

Subextraction from subjects in Greek: Things that you can thing and you can say

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1. Introduction

Topic: To examine extraction out of subjects in Greek and its implications for the theoretical approaches to subject condition

We show that:

- ✓ Greek violates the Subject Condition permitting extraction out of all kind of DP-subjects in all positions
- ✓ Extraction out of preverbal external argument subjects of volitional predicates poses serious problems for deep derivational approaches to subject condition which rely on freezing conditions such as the Activity and the Edge conditions

2. Theoretical perspectives

- (1) *Subject Condition* (Chomsky 1973)
Extraction out of subjects is not allowed
- (2) *Condition on Extraction Domains* (CED) (Huang 1982: 505)
A phrase A may be extracted out of a domain B only if B is properly governed
- (3) *Freezing Effect* (Stepanov 2001: 52, based on Wexler & Culicover's 1981 *Freezing Principle*)
No extraction is possible out of a previously moved domain.

Unlike the *Adjunct Condition* the *Subject Condition* seems to be violated in a number of languages, especially when the subject appears in a postverbal position (see Stepanov 2001 for an overview)

- (4) *English*
Which actor_i were there [pictures of t_i] on magazines?
- (5) *Spanish* (from Gallego 2010: 265)
 - a. De qué lingüista_i han llegado ya [muchos libros t_i]?
of what linguist have-3PL arrived already many books
'Which linguist have many books by already arrived?'
 - b. De qué escritor_i han sido vendidas [muchas novelas t_i]?
of what writer have-3PL been sold many novels
'Which writer have many novels by been sold?'

- (6) *Greek*
 pjanu maθiti_i paraponeθike [i mitera t_i] sto ðiefθidi?
 which pupil-GEN complain-PAST.3SG the mother-NOM to.the headmaster-ACC
 ‘*Of which pupil did the mother complain to the headmaster?’

2.1. ‘Freezing’ the subject

There have been many attempts to capture the “surprising differences among languages” with respect to the Subject Condition. They somehow reflect its “unstable status crosslinguistically” (Gallego & Uriagereka 2007: 4). The basic empirical facts show that in the languages that allow for subextraction from subjects there seems to be an asymmetry between extraction out of subjects which remain in their base position inside the v*P (postverbal) and extraction out of subjects which have moved to a Spec,TP (preverbal):

- (7) *English* (Lasnik & Park 2003: 651)
 a. Which candidate_i were there [posters of t_i] all over the town?
 b. *Which candidate_i were [posters of t_i] all over the town?
- (8) *Spanish* (Uriagereka 1988: 118)
 De qué conferenciantes_i te parece que...
 of what speakers cl-to-you seem-3SG that
 a. ... (?) me van a impresionar [las propuestas t_i]?
 cl-to-me go-3PL to impress-INF the proposals
 b. ... *[las propuestas t_i] mez van a impresionar?
 the proposals cl-to-me go-3PL to impress-INF
 ‘Which speakers does it seem to you that the proposals by will impress me?’
- (9) *Dutch* (Broekhuis 2005: 64-65)
 a. Wat_i zijn (er) jouw vader [t_i voor rare verhalen] verteld?
 what be-3PL EXPL your father for strange stories told
 ‘What kind of strange stories have been told to your father?’
 b. *Wat_i zijn [t_i voor rare verhalen] jouw vader verteld?
 what be-3PL for strange stories your father told
 ‘What kind of strange stories have been told to your father?’

➔ subject opaqueness arises at their derived position. There are many theoretical accounts of this fact:

- ✓ Representational driven (Takahashi 1994, Ormazabal et al. 1994, Stepanov 2001; see also Narita 2011, in a label-free framework).

- (10) *Chain Uniformity Condition* (Stepanov 2001: 52)
 No extraction is possible out of a previously moved domain

- ✓ Criterial-driven (Rizzi 2006 et seq., Rizzi & Shlonsky 2007, Boškovic 2008): “Classical EPP, the requirement that clauses have subjects, can be restated as a criterial requirement, the Subject Criterion, formally akin to the Topic Criterion, the Focus Criterion, the Q or Wh Criterion, etc.” (Rizzi 2006: 43).

- (11) *Subject Criterion*
 [DP [Subj XP]]

- (12) *Criterial Freezing* (Rizzi 2006: 112 and Rizzi 2007: 149)
 A phrase meeting a criterion is frozen in place
 In a criterial configuration, the Criterial Goal is frozen in place
- (13) *Operator Freezing Effect* (Bošković 2008: 250)
 Operators in operator-variable chains cannot undergo further operator movement
- ✓ Feature (checking/valuation)-driven (Chomsky 2000 et seq., Boeckx 2003 et seq., Gallego 2010, 2011):
 The subject freezes in positions where ϕ -features valuation and case assignment has taken place.
- (14) *Activity Condition* (Chomsky 2000: 123)
 Uninterpretable (unvalued) morphology renders syntactic objects ‘active’
- (15) *Case/Agreement Condition on Subextraction* (Gallego 2010: 256)
 a. A syntactic object whose ϕ -features can agree is transparent
 b. The ϕ -features of a syntactic object can agree if it bears unvalued T
- (16) *Activity Condition* (Gallego 2010: 257)
 a. Syntactic objects with unvalued (structural) Case are ‘active’
 b. Syntactic objects with valued Case are ‘frozen’

2.2. Can we really blame the derived position? Phase Edge effects

Chomsky (2008: 153-154): extraction out of preverbal subjects is possible even in English, when they enter the derivation as internal arguments or pass by a defective Specifier, where no ϕ -valuation takes place:

- (17) (a) * $[_{CP} \text{Of which car}_i \text{ did } [_{TP} \text{the driver } t_i]_j \text{ } [_{v^*P} t_j \text{ cause a scandal}]]]$?
 (b) $[_{CP} \text{Of which car}_i \text{ was } [_{TP} \text{the driver } t_i]_j \text{ } [_{VP} \text{awarded } t_j \text{ a prize}]]]$?
- (18) a. $[_{CP} \text{Of which car}_i \text{ is } [_{TP} \text{the driver } t_i]_j \text{ likely } t_j \text{ to } [_{v^*P} t_j \text{ cause a scandal}]]]$?
 b. $[_{CP} \text{Of which car}_i \text{ did they believe } [_{TP} t_j \text{ to have } [_{v^*P} t_j \text{ caused a scandal}]]]$?

If we were to relate the *Subject Condition* with the surface position of the subjects (namely Spec,TP), then there would be no way of deriving the difference between (17a) and (17b) or the grammaticality of (18a,b), since in all these cases the subject ends up in Spec,TP position:

- Extraction takes place from the base position in (13b) or from the embedded ϕ -defective Spec,TP in (14a,b)
- Extraction in (17a) is barred because the subject is merged at the v^*P edge and passes through no intermediate position from where extraction would be possible

- (19) *Edge Condition* (Gallego & Uriagereka 2007:55)
 Syntactic objects in phase edges become internally opaque

(20)



2.3. Where does this leave us?

- Spec,v*P is an island, either by pure locality because it is a phase edge that has already passed the derivation (Chomsky 2008), or because elements in this position are not part of the main spine as the ‘dynamically bifurcated’ Multiple-Spell Out Model of Uriagereka (1999) predicts.
- Spec,TP is also an island either because (i) it evokes Chain Uniformity restrictions or (ii) by means of feature valuation-freezing according to some kind of Activity Condition or Criterial Freezing

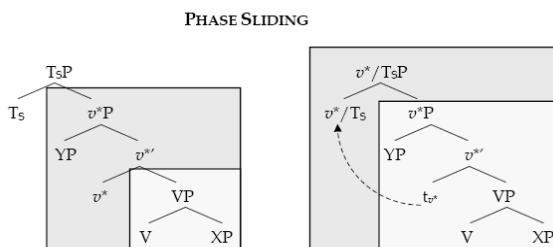
The challenge from Spanish: Extraction out of postverbal external argument subjects is allowed:

- (21) [CP De qué coche_i C te parece que ...
of what car cl.to.you seem-3SG that
a. ... (?)<sub>[TP T causó un escándalo [el conductor t_i]]]?
cause-PAST.3SG a scandal the driver
b. ... ??<sub>[TP [el conductor t_i]_j T causó un escándalo]]]?
the driver cause-PAST.3SG a scandal
‘Of which car does it seem to you that the driver caused a scandal?’</sub></sub>

(from Gallego 2011: 59)

- ✓ Gallego & Uriagereka (2007): Edge Condition is circumvented because of Phase Sliding caused by overt V-to-T movement: This way “phase domains are removed: the *complement domain* is v*P (not VP) and the *edge domain* is v*/T, plus all its SPECs. Especially important is the fact that SPEC-v*, where –we assume– post-verbal subjects stand in Spanish, is no longer a phase *edge*, it simply is a SPEC within the *complement domain*. Sub-extraction should then be possible, and it is, as we saw before.”

(22)

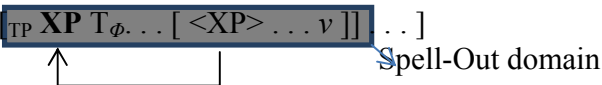


- ✓ Gallego (2010, 2011): Extraction is allowed from postverbal Spec,v*P because φ-valuation targeting the subject in this position is not complete and the subject has not moved to a freezing specifier

Summing up:

- ☞ Activity and Edge based approaches, either alone or in combination, exclude the possibility of extraction out of a preverbal external argument subject which has derived by movement from Spec,v*P to Spec,TP:
 - first merge at Spec,v*P creates edge effects
 - φ-valuation at Spec,TP deactivates the subject
 - there is no intermediate landing site in the subject movement from where subextraction would be possible

Boeckx (2010: 87): islandhood via valuation *cum* displacement *cum* cyclic spell-out: “[...]valuation per se is not the cause of freezing. Instead, what seems to cause freezing is the fact that the subject (as well as any other previously displaced argument) heads a non-trivial chain at the point of valuation’

(23) $[_{CP} C_{\phi} [_{TP} XP T_{\phi} \dots [\langle XP \rangle \dots v]] \dots]$


3. The challenge from Greek

The aforementioned generalization is too strong: In Greek, extraction out of subjects in both transitive and intransitive constructions is allowed no matter whether they are preverbal or postverbal:

(24) pjanu_i ipes $[_{CP}$ oti irθe $[_o$ aδelfos t_i]
 who-GEN say-PAST.2SG that come-PAST.3SG the brother-NOM
 ‘The brother of whom did you say came?’
 (Spyropoulos 1999: 135; Spyropoulos & Philippaki-Warburton 2001: 164)

(25) a. pjanu maθiti_i paraponeθike $[_i$ mitera t_i] sto δiefθidi?
 which pupil-GEN complain-PAST.3SG the mother-NOM to.the headmaster-ACC
 ‘*Which pupil did the mother of complain to the headmaster?’
 b. pjanu maθiti_i mu ipes $[_{CP}$ oti paraponeθike $[_i$ mitera t_i]
 which pupil-GEN CL1-SG.GEN say-PAST.2SG that complain-PAST.3SG the mother-NOM
 sto δiefθidi?
 to.the headmaster-ACC
 ‘*Which pupil did you tell me that the mother of complained to the headmaster?’
 (Spyropoulos 2003, Spyropoulos & Revithiadou 2007:11; 2009)

(26) pjas omaδas_i eleye i eleni oti $[_i$ poδosferistes t_i] ine eksadlimeni
 which team-GEN say-PAST.3SG the Helen-NOM that the footballer-PL.NOM are exhausted-MS-PL.NOM
 ‘Which teams’ footballers did Helen say are exhausted?’
 (Kotzoglou 2005: 178)

4. Is extraction out of subjects in Greek genuine?

Greek facts may not constitute genuine evidence against the validity of the Activity and Edge conditions unless we control for a number of factors (see Fortuny 2008 and Gallego 2010, 2011 for discussion)

4.1. The flavour of v*

- ✓ Chomsky (2008: 160 fn.39): “Choice of v* might have an effect. Perhaps “of which books did the author receive a prize?” is more acceptable than (6) [= of which car did the driver cause a scandal?]. If so, difference among theta roles might be relevant, perhaps requiring a deeper analysis of base structures”.
- ✓ Fortuny (2008): extraction out of subjects of psych-predicates may not question the validity of phase-edge effects, if we accept Belletti & Rizzi’s (1988) unaccusative analysis of such predicates (see however Arad 2002, Gallego 2010 against such an analysis), according to which the surface subject is generated deep inside the VP very much like a transitive object. This might make them more ‘transparent’ for subextraction.
- ✓ Uriagereka (2008): “...stay away for psychological predicates because it could be that they are analyzed in totally irrelevant terms!”

- ☞ We are seeking for constructions involving extraction out of external argument subjects of volitional (agentive) predicates

4.2. The status of the subextracted element

Chomsky (2008: 160 fn.38): “In the oral tradition, including talks of mine, examples have kept to ‘picture-PP’, but that lexical choice introduces extraneous issues because of the ambiguity of the phrase, which can be understood with PP interpreted not as a complement of ‘picture’ but as, in effect, a reduced relative clause (roughly, “I have a picture which is of Boston,” contrary to *‘‘I saw a driver who is of the car,’’ [*]‘‘I saw an author who is of the book’’). The differences show up elsewhere – for example, in *one*-replacement”

- ☞ We are seeking for constructions in which the subextracted element is unambiguously interpreted as the complement of the subject

4.3. The prolepsis issue

Verbs like ‘*say*’ or ‘*know*’ may force an ‘aboutness’ reading. If so, the alleged subextracted element might be generated as a direct dependent of the matrix verb.

- (27) a. Juan sabe / dice [CP que Maria fuma]
 Juan knows / says that Maria smokes
 b. Juan sabe / dice [PP de Maria] [CP que fuma]
 Juan knows / says of Maria that smokes
 ‘Juan knows / says about Maria that she smokes’

- (28) a. [_{v*P} [v* [_{ZP} Z [_{YP} Y]...]]]
 b. [_{v*P} [v* [about YP] ZP]]]

- (29) a. De que novela_i dijiste [CP que (?muchas traducciones) ganaron un premio
 of what novel said-2SG that many translations won-3PL a prize
 (muchas traducciones)]? (adopted from Gallego 2011b: 69 fn.13, his judgment)
 b. [De que novela_i] dijiste [~~de que novela_i~~] [CP que (?muchas traducciones) ganaron un premio
 (muchas traducciones)]?

- ☞ We are seeking for constructions in which the subextracted element is not able to be analysed as an aboutness dependent on the matrix verb

4.4. Genuine subextraction from preverbal external argument subjects

- (30) a. pjanu aftokinitu_i su fanike [CP oti [o oðiyos t_i] paraviase to stop]?
 which car-GEN CL2-SG.GEN seem-PAST.3SG that the driver-NOM violate-PAST.3SG the stop
 ‘*Of which car did it seem to you that the driver has disobeyed the stop sign?’
 b. pjanu aftokinitu_i su fanike [CP oti [o oðiyos t_i] xtipise
 which car-GEN CL2-SG.GEN seem-PAST.3SG that the driver-NOM hit-PAST.3SG
 mia yriula]?
 an old.woman-ACC
 ‘*Of which car did it seem to you that the driver has hit an old woman?’

- c. pjanu aftokinitu_i su fanike [CP oti [o oðiyos t_i] prosevale
 which car-GEN CL2-SG.GEN seem-PAST.3SG that the driver-NOM offended-PAST.3SG
 ton astinomiko]?
 the policeman-ACC
 ‘*Of which car did it seem to you that the driver has offended the policeman?’

Controlling the factors in the examples in (30)

- (i) The status of the v*P

The embedded predicate is volitional (agentive) and the subject is an external (agent) argument → the subject originates as a Spec,v*P at the v*P phase edge

- (31) a. [pjanu aftokinitu]_i su fanike [CP oti [TP [o oðiyos t_i]_j [T paraviase_k] [v*P t_j t_k [VP [to stop]]]]]]?
 b. [pjanu aftokinitu]_i su fanike [CP oti [TP [o oðiyos t_i]_j [T xtipise_k] [v*P t_j t_k [VP [mia yriula]]]]]]?
 c. [pjanu aftokinitu]_i su fanike [CP oti [TP [o oðiyos t_i]_j [T prosevale_k] [v*P t_j t_k [VP [ton astinomiko]]]]]?

- (ii) The status of the subextracted element

The wh-phrase is a complement of the subject as the following tests show

- (32) relativization

* o oðiyos o opios ine tu aftokinitu
 the driver-NOM the who-NOM is the car-GEN
 ‘*The driver who is of the car’

- (33) *alos* replacement (= *one* replacement)

- a. o oðiyos tu aftokinitu ke enas alos (= oðiyos tu aftokinitu)
 the driver-NOM the car-GEN and one-NOM other-NOM
 b. o oðiyos tu aftokinitu ke enas alos tis mixanis
 the driver-NOM the car-GEN and one-NOM other-NOM the motorbike-GEN

- (iii) The prolepsis issue

The wh-phrase may not be interpreted as an aboutness dependent of the matrix predicate

- ✓ the verb *fenome* ‘to seem’ rejects aboutness dependents (see also Gallego 2010: 69)
- ✓ In Greek, aboutness dependents are always PPs introduced by the preposition *ja* ‘for’ or the complex preposition *sxetika me* ‘about’; the wh-element in the relevant constructions are DPs marked in genitive case → the subextracted wh-phrase may not be reanalysed as a matrix predicate aboutness dependent, even with a predicate that allows for it:

- (34) ksero ja / sxetika me ti maria oti kapnizi
 know-1SG for / about the Maria-ACC that smoke-3SG
 ‘I know about Maria that she smokes’

- (35) pjas nuvelas kseris oti o sigrafeas xtipise ena ðimosioyrafo?
 which novel-GEN know-2SG that the writer-NOM hit-PAST.3SG a journalist-ACC
 ‘*Of which novel do you know that the writer hit a journalist?’

- (36) sxetika me to ðimosioyrafo, pjas nuvelas kseris
 about the journalist-ACC which novel-GEN know-2SG
 oti o sigrafeas ton xtipise?
 that the writer-NOM CL3-MSG.SG.ACC hit-PAST.3SG
 ‘*About the journalist, of which novel do you know that the writer hit him?’

☞ **The examples in (24) constitute genuine examples of extraction out of a preverbal external argument subject**

5. Kotzoglou’s (2005, 2010) analysis and the derivation of subjects in Greek

Kotzoglou (2005, 2010):

- ✓ The subject condition is a PF effect which derives from the way the syntax-phonology interface processes the syntactic output of a non-trivial chain by promoting one copy for pronunciation and deleting the others.
- ✓ Abstracting away from its technical details his analysis predicts that extraction can take place only out of a first-merged constituent in a given Transfer unit.
- ✓ Extraction out of preverbal subjects in Greek is possible because their derivation does not involve Spec,v*P-to-Spec,TP movement, but rather they are directly merged in their surface position (Spec,TopP in his analysis)

Kotzoglou’s analysis adopts the *Left Dislocation analysis of Greek subjects*.

Left Dislocation analysis of Greek subjects (Philippaki-Warburton 1987, 1989, Alexiadou & Anagnostopoulou 1998, Spyropoulos 1999, Spyropoulos & Philippaki-Warburton 2001, Kotzoglou 2005)

- ✓ postverbal subjects stay in situ inside the verb phrase
- ✓ preverbal subjects do not move to Spec,TP to satisfy the EPP
- ✓ EPP is satisfied by overt V-to-T movement (Alexiadou & Anagnostopoulou 1998) or by a subject-clitic (Spyropoulos & Philippaki-Warburton 2001) or it does not project at all (Kotzoglou 2005)
- ✓ preverbal subjects are topic-like dislocated elements (either adjoined or in a Spec,TopP) linked with a *pro* inside the relevant theta-position
- ✓ preverbal subjects resemble clitic left-dislocated objects

(37) DP-subject_i [_{TP} [_T V] [... *pro*_i ...]]

Problem #1: extraction out of a preverbal subject is allowed, whereas extraction out of a left dislocated element is allowed. If both elements are first-merged elements then the asymmetry in (38a-b) cannot be derived:

- (38) a. pjanu aftokinitu_i su fanike [_{CP} oti [o oðiyos t_i] prosevale
 which car-GEN CL2-SG.GEN seem-PAST.3SG that the driver-NOM offended-PAST.3SG
 ton astinomiko?
 the policeman-ACC
 ‘*Of which car did it seem to you that the driver has offended the policeman?’
- b. * pjanu peðiu_i mu ipes [_{CP} oti [to axlaði t_i] to efayes?
 which child-GEN CL1-SG.GEN say-PAST.2SG that the pear-ACC CL3-NT.SG.ACC eat-PAST.3SG
 ‘Which child did you tell me that you have eaten the pear of?’

Problem #2: The validity of the Left Dislocation analysis of Greek subjects has been seriously questioned on the basis of distributional, interpretational and prosodic evidence which show that preverbal subjects in

Greek are not first-merged (adjunct/topic like) elements in their surface position (Horrocks 1994, Roussou & Tsimpli 2006, Spyropoulos & Revithiadou 2007, 2009):

- ☒ Preverbal subjects do not always have and in some cases they resist a topic reading:
- ✓ Both SVO and VSO orders are felicitous answers to questions requiring an all new information answer, with SVO being the most optimal and frequent answer in such cases (Laskaratou 1989, 1998, Keller & Alexopoulou 2001):

- (39) Q: ti eyine? / ti nea?
 what-ACC happen-PAST.3SG / what-NOM new-PL.NOM
 ‘What happened?/What’s up?’
- A1. o janis filise ti maria
 the john-NOM kiss-PAST.3SG the Mary-ACC
 ‘John kissed Mary’
- A2. filise o janis ti maria
 kiss-PAST.3SG the john-NOM the Mary-ACC
 ‘John kissed Mary’

- ✓ Free Choice Items (FCIs), which are inherently incompatible with a topic reading due to their intentional semantics (Giannakidou 2001), are fine preverbal subjects

- (40) opiaðipote yata kiniyai pondikia
 whichever cat-NOM hunt-3SG mice-ACC
 ‘Any cat hunts mice’

- ☒ Indefinite subject can take narrow scope over a universal quantifier object when facilitated by the imperfective aspect of the verb (contra Alexiadou & Anagnostopoulou 1998)

- (41) a. enas ipuryos episkeftike kaqe perioxi tis eladas
 a minister-NOM visit-PERF-PAST.3SG every region-ACC the Greece-GEN
 ‘A minister (has) visited every region of Greece’
 $\exists > \forall$ only ($*\forall > \exists$)
- b. enas ipuryos episkeftotan kaqe perioxi tis eladas
 a minister-NOM visit-IMPERF-PAST.3SG every region-ACC the Greece-GEN
 ‘A minister was visiting every region of Greece’
 $\exists > \forall$ and $\forall > \exists$

- ☒ Preverbal subjects do not prosodify as left dislocated objects. Left dislocated objects behave as prosodic islands by being wrapped in their own phonological phrase and resist prosodic rephrasing; preverbal subjects on the other hand can be subject to prosodic rephrasing due to wellformedness prosodic constraints (see Revithiadou & Spyropoulos 2005, 2009 for discussion).

- (42) tis próves, mas / sas tis klíni o pános
 the rehearsal-PL.ACC CL1-PL.GEN / CL2-PL.GEN CL3-FM.PL.ACC.GEN arrange-3SG the Panos-NOM
 ‘As for the try-outs, Panos arranges them for us/you-PL’
- a. [tis próves]φ [mas/sas tis klíni o pános]φ
- b. *[tis próvezmas/ próveØsas tis klíni]φ [o pános]φ

- (43) to fós ðíni ísxí sti mixaní
 the light-NOM give-3SG power-ACC to-the engine-ACC
 ‘The light gives power to the engine’
- a. [to fós]φ [ðín∅ ísxí]φ [sti mixaní]φ *end-based mapping*
 b. [to fóz ðíni]φ [ísxí sti mixaní]φ *binarity-based mapping*

☞ Spyropoulos & Revithiadou (2007, 2009) take this evidence to suggest that Greek preverbal subjects involve a non-trivial chain and that the preverbal vs. postverbal distribution is the result of the different processing of this non-trivial chain by the syntax-morphology interface.

- (44) [TP subject [T V] [VP ... subject ...]]
- a. [TP subject [T V] [V*P ~~subject~~ [VP object]]] → preverbal subject (SVO)
 b. [TP ~~subject~~ [T V] [V*P subject [VP object]]] → postverbal subject (VSO)

Implications for Activity and Edge based approaches:

- ✓ extraction out of both preverbal and postverbal subjects involves extraction out of a non-trivial chain and thus it is expected to be ruled out, contrary to the facts
- ✓ whatever permits extraction out of a preverbal subject should also permit extraction out of a postverbal one and vice-versa

A note on postverbal subjects and agreement

Gallego (2010) argues on the basis of defective agreement patterns that postverbal subjects do not fully agree with the C-T φ-probe. The following examples show that this is not the case in Greek: agreement with the subject is full even with coordinated subjects in partial (first-conjunct) agreement constructions (see Spyropoulos 2011):

- (45) a. ton xtipisan o nikos ke i maria
 CL3-MSC.PL.ACC hit-PAST.3PL the nikos-NOM and the maria-NOM
 b. ton xtipise o nikos ke i maria
 CL3-MSC.PL.ACC hit-PAST.3SG the nikos-NOM and the maria-NOM
 ‘Nikos and Maria hit him’
- (46) a. ton xtipisan ta peðia ke i maria
 CL3-MSC.PL.ACC hit-PAST.3PL the child-PL.NOM and the maria-NOM
 a. ton xtipisan / *xtipise ta peðia ke i maria
 CL3-MSC.PL.ACC hit-PAST.3PL / *hit-PAST.3SG the child-PL.NOM and the maria-NOM
 ‘Maria and the children hit him’
- (47) a. ton xtipisame eyo ke i maria
 CL3-MSC.PL.ACC hit-PAST.1PL I-NOM and the maria-NOM
 b. ton xtipisa / *xtipise eyo ke i maria
 CL3-MSC.PL.ACC hit-PAST.1SG / *hit-PAST.3SG I-NOM and the maria-NOM
 ‘Maria and I hit him’

- (48) a. ton xtipisate esi ke i maria
 CL3-MSC.PL.ACC hit-PAST.2PL you-NOM and the maria-NOM
 b. ton xtipises / *xtipise esi ke i maria
 CL3-MSC.PL.ACC hit-PAST.2SG / *hit-PAST.3SG you-NOM and the maria-NOM
 ‘Maria and you hit him’

→ If morphological full agreement is an indication for full valuation and deactivation, then postverbal subjects in Greek should also exhibit Activity effects, contrary to the facts

Summary:

Greek subjects involve non-trivial chains so that extraction out of preverbal and probably postverbal external argument subjects is expected to be ruled out by the Activity and Edge conditions, contrary to the facts

6. Greek: an anti-freezing language

We established that subjects do not freeze in Greek. In this section we show that Greek in general resists freezing

6.1. Extraction out of subjects of small clauses

There is substantial evidence from binding effects that in a small clause configuration involving a DP and an XP predicated of this DP, the DP moves out of the small clause constituent either to the Specifier of a functional category F that heads the small clause or to a specifier of the matrix v*P/VP (Spyropoulos 1998, Jimenez & Spyropoulos 2010):

- (49) $\theta eoro$ [_{DP} ton oðiyo tu kokinu aftokinitu] [_{XP} poli kalo]
 consider-1SG the driver-ACC the red car-GEN very good-MSC.SG.ACC
 ‘I consider the driver of the red car very good’

(50) *Binding effects*

- a. $\theta eoro$ [_{DP} to niko_i] [_{XP} poli perifano ja ton eafto tu_i]
 consider-1SG the Nikos-ACC very proud-MSC.SG.ACC for himself
 I consider Nikos very proud of himself
 b. [_{XP} poso perifano ja ton eafto tu_i]_j $\theta eoris$ [_{DP} to niko_i] t_j?
 how much proud-MSC.SG.ACC for himself consider-1SG the Nikos-ACC
 ‘How much proud of himself do you consider Nikos?’
 c. i maria_j anarotiete [_{XP} poso perifano ja ton eafto tu_i / *ton eafto tis_j /
 the Mary-NOM wonder-3SG how much proud-acc for himself / *herself /
 *afton_i / aftin_j $\theta eoris$ [_{DP} to niko_i]
 *him / her consider-2SG the Nikos-ACC
 ‘Mary wonders how proud of himself / *herself / *him / her you consider Nikos’

Thus if the configuration of (49) is

- (51) $\theta eoro_k$ [_{v*P} t_k ... [_{DP} ton oðiyo tu kokinu aftokinitu]_i [_{XP} t_i poli kalo]]

where the DP occupies a derived position and it is assigned case by the matrix v*, we expect extraction out of this DP due to freezing. However, such an extraction is perfectly ok in Greek:

- (52) pjanu aftokinitu_i theoris [DP ton oðiyο t_j]_i [XP poli kalo]
 which car-GEN consider-2SG the driver very good-MSG.SG.ACC
 ‘*Of which car do you consider the driver very good?’

6.2. Extraction out of criterial positions

- (53) *wh-extraction out of a wh-element in Spec,CP*
 ?pjanu piimatos_i anarotiese / emaθes
 which poem-GEN wonder-2SG / hear-PAST.2SG
 [CP [pjes metafrasis t_i] θa puliθun avrio
 which translation-PL.ACC will sell-PASS-3SG tomorrow
 ‘*Of which poem do you wonder / have you heard which translations will be sold tomorrow?’
- (54) *focus movement out of a wh-element in Spec,CP*
tis iliadās_i emaθa [CP [pjes metafrasis t_i] θa puliθun avrio
 [the Iliad-GEN]FOC hear-PAST.1SG which translation-PL.ACC will sell-PASS-3SG tomorrow
 ‘*It is the Iliad that I heard which translations will be sold tomorrow’
- (55) *wh-movement out of a fronted focus phrase*
 pjanu aftokinitu_i su fanike [CP oti [ton oðiyο t_j]_i sinelave i astinomia t_j]
 which car-GEN CL2-SG.GEN seem-3SG that [the driver-ACC]FOC arrest-PAST.3SG the police-NOM
 ‘*Of which car did it seem to you that it was the driver that the police arrested?’

7. Discussion

“... Take islands for example: to the extent that they are understood, which is limited, they seem to result from computationally efficient properties like say minimality, but of course they lead to communicative inefficiency. **Islands mean that there are things you CAN think but you CANNOT say...**”
 (from Chomsky 2011, his emphasis)

If extraction out of a subject is something that we can think, the subject island is the effect that we cannot say it. Two possibilities

- ✓ we cannot say it because the computational system cannot derive the relevant construction
- ✓ we cannot say it because the Sensory-Motor system poses limitations in the processing of the relevant constructions

Hypothesis A: Activity and Edge conditions are properties of the computational system, which impose restrictions on the derivation → extraction out of a non-trivial subject chain which involves a phase edge base position and a derived position where valuation of φ-features takes place cannot be derived

What about Greek?: Two possibilities:

- ✓ Either Activity or Edge condition or perhaps both are not valid in this language
- ✓ Extraction out of a preverbal subject may take place from an escape hatch, perhaps an extra outer specifier of v*P where the subextracted element moves in order to escape Edge freezing before φ-valuation deactivates the subject

Problem: Derivation is tailored to fit in the appropriate language → too much parametric variation in the computational system

Hypothesis B: Activity and Edge conditions are not properties of the computational system and derive from independent properties of the Sensory-Motor system

- ✓ The computational system is able to derive the relevant constructions
- ✓ Freezing effects derive from properties of the syntax-phonology interface, hence their unstable status and the crosslinguistic variation
- ✓ Activity and Edge Conditions as well as Criterion Freezing are epiphenomena; we therefore should seek what lies behind them

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