, and thus PRO is related to its controller





Conclusions

1. Small clauses are incomplete sentences.
2. Small clauses share with other types of clauses the idea of predication.
3. Small clauses are not mere lexical phrases, but require some functional structure.
4. The grammar of small clauses relies on the mechanisms available for other types non-finite clauses (raising, control).