Complementizers as Probes

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1 Setting the stage

1.1 Goal of the talk

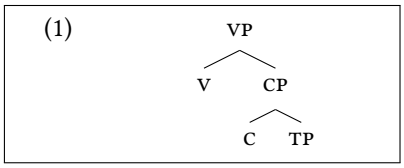
The main goal of the talk is to:

- propose a thorough analysis of several distributional and interpretive properties of clausal embeddings formed with complementizers (hereafter, Cs) within a restrictive theory of grammar,
- show that any syntactic theory of clausal complementation must pay close attention to two interrelated questions regarding C(omplementizers):
  1. where do Cs enter the derivation?
  2. how do Cs 'get together' with their surface complement?

1.2 The standard view

- The standard view is that Cs form a constituent with their surface complement, the TP, by merging directly with it, as in (1):

(1)



- The hypothesis behind (1) is as in early generative approaches (cf. Bresnan 1972, Stowell 1981 i.a.), that the C and its surface complement must be born together as a constituent by merging directly because they behave as a constituent on the surface.
- However, the inventory of existing operations predicts that constituents can also be derivationally built via internal merge (aka movement). Given this, it is an open question whether the C and its surface complement:
  - are born together as a constituent by merging directly as in (1),
  - are built into a constituent in the course of the derivation via movement.

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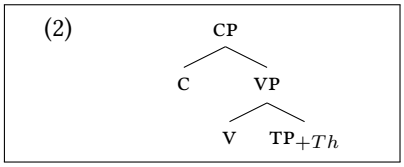
1.3 Preview of the analysis

- This talk proposes in contrast to the standard view, that the C and its surface complement enter the syntactic derivation as discontinuous pieces of structure:

(2)



- Cs are merged in the matrix clause higher than the matrix verb (cf. Kayne 2000, 2005).
- Cs function as probes attracting their surface complement, that is, they 'get together' with their surface complement via movement.

The new finding supporting the proposal that Cs are merged in the matrix clause is comes from Greek and Dutch:

(3) Cs are licensed by grammatical properties of the matrix verb which are determined higher than the matrix VP.

(4) The matrix V may select XPs of the embedded clause that are projected lower than the complementizer.

I also show that two more findings from Greek, which are puzzling for the standard view of clausal complementation follow directly under the proposal in (2):

- Clausal embeddings exhibit previously unnoticed extraposition effects.
- Clausal embeddings exhibit striking subject-object asymmetries.

2 Background on C-selection in Greek

- Why do we care about Greek?
  The conditions under which Cs are licensed in Greek are more transparent because finite clausal embeddings are formed with a number of Cs. In contrast, well-studied Romance languages or English have just one C that productively introduces finite embedded clauses.

2.1 Greek

- Just like other Balkan languages e.g. Bulgarian, Greek lacks non-finite clauses (cf. Terzi 1992).
- Greek has four distinct elements introducing declarative embedded clauses i.e. na, oti, pos and pu:

(5) a. I Dhespina dhen thimotan na ehi pai s-tin Vrazilia.
the Dhespina not remembered.3SG na have.3SG gone.3SG to-the Brazil
'Despina did not remember that she has been to Brazil.'

b. I Dhespina dhen thimotan pos ehi pai s-tin Vrazilia.
the Dhespina not remembered.3SG pos have.3SG gone.3SG to-the Brazil
'Dhespina did not remember that she has been to Brazil.'

c. I Dhespina dhen thimotan [oti] ehi pai s-tin Vrazilia.
the Dhespina not remembered.3SG oti have.3SG gone.3SG to-the Brazil
'Despina did not remember that she has been to Brazil.'

d. I Dhespina dhen thimotan [pu] ehi pai s-tin Vrazilia.
the Dhespina not remembered.3SG pu have.3SG gone.3SG to-the Brazil
'Despina did not remember that she has been to Brazil.'

- This talk focuses on clauses formed with [oti] and [pu] (cf. Angelopoulos 2019).

2.2 The puzzle

- The puzzle raised by the distribution of [oti] and [pu] is that they are mutually exclusive after most clause embedding predicates:

(6) a. * I Eleana herete [oti] perase tis eksetasis.
the Eleana be.happy.3SG oti passed.3SG the exams
'Eleana is happy that she passed the exams.'

b. I Eleana herete [pu] perase tis eksetasis.
the Eleana be.happy.3SG pu passed.3SG the exams
'Eleana is happy that she passed the exams.'

- Under which conditions are [oti] and [pu] licensed?

2.3 The picture from previous literature

2.3.1 Factivity

- The [oti] vs [pu] alternation has been discussed since very early in the Greek generative linguistic literature (cf. Christidis 1982, 1986, Roussou 1994, 2010, 2018, Varlokosta 1994 i.a.).
- This literature has focused on just one aspect of the behavior of [oti]- and [pu]-clauses. The consensus is that:
  - [Oti]-clauses are by default non-factive: the speaker is not committed to the truth of the clause.
  - [Pu]-clauses are obligatorily factive: the speaker is committed to the truth of the clause.

(7) a. Thimame [oti] tin icha sinadisi s-to Parisi, ala bori na kano lathos.
remember.1SG oti 3.SG.ACC.F had.1SG met in-the Paris, but might be do.1SG wrong
'I remember that I had met her in Paris, but I might be wrong.'

b. Thimame [pu] tin icha sinadisi s-to Parisi, [#] ala bori na kano lathos.
remember.1SG pu 3.SG.ACC.F had.1SG met in-the Paris, but might be do.1SG wrong
'I remember that I had met her in Paris, but I might be wrong.'

2.3.2 Modification Puzzle

- The factive/non-factive distinction is a crucial one. However, as mentioned already in Christidis (1982), it does not pertain to the contrast below:

(8) a. Thimotan (me dhiskolia) [oti] milise s-tin Eleana.
remembered.3SG with difficulty oti talked.3SG to-the Eleana
'She remembered with difficulty that she talked to Eleana.'

b. Thimotan (* me dhiskolia) pu milise s-ti Eleana.
remembered.3SG with difficulty pu talked.3SG to-the Eleana
'She remembered with difficulty that she talked to Eleana.' (modified from Roussou 2018)

- This contrast shows that the same embedding predicate, *thimotan*-'remembers', behaves differently with respect to the modifiers it accepts when it embedds an oti- or pu-clause.
  - What kind of modifiers do pu-embedding predicates reject?
    Pu-embedding predicates reject modification by manner adverbs or manner PPs.

- NB: Manner adverbials have be used as a diagnostic for eventivity:
  - **Eventive** predicates are compatible with manner adverbs.
  - **Stative** predicates reject manner adverbial modification.

Given this, I propose the following effect:

(9) The ASP-COMP effect:
Pu-clauses can only combine with stative predicates.

- This effect showing an interaction between C and the inner aspect of the matrix verb is surprising for current theories of clausal complementation because they have been tailored to account for C-selection in regard to:
  - grammatical properties of the verb in the embedded clause, that is, whether it is finite or not,
  - or whether the matrix verb embeds a declarative or an interrogative clause,
  - a factive or a non-factive one.

2.4 Manner Adverbs: diagnostic for eventivity

- Vendler (1957) distinguishes two kinds of predicates:
  - **States**
  - **Events:** activities, achievements and accomplishments

- States and events behave differently with respect to manner adverbial modification (cf. Katz 2003, Maienborn 2005, 2015 i.a.):

(10) a. I Eleana *iche* aftokinito (* dhiskola).
the Eleana.NOM had.3SG car with difficulty
'Eleana had a car with difficulty.' State

b. I Eleana *efaghe* (dhiskola).
the Eleana.NOM ate.3SG with difficulty
'Eleana ate with difficulty.' Activity

c. O Vasilis *kerdhise* ton aghona (dhiskola).
the Bill.NOM won.3SG the race with difficulty
'Bill won the race with difficulty.' Achievement

d. O Vasilis *elise* tis askisis (dhiskola).
the Bill.NOM solved.3SG the exercises with difficulty
'Bill solved the exercises with difficulty.' Accomplishment

- I use unambiguous manner adverbs for my investigation (see Appendix A for confounds with ambiguous adverbs):
  - efkola-'easily' and dhiskola-'with difficulty'
  - apotoma-'abruptly'

2.5 The data

2.5.1 Data Base: Greek clausal complementation

- I present a subset of examples from a nearly exhaustive data base I have created with clause embedding predicates of Greek.
- The predicates were collected from the dictionary of Triantafyllidis (1998) and they were classified into distinct categories depending on various syntactic and semantic criteria e.g. c-selection, factivity.
- The data patterns reported below have been systematically checked with ten native speakers of Greek, and the participants of the Patras Reading Group and Semantics III in Athens.

2.5.2 Subject experiencer predicates

Thimoni-'be/ get angry' or *regret*-'be/come at a regret state' can be interpreted as stative or eventive in different syntactic contexts:

(11) a. Thimoni (efkola/ apotoma).
get.angry.3SG easily/ abruptly
'She gets angry easily/ abruptly.'

b. Thimoni (efkola/ apotoma) me tin kivernisi/ to jeghonos.
get.angry.3SG easily/ abruptly with the government the fact
'She gets easily/ abruptly angry with the government/ the fact.'

c. Thimoni (* efkola/ *apotoma) pu apoliun prosopiko.
be.angry.3SG easily/ abruptly pu fire.3PL personnel
'She is (* easily/ * abruptly) angry about the fact that they fire personnel.'

(12) a. Metanjoni (efkola).
regret.3SG easily
'She regrets easily.'

b. Metanjoni (efkola) ja tis epiloghes tis.
regret.3SG easily for the choices her.GEN
'She regrets easily for her choices.'

c. Metanjoni (* efkola) pu dhen afksise tus dhasmus.
regret.3SG easily pu not increased.3PL the taxes
'She regrets easily that she did not increased the taxes.'

2.5.3 Psych predicates: Class II

- This class of psych predicates is relevant because it has been shown in previous literature to be ambiguous between a stative and an eventive usage (cf. Belletti and Rizzi 1988, Pesetsky 1996, Landau 2009, Alexiadou and Iordăchioaia 2014 i.a.).
- Class II psych predicates uniformly select an accusative experiencer. They also select an additional argument which can be:

- a nominative DP
- a [pu]-clause.

- I show that the [eventive] use of Class II psych verbs is possible when they select nominative DPs. On the other hand, when Class II psych verbs combine with [pu]-clauses, they must be [stative].

(13) a. (Dhiskola) tin stenohori [i kaki siberifora tus]$_{Causer}$.
with difficulty 3SG.F.ACC sadden.3SG the bad behavior.NOM their
'approx. Their bad behavior can hardly make her sad.'

b. (*Dhiskola) tin stenohori [pu dhen pire proaghoghi]$_{SubjectMatter}$.
with difficulty 3SG.F.ACC sadden.3PL pu dhen pire proaghoghi
'She is (*with difficulty) sad about the fact that she did not get promotion.'

2.5.4 Oti- and pu-clauses in Small Clauses

The distribution of [oti]- and [pu]-clausal embeddings in small clauses shows that:

- just as we saw previously, the stative vs eventive distinction plays important role in C-selection,
- the stative predicate conditioning the presence of *pu* is not the predicate of the small clause but, crucially, the matrix verb selecting the small clause.

(14) DPs as subjects in small clauses

a. [Afto to jeghonos]$_{DP}$ *itan* ksekatharo.
this the fact.NOM was.3SG clear
'This fact was clear.' State

b. [Afto to jeghonos]$_{DP}$ *ejine* ksekatharo.
this the fact.NOM became.3SG clear
'This fact became clear.' Event

(15) [Oti]-clauses as subjects in small clauses

a. *Itan* ksekatharo [oti to pirama ejine lathos].
was.3SG clear oti the experiment was.conducted.3SG wrongly
'It was clear that the experiment was conducted in a wrong way.' State

b. *Ejine* ksekatharo [oti to pirama ejine lathos].
became.3SG clear oti the experiment was.conducted.3SG wrongly
'It became clear that the experiment was conducted in a wrong way.' Event

(16) [Pu]-clauses as subjects in small clauses

a. *Itan* ipervoliko [pu apelian prosopiko sihna].
was.3SG overwhelming pu fired.3PL personnel often
'It was overwhelming that they fired personnel often.' State

b. * *Ejine* ipervoliko [pu apelian prosopiko sihna].
became.3SG overwhelming pu fired.3PL personnel often
'It became overwhelming that they fired personnel often.' Event

2.6 Analysis

How to capture the finding that CS are sensitive to grammatical properties of the embedding verb:

- CS have selectional properties. In Greek, CS select the inner aspect of the embedding verb:
  - Pu is compatible only with stative predicates because it selects stative predicates.
  - Oti is compatible with stative or eventive predicates because it selects both.

Background theoretical assumptions:

- **Principle of Locality of Selection**: selection must be satisfied in a strictly local relation, that is, either head-complement or specifier-head (cf. Sportiche 2005 for a more recent formulation).
- **Direct syntax-semantics interface**: the stative vs eventive distinction is determined in the syntax via projections introduced higher than the lexical verb (Borer 2005, Harley 1995, Ramchand 2008 i.a.).
- In complement clauses, the surface complement of pu and oti is a TP entering the derivation in a thematic, $+_{Th}$, position.

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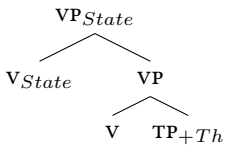

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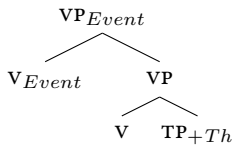
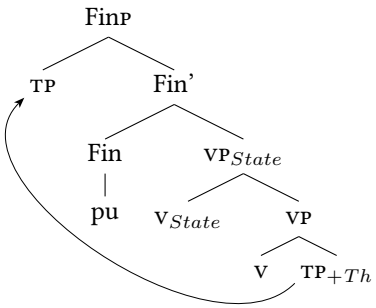


- Pu and oti enter the derivation in a Fin head of Rizzi (1997). This head is introduced in the matrix clause where pu and oti can satisfy their selectional requirements in a local manner via Head-Comp.

(19)



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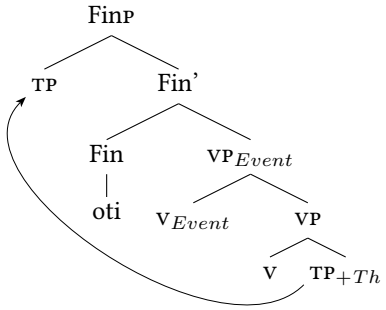

- (19) and (20) also show that pu and oti attract the TP. This is so because pu and oti select a TP, therefore, they must attract it in order to satisfy their selectional property via Head-Spec.
- Pu and oti undergo head movement to a higher head. This movement step could be analyzed on a par with Fin to Force movement in Rizzi (1997) (see Section 6 for an alternative).

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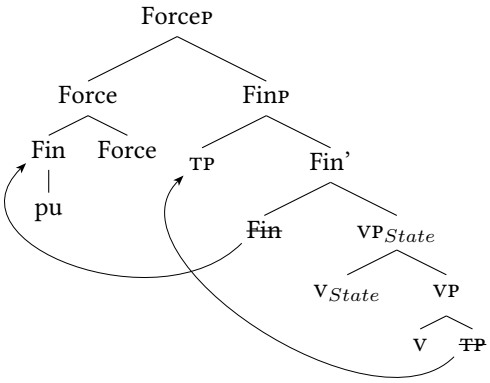

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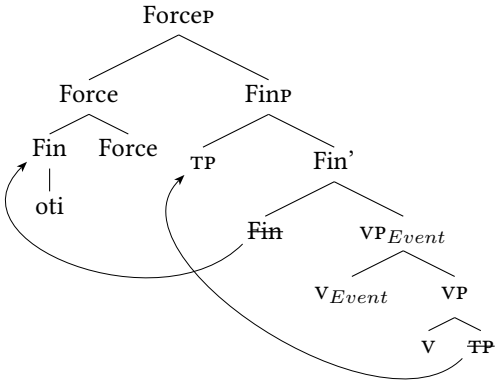

- Force selects and subsequently attracts the VP into its specifier giving rise to the surface order "V *pu/oti* TP".

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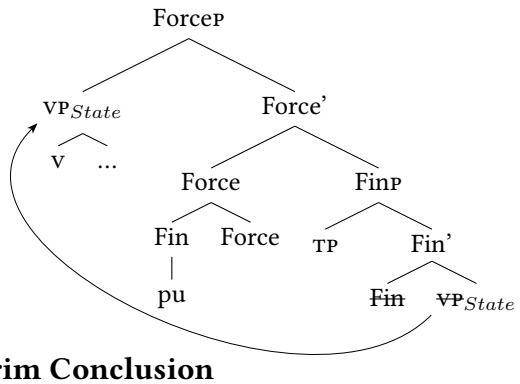

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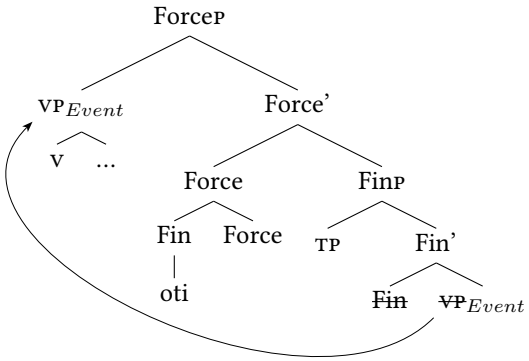

2.7 Interim Conclusion

- The proposed analysis captures in a strictly local manner the finding that Cs are sensitive to grammatical properties of the embedding predicate.
- The analysis suggests that the C and its surface complement 'get together' via movement.
- These movement steps find support in extraposition effects, discussed next, as well as in subject-object asymmetries in the distribution of oti- and pu-clauses.

3 Extraposition with complement clauses

- Embedded clauses formed with initial Cs are well-known cross-linguistically to undergo the effects of "extraposition" (cf. Singh 1980, Dryer 1992, Bayer 1995, 1999). These effects become more visible in OV languages.
- For instance, Bengali is head final, that is, OV with DP objects. However, clausal embeddings formed with je are obligatorily extraposed.[1]

(25) *je-TP >> V ✓V >> je-TP

a. * chele-Ta [je or baba aS-be] Sune-che
boy-CF C his father come-FUT3 hear-PTS3
'The boy heard that his father is coming.'

b. chele-Ta Sune-che [je or baba aS-be]
boy-CF hear-PTS3 C his father come-FUT3
'The boy heard that his father is coming.' Bayer (1999, 11b)

[1] Je is also used in relative clauses just like English *that* or Romance *che/que* (cf. Bayer 1999).

- Clausal embeddings have also be shown in VO languages to undergo the effects of "extraposition" in different syntactic contexts (see Stowell 1981, Kayne 2005, Moulton 2015 i.a. for English).[2]

3.1 Extraposition in small clauses

3.1.1 DPs in small clauses: optional extraposition

- Small clauses formed with DPs permit two orders in which the small clause predicate may either preceed or follow the DP argument.
- The DP argument may also be doubled by a clitic in both orders (cf. Anagnostopoulou 1994).

(26) ✓[DP >> ADJ]$_{SC}$ ✓[ADJ >> DP]$_{SC}$

a. Dhen (to$_i$) theori [[afto to astio]$_i$ ekseretika eksipno].
not 3.SG.ACC.NEUT consider.3SG this the joke extremely smart
'She does not consider this joke extremely smart.'

b. Dhen (to$_i$) theori [ekseretika eksipno [afto to astio]$_i$].
not 3.SG.ACC.NEUT consider.1SG extremely smart this the joke
'She does not consider this joke extremely smart.'

3.1.2 Oti-clauses in small clauses: obligatory extraposition

- In contrast to DPs in small clauses, oti-clauses obligatorily surface after the predicate of the small clause.

(27) *[oti-TP >> ADJ]$_{SC}$ ✓[ADJ >> oti-TP]$_{SC}$

a. * Dhen (to$_i$) theori [[oti tha apovlithi o Jorghos]$_i$ poli sighuro].
not 3.SG.ACC.N consider.3SG oti will get expelled.3SG the George.NOM very certain
'She does not consider it very certain that George will get expelled.'

b. Dhen (to$_i$) theori [poli sighuro [oti tha apovlithi o Jorghos]$_i$].
not 3.SG.ACC.N consider.3SG very certain oti will get expelled.3SG the George.NOM
'She does not consider it very certain that George will get expelled.'

3.1.3 Pu-clauses in small clauses: obligatory extraposition

- Just like oti-clauses, pu-clauses undergo obligatory extraposition after the predicate of the small clause.

(28) *[pu-TP >> ADJ]$_{SC}$ ✓[ADJ >> pu-TP]$_{SC}$

a. * Dhen (to$_i$) theori [[pu tha apovalun ton Jorgho]$_i$ poli adhiko].
not 3.SG.N.ACC consider.3SG pu will expelled.3PL the George.ACC very unfair
'She does not consider it very unfair that they will expel George.'

b. Dhen (to$_i$) theori [polu adhiko [pu tha apovalun ton Jorgho]$_i$].
not 3.SG.N.ACC consider.3SG very unfair pu will expelled.3PL the George.ACC
'She does not consider it very unfair that they will expel George.'

[2] The fact that English finite embedded clauses undergo obligatory "extraposition" can be seen in the contrast below:

(1) a. I consider [[who you decide to work with] to be unimportant].
b. * I consider [[that you work with Roger] to be unimportant]. Stowell (1981, (28b,29c))

3.1.4 Analysis: extraposition is built in the syntax

- The extraposition effects [pu]- and [oti]-clauses exhibit are built in the syntax, and follow from the proposed analysis without invoking any special extraposition rules or rightward movement operations.
- Since in small clauses Cs are sensitive to the grammatical properties of the verb selecting the small clause (cf. Section 2.5.4), the merge order should be:

(29) [pu/oti > Asp > v > [TP ADJ]$_{SC}$.]

  - This merge order is reflected in the derivations below.

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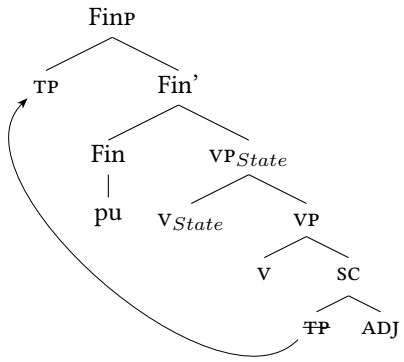

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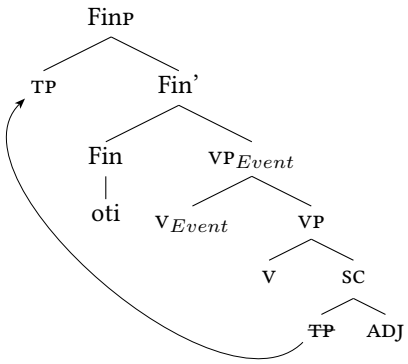

- Subsequent Fin to Force movement and remnant VP movement give rise to the effects of extraposition in the surface order "v >> ADJ >> [oti/pu]-TP."

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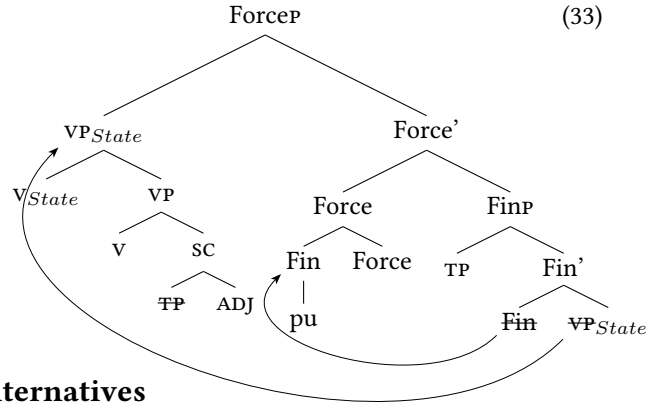

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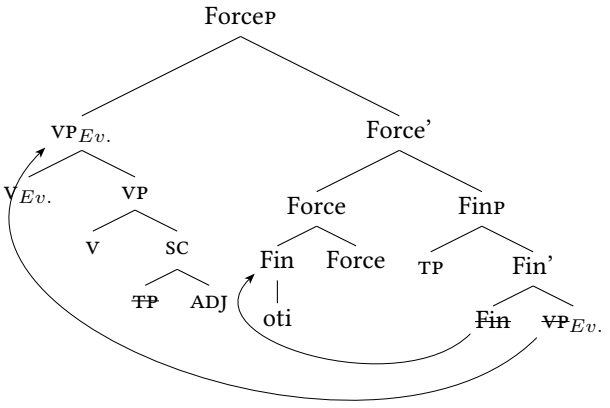


3.2 Alternatives

3.2.1 Prosody

- In contrast to DPs, clausal embeddings undergo extraposition due to intonation or processing factors related to length/ size considerations.[3]
- Note that DP constituents which are longer than the [oti]- and [pu]-clauses we examined do not have to surface after the predicate of the small clause:

(34) [✓[DP >> ADJ]$_{SC}$ ✓[ADJ >> DP]$_{SC}$]

[3] In order to exclude the possibility that the small clause predicate has undergone incorporation into the matrix predicate leaving the clause in-situ, the examples always comprise modified adjectival predicates e.g. *poli adhiko*-'very unfair.'

a. Dhen theori [oti tis pune i dhaskali tis s-to sholio] dhedhomeno].
not consider.3SG what 3SG.F.DAT tell.3PL the teachers her at-the school granted
'approx. She does not take what her teachers tell her at school for granted.'

b. Dhen theori [dhedhomeno [oti tis pune i dhaskali tis s-to sholio]].
not consider.3SG granted what 3SG.F.DAT tell.3PL the teachers her at-the school
'approx. She does not take what her teachers tell her at school for granted.'

- The length/ size of a constituent does not correlate with extraposition.

4 Subject-object asymmetries

- Pu- and oti-clauses can serve as internal arguments, as we have seen already (cf. 11).
- On the other hand, pu- and oti-clauses are ruled out as external arguments of verbs (cf. Roussou 1991, 1994).

(35) Oti-clauses as subjects

a. * [Oti ehis filus] dhihni pola ja sena.
oti have.2SG friends show.3SG a lot for you
'That you have a lot of friends shows a lot about you.'

b. * Dhihni pola ja sena [oti ehis filus].
show.3SG a lot for you oti have.2SG friends
'It shows a lot about you that you have a lot of friends.'

(36) Pu-clauses as subjects

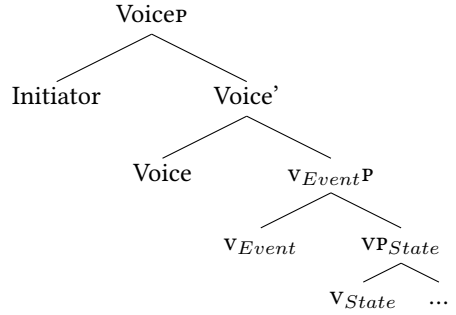
a. * [Pu ehis filus] dhihni pola ja sena.
pu have.2SG friends show.3SG a lot for you
'That you have a lot of friends shows a lot about you.'

b. * Dhihni pola ja sena [pu ehis filus].
show.3SG a lot for you pu have.2SG friends
'It shows a lot about you that you have a lot of friends.'

4.1 Analysis

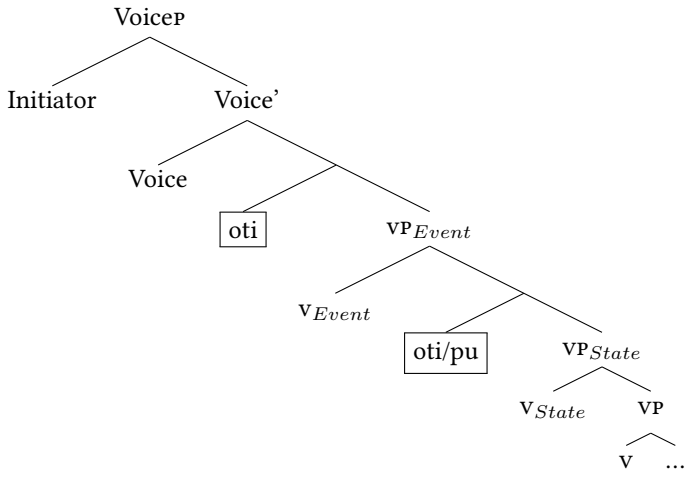
- The head introducing the causing event is different from the head where the initiator of the causing event is introduced and theta-marked (cf. Folli and Harley 2007, Legate 2014, Pylkkänen 2008).

(37)



- In this structure, pu and oti merge at distinct syntactic heights where they can satisfy their selectional properties in a local manner.

(38)

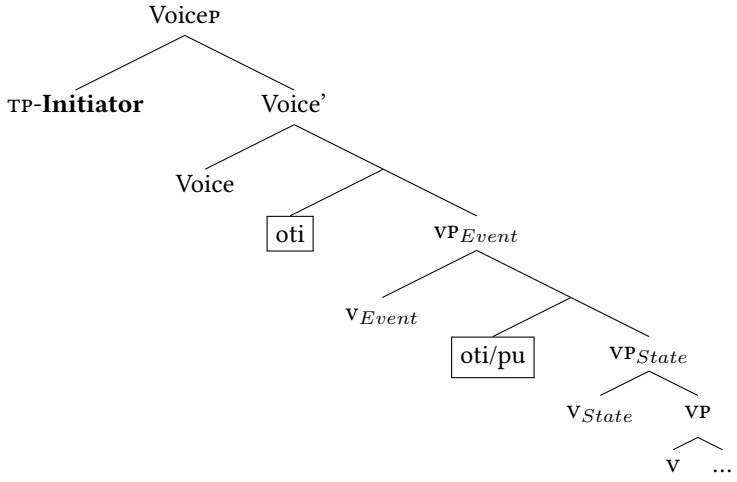


- Since [pu] can only combine with stative embedding verbs, I assume that it can merge as high as the low VP$_{State}$.
- On the other hand, since [oti] can combine with stative or eventive embedding verbs, it selects either for a stative or an eventive VP in which case it must be merged locally with them.

4.1.1 The subject restriction

- Clauses functioning as external arguments are introduced as bare TPs is Spec VoiceP:

(39)



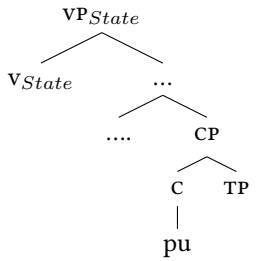
- [Pu] and [oti] are probes that must attract the TP into their specifier.
- However, this is not possible with the external argument because it is introduced higher than the merge position of [pu] and [oti].
- If the surface complement of [pu] and [oti] is introduced in the internal argument position of the verb, [pu] and [oti] can attract it. Consequently, there is no syntactic restriction blocking the formation of complement clauses.

5 The standard analysis

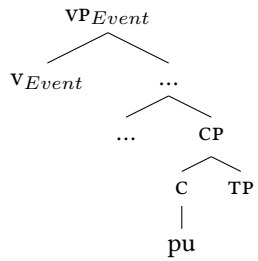
5.1 C-selection sensitivity

- The standard analysis cannot immediately capture why *pu* is sensitive to the "inner" aspect of the matrix predicate because the C is not local to the relevant aspectual projections.

(40)



(41)



- Furthermore, if pu has already been merged in the embedded clause, it is unclear what blocks the matrix verb from becoming eventive.

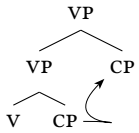
5.2 Subject-object asymmetries

- The subject-object asymmetries have not received any principled account in the standard analyses (Roussou's 1991 analysis of nominalized clauses in Greek is fairly problematic).

5.3 Extraposition

- Under some standard analyses, CPs show the effects of extraposition because they must undergo rightward movement (cf. Rosenbaum 1965, Büring and Hartmann 1997, Bruening 2018 i.a.).

(42)



- The issue with this account is that rightward movement lacks independent motivation as it is tailored to apply to CPs only.

6 The Dutch facts

- In Dutch, it is clear that that the choice of the matrix verb correlates with the syntactic structure realized inside the embedded clause lower than the C:

(43) a. Ik denk [dat ze eerlijk gezegd/ helaas/ misschien niet komen].
I think that they honestly unfortunately perhaps not come
'I think that they honestly unfortunately perhaps won't come.'

b. * Ik wil [dat ze eerlijk gezegd/helaas/misschien niet komen].
I want that they honestly unfortunately perhaps not come
'I want that they honestly unfortunately perhaps won't come.' Barbiers (2018, 63,(9))

- Under the view that adverbs are hosted in designated positions (cf. Cinque 1999), the facts above suggest that the embedded clause after *willen* must be smaller:

  - The internal argument of *denken* projects at least as much as MoodSpeechActP,
  - the internal argument of *willen* projects as much as ModVolP.

- These facts cannot be accounted for under an analysis in which the C intervenes between the matrix V and the projections in the embedded clause:
  - denken$_V$ [$_{CP}$ C [MoodSpeechActP ...]]
  - willen$_V$ [$_{CP}$ C [ModVolP ...]]
- On the other hand, if the complementizer is merged in the matrix clause, the verb can select the relevant projections:
  - [$_{CP}$ C [$_{VP}$ denken$_V$ [MoodSpeechActP ...]]
  - [$_{CP}$ C [$_{VP}$ willen$_V$ [ModVolP ...]]

7 PP constituents

- Do we ever find other cases in which a constituent is not the result of direct merge?
  There are a number of reasons to believe that prepositions and their DP surface complements are not born together as a constituent (Angelopoulos 2019).
- Just like CS, PS are sensitive to grammatical properties of the verbs they combine with.
  - For instance, the Greek preposition apo can combine with passive verbs in which case it introduces the agent.
  - On the other hand, the preposition ja is possible in double object constructions in which case it introduces the beneficiary.
- The following examples show that apo and ja are mutually exclusive in the syntactic contexts in which they can occur:

(44) Agent PPS: ✓apo *ja

a. I tenia hirokrotithike apo to cino.
the movie applauded.NACT.3SG apo the audience
'The movie was applauded by the audience.'

b. * I tenia hirokrotithike ja to cino.
the movie applauded.NACT.3SG ja the audience
'The movie was applauded by the audience.'

(45) Benefactive PPS: ✓ja *apo

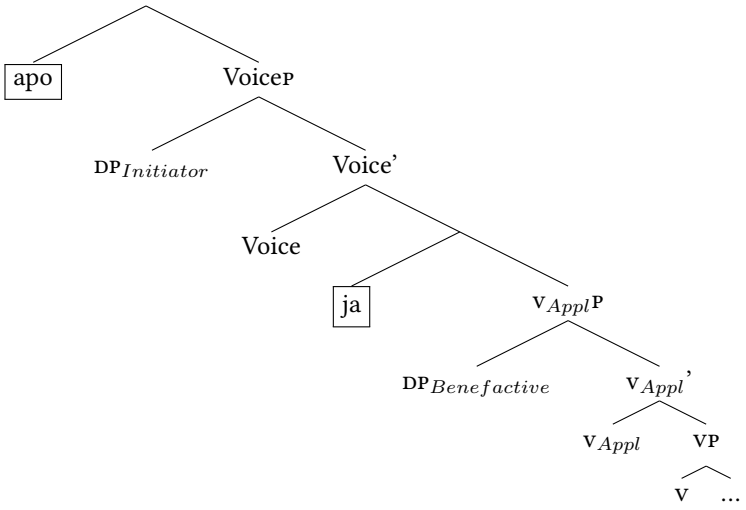
a. I Maria edhose ena vivlio ja tin Eleana.
the Maria gave.3SG a book ja the Eleana
'Maria gave a book for Eleana.

b. * I Maria edhose ena vivlio apo tin Eleana.
the Maria gave.3SG a book apo the Eleana
'Maria gave a book for Eleana.

- If we want to extend the analysis of CS to PS, this behavior of apo and ja can be captured as follows:

- – apo and ja are merged separately from their surface DP complements,
- – apo select VoiceP and ja selects $v_{Appl}P$,
- – the surface DP complements of apo and ja are introduced in the corresponding argument position.

(46)



- If this syntactic structure is correct, the prediction is that the surface DP complement of apo, that is, the initiator DP should be able to bind a benefactive reflexive and trigger Condition C with it.
- This is so because the surface complement of apo, the initiator DP, c-commands the benefactive.

7.1 Reflexive Binding

- The Greek reflexive resists logophoric usages.
- The minimal pair below reveals an interesting contrast that correlates

(47) a. Aftes i diataksis stalthikan apo tus vuleftes$_1$ tis kivernisis s ton eafto tus$_1$.
these the regulations were sent.3PL by the MPs the government.GEN to the self their
'These regulations were sent by the MPs of the government for themselves.'

b. * Aftes i diataksis stalthikan horis tus vuleftes$_1$ tis kivernisis s ton eafto tus$_1$.
these the regulations were sent.3PL witjout the MPs the government.GEN to the self their
'These regulations were voted without the MPs of the government for themselves.'

- The surface DP complement of apo triggers Condition C with a proper name contained in a ja-PP.

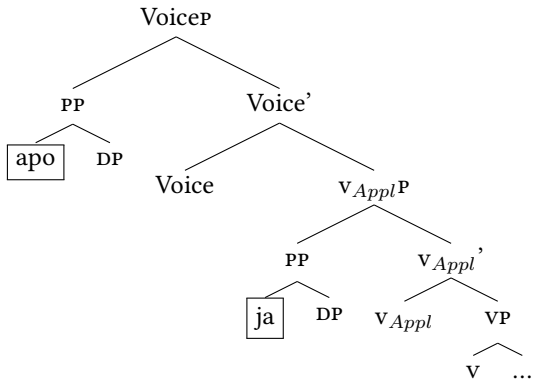
(48) a. Psifistike apo aftin$_1$ ja tin Maria$_{*1/2}$.
was voted.3SG by her for the Maria
'It was voted by her for Maria.'

b. Epilechtike apo aftin$_1$ ja tin Maria$_{*1/2}$.
was selected.3SG by her for the Maria
'It was created by her for Maria.'

7.2 The standard analysis

- Under the standard analysis PPs enter the derivation as constituents.

(49)



- If the principles behind reflexive binding and Condition C rely on c-command,[4] it is unclear in (49) how exactly the surface complement of apo can bind a benefactive reflexive or give rise to Condition C effects with it.

7.3 Residual Issues

- Abels and Neeleman (2012) argue against Kaynean derivations as in Cinque (2005):

> Similar predictions can potentially be derived from other phenomena sensitive to c-command, such as the licensing of negative polarity items, scope, or binding. We are not aware of any effects of this type, but it seems to us that the burden of proof is on proponents of the SHCH, who should be committed to showing that the additional material and operations required for SHCH-compatibility have testable consequences.

- See Angelopoulos (2019, Ch.2) for discussion that these additional operations do indeed yield consequences, which are testable and compatible with standard Binding Principles.

8 Conclusion

- **Empirical Contribution:**
  - I presented data showing that C-selection in Greek is conditioned by grammatical properties of the matrix verb.
  - Just as in OV languages, embedded clauses of VO languages exhibit extraposition effects and,
  - they show striking subject-object asymmetries.
- **Theoretical Contribution:**
  - I proposed that the facts above support an analysis in which Cs are merged in the matrix clause separately from the surface complement.
  - I showed that there are reasons to believe that this view can be extended to account for properties of PPs.
- **Take-home message**
  - A surface constituent might be:
  - born as such,
  - the output of a syntactic derivation involving movement.

[4] Bruening (2014) argues that c-command must be replaced by precede and phase-command. In his reply, Zwart (2015) shows that "[…] condition C effects cannot be used to show the relevance of phases for the definition of syntactic dependency."

References

Abels, K. and A. Neeleman (2012). Linear asymmetries and the lca. *Syntax 15*(1), 25–74.

Alexiadou, A. and G. Iordăchioaia (2014). The psych causative alternation. *Lingua 148*, 53–79.

Anagnostopoulou, E. (1994). *Clitic Dependencies in Modern Greek*. Ph. D. thesis, University of Salzburg.

Angelopoulos, N. (2019). *Complementizers and Prepositions as Probes: Insights from Greek*. Ph. D. thesis, UCLA.

Barbiers, S. (2002). the theory of movement". *Dimensions of movement: From features to remnants 48*, 47.

Barbiers, S. (2018). Adverbs in strange places. *Nederlandse Taalkunde 23*(1), 57–88.

Bayer, J. (1995). On the origin of sentential arguments in german and bengali. In *Studies in comparative Germanic syntax*, pp. 47–75. Springer.

Bayer, J. (1999). Final complementizers in hybrid languages. *Journal of Linguistics 35*(2), 233–271.

Belletti, A. and L. Rizzi (1988). Psych-verbs and θ-theory. *Natural Language & Linguistic Theory 6*(3), 291–352.

Borer, H. (2005). *Structuring Sense*, Volume I. Oxford University Press.

Bošković, Ž. (2008). On successive cyclic movement and the freezing effect of feature checking. *Sounds of silence: Empty elements in syntax and phonology*, 195–233.

Bresnan, J. (1972). *Theory of Complementation in English Syntax, unpublished doctoral dissertation*. Ph. D. thesis, Massachusetts Institute of Technology.

Bruening, B. (2014). Precede-and-command revisited. *Language 90*(2), 342–388.

Bruening, B. (2018). CPs Move Rightward, Not Leftward. *Syntax 21*(4), 362–401.

Büring, D. and K. Hartmann (1997). Doing the right thing. *The Linguistic Review 14*(1), 1–42.

Christidis, A.-P. (1982). Oti/pos - pu: complementizer selection in modern greek. *Studies in Greek Linguistics 2*, 113–178.

Christidis, A.-P. (1986). The morpheme pu as a definite clause nominalizer. *Studies in Greek Linguistics 7*, 135–148.

Cinque, G. (1999). *Adverbs and functional heads: A cross-linguistic perspective*. Oxford University Press on Demand.

Cinque, G. (2005). Deriving Greenberg's Universal 20 and its exceptions. *Linguistic inquiry 36*(3), 315–332.

Dryer, M. S. (1992). The Greenbergian word order correlations. *Language 68*(1), 81–138.

Folli, R. and H. Harley (2007). Causation, obligation, and argument structure: On the nature of little v. *Linguistic Inquiry 38*(2), 197–238.

Harley, H. (1995). *Subjects, events, and licensing*. Ph. D. thesis, Massachusetts Institute of Technology.

Katz, G. (2003). Event arguments, adverb selection, and the stative adverb gap. *Modifying adjuncts 4*, 455.

Kayne, R. S. (2000). *Parameters and universals*. Oxford University Press on Demand.

Kayne, R. S. (2005). *Movement and silence*. Oxford University Press.

Landau, I. (2009). *The locative syntax of experiencers*, Volume 53. MIT press.

Legate, J. A. (2014). *Voice and v: Lessons from Acehnese*, Volume 69. MIT Press.

Maienborn, C. (2005). On the limits of the davidsonian approach: The case of copula sentences. *Theoretical linguistics 31*(3), 275–316.

Maienborn, C. (2015). Events and states. In *The Oxford Handbook of Event Structure*.

McNally, L. and C. Kennedy (2013). Degree vs. manner well: A case study in selective binding. In *Advances in generative lexicon theory*, pp. 247–262. Springer.

Moulton, K. (2015). CPs: Copies and compositionality. *Linguistic Inquiry 46*(2), 305–342.

Pesetsky, D. M. (1996). *Zero syntax: Experiencers and cascades*. Number 27. MIT press.

Pylkkänen, L. (2008). *Introducing arguments*, Volume 49. MIT press.

Ramchand, G. C. (2008). *Verb meaning and the lexicon: A first phase syntax*, Volume 116. Cambridge University Press.

Rizzi, L. (1997). The fine structure of the left periphery. In *Elements of grammar*, pp. 281–337. Springer.

Rosenbaum, P. S. (1965). *The grammar of English predicate complement constructions*. Ph. D. thesis, Massachusetts Institute of Technology.

Roussou, A. (1991). Nominalized clauses in the syntax of modern greek. *UCL working papers in linguistics 3*, 77–100.

Roussou, A. (1994). *The Syntax of Complementizers*. Ph. D. thesis, UCL.

Roussou, A. (2010). Selecting complementizers. *Lingua 120*(3), 582–603.

Roussou, A. (2018). Complement clauses: case and argumenthood. In *Linguistic Variation: Structure and Interpretation. Studies in honor of M. Rita Manzini*. Mouton de Gruyter: Berlin.

Singh, U. N. (1980). Bole an unresolved problem in Bengali syntax. *Indian Linguistics 41*(1), 188–195.

Sportiche, D. (2005). Division of labor between merge and move: Strict locality of selection and apparent reconstruction paradoxes. In *Proceedings of the Workshop Divisions of Linguistic Labor. The La Bretesche Workshop*, pp. 159–262. Citeseer.

Stowell, T. A. (1981). *Origins of phrase structure*. Ph. D. thesis, Massachusetts Institute of Technology.

Terzi, A. (1992). *PRO in finite clauses: a study of the inflectional heads of the Balkan languages. CUNY Graduate Center*. Ph. D. thesis, Dissertation.

Triantafyllidis, M. (1998). Dictionary of common modern greek language. *Thessaloniki: Institute of Greek studies of Aristotle University of Thessalonica, Manolis Triantafyllidis Foundation*.

Varlokosta, S. (1994). *Issues on Modern Greek Sentential Complementation*. Ph. D. thesis, University of Maryland.

Vendler, Z. (1957). Verbs and times. *The philosophical review 66*(2), 143–160.

Zwart, J.-W. (2015). Precede-and-command revisited revisited. *Language 91*(3), 169–178.

A Manner adverbs: confounds

- A few manner adverbs can have an additional meaning e.g. *quantity/ degree* or *temporal*.
- **Confound:** these ambiguous adverbs are compatible with states in their quantity/ degree or temporal usage. For instance, *kala-*'well' is an ambiguous adverb (see fn.5 for a similar observation about English *well*):[5]

(50) a. Pos pighe/ perase to kaloceri?
how go.3SG/ pass.3SG the summer
approx. 'How did your summer go?'

b. Pighe/ perase kala.
go.3SG/ pass.3SG well
'It went well.'

c. Pighe/ perase efkola/ dhiskola.
go.3SG/ pass.3SG easily/ with difficulty
'approx. It went easily/ with difficulty.'

d. * Pighe/ perase ligho/ poli.
go.3SG/ pass.3SG a little/ a lot
'*It went a little/ a lot.'

(51) a. Poso tin kseri?
how much 3.SG.F.ACC know.3SG
'approx. To what degree/How much does she know her?'

b. Tin kseri kala.
3.SG.F.ACC know.3SG well
'She knows her well.'

c. Tin kseri ligho.
3.SG.F.ACC know.3SG a little
'She knows her a little.'

d. * Tin kseri efkola/ apotoma.
3.SG.F.ACC know.3SG easily/ abruptly
'She knows her easily/ abruptly.'

- The confound can be avoided if we use unambiguous manner adverbs.

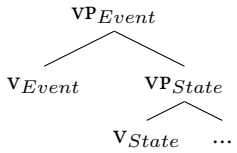
B Open questions

- Why can *pu*-embedding predicates be only stative? What blocks them from becoming eventive?
  - Following extensive previous literature, I assume just as I did previously that v_{Event} is introduced higher than v_{State} (cf. Ramchand 2008 i.a.),
  - v_{Event} selects VP_{State} :

[5] McNally and Kennedy (2013) observe that English *well* can have a degree reading and a "quality" reading in the following examples:

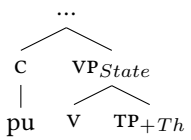
(1) a. a well-loaded truck (high degree of loadedness or loaded in a skilled/neat etc. way)
b. well-loaded hay (loaded in an organized/skilled/neat etc. way) McNally and Kennedy (2013, (3))

(52)



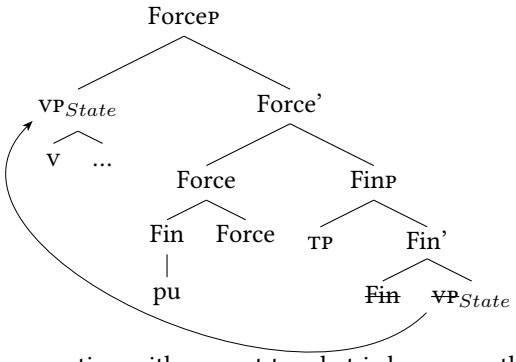
– *Pu* also selects VP$_{State}$, therefore, pu and V$_{Event}$ are mutually exclusive because they compete for the same position.

(53)



- *Oti*-clauses permit extraction out of them. Nonetheless, if you look at the proposed syntactic structure, this would mean that extraction would have to take place out of a moved constituent, the TP:

(54)



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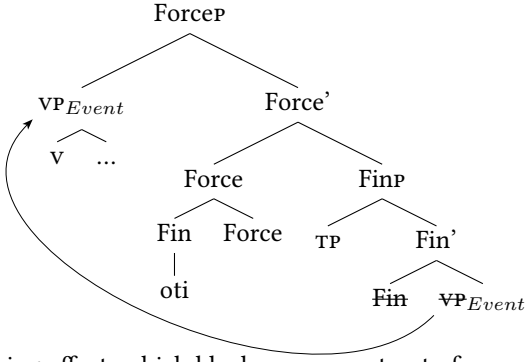

- This raises a question with respect to what is known as the freezing effect, which blocks movement out of a moved constituent. The freezing effect is not as not an absolute constraint (see Barbiers 2002 and Bošković 2008 i.a.). Bošković (2008) argues that there is nothing wrong in principle with movement out of moved elements.