

## Two Adjunction Sites and Extraction out of Clausal Adjuncts

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### 1. Introduction

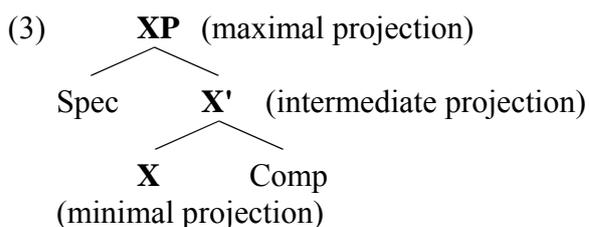
Since Huang (1982), it has been argued that extraction out of adjunct clauses is banned with violation of the Condition on Extraction Domain (CED). However, the CED is too strong and it is the case that extraction out of a certain type of adjuncts is allowed.

- (1) The aims of this presentation are
- a. to propose that there are two kinds of adjunction sites: (i) an intermediate projection and (ii) a maximal projection; and
  - b. to show that extraction is possible from the adjunct clauses adjoining to an intermediate projection but not from the ones adjoining to a maximal projection.

### 2. The Framework

#### 2.1. Three Types of Projections

- (2) a. maximal projection (XP): does not project any further  
 b. minimal projection (X): is not a projection at all  
 c. intermediate projection (X'): any other (Chomsky (1995: 242))

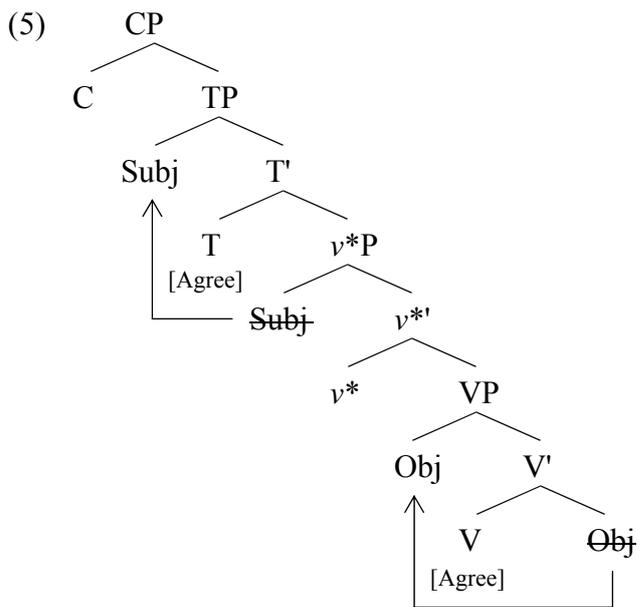


#### 2.2. The Internal Structure for Clauses

Chomsky (2005) proposes that any operation is triggered by phase heads: C and  $v^*$ , which have uninterpretable features. One of them is Agree-feature.

- (4) Agree-feature: is inherited by the head of its complement; and triggers A-movement.

Thus, the internal structure for clauses is schematically illustrated in (5):

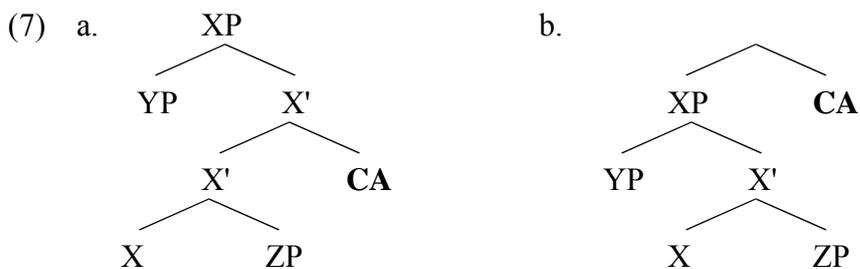


### 3. The Proposal and Predictions

(6) Proposal:

**There are two kinds of adjunction sites. One of them is an intermediate projection. The other is a maximal projection.**

In this presentation, I will focus on clausal adjuncts (CA).



As illustrated in the case of (7a), the relation between the head X and the adjunct is similar to the one between the head X and its complement (ZP), in that X projects further from that point in the derivation. On the other hand, in (7b), the adjunct merges with XP which does not project any more.

(8) Predictions:

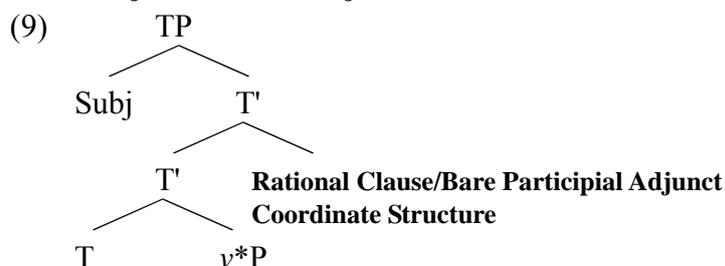
- a. An adjunct adjoining to intermediate projections behaves like an argument.
- b. An adjunct adjoining to maximal projections behaves as a true adjunct.

It is argued that an argument can be accessible to syntactic operations, while an adjunct cannot be accessible to such operations because of an optional element. Thus, the prediction of (8a) implies that to the extent that an adjunct adjoining to intermediate projections behaves like an argument, the adjunct can be accessible to operations. On the other hand, the second prediction of (8b) means that if an adjunct adjoining to maximal projections behaves as a true adjunct, then it cannot be available for any operation.

In what follows, I will present arguments in favor of the present proposal, based on the phenomenon of extraction out of adjunct clauses.

#### 4. Clausal Adjuncts to Intermediate Projections

##### 4.1. Adjuncts to T' Projection



##### 4.1.1. Rational Clauses

Before discussing extraction out of rational clauses, I must point out that rational clauses adjoin to T'.

A matrix subject can bind the anaphor within a rational clause, while the matrix object cannot bind it.

- (10) a. **John** hugged Mary [in order to make **himself** happier]  
 b. \*John hugged **Mary** [in order to make **herself** happier] (Truswell (2007: 190))

The pronoun in a rational clause can have its antecedent in the matrix object but not subject.

- (11) a. \***John** hugged Mary [in order to make **him** happier]  
 b. John hugged **Mary** [in order to make **her** happier] (ibid.: 191)

A matrix object pronoun does not bind R-expression in a rational clause.

(12) We gave **him** a book [in order to impress **John**'s birthday].

(Nissenbaum (2000: 38))

Accordingly, rational clauses are located above the matrix object but under the matrix subject. The possible adjunction sites are T', v\*P, or v\*'.

However, when VP-Ellipsis applies, a rational clause is not elided.

(13) John dove from the cliff [in order to impress Mary], then Fred did Ø [in order to get away from her].

(Jones (1991: 62))

Thus, we can say that the adjunction site of rational clauses is T'. If so, it is predicted that operations can apply to the internal element of the rational clauses.

(14) a. Here is the influential professor [**that** John went to college [in order to impress *t*]].

(Chomsky (1982: 72))

b. **Who** did you go to Harvard [in order to work with *t*]?

(Culicover (1997: 253))

#### 4.1.2. Bare Present Participial Adjuncts

Before turning to the main points, it is useful to point out that this type of adjuncts adjoins to T'.

When VP-Ellipsis applies, a bare present participial adjunct is not elided.

(15) John drove Mary crazy [whistling], and Bill did so [running round in circles].

(Truswell (2007: 122))

For this reason, as a first approximation, the possible adjunction sites are CP, C', TP, or T'. However, this type of adjuncts appears between the matrix subject and verb.

(16) a. Ben, [whistling happily], serviced his car in preparation for the long drive North.

b. He shrugged his shoulders and, [whistling the Lorelei], stared out of the window at the castles on the Rhine.

(BNC)

Thus, we can say that the adjunction site of bare present participial adjuncts is T'. If so, it is predicted that operations can apply to the internal element of bare present participial adjuncts.

(17) **What** did John drive Mary crazy [whistling *t*]? (Truswell (2007: 17))

#### 4.1.3. Coordinate Structures

Following Munn (1993), I assume that the internal structure for coordinate structures constitutes a first conjunct (XP<sub>1</sub>) adjoined by a conjunction phrase (ConjP) that consists of conjunction (Conj) and a second conjunct (XP<sub>2</sub>).

ConjP adjoins in the TP-level not *v*\*P-level. This is because those manner adverbs in a first conjunct which adjoin to *v*\*P-level cannot take scope over a second conjunct.

(18) Ellen **partially** [solved the problem] [and wrote up her findings].  
(Bošković and Franks (2000: 117))

However, those sentential adverbs in a first conjunct which adjoin to TP-level can take scope over a second conjunct.

(19) [John **probably** likes Mary] [and hates Susan]. (ibid.: 118)

So, the possible adjunction sites are TP or T'.

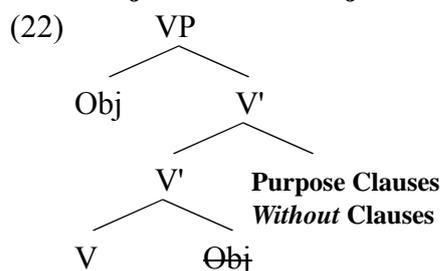
Further, I assume that intermediate projections can not be preposed. The adjunct ConjP cannot be preposed.

(20) a. [The boy laughed] [and the girl was silent].  
b. \*[And the girl was silent] [the boy laughed] *t*. (Dik (1968: 38))

As a consequence, we can say that the adjunction site of ConjP is T'. If so, it is predicted that operations can apply to the internal element of ConjP.

(21) a. [I went to the store] [and bought some whisky].  
b. Here's the whisky **which** [I went to the store] [and bought *t*].  
(Ross (1967: 168))

## 4.2. Adjuncts to V' Projection



### 4.2.1. Purpose Clauses

Before the main discussion, I must show that the purpose clauses adjoin to V'.

If VP-Ellipsis applies to a purpose clause, then the clause must be elided.

- (23) a. \*Mom sent John out [to pick up the laundry], then Dad did Ø [to pick up some pizza].  
b. \*John brought Moby Dick [to read], then Fred did Ø [to put on his shelf].

(Jones (1991: 62))

So, purpose clauses are located under  $v^*P$  projection. The possible adjunction sites are  $v^*P$ ,  $v^*$ , VP or V'.

A purpose clause cannot be preposed.

- (24) a. They brought John along [to talk to them].  
b. \*[To talk to them], they brought John along *t*. (ibid.: 51-52)

- (25) a. They brought John along [to talk to].  
b. \*[To talk to], they brought John along *t*. (ibid.)

This indicates that the purpose clause adjoins to an intermediate projection. If so, then the possible adjunction sites are  $v^*$  or V'.

Further, a matrix object can bind the anaphor within a purpose clause.

- (26) Ben took **Alice** to Boston [to amuse **herself**] to please himself. (ibid.: 61)

In this way, we can say that the adjunction site of purpose clauses is V'. If so, it is predicted that operations can apply to the internal element of purpose clauses.

- (27) a. John brought Bill in [to work on this car].  
 b. ?**Which car** did John bring Bill in [to work on *t*]? (ibid.: 74)

- (28) a. John brought these tires in [to put on this car].  
 b. ?**Which car** did John bring the tires [to put on *t*]? (ibid.)

#### 4.2.2. Without Clauses

Before attempting an account of extraction out of *without* clauses, I must argue that the *without* clauses adjoin to V'.

A matrix object binds an element in *without* clauses.

- (29) a. I called **John** [without dialing **his** number].  
 b. \*I called **John** [without dialing **John's** number]. (Runner (1998: 40))

Thus, we can say that the adjunction site of *without* clauses is V'. If so, it is predicted that operations can apply to the internal element of *without* clauses.

- (30) the article **that** I went to England [without reading *t*] (Chomsky (1982: 72))

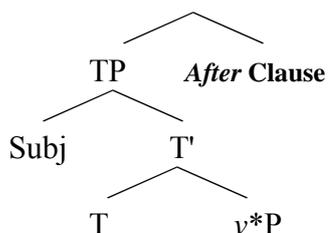
### 5. Clausal Adjuncts to Maximal Projections

Another prediction derived from the present proposal:

- (31) An adjunct adjoining to maximal projections behaves as a true adjunct. (=8b)

#### 5.1. Adjuncts to TP Projections: *After* Clauses

(32)



*After* clauses can appear both above and under the matrix sentence. If the clauses occur in the sentence initial position, they precede the matrix subject.

- (33) a. Hephaestus wept, [after the executioner left].  
 b. [After the executioner left], Hephaestus wept. (Adger (2003: 327-328))

So, the possible adjunction sites are CP, C', or TP.

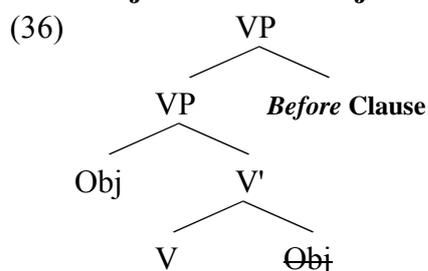
Further, when the *after* clauses occur in a sentence initial position within an embedded clause, the clauses appear in a lower position than in a CP projection.

- (34) Medea thought that, [after the executioner left], Hephaestus would be relieved.  
 (ibid.)

Thus, we can say that the adjunction site of *after* clauses is TP. If so, it is predicted that operations cannot apply to the internal element of *after* clauses.

- (35) ?\***What** did John go to bed [after Peter fixed *t*]? (Stepanov (2001: 95))

## 5.2. Adjuncts to VP Projections: *Before* Clauses



A matrix object cannot bind an element in *before* clauses, while a matrix subject can bind the element.

- (37) a. The chairman hit **him** on the head [before **the lecturer** had a chance to say anything].  
 b. \***He** was hit on the head [before **the lecturer** had a chance to say anything].  
 (Reinhart (1976: 23-26))

So, the possible adjunction sites are T', v\*P, v\*', or VP.

Further, I assume that maximal projections can be preposed. *Before* clauses can be preposed.

(38) [Before he went home], I talked to John *t*. (McCawley (1988: 339))

So, the possible adjunction sites are *v*\*P or VP.

Moreover, *before* clauses can appear between a verb and object.

- (39) a. If a judgment requires, [before it can be made], the existence of some facts  
then, ...  
b. ... I suspect, [before I left Rome], why didn't you send those signals yourself?  
(BNC)

For these reasons, the possible adjunction site is only VP in which the *before* clause can be follow the verb and precede the object. Therefore, *before* clauses adjoins to VP. If so, it is predicted that operations cannot apply to the internal element of *before* clauses.

(40) \***Who** had Hephaestus run away, [before the executioner murdered *t*]?  
(Adger (2003: 399))

## 6. Conclusion

I have proposed that that there are two kinds of adjunction sites: (i) an intermediate projection and (ii) a maximal projection. Based on this proposal and the relation of projections, I have argued that the adjunct adjoining to an intermediate projection exhibits like an argument, while the one adjoining to a maximal projection behaves as a true adjunct. Then, I have predicted that the two types of adjuncts exhibit different behaviors with respect to the syntactic operation. I have demonstrated that the prediction is borne out by considering the phenomenon of extraction out of clausal adjuncts.

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## Corpus

(BNC) The British National Corpus