

From the Complex NP Constraint to everything

Željko Bošković

University of Connecticut

While extraction from complex NPs (Ns modified by clauses) is disallowed, extraction from such VPs is allowed. In other words, while the Complex NP Constraint (CNC) holds there is no such thing as the Complex VP Constraint (note the CNC cannot be reduced to the adjunct condition by treating nominal clausal complements as appositives/adjuncts, see Safir 1985).

(1) ??Who_i did you hear [_{NP} rumors [that he hit t_i]] (2) Who_i did you [_{VP} think [that he hit t_i]]
Previous research emphasized (2) as the test case for understanding the locality of movement, putting aside (1) as an exceptional case. I show that when properly generalized, (1) represents a pervasive pattern found all over the place, with (2) being exceptional. Understanding the CNC is then the key to understanding the locality of movement (as well as structure building)

First, extraction is banned not only from clausal, but all complements of Ns. This is shown by (3b) (I'll argue for a re-analysis/pruning (Hornstein & Weinberg 1981, Stepanov 2012, a.o) account of dangling Ps as in (3) (in Dutch, P-stranding in NPs is restricted to a single P), where there's no PP in (3a) hence (3a) involves extraction of the N-complement, not out of it) Further confirmation of the ban on extraction from N-complements is provided by the simple/deep extraction contrast with *combien* (4). Also, while SC allows adjectival left-branch extraction and extraction of NP adjuncts, deep extraction of these elements is disallowed (5)-(7). I will provide a number of additional cases, which will lead to generalizing the CNC to (8).

(3) a. Who_i did you see [friends of t_i]? b. ?*Who did you see enemies of [friends of t_i]

(4) a. Combien_i a-t-il consulté [_{DP} t_i de livres]?

‘How many did he consult of books?’

b. *Combien_i a-t-il consulté [_{DP} (plusieurs/des) préfaces [_{DP} t_i de livres]]

‘How many did he consult several/some prefaces of books?’ (French)

(5) a. Pametne_i on cijeni [t_i prijatelje] b. *Pametnih_i on cijeni [prijatelje [t_i studenata]]
smart he appreciates friends smart he appreciates friends students
‘He appreciates smart students’ ‘He appreciates friends of smart students.’

(6) Iz kojeg grada_i je Petar sreo [djevojke t_i]
from which city is Peter met girls
‘From which city did Peter meet girls?’

(7) *Iz kojeg grada_i je Petar kupio slike [djevojke t_i]?
from which city is Peter bought pictures girl
‘From which city did Peter buy pictures of a girl?’ (Serbo-Croatian)

(8) Extraction out of nominal complements is disallowed.

Significantly, APs pattern with NPs (since weak islands are sometimes completely weakened with argument extraction, adjunct extraction is much more reliable; however, in English it can be tested only with clausal complements, even (6) being disallowed in English.)

(9) a. Who_i is he [proud of t_i]? b. ?*Who_i is he proud of [friends of t_i]?

(10) ??What_i are you [_{AP} proud [_{CP} that John bought t_i]]?

(11) *How_i are you [_{AP} proud [_{CP} that John kissed Mary t_i]]?

PPs exhibit the same behavior—they also ban extraction from their complements (some speakers can drop the P in (13); (13b-c) then improve).

(12) a. Who_i did you read about t_i? b. ??Who_i did you read about friends of t_i?

(13) a. se acordó de [que [Pedro preparaba la comida]]
clitic.3p (s)he.remembered prep that Pedro prepared.imperfect the food
‘She just remembered that Pedro used to cook the food’

b. ?*¿qué_i se acordó de [que [Pedro preparaba t_i]]
what clitic (s)he.remembered prep that Pedro prepared.imperfect

c. *¿cómo_i se acordó de [que [Pedro preparaba la comida t_i]]
how clitic (s)he.remembered prep that Pedro prepared.imperfect the food (Spanish)

- (14) a. Hij kan zich niet [in [de bibliografie [van dat boek]]] vinden
 He can himself not in the bibliography of that book find
 ‘He cannot find himself in the bibliography of that book.’
 b. *Hij kan zich er_i niet in de bibliografie van t_i vinden
 he can himself r-pron. not in the bibliography of find
 c. *[Van dat boek]_i kan hij zich niet in de bibliografie t_i vinden (Dutch, Van Riemsdijk 1997)
 A number of additional AP/PP cases will be presented, which will lead to positing (15).

(15) **The Complex XP constraint** (where $X \neq V$)

Extraction from complements of lexical heads is disallowed

I also provide a deduction of (15) based on the following mechanisms:

1. Simplifying Grohmann (2003) by conflating his two functional domains into one: structure is divided into two domains, thematic and non-thematic; movement must pass through the highest phrase of each domain. (This differs from Grohmann 2003.)

2. Kayne (1994): Specs are adjuncts. I show this follows from Chomsky (2012), where in the case where a head and a phrase merge, the head projects. I show the way Chomsky allows projection in the case where non-minimal projections are merged is problematic; a natural consequence of his system is then that there is no projection when non-minimal projections are merged, only segmentation. This deduces Kayne’s Specs-are-adjuncts claim.

3. Antilocality (the ban on movement that is too short) defined as in Bošković (in press) (not in terms of Grohmann’s domains): Move must cross at least one phrase (not only a segment). The above system captures the CNC case (the relevant thematic/non-thematic domains are highlighted in (16); only the relevant traces are shown): movement must pass through CP and NP, given 1.; this can only be done by adjoining to CP/NP, given 2., which violates antilocality. The system in fact rules out all the unacceptable cases from above (some representative derivations are given in (17)), fully deducing (15) (without the parenthesis).

(16) ??Who_i did you hear [_{DP} [NP t_i [NP rumors [CP t_i [CP that [IP a dog [vP bit t_i]]]]]]]?

(17) a. *Combien_i a-t-il consulté [_{DP} (plusieurs/des) [NP t_i [NP préfaces [DP t_i [DP de livres]]]]]]

b. *How_i are you [_{AP} t_i [AP proud [CP t_i [CP that [IP John [vP kissed Mary t_i]]]]]?

Why are VPs different? They are different due to the existence of vP. Since vP belongs to the thematic domain, there is no need for VP adjunction in (2) (nP/pP/aP have often been posited for the sake of uniformity with VP, but the fact is that there is no such uniformity across these domains regarding extraction; if n/p/aP exist they are then not part of the thematic domain; the above analysis will also be seen as supporting proposals for additional structure between vP and TP, as a result of which subject movement to TP does not violate antilocality).

(18) Who_i did you [_{vP} t_i [_{vP} [_{vP} think [CP t_i [CP [that he [_{vP} hit t_i]]]]]]

Significantly, passives/ergatives behave differently from other verbs regarding (15). This also follows: passives/ergatives lack the thematic vP layer, which means movement must proceed via VP adjunction in (19b,d) (in contrast to (18)), violating antilocality (the degraded status of subject extraction in ?*Who_i was it believed t_i liked Mary will also be captured).

(19)a. How did they believe [that Jon hired her t] b. *How was it believed [that Jon hired her t]

b. Who did they see (some) friends of t b. ?*Who did there arrive (some) friends of last week
 As for infinitives, Li (2003) shows adjunct extraction is banned from non-verbal infinitival complements, but allowed with raising infinitives. The above system easily handles (20a). I will propose an account of raising infinitives that voids the effect of (15) for them via the mechanism of Rescue-by-PF deletion. (I will also discuss extraposed clauses and propose a constrained theory of when restructuring is possible based on the above system.)

(20) a. *How did he witness an attempt [to fix the car t] b. How is John likely [to fix the car t]

Finally, I address the status of phases. I show that in addition to capturing (15), the above system goes a long way in capturing a number of phase effects (e.g. subnumeration formation and cyclic spell out can be restated in this system without appealing to phases), which will lead to raising the possibility that phases (as currently understood) can be dispensed with.