

On the other hand, if no X or XP is realized/merged, then (finite) enclisis obtains through merger of V across the cliticization site (✓V):

- (4) $[_{CP3} C_3 [_{TopP} \mathbf{Top} [_{CP2} C_2 [_{FocusP/WhP} \mathbf{Focus/Wh} [_{CP1} C_1 [_{NegP} \mathbf{Neg} [_{XP} \dots \{CL V\} \dots]]]]]]]]$
- ✓V *V

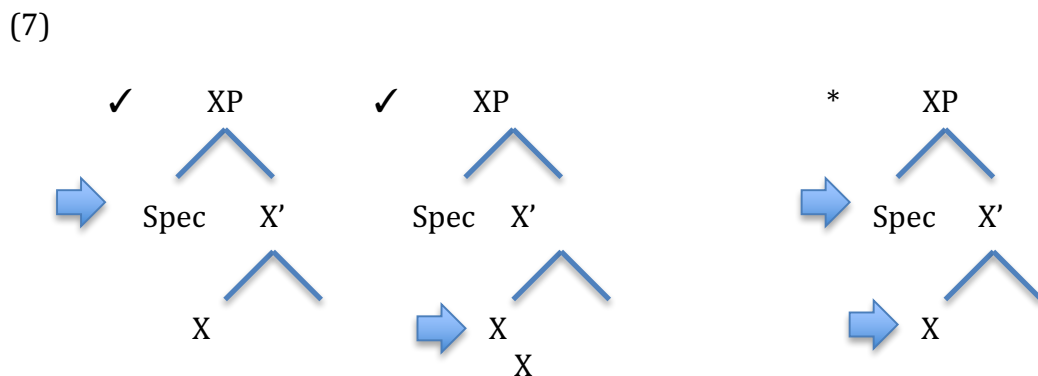
I will argue that this distribution follows from a phonological/spell-out requirement imposed on an Agreeing functional head which c-selects TP/INFLP (= XP in (2-4) above) and which is structurally and functionally defined, but crucially not in terms of feature content (what I call a ‘decomposed EPP’, following the hypothesis put forward in Landau 2007 that the EPP is (also) PF in nature):

- (5) a. $[\dots [_{HP} \mathbf{H} [_{TP} TP [_{VP} \dots V \dots]]]]$
 b. $\mathbf{H} = \{f_1; f_2; \dots f_n\}$ and **feature projection** is subject to $f_1 > f_2 > \dots f_n$

(5) specifies that H has a morpho-syntactic feature that needs checking. It also specifies that H may come in flavours (i.e. it may contain different types of features), where insertion and projection of each feature is regulated by a feature projection algorithm of some sort (which may or may not be reduced to independent semantico-syntactic restrictions). I will further argue that besides this morpho-syntactic requirement, there is an additional PF requirement imposed on H, namely that its Edge must be realized by material with *phonological content*:

- (6) $[_{HP} \mathbf{Spec} [_{H'} H_{[+feature]} [_{YP} WP Y ZP]]]$
-

Given that the Edge of a projection is taken to include both the head and the spec,² and assuming that this requirement, being an interface requirement, is restricted by Economy, realization of either the head or the spec must be sufficient (see also Collins 2007; Koopman 2000; Kupula 2011; Nchare & Terzi 2014; Pearson 2005; Pesetsky 1998):



² Note that this definition of the Edge would carry over to a Phonological domain X, as long as the relevant projection lies at the Edge of X (see Pesetsky 1998; Selkirk 2011, and sections 3.2.2 and 4.2).

I will argue that it is exactly this Economy restriction that gives rise to the complementarity distribution pattern illustrated in (1) above. I will further show that obligatory non-finite enclisis in CG (and Standard Greek (SG)) also involves an Edge Requirement imposed on H, however in this particular case an affixal requirement that is imposed on H for independent reasons within Morphology blocks the complementary distribution. Finally, I will speculate that finite enclisis is not found in languages like SG due to the fact that H is parameterized.

This paper is structured as follows: section 2 gives the theoretical background regarding the EPP and introduces the notion of the EPP adopted in this paper. Section 3 offers a detailed presentation of finite enclisis in CG (and of enclisis in CG and SG more generally). Section 4 provides an analysis of the data based on EPP decomposition. Section 5 concludes the discussion.

2. Theoretical background

Researchers have been disagreeing on whether the EPP constitutes a theoretical primitive or not (see e.g. Grohmann, Drury & Castillo 2000; Landau 2007; Lasnik 2003 for an overview). For this reason, linguists have been trying to reduce it to independent principles (such as case or agreement – see e.g. Fukui & Speas 1986). But, what is the EPP? Initially, the EPP was taken to be a grammatical rule that ensured that a finite clause has an overt subject. Within Government and Binding (GB) Theory, this would translate to the requirement that finite T/AGR projects an overt specifier (at least in languages like English):

- (8) a. [_{TP} *(John) [_{T'} T [_{vp} sleeps]]]. [Finite T]
 b. [_{TP} John decided [_{CP} [_{TP} (*Mary) [_{T'} to [_{vp} sleep]]]]]. [Non-finite T]

Nowadays, this view has changed considerably. First of all, most researchers agree that the EPP applies to any functional head (i.e. C, T, v, n, p, ...) (see e.g. Chomsky 2000, 2001). This follows from the assumption that the EPP is some sort of feature (categorical, non-categorical, or of a more generalized nature) that is added to one or more morpho-syntactic features, the latter typically being taken to reside within a functional head (e.g. phi features). The role of the EPP, then, is to trigger overt displacement of an agreeing constituent. Given that according to this view the EPP is a morpho-syntactic feature, two additional standard assumptions follow: (a) satisfaction of the EPP may be parameterized in that languages may differ in whether a head X or a phrase XP may satisfy the EPP by being merged at a functional head F (see e.g. Alexiadou & Anagnostopoulou 1998 for V-to-T movement in pro drop languages satisfying a D-feature on T); (b) the X or XP satisfying the EPP may be phonologically overt or covert (e.g. PRO or pro), as what is at issue is merger of an abstract feature bundle.

Despite the general consensus that the EPP has a morpho-syntactic basis, it has been pointed out by various researchers that in many cases the empirical picture leads to the observation that the EPP is directly related to a semantic and/or PF effect.³ These would include phenomena such as pro drop (see e.g.

³ See Landau (2007: introduction) for an overview of semantic and PF approaches to the EPP.

Alexiadou & Anagnostopoulou 1998), clitic doubling (see e.g. Alexiadou & Anagnostopoulou 1997), or V2 (see e.g. Roberts 2005), among many others. A similar point follows from theoretical considerations, as the EPP regulates displacement, which may or may not be overt and which may include total or partial pied-piping of morpho-syntactic material (see e.g. Chomsky 1995). Landau (2007) goes one step further and argues that the EPP has properties which clearly differentiate it from other morpho-syntactic features in terms of a number of parameters, including locality (EPP is strictly local, as opposed to AGREE, which is moderately local) and headedness (EPP is satisfied by a phonetically overt local head, as opposed to morpho-syntactic features which are not restricted in terms of overtness). In particular, he proposes that the EPP is a selectional PF/[p] feature which is parasitic on some morpho-syntactic feature. This PF feature must be satisfied (at PF) via the spell-out of (the head of) an appropriate (morpho-syntactic) copy (i.e. a copy which satisfies locality and headedness).⁴ Landau's theory intends to capture a number of phenomena, including phenomena traditionally attributed to the Empty Category Principle (ECP),⁵ as well as cases of null-headed specifiers not attributable to the ECP (including initial adjuncts, bare NP adverbs, and indirect objects) and cases of head doubling (e.g. DP/P doubling in split topicalization constructions, intermediate P-stranding constructions, and V-doubling in VP-fronting and predicate clefts constructions).⁶ PF approaches to the EPP have been proposed also by various other researchers (cf. e.g. Sigurdsson 2010; for the use of PF diacritics see Holmberg 2000; Manzini & Savoia 2002; Richards 2016; Roberts & Roussou 2002).

⁴ According to Landau (2007), in the following configuration [_{HP} [_{ZP} spec [_{Z'} Z WP]] [_{H'} H [_{YP} spec [_{Y'} Y KP]]], only an overt Z or Y can satisfy the [p] feature on H. This follows from standard assumptions regarding feature percolation. The predictions made by Landau's system are the following: (a) if Z is null, then the result is ungrammatical; (b) if Z may alternate between an overt and a null form, the null form results in ungrammaticality; (c) doubling (i.e. spell-out of both Z and Y) is possible as long Z and Y specify distinct [p] features. He claims that these predictions are borne out across a range of constructions cross-linguistically (mentioned in the main text above). Although in this paper I only follow the spirit (and not the letter) of Landau's proposal, as long I understand his system correctly (at least) predictions (a) & (b) are compatible with finite enclisis.

⁵ These involve cases where ZP (i.e. the specifier of the head carrying the [p] feature) is phonetically covert (e.g. bare Nouns in Romance and sentential subjects with a null C word).

⁶ A reviewer asks what position Landau takes concerning the classic version of the EPP as a requirement of a subject in spec, TP. As far as I understand Landau (2007), the classic EPP would fall within the wider EPP notion proposed in his paper in the following manner: it would be a subcase of [p] feature satisfaction on T by a local overt head or (head of a) spec. Whether the [p] feature is located on T or some other functional head within the extended verbal projection (e.g. C), and whether it is satisfied by a head or spec is subject to cross-linguistic parameterization. It is not clear to me whether any semantic and/or other properties of the spec, TP EPP, reported in the literature, would be accommodated within such an approach, and if yes, in what manner. In this respect, note that the proposal put forward in this paper differs from that made by Landau (2007) among other things, in that it argues in favour of the idea that the EPP as a [p] feature requirement is a property of a structural position (in which certain morpho-syntactic features are merged) rather than a property of some feature on some functional head (see also section 4). One prediction that follows from this assumption is that cross-linguistic parameterization should be localized to (properties of) H (rather than to functional features more generally). This issue is further discussed in section 4. Regarding the traditional EPP, in particular, there are two main hypotheses that the analysis proposed here makes, as far as I can see: (a) languages may differ wrt. the structural position of H (in some languages H = T, in some languages H = C, and in some H = T and C; (b) languages do not differ wrt. to the structural position of H, but rather in terms of the featural content allowed to be inserted in H (in some languages H will contain both A and A-bar features, in some languages it will contain only A or A-bar features). Which one of these analytical options is empirically correct is a question open to research (and see section 4 for further discussion on this issue). Many thanks to an anonymous reviewer for pointing out this issue to me.

If one assumes that the EPP involves a PF requirement, one issue that arises is what is the best way to model this requirement, especially so with regard to the syntax - PF interface. For example, would we need to posit a diacritic that is present on a morpho-syntactic feature but whose satisfaction is checked at PF? Or, could we get rid of the morpho-syntactic diacritic, and simply postulate a purely PF requirement, without any look-ahead in the syntax? Moreover, would we want to say that the PF component may move items as a Last Resort (or, more generally, that it may have syntax-like properties), or would we prefer it to have filter-only properties (see Bošković 2001 for a comparison of various possible syntax - PF interface models)? In this regard, various proposals have been offered in the literature (for a discussion see Landau 2007; Pesetsky 1998; Richards 2010, 2016), but it is not as yet clear whether it is feasible, theoretically and empirically, to have a purely PF requirement or not. What most researchers agree on, though, is that PF should be as much restricted as possible.

A second question revolves around the PF requirement itself: if the EPP is interpreted as a requirement for PF to phonologically realize an XP or X merged at a certain functional head (which carries the relevant morpho-syntactic feature), do we expect to find any interaction in those cases where both an XP and an X can be realized overtly (for independent reasons)? In this respect, it has been pointed out in the literature that cross-linguistically the spec and head of a projection need not (and, by economy, must not) be realized phonologically at the same time (although one of them must be spelled-out – see e.g. Speas 1995). This restriction is more generally known as the doubly filled Comp filter (see Chomsky and Lasnik 1977), however it is implicated in other domains besides the CP, as illustrated in (9-12) below (for pro-drop see Alexiadou & Anagnostopoulou 1998; for clitic doubling see Sportiche 1992/1998; for the PP domain see Collins 2007; Nchare & Terzi 2014. See also Pesetsky 1998 for CP edges and Kupula 2011 for vp applicative domains):

CP domain

- (9) a. *<sub>[DP The man [_{CP} who [_{C'} C that [_{IP} I saw (who)]]]]].
 b. The man who I saw.
 c. The man that I saw. [English]</sub>
- a'. *<sub>[DP O άνθρωπος [_{CP} ton opío [_{C'} C pu [_{IP} íða (ton opío)]]]]].
 The man.nom the whom.acc that saw.1sg (the whom.acc)
 b'. O άνθρωπος ton opío íða.
 c'. O άνθρωπος pu íða. [SG]</sub>

T(P) domain [pro drop]

- (10) a. *_{[TP O Níkos [_{T'} T éfiye [_{VP} ...]]]}
 b. _{[TP O Níkos [_{TP} pro [_{T'} T éfiye [_{VP} ...]]]]]}
 c. _{[TP [_{T'} T Éfiye [_{VP} o Níkos]]]} [SG]

v(P) domain [clitic doubling]

- (11) a. *_[vP] Ton Níko _[vP] pro _[v' V-v ton íðe] _[vP] _[v' (V) (ton) (ton Níko)]]]]]
b. _[vP] pro _[v' V-v ton íðe] _[vP] _{[v' (V) (ton) ton Níko]]]] [SG]}

P(P) domain [r-pronouns in English]

- (12) a. *_{[I went [PP there [P' to P (there)]]]}
b. _{[I went [PP there [P' ∅ P (there)]]]} [English]

What is interesting about this pattern is that it involves complementary distribution, strict locality⁷ (i.e. the relevant spec or head must be realized locally at a functional head, so that long – distance AGREE of abstract morpho-syntactic features is not sufficient in this respect), and wide distribution (i.e. it applies with various functional heads). Crucially, it is the same pattern found with finite enclisis. Moreover, it seems to differ from criterial effects (see Rizzi 1996), where both the spec and the head of a projection are realized overtly (although, crucially, they do not have to): if the EPP is due to a PF requirement being independently available by UG, we would prefer it to be uniform across languages (the null hypothesis). Parameterization should be forced only by the empirical picture, and it might involve syntax and/or PF (and see section 4 on this).

In what follows I will propose that enclisis in CG and SG falls within the realm of the EPP, giving support to the claim that the EPP involves a PF requirement applied on an independently established AGREE relationship between a feature located in H and a matching XP/X constituent. Such an approach puts enclisis together with phenomena such as pro drop, doubly-filled comp filter effects, clitic doubling, stylistic fronting, as well as that-trace effects, in that all of them involve a complementary distribution of phonologically realized constituents that are in a local relationship.

3. Enclisis in CG and SG

3.1 Overview

I will start the discussion by giving an overview of enclisis in CG and SG. For detailed descriptions see Agouraki 1997, 2001, 2010, 2015; author 2010, 2013; Chatzikyriakidis 2010, 2012; Condoravdi & Kiparsky 2001; Pappas 2004; Philippaki-Warbuton 1995, 1998; Revithiadou 2006, 2007; Rivero 1994; Rivero & Terzi 1995; Terzi 1999a,b). The main generalization to keep in mind is the following: in SG enclisis strictly correlates with lack of person and/or restricted person specification on the verbal host (see author 2010). In CG, on the other

⁷ Note that the notion of locality used here is potentially distinct from the syntactic notion of locality: according to the latter, the head of a complement is local to the head selecting it. However, and as we will see later on in section 3, the EPP forces the head of the complement to be spelled-out on the c-selecting head (which carries the relevant c-selecting/morpho-syntactic feature). In other words, PF locality is fed by syntactic-locality, a welcome result if PF simply reads off syntax (see Landau 2006, 2007 on this point).

hand, enclisis correlates with properties of the left periphery of the clause, and only residually with lack of person and/or restricted person on the verbal host.⁸

More specifically, in SG a clitic (cluster) immediately precedes or follows the verbal host, depending on the finiteness properties of the latter:

- (13) a. O Jánis **tin** ayapái ti María.
 The Janis.nom her.acc.cl love.3sg the Maria.acc
 ‘John loves her, Mary.’
 b. Jáni, ayápa **tin** ti María!
 John.voc, love.imp.impf.2sg her.acc.cl the Maria.acc
 ‘John, love Mary!’

CG also has obligatory enclisis with non-finite verbal hosts:⁹

- (14) a. Esí, θkiávase **to!**
 You.voc, read.imp.perf.2sg it.acc.cl
 ‘You read it!’
 b. θkiavázondàs **to** eyó...
 reading it.acc.cl I.nom...
 ‘I reading it...’

With finite verbal hosts, however, CG has enclisis, which is the default situation:

- (15) a. Eθkiávasèn **mas to** i María.
 Read.3sg us.dat.cl it.acc.cl the Maria.nom
 ‘Mary read it to us.’
 b. Eθkiávasèn **mas to** i María?
 Read.3sg us.dat.cl it.acc.cl the Maria.nom
 ‘Did Maria read it to us?’

Proclisis typically arises if some preverbal constituent of a particular type *c-commands* the finite {CL, V} ‘cluster’.¹⁰ Depending on the phrase structure status of the *c*-commanding constituent, the following sub-cases can be distinguished (see also author 2013 for languages with finite enclisis (Tobler – Mussafia languages) more generally) (preverbal constituents are in *italics*; clitics in **bold**):

(a) the *c*-commanding constituent is an *XP*

Typically, this sub-type involves either operator phrases and/or stressed phrases (including *wh*-phrases, *verum focus* phrases, and contrastive focus

⁸ A caveat is in order here: the terms ‘proclisis’ vs. ‘enclisis’, as used here, refer to the linear order between a clitic and a verbal host, not to phonological proclisis/enclisis (which may or may not coincide with linear proclisis/enclisis – see Klavans 1985). For a discussion of phonological proclisis/enclisis in CG see Revithiadou (2006, 2007).

⁹ In this respect, CG differs from languages like Medieval Greek (MG) or Bulgarian, which allow proclisis also with non-finite verbal hosts (see Condoravdi & Kiparsky 2004; Pappas 2004; Pancheva 2005) as long as the clitic is not clause initial. See section 4.3 for detailed discussion.

¹⁰ {CL, V} does not imply any ordering relation, i.e. {CL, V} = [CL V] or [V CL].

phrases).¹¹ Note that if the relevant XP does not c-command the {CL, V} cluster, enclisis obtains:

- (16) a. *Pkiós to eθkiávasen?* [subject wh-phrase]
 Who.nom it.acc.cl read.3sg
 'Who read it?'
 b. *Eθkiávasèn to pkiós?* [subject wh-phrase in situ]
 'Read it who?'
 c. *Tí tu éðokes?* [object wh-phrase]
 What.acc him.dat.cl gave.2sg
 'What did you give him?'
 d. *Éðokès tu tí?* [object wh-phrase in situ]
 'You gave him what?'
- (17) a. *EFÓ to éðoka, oi i María.* [stressed subject phrase]
 I it.acc.cl gave.1sg not the Maria.nom
 b. *Éðokà to EFÓ, oi i María.* [stressed subject phrase in situ]
 'I gave it, not Mary.'
 c. *TÚTO mu éðoke.* [stressed object phrase]
 THIS.acc me.dat.cl gave.3sg
 d. *Éðokè mu TÚTO.* [stressed object phrase in situ]
 'THIS is what he/she gave me.'
- (18) a. *KALÁ to lalún.* [stressed adverb]
 WELL it.cl.acc say.3pl
 b. *Lalún to KALÁ.* [stressed adverb in situ]
 'They say it correctly'.

Note that there are certain preverbal XPs that give rise to enclisis. These XPs are typically interpreted as topics and must be cliticized when they function as objects. This description also includes D-linked wh-phrases, which must be cliticized and which trigger enclisis (19d) (see Revithiadou 2006: 83 (her 4b')). Note that contrastive topics are typically stressed, which means that the presence of a stressed preverbal XP is not a sufficient condition for proclisis:

- (19) a. *I María ípen mu óti...* [subject topic]
 The Maria.nom said.3sg me.dat.cl that...
 'Mary told me that...'
 b. *Tsínu ípen tu i María oti...* [IO topic]
 that.one.gen said.3sg him.dat.cl the Maria.nom that
 'That one, Mary told him that...'

¹¹ Note that preverbal negative phrases (which are typically stressed) require the presence of a negation particle (negative concord), which immediately precedes the {C, V} cluster and triggers proclisis (as revealed from cases with post-verbal negative phrases (ii)):

- (i) *Típota en mu éðoke.*
 Nothing neg me.dat.cl gave.3sg
 (ii) *En mu éðoke típota.*
 'S/he did not give me anything.'

- c. *Túto ípen tu to i María.* [DO topic]
 this.acc said.3sg him.dat.cl it.cl.acc the Maria.nom
 ‘This, Mary said it to him.’
- d. *Pjós pu úlus tus anthrópus eθkiávasèn to?*
 Who.nom from all the people.acc read.3sg it.acc.cl
 ‘Which one of all the people read it?’ [D-linked subject wh-phrase]
- e. *Tu Kósta éðokà tu to mávro vivlío,*
 The Kósta.dat gave.1sg him.dat.cl the black.acc book.acc
tse tis Marías éðokà tis to áspro. [Contr topic]
 and the María.dat gave.1sg her.dat.cl the white.acc

‘As for Kostas, I gave him the black covered book, and as for Maria, I gave her the white covered one.’

(b) the c-commanding constituent is an X

This sub-type typically involves preverbal particles such as negation and modality markers, or alternatively certain complementizers.

- (20) a. *En to íksera.* [negation particle]
 NEG it.acc.cl knew.1sg
 ‘I did not know it.’
- b. *Θέλο na sas po túto.* [subjunctive particle; embedded]
 want.1sg SUBJ you.dat.cl say.1sg this.acc
 ‘I want to tell you this.’
- c. *Na sas po túto.* [subjunctive particle; main]
 SUBJ you.cl.gen say.1sg this.acc
 ‘Allow me to tell you this.’
- d. *Έννα sas po túto.* [future particle]
 FUT you.dat.cl say.1sg this.acc
 ‘I will tell you this.’
- e. *Πέρκι su to féri.* [modality marker]
 Maybe you.dat.cl it.acc.cl bring.3sg
 ‘Maybe he/she will bring it to you.’
- f. *Ípen pos/óti¹² to éfere i María.* [Comp]
 Said.3sg that it.acc.cl brought.3sg the Maria.nom
 ‘He/she said that Maria brought it.’
- g. *Έíji pollús anθrópus pu tin ksérun.* [Comp]
 Have.3sg many.acc people.acc that her.acc.cl know.3pl
 ‘There are many people that know her.’
- h. *En kséro an ton ayapái i María.* [Comp]
 NEG know.1sg whether him.acc.cl love.3sg the Maria.nom
 ‘I do not know whether Mary loves him.’
- i. *Áma me íðe i María...* [Comp]
 when me.acc.cl saw.3sg the Maria.nom
 ‘When Maria saw me...’

¹² I will return to the specifics of the complementizer *óti* (and of similar complementizers) later on in the paper (see 3.2.2).

c) two or more c-commanding constituents:

An important question is what happens when there are more than one preverbal constituents. The following patterns apply: (i) when both an *X* and (at least) one *XP* precede the clitic (cluster), it is the closest c-commanding constituent that determines the position of the clitic (cluster) in relation to the verbal host:

- (21) a. *Ípen óti tu éðoken to vivlío i María.*
 Said.3sg that him.dat.cl gave.3sg the book.acc the Maria.nom
 ‘S/he said that Mary gave him the book.’ [Comp]
- b. *Ípen óti i María éðokèn tu to vivlío.*
 Said.3sg that the Maria.nom gave.3sg him.dat.cl the book.acc
 ‘S/he said that Mary gave him the book.’ [Comp, topic]
- c. *Ípen óti ESÍ tu to éðokes to vivlío.*
 Said.3sg that YOU.nom him.dat.cl it.cl.acc gave.2sg the book.acc
 oi i María.
 not the Maria.nom
 ‘S/he said that it was you that gave the book to him, not Mary.’
 [Comp; stressed phrase]

In (21a) a complementizer immediately precedes the clitic (cluster) and triggers proclisis. In (21b) a preverbal subject topic intervenes between the same complementizer and the clitic (cluster), and enclisis obtains, as expected (recall that preverbal subject phrases typically give rise to enclisis in CG, on a par with preverbal object topics). In (21c), on the other hand, the intervening phrase is a stressed subject, and proclisis obtains, on a par with all preverbal stressed items. In other words, (21b) and (21c), as opposed to (21a), behave as if they were root clauses, in the sense that in the former the complementizer does not seem to play any role in the position of the clitic.¹³

The same principle applies when (at least) two *XPs* precede the clitic (cluster), namely it is the *XP* closest to the clitic (cluster) which determines the position of the clitic. Take a look at the following sentences:

- (22) a. *Pkiós tin íðe ti María?*
 who.nom her.acc.cl saw.3sg the Maria.acc
 ‘Who saw Mary?’ [wh-phrase]
- b. *Ti María íðen tin pkiós?*
 The Maria.acc saw.3sg her.acc.cl who.nom
 ‘As for Mary, who did you say saw her?’ [topic]
- c. *Ti María pkiós tin íðe?*
 The Maria.acc who.nom her.acc.cl saw.3sg
 ‘Mary, who saw her?’ [topic; wh-phrase]
- d. *O Nikólas emílisèn tis.*
 The Nicholas.nom talked.3sg her.dat.cl
 ‘Nicholas talked to her.’ [topic]
- e. *Tis Marías o Nikólas emílisèn tis.*
 The Maria.dat the Nicholas.nom talked.3sg her.dat.cl

¹³ Note that although all Tobler-Mussafia languages may show similar effects to some extent, CG is one of the few that strictly adheres to the pattern described here (see author 2013 and author in progress).

- 'As for Mary, Nicolas talked to her.' [topic₁; topic₂]
 f. *O Nikólas tis Mariás emílisèn tis.*
 The Nicholas.nom the Mary.dat talked.3sg her.dat.cl
 'As for Mary, Nicolas talked to her.' [topic₂; topic₁]
 g. *Tis Mariás o NiKÓLAS emílisèn tis.*
 The Maria.dat the NiKÓLAS.nom talked.3sg her.dat.cl
 'As for Mary, Nicolas talked to her.' [topic; stressed phrase]

(22a) shows that a preverbal *wh*-phrase triggers proclisis. (22b) shows that a preverbal topic phrase triggers enclisis. The crucial piece of data is (22c): here a *wh*-phrase triggers proclisis even though it is preceded by a preverbal topic, which suggests that it is the XP closest to clitic-cluster (in this case, the *wh*-phrase) that determines the position of the clitic.¹⁴ In a similar fashion, in (22d) a preverbal subject topic triggers enclisis. (22e-f) show that the addition of a further (indirect object) topic does not affect the position of the clitic, independently of the order in which the two topics are generated. This is expected, as preverbal topics trigger enclisis, independently of the grammatical function of the topic phrase. Finally, (22g) shows that if we add a stressed phrase to (22d) instead of a topic, proclisis obtains, on a par with (22c). This is so, because now the stressed phrase is closer to the clitic cluster, and stressed phrases trigger proclisis (see 17 above).

To summarize, in this section I have shown that in SG the position of the clitic before or after the verbal host correlates with the person properties of the host. On the other hand, CG only has this pattern for a few, residual cases, with the majority of cases being regulated by the *spell-out* position of certain preverbal CP-related XPs and/or Xs.

3.2 Patterns in the data: The EPP-like distribution of finite enclisis¹⁵

3.2.1 Preverbal XPs and modality/negation Xs

In this section I will argue that the CG data described earlier have the EPP distribution (see sections 1 and 2), in that enclisis only shows up whenever the specifier or head of a certain functional head is not independently spelled out.

By way of reminder, generally speaking CG has proclisis when some preverbal operator and/or stressed XP (23a) or some preverbal Comp/Modal/Neg head (23b) c-commands the {CL, V} 'cluster', otherwise it has enclisis (23c):

- (23) a. **XP**_[Focus/WH] [CL V]
 b. **X** _[Comp/Mod/Neg] [CL V]
 c. # [V CL]

¹⁴ Note that the opposite order (namely, *wh*-phrase >> topic) is suboptimal in CG:

(i) *?*Pkiós ti María tin íðe?*

For this reason, it is not possible to test this order against the hypothesis put forward here.

¹⁵ This section was restructured following suggestions made by the editor, who is hereby acknowledged.

On the other hand, a Topic XP gives rise to enclisis, and the same applies to certain complementisers:

- (24) a. **XP**_[Topic] [V CL]
 b. **X** _[Comp] [V CL]

There are two main interesting facts regarding (23) and (24): first, the proclisis-enclisis alternation seems to correlate with various types of features, which do not constitute a natural class, morpho-syntactically and/or semantically.¹⁶ Second, all these features are typically considered to be projected above the projection hosting the {CL, V} cluster, i.e. somewhere at the left edge of the TP/INFLP domain and/or at the right edge of the CP domain. Leaving the first issue aside for the moment (but see section 4 below), it would be useful to see whether the relevant projections form some kind of contiguous domain or not. In this regard, Rizzi's (1997) cartographic enterprise (and much subsequent work after that) offers us a useful localization tool.

In particular, Rizzi (1997) has pointed out that cross-linguistically Topics are generally merged higher than preverbal focused/stressed phrases and/or wh-phrases. It has been shown by various researchers (see e.g. Iatridou 1991; Anagnostopoulou 1997; Roussou 2000 among many others) that this also applies to SG, and the same seems to be the case also for CG, given the data presented in section 3.1 (and see the following sentences which illustrate the fact that the reverse order is ungrammatical):¹⁷

- (25) a. *Tu Kósta tí tu éðokes?*
 The Kosta.dat what.acc him.dat.cl gave.2sg
 b. **Tí tu Kósta tu éðokes?*
 'What did you give to Kostas?'
 c. *Tu Kósta TÚTO tu éðoka.*
 The Kosta.dat THIS.acc him.dat.cl gave.1sg
 d. **TÚTO tu Kósta tu éðoka.*
 'To Kostas, THIS is what I gave him.'

¹⁶ To illustrate with one example, there is no single operation that we know of which is contingent on the presence of a (non-wh) comp or a wh-operator.

¹⁷ The fact that a D-linked wh-phrase cannot co-occur along with a wh-phrase (i) (as opposed to non-wh topics, which can (ii)), together with the fact that it is fine with other preverbal topics (iii-iv), suggests that at some point during the derivation the D-linked wh-phrase must be in WhP/Foc. Despite this, it behaves like a preverbal topic as far as clitic positioning is concerned:

- (i) **Pjós pu úlus tus mathités póte to eθkiávasen?*
 Who.nom from all the students.acc when it.acc.cl read.3sg
 '*Which one of all the students when read it?'
 (ii) *Túto to vivlío póte to eθkiávasen?*
 This.acc the book.acc when it.acc.cl read.3sg
 'This book, when did s/he read it?'
 (iii) *Túto to vivlío pjós pu úlus tus mathités eθkiávasèn to?*
 This.acc the book.acc who.nom from all the students.acc read.3sg it.acc.cl
 'This book, which one of all the students read it?'
 (iv) *Pjós pu úlus tus mathités túto to vivlío eθkiávasèn to?*

Moreover, negation and modal particles are merged lower than preverbal foci or wh-phrases in SG (see Roussou 2000 and references therein), and the same applies to CG, as illustrated below:

- (26) a. *Tu Kósta pkiós na min tu to ðóki?*
 The Kosta.dat who.nom SUBJ NEG him.dat.cl it.acc.cl give.3sg
 ‘To Kostas, who should not give it to him?’
 b. *Tu Kósta pkiós éna tu to ðóki?*
 The Kosta.dat who.nom FUT him.dat.cl it.acc.cl give.3sg
 ‘To Kostas, who will give it to him?’
 c. *Tu Kósta o GIÓRkos na tu to ðóki.*
 The Kosta.dat the GEORge.nom SUBJ him.dat.cl it.acc.cl give.3sg
 ‘To Kostas, it is GEORge that should give it to him.’
 d. *Tu Kósta o GIÓRkos éna tu to ðóki.*
 The Kosta.dat the GEORge.nom FUT him.dat.cl it.acc.cl give.3sg
 ‘To Kostas, it is GEORge that will give it to him.’

The partial order in the CG preverbal field is, thus, as follows:

- (27) *TopP WhP/FocusP Mod/Neg {CL, V}*

(27), in combination with the data presented in section 3.1, lead to the following descriptive generalization (to be further revized):

Generalization 1:

- (28) *Merger of a constituent (X or XP) above the {CL, V} cluster up to TopP triggers proclisis.*

In other words, the traditional cut-off point between old and new information (which also maps onto particular prosodic and syntactico-semantic properties) strongly correlates with the proclisis-enclisis alternation in CG. The immediate question that arises is what to do with complementizers. This is addressed in the following section.

3.2.2 Complementizers

As it has been pointed out earlier, complementizers in CG may trigger proclisis (a), although some trigger both proclisis and enclisis (b), while some trigger only enclisis (c) (see Agouraki 2001, 2015; Chatzikyriakidis 2010; 2012; Revithiadou 2006, 2007):

- (29) a. *Lipúme pu tin ídes /*ídes tin étsi.*
 Be.sorry.1sg that her.acc.cl saw.2sg/*saw.2sg her.acc.cl thus
 ‘I am sorry that you saw her like this.’
 b. *Epiðí ayapá tin /tin ayapá, féni tis lulúθkia.*
 Because love.3sg her.acc.cl/her.acc.cl love.3sg bring.3sg her.dat.cl flowers
 ‘Because he loves her, he brings her flowers.’

c. *An dze* θéli **ton** /***ton** θéli,
 If and want.3sg him.acc.cl /him.acc.cl want.3sg
en tu to léi.
 not him.dat.cl it.acc.cl say.3sg
 ‘Although she wants him, she does not let him know.’

Let us start from the non-optional cases illustrated in (a) and (c) above, as these are simpler in descriptive terms and will help us understand what the issue is. The main issue posed is the following: in what way does the structural position of the complementizer relate to the position of the clitic before or after the verbal host in each case? Within a structural analysis, which assumes that all complementizers in (29) above are similar, in that they all introduce an embedded clause, such variation is surprising, as one would expect them to be merged in the same position. But, if they are merged in the same position, then the position of the clitic before or after the verb cannot be related any more to the position of the complementizer. This is an unwelcome result, as intuitively it is clear that the two phenomena interact with each other. Fortunately, much work in syntax has shown that not all embedded/dependent clauses are the same. For example, some embedded/dependent clauses exhibit more root-like properties as opposed to others (see e.g. Emonds 2004, Iatridou & Kroch 1992). This difference has been linked to the distinct positions a complementizer may have within such a clause, so that a higher complementizer would introduce a clause with more root-like properties in comparison to a lower complementizer. In other words, not all complementizers seem to be merged in the same structural position.

The same conclusion has been defended from a different perspective by the cartographic approach, which has shown that the postulation of low complementizers is independently required in order to account for various phenomena, including recomplementation phenomena in languages that allow them (e.g. Spanish, European Portuguese, Italian or English varieties), but also for cases where preverbal topics or foci may precede a (low) complementizer. Consider the following sentences from SG (examples adapted from Roussou 2000):

- (30) a. *Ípan ton Níko pos ton íðe i María.*
 Said.3pl the Nick.acc that him.acc.cl saw.3sg the Maria.nom
 b. *Ípan pos ton Níko ton íðe i María.*
 ‘They said that as far as Nick is concerned, Mary saw him.’
 c. *Me rótisan ton JÁNI an θélo na ðo.*
 Me.dat.cl asked.3pl the JOHN.acc if want.1sg SUBJ see.1sg
 d. *Me rótisan an θélo ton JÁNI na ðo.*
 e. *Me rótisan an θélo na ðo ton JÁNI.*
 ‘They asked me if it was John that I wanted to see.’

These sentences illustrate the fact that in SG a preverbal object topic or focus may precede or follow certain complementizers (here *pos*, *an*, and *na*). Languages may differ in whether they allow both foci and topics to precede a certain complementizer or not, or whether they allow some or all complementizers to be preceded by a preverbal topic or focus (e.g.

recomplementation in Romance languages typically involves only preverbal topics - see e.g. Demonte & Fernández-Soriano 2009; Villa-García 2012 for Spanish - while SG allows preverbal foci mainly with interrogative complementizers). In terms of analysis, one may assume that when a preverbal focus or topic phrase precedes the complementizer (30 a & 30 c-d), the latter is merged low (i.e. close to what Rizzi 1997 dubs the CFin). The opposite would hold for those cases where the focus or topic phrase follows the complementizer (30 b & e).¹⁸

If it is true that complementizers may vary wrt. where they are merged within the clause, an immediate way to solve the puzzle posed by (29) arises: we could assume that variation in the structural position of the complementizer directly correlates with variation in the structural position of the clitic (which in turn gives rise to proclisis or enclisis). Given the empirical generalizations we have seen thus far, this is hardly surprising, as we already know that the clitic position directly correlates with the nature and structural position of preverbal XP constituents and X constituents like negation. A concrete hypothesis then to test this assumption would be to say that a low complementizer somehow blocks enclisis (on a par with other constituents merged below TopP), as opposed to a high complementizer, which doesn't (and if fact, mustn't) (on a par with other constituents merged at TopP or higher). Applying this working hypothesis to the sentences in (29 a & c), this would mean that whereas the complementizer in (29a) is merged low, triggering proclisis, the complementizer in (29c) is merged high, triggering enclisis. So, what is the evidence for this hypothesis?

Unfortunately for us, the left periphery of CG embedded clauses has barely been investigated in the literature. As a result, there is much we do not know. However, given the similarities between CG and SG, we may assume that the two varieties are similar to an important extent, as far as their complementizer systems are concerned. Starting from cases of obligatory enclisis, as the one illustrated in (29c), what is interesting about the complementizer *an dze* is that it is composed of two independently existing homophonous morphemes, namely the complementizer *an* ('if') and the conjunction *dze* ('and'). Whereas the former typically correlates with proclisis, the latter always triggers enclisis. However, their combination triggers enclisis, as long as no proclisis trigger (e.g. *neg*) intervenes (and the same seems to apply to all the members of a group of similarly complex items, all of which introduce an embedded clause and all of which contain *dze* - see Agouraki 2001, 2015; Chatzikyriakidis 2012). Why should this be the case? Assuming that *an dze* is a type of conjunction might provide an answer to this question, as conjunctions are associated with enclisis when they conjoin clauses (31):

- (31) a. Θαυμάζο **ton** dze ektimó **ton**.
 admire.1sg him.acc.cl and appreciate.1sg him.acc.cl
 'I admire and appreciate him.'

¹⁸ According to this analysis, the position of foci or topics remains constant, as opposed to the position of complementizers, which varies. An immediate question is why we start with this assumption in the first place. In other words, why not assume that the complementizer is merged in the same position in e.g. (30 a & b), with the topic phrase being merged higher (in 30a) or lower (in 30b) than the complementizer, which stays constant? The main reason has to do with the fact that a similar distribution seems to be possible for foci (see 30 c-d), which are non-recursive (as opposed to topics, which are recursive) and which tend to be merged in more or less the same position within the clause (see Rizzi1997).

What this example shows is that *dze* does not count as being part of the second clause, as far as clitic position is concerned. The classic analysis of such phenomena (also found in second position cliticization – see Schütze 2004 and references therein) is that *dze* does not belong to the second conjoined clause, which is intuitively correct for cases like this. However, it is far from clear whether the same analysis would equally apply to *an dze* in (29c). This is so, as the latter is clearly a complementizer introducing an adjunct clause (e.g. note that (29c) is rendered ungrammatical if one deletes *an dze* or *an*, although not if one deletes *dze* only). This conclusion is further supported by the fact that there are cases where *dze* may have a complementizer-like interpretation, in which case it triggers enclisis:

- (32) a. *Píye dze éðokèn tis to.*
 Went.3sg and gave.3sg her.dat.cl it.acc.cl
 ‘S/he went and gave it to her.’
 b. *Akúi tin dze lalí tu óti...*
 listens.3sg her.acc.cl and tells.3sg him.dat.cl that
 ‘He hears her telling him that...’

If *an dze* is a high complementizer (what Rizzi 1997 calls ‘a subordinator’ or CForce), it is predicted that it should precede preverbal topics and/or foci as well as preverbal particles such as negation. This prediction is borne out, as illustrated by the following examples (and similar facts would apply to other complementizers containing *dze*, although this is not shown here due to lack of space):

- (33) a. *An dze ton Giórkon théli ton...*¹⁹
 If and the George.acc want.3sg him.acc.cl
 ‘Although she wants George...’
 b. *An dze o Giórkos KÁTI tis éðoke...*
 If and the George.nom SOMETHING.acc her.dat.cl gave.3sg
 ‘Although George gave her SOMETHING...’
 c. *An dze en to théli ...*
 If and NEG it.acc.cl want.3sg
 ‘Although s/he does not want it...’

Since *an dze* is a high complementizer (meaning it appears above TopP), and since it always triggers enclisis when it appears on its own, it is safe to conclude that the structural position of a complementizer indeed correlates with the position of the clitic before or after the verb.

Let us move on to (29a), which is repeated here for convenience:

¹⁹ Note that a topic preceding *an dze* is ungrammatical, unless it is construed as a main clause topic (in which case it cannot belong to the clause introduced by *an dze*):

- (i) *An dze ton Giórkon en ton théli, eyó en tis miláo.*
 If and the George.acc NEG him.acc.cl want.3sg, I NEG her.dat.cl speak.1sg
 (ii) **Ton Giórkon an dze en ton théli, eyó en tis miláo.*
 The Maria.dat if and the George.acc NEG him.acc.cl want.3sg I NEG her.dat.cl speak.1sg
 (iii) *Tis Marías, an dze ton Giórkon en ton théli, eyó en tis miláo.*
 The Maria.dat if and the George.acc NEG him.acc.cl want.3sg I NEG her.dat.cl speak.1sg
 ‘Although she/Maria does not want George, I do not speak to her.’

- (34) Lipúme *pu tin* íðes /**íðes tin* étsi.
 Be.sorry.1sg that her.acc.cl saw.2sg/**saw.2sg her.acc.cl thus*
 'I am sorry that you saw her like this.'

This is an example of a complementizer (in this case factive *pu*) which triggers obligatory proclisis (unless an enclisis trigger intervenes between the complementizer and the clitic (cluster)).²⁰ According to our working hypothesis, such a correlation should be attributed to the low structural position of *pu* (i.e. *pu* should be merged below TopP). An immediate problem this hypothesis faces is that *pu* obligatorily precedes preverbal topics:

- (35) a. Lipúme *pu tu Kósta en tu* emílises.
 Be.sorry.1sg that the Kosta.dat not him.dat.cl spoke.2sg
 'I am sorry that to Kostas (that) you did not speak to him.'
 b. *?*Lipúme tu Kústa pu en tu* emílises.

One could assume that *pu* in (35a) starts in some position lower than TopP, where it checks some feature, and then moves to the pre-topic position. According to such an analysis, what matters for proclisis to obtain in the presence of *pu* is that some feature checking takes place in a position below TopP, independently of where the actual complementizer is spelled out. The problem with such an analysis is that it predicts that we should get proclisis independently of the nature of the constituents preceding the clitic cluster. That this is not correct is shown by the following example:

- (36) Lipúme *pu tu Kósta (pu)* emílises *tu* /**tu* emílises.
 Be.sorry.1sg that the Kosta.dat (*that*) spoke.2sg him.dat.cl
 'I am sorry that to Kostas (that) you talked to him.'

(36) shows that a preverbal object topic triggers enclisis in the presence of *pu*. If *pu* had originated below *tu Kósta* (cf. the copy of *pu*), and if a copy were a sufficient condition to trigger proclisis, we would expect proclisis to be possible, contrary to fact. This suggests that at least in this case spell-out position is the crucial factor, rather than the mere presence of a copy. Moreover, it suggests that proclisis in (35a) above is due to the presence of negation rather than to the presence of (a copy of) *pu*. Although this is not entirely unexpected (recall that in CG it is the element closest to the clitic cluster that determines the position of the clitic), it does not seem to be compatible with our working hypothesis that in simple cases (namely, when no other preverbal constituent besides *pu* is present) *pu* triggers proclisis because it is merged low:

- (37) Lipúme *pu tu* emílises.
 Be.sorry.1sg that him.dat.cl spoke.2sg
 'I am sorry that you spoke to him.'

²⁰ Other complementizers of the same type include relative *pu* ('that'), interrogative and conditional *an* ('if'), as well as complementizers introducing temporal adjunct clauses (e.g. *ama* ('when'), *pu* ('when'), or *prin* ('before')).

There are at least two plausible ways to deal with this contradiction. One alternative would be to assume that *pu* is always merged high, i.e. above TopP (it does not matter if this is by external or internal merge), and that enclisis obtains whenever the clitic (cluster) does not belong to the same prosodic domain with the preverbal constituent. Assuming that in (37) above some prosodic restructuring takes place, so that *pu* ends up being in the same prosodic domain with the clitic (cluster) and the verb, proclisis is accounted for. When prosodic restructuring is blocked (presumably, in the presence of a preverbal topic), enclisis obtains. The second alternative would be to claim that *pu* in (37) is actually a low *pu*, in the sense that it immediately precedes the clitic cluster and triggers proclisis. This does not imply that this low *pu* differs in any way from the high *pu* in (35) and (36); in fact, they are the same item in morpho-syntactic terms. Their only difference is how big the portion of the clause they have merged with can be. Accordingly, whereas in (37) *pu* merges with a clausal chunk that only contains {Cl, V} (presumably, an TP/INFLP, given standard assumptions on cliticization, and see section 4), in (35) and (36) it merges with a bigger clausal chunk (namely, one that contains {Top, Cl, V} (presumably, a TopP). If this is correct, the difference between a complementizer like *pu*, which always triggers proclisis when appearing next to the clitic (cluster), and a (high) complementizer like *an dze*, which always triggers enclisis under the same circumstances, reduces to the following: whereas the former is free to merge with clausal chunks of variable sizes (including TP/INFLP), the latter may merge with any constituent *besides* TP/INFLP. Why this is the case is far from clear. Moreover, it suggests that in simple cases, like (29c), *an dze* cannot be merged with TP/INFLP, but rather with a larger clausal chunk. Given that nothing is spelled-out between *an dze* and TP/INFLP in (29c), this is far from evident.

Although at this stage I do not have a convincing answer to give in relation to this problem, what strikes me as important is that both alternatives mentioned in this paragraph propose more or less the same thing, but also face a similar problem. In particular, both argue that a proclisis trigger (which includes complementizers like *pu*) need to form a contiguous domain with the clitic (cluster). In any other case, enclisis obtains. Their main difference is whether this domain is syntactic or prosodic. The problem that both seem to be facing is that whereas *pu* is able to count as part of the prosodic or clausal chunk that contains inflectional information (either via prosodic restructuring, or due to merger with TP/INFLP), this is not the case for *an dze*, which seems to be separated from it by some sort of barrier. This is an unavoidable conclusion, and it does correlate with clitic positioning. In addition, it is compatible with the intuition that whether some constituent counts as a proclisis trigger or not ultimately reduces to hierarchical structure, which was the essence of our working hypothesis (under the assumption that syntactic structure is directly related to prosodic structure). This suggests that the original intuition (namely that only constituents merged/spelled-out up to a certain cut-off point in the clause may trigger proclisis) is correct.²¹ For all these reasons, I will treat *pu*, and similar complementizers, as being able to merge below TopP.

²¹ This conclusion would be further supported, if at least some of the complementizers that trigger proclisis could be shown to allow preverbal constituents, including topics and foci. This is an issue for further research.

That the structural position of a complementizer is crucial for clitic positioning is most clearly evident in the case of optional complementizers. An example of an optional complementizer was provided in (29b), which is repeated here for convenience:

- (38) *Epiðí* ayapá **tin** /**tin** ayapá, féрни **tis** lulúθkia.
 Because love.3sg her.acc.cl/her.acc.cl love.3sg bring.3sg her.dat.cl flowers
 ‘Because he loves her, he brings her flowers.’

In CG optional complementizers include among others *óti* and *pos* ‘that’, or *epiðí* and *γiatí* ‘because’. Their common property is that they seem to be compatible with both proclisis and enclisis. One way to capture these facts is by postulating that optional complementizers may be either low or high, and that this fact gives rise to the optionality we see: a low complementizer (or, given the discussion in the previous paragraph, a complementizer that may merge with TP/INFLP) triggers proclisis, as opposed to a high complementizer (or, alternatively, a complementizer that cannot merge with TP/INFLP), which triggers enclisis. This hypothesis is consistent with the overall empirical picture (although details would need to be further evaluated), as low - only complementizers trigger proclisis systematically, as opposed to high - only ones which always trigger enclisis.²²

One piece of evidence which points towards this direction is the fact that high vs. low complementizers also correlate with semantic/pragmatic differences (besides prosodic/phonological differences). This suggests that they involve distinct morpho-syntactic features (a fact that increases the chances they are merged in distinct positions).²³ Consider the following pair of sentences from Asturian, a language that behaves like CG as far as finite enclisis is concerned:

- (39) a. Digo *qu* ‘ayúdame [#pero nun toi seguru].
 say.1sg that help.3sg-me.cl [#but not am sure]
 ‘I say that s/he helps me, #but I am not sure (that s/he does help me).’
 b. Digo *que me* ayuda [pero nun toi seguru].
 Say.1sg that me.cl help.3sg [but not am sure]

²² An anonymous reviewer suggests that it might be useful to test this generalization against Roussou’s (2000) model for SG, focusing in particular on any differences between complementizers that according to her stay low within the CP vs. complementizers that raise higher. Although this suggestion seems very promising, one problem I see with it is that it is bound to face the same problems mentioned earlier in the main text. In this respect, it does not seem to add much to the picture already sketched. To illustrate, proclisis triggers, like the complementizers *óti/an* and *na*, are argued by Roussou (2000) to be merged in COp, which is located lower than Topic/Focus (although *óti* and *an* can move higher). Assuming that SG and CG complementizers overlap, this analysis is compatible with the high-low correlation (although for optional complementizers, one would need to check that they are higher whenever enclisis obtains). For relative and factive *pu*, Roussou (2000) claims that they are merged in Csubordinator, i.e. they are high complementizers (an assumption which brings us back to the issues mentioned in the main text).

²³ In this respect, see also Pesetsky & Torrego (2001), who propose a double C analysis for Spanish embedded questions, on the basis of the features each C contains. To illustrate, according to their analysis in the following sentence [Qué pensaba Juan [que le había dicho Pedro [que había publicado la revista]]? ‘What did Juan think that Pedro had told him that the journal had published?’, the verb is in C (via T-to-C movement, in order to check uT on C), while *que* spells-out C (and also checks uwh). The presence of two C heads accounts for the lack of that-trace effects in Spanish, as opposed to English (presumably, *that* is the spell-out of T-to-C movement in English). Note that CG also does not have that-trace effects, which could be related to this property (and in fact, the same applies for SG, which also has H, as section 4.3 illustrates). Thanks to an anonymous reviewer for pointing out this link to me.

'I say that s/he helps me, but I am not sure (that s/he does help me).'

[Asturian; Fernández-Rubiera 2013: 79 (his (50))]

According to Fernández-Rubiera, enclisis in (39a) correlates with a high Comp (which does not block V-movement to CFin), which in turn correlates with epistemic modality (i.e. the speaker asserts that the reported content is true) and enclisis. (39b), on the other hand, correlates with a low Comp (which blocks V-movement to CFin), which in turn also correlates with epistemic modality (in this case the speaker does not assert the truthfulness of the reported content) and with proclisis. Similar semantico-pragmatic effects have been reported for embedded V2 in Germanic languages (see e.g. Meinunger 2006; Truckenbrodt 2006), and they have been connected with the root vs. non-root dimension. More importantly, they seem to hold also in CG. In this respect, consider the following sentences:²⁴

- (40) a. Léyo *óti* evoíθisèn **me** [#ma en íme síyuros].
say.1sg that helped.3sg me.acc.cl [#but not am sure]
b. Léyo *óti* **me** evoíθisen [ma en íme síyuros].
say.1sg that me.acc.cl helped.3sg [but not am sure]
'I say that s/he helped me, (#) but I am not sure.' [CG]

The effect is identical with Asturian: the *óti* Comp that allows for enclisis correlates with assertion of the truthfulness of the reported content by the speaker, as opposed to the *óti* Comp that allows for proclisis (where the content is only reported but not asserted). This fact, which has not been previously reported for CG, clearly suggests that the two complementizers differ in semantic terms, and by default (given our current understanding of grammatical models) also in syntactic terms (including features and possibly positioning, or alternatively the portion of structure projected above the {CL, V} cluster).²⁵

Where does this discussion leave us regarding CG? It seems that preliminary investigation strongly suggests that complementizers for which we have independent evidence that they are merged low in the clause (i.e. below TopP but higher than TP/INFLP) trigger proclisis, while complementizers for which we have evidence that they are merged higher in the clause (i.e. above TopP) trigger enclisis. This gives us the following (revized) empirical generalization:

²⁴ Thanks to Christina Giannapi (University of Edinburgh) for these judgments.

²⁵ Note that other researchers (e.g. Agouraki 2001, 2015; Chatzikyriakidis 2012; Revithiadou 2006) have also pointed out that complementizers like *oti* allow for both proclisis and enclisis in CG. However, they do not really investigate the meaning of these structures, hence they either do not consider the possibility that the particular proclitic vs. enclitic structures may have distinct meanings (and hence distinct structural properties), or they do not offer any evidence for this possibility. Interestingly enough, Revithiadou (2006) notes that sentences like the one in (40a) have different prosodic phrasing compared to sentences like the one in (40b) (namely: [ípen *óti*]_{Prosodic Phrase} [evoíθisèn me]_{Prosodic Phrase} vs. [ípen]_{Prosodic Phrase} [*óti* me evoíθisen]_{Prosodic Phrase}). This prosodic fact clearly supports the structural analysis proposed here, as it is expected that distinct syntactic structures would have distinct prosodic phrasing (under the null hypothesis that prosodic structures match syntactic ones unless independent non-syntactic principles prevail – see Revithiadou 2006; Selkirk 2011). Revithiadou 2006 does not consider this possibility at all (and see ft. 37).

Generalization 1':²⁶

(41) *Merger of a constituent (X or XP) above the {CL, V} cluster up to TopP triggers proclisis. This includes also low complementizers, which are merged lower than TopP but higher than the {CL, V} cluster, i.e. within the high TP - low CP domain.*

Assuming that a low Comp may be merged either above or below a FocusP/WhP²⁷ (but lower than TopP), one gets the following structure (where one may assume, for expository reasons, that XP = TP/INFLP; C₃ = CForce; C₁ = CFin and TopP = Left Dislocated Topic/LD; see also Roussou 2000):²⁸

(42) [_{CP3} C₃ [_{TopP} Top [_{CP2} C₂ [_{FocusP/WhP} Focus/Wh [_{CP1} C₁ [_{NegP} Neg [_{XP} ...{CL, V}...]]]]]]]]
*an dze/óti óti/pos/an/pu KALÁ/pkión óti/ pos/an/(pu)/na men/en*²⁹

In this case, V-merger to a head higher than the cliticization site is blocked (*V), and proclisis obtains:

(43) [_{CP3} C₃ [_{TopP} **Top** [_{CP2} C₂ [_{FocusP/WhP} Focus/wh [_{CP1} C₁ [_{NegP} Neg [_{XP} ...{CL, V}...]]]]]]]]
*V ✓V

On the other hand, if no head or spec within that area is realized/merged, then (finite) enclisis obtains through merger of V across the cliticization site (✓V):

(44) [_{CP3} C₃ [_{TopP} **Top** [_{CP2} C₂ [_{FocusP/WhP} Focus/Wh [_{CP1} C₁[_{NegP} Neg [_{XP} ...{CL, V}...]]]]]]]]
✓V *V

²⁶ Although I expect the high vs. low Comp hypothesis to be correct for many cases of the proclisis-enclisis alternation, there may be residual cases which do not seem to be amenable to such an analysis, or for which it is hard to get solid independent evidence. Even for these cases, it is still possible to maintain a more abstract generalization: “a complementizer triggers proclisis as long as no TopP intervenes between the complementizer and the rest of the clause” (and see discussion earlier regarding this point for a way to achieve this using merger restrictions for the low complementizer *pu*).

²⁷ An anonymous reviewer asks which one of the low complementizers can merge either above or below a FocusP/WhP. Although this needs to be tested exhaustively, a preliminary investigation indicates that this would be possible with all main complementizers (such as e.g. *óti* or interrogative *an*), besides *na*, which would only be able to merge with XP (which equals TP/INFLP). On the other hand, low complementizers like factive *pu* may merge either with FocusP/WhP or with XP (the latter as long as FocusP/WhP is not projected).

²⁸ Note that the same generalization could be modeled within Roussou’s (2000) system if we made the extra assumption that her C_{Fin} and C_{Op} constitute a discontinuous phase-head. This is so as both heads are contained within a larger area that seems to have a unified function in terms of demarcating the edge of a structural domain (XP here). This is currently assumed to constitute one of the properties phase heads have. Similar considerations would apply to any cartographic approach to phrase structure

²⁹ It is not clear to me where *énna* would lie in this structure. If *énna* is like *na*, then it would involve a high TP head (where *Neg* is positioned) and/or a low CP head (where *na* is positioned). For a discussion of CG *énna*, see Christodoulou & Wiltschko (2012) and references therein.

This give rise to the following abstract generalization:

Generalization 1’:

(45) *Realization of a spec or a head within a particular area within the high TP - low CP domain blocks realization of the verb within that same domain.*

The issue here is how to best analyse this distribution. In particular, the following issues need to be addressed: does complementarity involve the spec and head of a *single* syntactic head? Or, does it involve the spec and head of *multiple* heads? Alternatively, could the complementarity pattern refer to some (syntactically simplified) post-syntactic domain (e.g. an intonational domain)? Why does spell-out of an XP interact with realization of the verb (i.e. of a head)? These issues are taken up in the following section.

4. EPP as a PF Edge Requirement

Let us repeat the generalization formulated in section 3.2.2 above. What the data show is that finite enclisis in CG involves activation of the high TP – low CP domain, in the following manner: when a head or phrase is merged within this domain, proclisis obtains. Otherwise, we get enclisis. In other words, any *single* feature that is merged and spelled-out within this particular domain is sufficient to trigger proclisis, independently of the precise position it is merged within that domain. Assuming that enclisis is analyzed as the result of the realization of (a copy of) the verb in some position higher than the cliticization site (note that the clitic and the host are independent morphemes manipulated by the syntactic component - see author 2010 for discussion), then the simplest hypothesis to make is that the complementarity distribution observed with finite enclisis derives from a certain restriction applied on a single projection (i.e. a feature on the head of the projection, or the projection itself). Given that phonological realization is conditioned by the presence of a morpho-syntactic copy, it follows that the restriction must be PF in nature (see also Landau 2007 for a detailed discussion, and also the analysis below), as syntax does not prevent the presence of both copies at the same projection (although it does not force it, either). This is the claim I am going to make in this section. Before I move on to the analysis, let me first present my assumptions:

4.1 Assumptions

I make the following 4 assumptions regarding cliticization and the creation of verbal copies within the clausal extended functional projection:

Assumption 1: clitics

First of all, I assume that clitics in CG (and SG) target the periphery of vP (where they check a case and/or Topic feature – see e.g. Anagnostopoulou 2003; author 2010), and the periphery of TP/INFLP (where they check a deixis and/or person feature – see e.g. Anagnostopoulou 2003; author 2010; Bianchi 2003; Nash &

Rouveret 2002 for clitics; see also Ritter & Witschko 2009 on INFL as the locus of deixis cross-linguistically, which is why from here onwards TP = TP/INFLP):

$$(46) [_{CP} C [_{TP} \mathbf{CL} [_{TP} T' [_{VP} (\mathbf{CL}) [_{VP} V (\mathbf{CL})]]]]]]$$

Assumption 2: c-selection of functional heads

I assume that each functional head locally c-selects (the head of) its complement, potentially via AGREE/FEATURE SHARE (depending on available feature matrices, a Lexicon List 1 issue essentially).³⁰ Such a situation may give rise to a chain of heads (Grimshaw's 'extended projection'; see also Landau 2006, 2007; Pesetsky & Torrego 2001; Zwart 2001), which may be realized phonologically by one or more items (an issue of overt displacement, which depends on whether a head is affixal or not, a Morphology property – see Lasnik 1995; Platzack 2010; Zwart 2001, and section 4.3 below). For example, in (47a) *v* Agrees with *V* in terms of a *V* feature, *T* Agrees with *v* in terms of a *v* feature, and *C* Agrees with *T* in terms of a *T* feature.³¹ This gives rise to an interdependency between sub-chains. An alternative, illustrated in (47b) would be to assume some common feature (say $[\alpha]$) shared by all functional heads (in which case AGREE/FEATURE SHARE would involve some 'a-categorical' feature, i.e. a feature that is shared by all heads within the extended verbal projection).

$$(47) \quad \begin{array}{l} \text{a. } [_{CP} \dots C \dots [_{TP} \dots T \dots [_{VP} \dots v \dots [_{VP} \dots V \dots]]]] \\ \quad \quad \quad [C-T] \quad \quad [T-v] \quad \quad [v-V] \quad \quad [V] \\ \\ \text{b. } [_{CP} \dots C \dots [_{TP} \dots T \dots [_{VP} \dots v \dots [_{VP} \dots V \dots]]]] \\ \quad \quad \quad [\alpha] \quad \quad [\alpha] \quad \quad [\alpha] \quad \quad [\alpha] \end{array}$$

Assumption 3: head movement

I further assume that head *movement* is contingent on AGREE among heads – see formation of feature/head chains above – but in the default case the actual movement part is delegated by PF (e.g. through an 'affixal/morphological'

³⁰ There are technical differences between AGREE and FEATURE SHARING (see Frampton & Gutmann 2000), however it is not clear to me whether they would have any empirical effects on the particular phenomenon studied. I leave this issue aside for future research.

³¹ Whether c-selection requires AGREE/FEATURE SHARING is an issue that is under debate. What is important for my purposes is that a mechanism is in place that allows for heads to create a copy to the next higher position (giving rise to traditional head movement effects – see Travis 1984). This does not deny the possibility that verb movement may, in certain cases, involve syntactic merger (e.g. via remnant movement, or some other mechanism): such a scenario would still be compatible with my analysis of finite enclisis, as what is crucial is the spell-out of a copy under certain conditions, not the creation of the copy per se, which is a matter of morpho-syntax (via feature copying/sharing, by default, or some other mechanism, if required by empirical considerations, e.g. semantic/syntactic differences between structures involving feature copying/sharing and merger).

As briefly mentioned in the main text here and immediately below, one major problem for the assumption that head copies can be created via AGREE/FEATURE SHARE (i.e. c-selection) is that it requires additional machinery in order to account for the fact that the extended verbal projection may be spelled-out by multiple heads (or bundles of heads) – cf. e.g. auxiliary constructions. This could be regulated via PF, either as a morphological/affixal requirement on a head or as a phonological/prosodic requirement (see author 2013 for empirical arguments supporting this idea; see also Landau 2006; Platzack 2010; Zwart 2001).

requirement on a head – see e.g. Landau 2006 for Hebrew V(P) - fronting; Lasnik 1995; Platzack 2010; Zwart 2001, among many others). As discussed later on in section 4.3, this assumption is empirically supported by non-finite enclisis.

Assumption 4: content is separate from function and structural position

The final assumption is the most important one for my analysis to go through. At the same time, it is the most controversial one. In particular, I assume that the first head H (within the low CP – high TP domain, as evidenced by the cartographic description of the facts given earlier) that c-selects (a portion of) TP may come in flavours,^{32,33} in that it may host one or more morpho-syntactic features of various types (e.g. a modal feature, a negation/affirmation feature, or an operator feature) compatible with this particular domain.

- (48) a. [...[_{HP} **H**_[+f] [_{TP} T [_{VP}...V...]]]]
 b. **H** = {f₁; f₂; ...f_n} and **feature projection** is subject to f₁ > f₂ > ...f_n

In other words, H may come in flavours, and only a single feature at a time may be inserted, checked, and spelled-out at H (modulo the c-selection feature). Feature insertion would be regulated by a feature insertion algorithm of some sort, as shown in (48b).³⁴ Crucially, not any feature can be inserted in H: topic features, or any other higher feature within the extended CP periphery cannot appear in H. Although it is not clear why this should be the case, it seems that H may only contain features that belong to the core of the clause.

Despite this variation in terms of featural content, the structural position of H remains constant, and the same applies to its function, which is that of marking the edge of a morpho-syntactic and/or prosodic domain (possibly, a phase head, in the sense of Chomsky 2000, 2001). The dissociation of content from function and structural position (see Ritter & Wiltscko 2009 for this idea on the basis of cross-linguistic evidence regarding the nature of T) allows us to take into account the variation we have seen (which cannot be accounted for on the basis of a single morpho-syntactic property, as the relevant features do not form

³² Recall that – following assumption 1, a fairly standard assumption - the clitic cluster targets TP.

³³ An equally plausible alternative would be to assume that H acts as a (purely morpho-syntactic) mediator between the lower domain and a higher active feature/head (e.g. wh- or focus) (see e.g. Roberts 2005, 2012 for this proposal regarding CFin). However, such an assumption would fail to explain without further stipulations why a (moved) topic phrase cannot give rise to proclisis (underlined subjects receive main stress):

- (i) Míla éðokèn **mu** i María, enó axláðia éðokèn **mu** o Kóstas.
 Apples.acc gave.3sg me.dat.cl the Maria.nom but pears.acc gave.3sg me.dat.cl the Kostas.nom
 ‘Apples, Maria gave me, while pears, Kostas gave me.’

Moreover, it would miss the empirical point, namely that Tobler-Mussafia cliticization is an instance of Edge marking.

³⁴ It would be desirable that feature compatibility (i.e. what mechanism is postulated to allow a feature to be merged at this particular clausal position, and in which order) be derived from independent semantic or syntactic properties. However, it might well turn out that absolute reduction is not possible on empirical grounds. A separate issue is whether this head can host one or more features. Although this issue is far from settled in the literature, the problem remains the same for all accounts, more or less: multiple features and how these map onto a particular position and/or domain (typically, corresponding to one or more morphemes in the Lexicon) require some feature interaction algorithm. This is a Lexicon-Syntax interface issue, in essence.

a natural class), and at the same time to account for the predictable interaction between H (a prominent structural position) and finite enclisis.

4.2 Analysis

Having presented my assumptions, I wish to make the following theoretical claim, on the basis of the empirical model presented in section 3:

Theoretical Claim

(49) *H has a (morpho-)syntactic requirement and an Edge Requirement, which are separate though interdependent.*

The (morpho-)syntactic requirement of H follows from the fact that it contains a morpho-syntactic feature that must be valued via AGREE. AGREE involves matching between H and some constituent (XP or X). This accounts for semantico-syntactic effects, such as the position and interpretation of quantifiers or heads such as negation heads, modal heads, and complementizers (assuming AGREE can be satisfied via external or internal merge – see Ledgeway 2008). It also accounts for the fact that not any phrase or head participates in the complementary distribution pattern discussed in section 3.2.2 (e.g. topics or high complementizers do not interact in any way with verb movement, in that they always give rise to enclisis, as opposed to operators or negation heads). This is so, as only certain features may be inserted in H (possibly, due to independent semantic-syntactic restrictions). As a result, only phrases or heads able to check these features can merge at H and interact with verb movement.

The Edge Requirement basically says that (the valued feature in) H needs to be spelled-out. A (copy) of an overt head or a phrase merged at H may satisfy this requirement (see also Collins 2007; Landau 2007; Nchare & Terzi 2014), presumably because both extend the root (see Roberts 2010 and references therein):

(50) [..._{HP} **Spec** [_{H'} **H**... [_{TP} [_{T'} T [_{VP} [_{V'} V [_{VP} V]]]]]]]]]

The Edge Requirement is a PF requirement. First of all, it marks the edge of a domain (potentially linked to both linguistic (e.g. the LCA) and extra-linguistic factors (e.g. processing factors)).³⁵ This relates to the fact that H is typically associated with a prosodic boundary that correlates with the traditional separation between the higher Topic and the lower Focus domain (this boundary carries syntactico-pragmatic information, including the theme: rheme dichotomy). Second, the Edge Requirement must be satisfied *locally* (i.e. it may not be satisfied by a non-local copy) and *once* (i.e. it is restricted by economy in that only the spec or the head may be spelled-out but not both). Third, in case nothing is merged at H, PF spells-out the copy of T on H as a last resort (recall that the copy is created in the syntax via c-selection, and it is local as it involves the head of the complement of H).³⁶ In the next section I will show that the Edge

³⁵ For similar ideas from V2, see Mohr (2009); Zwart 2005.

³⁶ An anonymous reviewer asks whether this last resort flavour to V-movement producing enclisis in CG could be linked to other cases where V-movement is employed as Last Resort, such as do-support in

Requirement must be prosodic in nature, and that merger of a head at H may be triggered within the Morphology for independent morphological reasons (satisfying at the same time the Edge Requirement by proxy).³⁷

Let us now see how the Edge Requirement derives the finite enclisis patterns in CG:

Wh-phrase

Starting with the case of a fronted *wh*-operator, recall that a preverbal *wh*-operator triggers obligatory proclisis. In this case, I assume that a *wh*-feature is inserted into H which needs to be valued. The *wh*-feature probes into its c-selection domain, finds a matching constituent, and a copy of this constituent is merged at spec HP (as required by the language, possibly for PF reasons also – see Richards 2016):

(51) [... [HP *tí*_{+wh}] [H' H _{+wh}] [TP **tu** [TP [T' *éðokes* T [VP (**tu**) (*tí*_{+wh})] [VP [*v'* (*éðokes*) *v* [VP (**tu**) (*éðokes*) V (*tí*_{+wh})]]]]]]]]]]]

PF spells-out the higher copy of *ti*, the Edge Requirement is satisfied trivially, and proclisis obtains (as the verb is spelled-out in T).

Na-particle

Modal particles, such as the subjunctive *na*, also trigger obligatory proclisis. In this respect, consider the following example: an unvalued modal feature is

questions but also V-movement to C in V2 languages. Regarding do-support, there is a definite link, as it is typically attributed to the Stray Affix filter (see Lasnik 1990) (or some alternative version thereof). However, according to the analysis presented here, there are two ways to get the same surface effect: either via a prosodic requirement (the edge of H needs to be spelled-out by a phonetic exponent), or via a morphological requirement (the phonetic exponent in H cannot remain unaffixed (i.t. it cannot spell-out H on its own), presumably due to weakness). The former leads to optional/complementary distribution phenomena, while the latter leads to obligatory/non complementary distribution phenomena (see also section 4.3). Whether these two requirements can be reduced to a single underlying cause (namely, prosody – see e.g. Richards 2016 for the hypothesis that V-to-T movement in null subject languages, or do-support may be linked to prosodic factors) is an issue open to research. Regarding the second point, this depends on whether V2 has any semantic effects, and if yes, whether these can be captured via a Last Resort spell-out operation. Although this is quite a complicated matter (as it may not be the case that all V2 movements form a natural class), I think it is safe to assume that something like this is indeed possible. The particulars, however, are beyond the purposes of the present paper.

³⁷ An anonymous reviewer asks how the analysis proposed here differs from the prosodic account offered by Revithiadou (2006, 2007). Both analyses assume that the role of PF is restricted, in that it only has a filtering role on independently derived syntactic computations (although for Revithiadou this is achieved via spell-out of a lower clitic copy, whereas in the current approach this is achieved via spell-out of INFL at H). In this respect, both approaches are equally economical. However, I think that the current analysis fares better wrt. the empirical picture. In particular, according to Revithiadou, any differences between proclisis and enclisis triggers is (solely) related to their distinct prosodic properties. Although this observation may be empirically correct, the implicit assumption lying therein, namely that the syntax plays no role whatsoever in these differences (besides producing well-formed structures) does not follow. This is clearly evident when one looks at the empirical evidence alluded to by Revithiadou in order to support her claim, namely optional complementizers and D-linked *wh*-phrases. As shown in section 3.2.2, complementizers which allow for both proclisis and enclisis have distinct syntactic/structural and semantic differences, which can directly account for their prosodic differences. On the contrary, an identical syntax – different prosody account cannot capture these facts. The same applies to D-linked *wh*-phrases (see sections 3.1 and 3.2.1), which also have distinct syntactic and semantic properties from non D-linked/bare *wh*-quantifiers (and see Pesetsky 1989 for English), which naturally explains their prosodic differences.

Structure fed to PF:

c. [...] $[_{HP} [_{H'} \text{pulís } H_{\{+T\}}] [_{TP} \text{mas } [_{TP} [_{T'} (\text{pulís}) \text{ T } [_{VP} (\text{mas}) [_{VP} [_{V'} (\text{pulís}) \text{ v } [_{VP} (\text{mas}) (\text{pulís}) \text{ ta } \acute{m}i\acute{l}a]]]]]]]]]]]]]]]]]]]$

The final scenario involves multiple instances of Xs and/or XPs. Recall that the empirical generalization is that it is the closest X and/or XP spelled-out higher than the {CL, V} cluster that predicts whether enclisis obtains or not. In what follows I discuss one case of proclisis and one case of enclisis:

Preverbal neg particle and a CLLDed object topic

(57) a. *Ta mίla en mas ta éđoke.*
 The apples.acc not us.dat.cl them.acc.cl gave.3sg
 ‘The apples, he did not give them to us.’

b. [...] $[_{TopP} \text{Ta } \acute{m}i\acute{l}a_{\{+top\}}] [_{Top'} \text{Top}_{\{+top\}}] [_{HP} [_{H'} \text{en}_{\{+neg\}} \text{ H}_{\{+neg\}}] [_{TP} \text{mas } \text{ta } [_{TP} [_{T'} \acute{e}\acute{d}o\acute{k}e \text{ T } [_{VP} (\text{Ta } \acute{m}i\acute{l}a_{\{+top\}}) (\text{mas}) (\text{ta}) [_{VP} [_{V'} (\acute{e}\acute{d}o\acute{k}e) \text{ v } [_{VP} (\text{mas}) (\text{ta}) (\acute{e}\acute{d}o\acute{k}e) (\text{ta } \acute{m}i\acute{l}a_{\{+top\}})]]]]]]]]]]]]]]]]]]]]$

In this case, the negation particle is merged at H (where it checks the unvalued neg feature of H), and the Edge Requirement is satisfied trivially. Hence, T gets spelled-out in situ, giving rise to proclisis.

Preverbal Comp and CLLDed object topic

(58) a. *Ípen mu pos tu Kósta éđokè tu to vivlío*
 Said.3sg me.dat.cl that the Kosta.dat gave.3sg him.dat.cl the book.acc
 i María.
 the Maria.nom
 ‘He told me that as far as Kostas is concerned, Mary gave him the book.’

Two possibilities are available in this case: one is that *pos* is first merged at H (checking a Comp feature), then it gets merged again at C. Given that H must be spelled-out, the Edge Requirement is not met trivially. Hence, the T-copy on H is spelled-out instead, giving rise to enclisis:

b. [...] $[_{CP} \text{pos}_{\{+comp\}} \text{ C}_{\{+comp\}}] [_{TopP} \text{tu } \acute{K}o\acute{s}\acute{t}a_{\{+top\}}] [_{Top'} \text{Top}_{\{+top\}}] [_{HP} [_{H'} (\text{pos}_{\{+comp\}}) \text{ H}_{\{+comp; +T\}}] [_{TP} \text{tu } [_{TP} [_{T'} \acute{e}\acute{d}o\acute{k}\acute{e} \text{ T } [_{VP} (\text{tu}) [_{VP} [_{V'} (\acute{e}\acute{d}o\acute{k}\acute{e}) \text{ v } [_{VP} (\text{tu}) (\acute{e}\acute{d}o\acute{k}\acute{e}) \text{ to } \text{vivlío } \text{i } \text{María}]]]]]]]]]]]]]]]]]]]$

Structure fed to PF:

c. [...] $[_{CP} \text{pos}_{\{+comp\}} \text{ C}_{\{+comp\}}] [_{TopP} \text{tu } \acute{K}o\acute{s}\acute{t}a_{\{+top\}}] [_{Top'} \text{Top}_{\{+top\}}] [_{HP} [_{H'} (\text{pos}_{\{+comp\}}) \acute{e}\acute{d}o\acute{k}\acute{e} \text{ H}_{\{+comp; +T\}}] [_{TP} \text{tu } [_{TP} [_{T'} (\acute{e}\acute{d}o\acute{k}\acute{e}) \text{ T } [_{VP} (\text{tu}) [_{VP} [_{V'} (\acute{e}\acute{d}o\acute{k}\acute{e}) \text{ v } [_{VP} (\text{tu}) (\acute{e}\acute{d}o\acute{k}\acute{e}) \text{ to } \text{vivlío } \text{i } \text{María}]]]]]]]]]]]]]]]]]]]$

evidenced e.g. by the fact that the presence of certain preverbal particles blocks their formation):

- (62) a. [na/θa [TP **tu** ḏínis /ḏósis]]
 SUBJ/FUT him.cl.gen give.imperf.2sg/give.perf.2sg
 ‘You should/will give him.’
 b. *[na/θa [TP **tu** ḏíne /ḏóse]]!
 SUBJ/FUT him.cl.ge give.imperf.imp.2sg/give.perf.imp.2sg
 ‘*Give him!’
 c. *[na/θa [TP **tu** ḏínondas]]
 SUBJ/FUT him.cl.gen giving
 ‘*to/will giving him’

Given that this special morphology always correlates with a higher position for the verb, and given that the special form is in complementary distribution with preverbal particles such as *na* or *θa*, it is natural to assume that the morphology resides within H and that it is affixal in nature: T cannot be spelled out in situ; rather it must be spelled out in H (see also Bošković 2004 for SG imperatives). If this is true, then the Edge Requirement is satisfied trivially. Moreover, it cannot be triggered for prosodic reasons, as there is evidence that the trigger is morpho-syntactic and is in fact obligatory. As CG non-finite enclisis shares the same properties with SG enclisis, my suggestion is to extend this analysis to CG: H _{+imp/+ger} (and only that, as H_{inter/affirm} do not trigger obligatory enclisis), being suffixal in nature, triggers obligatory spell-out of T at H, satisfying the Edge Requirement trivially. Moreover, any other phrase (such as a FocusP or a wh-phrase) that may be compatible with an imperative or gerund (presumably for independent reasons) is merged in a higher position, as H is already occupied by non-related morpho-syntactic content.

According to this analysis of non-finite enclisis in CG and SG, obligatory enclisis with imperatives and gerunds is not in complementary distribution with preverbal CP-related XPs, because these verbal forms carry special morphology which is inserted in H and which is affixal in nature. The latter property explains why an imperative or gerund form cannot be spelled-out in T (giving rise to the obligatory enclisis effect), while the former property explains why a preverbal XP is possible (as it checks a feature merged in a higher position, given that H is occupied by special morpho-syntactic features).

One prediction this analysis makes is the following: in those languages where special imperative and/or gerund morphology is either not inserted in H, or is inserted in H but is non-affixal, non-finite enclisis is expected to pattern on a par with finite enclisis. Indeed, this appears to be the case (to various degrees) in certain Tobler-Mussafia languages, as e.g. Medieval Greek and the (contemporary) Cretan dialect (see Condoravdi & Kiparsky 2001, 2004; Pappas 2004, and references therein), Bulgarian (see Pancheva 2005), or various stages of Old French (see Labelle & Hirschbühler 2005) (see also author 2013 for details). Focusing on Medieval Greek, which is more directly relevant to the present discussion, it appears that it allows both preverbal and postverbal clitics with (true) imperatives (i.e. imperatives with non-suppletive morphology), depending on the properties of the constituent preceding the clitic cluster. This is

the same situation we find with finite clauses in CG. In this respect, take a look at the following pair of sentences:

- (63) a. *Αγία tin* ipé!
 Holy her.cl.acc call.2sg.imp
 'Call her holy!' (example taken from Pappas 2004: 70 (his (57)))
 b. *Próton ipé mas* mana!
 First tell.2sg.imp us.dat.cl mother.voc
 'First, tell us mother...' (example taken from Pappas 2004: 81 (his (16)))

In (63a) the direct object clitic *tin* is preceded by a fronted constituent (an adjectival predicate), which presumably could be interpreted as stressed/emphasized. What is of immediate interest to us is that the clitic appears before the imperative verb. On the other hand, in (63b), where the preverbal constituent is an adverbial topic, the direct object clitic *to* follows the imperative verb. A straightforward way to account for this distribution is to assume that imperative verb forms stay in T, and end up in H only if nothing gets merged there for independent reasons. Such a hypothesis would treat imperative morphology in Medieval Greek on a par with finite morphology (including indicatives and subjunctives), in that both morphology types are licensed in T, with H being spelled-out by a verbal form in case nothing else has merged at H (for a similar proposal see Condoravdi & Kiparsky 2004; for similar proposals in other languages see e.g. Bošković 2004; Pancheva 2005; Rivero and Terzi 1995). Were this to be the case, we would expect (true) imperative verbs to behave like non-imperative forms in various respects. For example, we would expect them to be able to be negated, as preverbal negation typically appears above T (see Laka 1990; Zanuttini 1997), which is why true imperatives are rarely negated cross-linguistically (see Han 1998). This prediction appears to be borne out, as illustrated by the following example provided by Condoravdi & Kiparsky (2004: 170 (their (10))):

- (64) *To thélimà mu plíroson*
 The wish.acc mine.cl.gen fulfil.2sg.imp
ke apiθís mi ýinu!
 and disobedient neg become.2sg.imp
 'Fulfil my wish and do not become disobedient!'

According to this analysis, CG and SG would differ from Medieval Greek in the following way: whereas in Medieval Greek imperative morphology is inserted in T (where it is also spelled-out, unless the whole verbal form gets spelled-out higher, in this particular case as a way to satisfy the Edge Requirement at H), in CG and SG imperative morphology is inserted in H. Due to the fact that the affix that spells-out this morphology is affixal, T is obligatorily spelled-out in H. This is illustrated below:

- (65) a. [_{HP} H_[neg; foc; ∅] [_{TP} T_[+imp]]] (Medieval Greek imperatives)
 b. [_{HP} H_[+imp] [_{TP} T]] (CG & SG imperatives)

This analysis implies that one possible locus of parameterization regarding clitic positioning is the functional head a certain feature may be inserted into. This is a welcome result, as we know that this is a more general phenomenon attested cross-linguistically, especially so across dialects and/or earlier forms of a language. In fact, and given that according to Pappas (2004) gerunds in Medieval Greek behave on a par with gerunds in SG and CG (i.e. they trigger obligatory enclisis), it appears that such parameterization may hold even within a single language, a hardly surprising fact.⁴³

On the basis of what has been discussed earlier, at least two additional loci of parameterization may be identified: (a) affixal/non-affixal status of imperative morphology [parameterization at the morphological level]; (b) locus of Edge Requirement [parameterization at the prosodic level or at the syntactic level]. Regarding (a), I am not aware of any Tobler-Mussafia language having a true imperative particle/non-affixal head, which would be an instance of a non-affixal H head with an [imp] feature, and which would be predicted to block enclisis. The next closest candidate would be a suppletive morpheme including subjunctive particles (cf. *na* in SG and CG), or deontic modality negation heads (cf. *min* in SG and CG) (see e.g. Isac & Jakab 2004), provided these actually spelled-out an imperative feature (in which case we should be able to detect root properties, on a par with true imperative clauses in these two varieties). This is an issue open to research.

Regarding (b), recall that enclisis is the product of two properties or requirements, namely a morpho-syntactic one (a morpho-syntactic feature) and a prosodic one (the Edge Requirement). One plausible hypothesis is that one or both properties could be subject to cross-linguistic parameterization. Applying this hypothesis to SG and to the empirical observation that it *lacks* finite enclisis (as opposed to CG), one could assume that this is so, either because H is located in T (namely, H = T in morpho-syntactic terms), in which case the Edge Requirement also applies at T (assuming a default syntax-prosody matching algorithm – see Selkirk 2011), or because H is located right above T but the Edge Requirement applies to T (namely, H = T in prosodic terms).

The former option is standardly assumed in purely morpho-syntactic approaches, and is sufficient to block finite enclisis (as the verb in T, having ended up there to check some feature in T, can also spell-out the Edge of T (where H = T)). Among other things, it predicts that spec, TP in SG should be able to (also) host constituents found in spec, HP in languages like CG (this would include wh-phrases, foci, or negated phrases). It would also predict obligatory subject-verb inversion in the presence of such constituents in spec, TP (as spec,

⁴³ An anonymous reviewer asks whether this means that CG is in a transition stage, and if yes, what the implications are for the analysis proposed in this paper. Regarding the first point, an immediate answer is that yes, CG seems to have moved closer to SG. However, this may only be a descriptive statement without any teleological implications, as we know from languages like Bulgarian (see e.g. Pancheva 2005) that Tobler-Mussafia languages may develop out of systems which behave like SG. Wrt. to the second point, and as just mentioned in the main text, the implications for the present analysis would be that CG non-finite clauses have developed inflectional properties (such as special agreement) which are located in H (as defined here, namely as the first head c-selecting TP), on a par with SG and unlike MG and Bulgarian. This implies that imperative morphology in CG (e.g.) is linked to a modal head rather than to a purely inflectional head, while the opposite holds for MG. This in turn could have implications for the syntax of imperatives across the two grammar systems (e.g. MG imperatives might display less root-related phenomena compared to CG or SG, and see Rivero & Terzi 1995; Medeiros 2015 on this point for Ancient Greek). I leave this issue for future research.

TP would be occupied, and hence unable to host a preverbal subject). Finally, it would predict that the edge of TP aligns with the edge of a prosodic domain. Interestingly enough, the first two predictions have been independently argued to hold in SG and other languages which lack finite enclisis (e.g. Spanish or Italian) (see e.g. Alexiadou & Anagnostopoulou 1998). The last prediction has also been supported to hold for Romance languages which lack finite enclisis by Richards (2016), although I do not know if it also holds for SG.

As for the second option, it predicts that spec, HP should be able to project if the relevant features are part of the numeration, although it does not make direct predictions for the morpho-syntactic nature of spec, TP. If one assumes that the verbal agreement in SG can satisfy the requirements of T (following in this Alexiadou & Anagnostopoulou 1998), further extension of T does not need to apply. This can capture the syntactic facts mentioned earlier, as long SG does not have true preverbal subjects, i.e. subjects without any H-related properties (a highly controversial issue). Additionally, it predicts that the edge of the relevant prosodic domain in SG would be spec, TP, blocking for this reason finite enclisis (as finite verbs would always be in T for independent reasons, hence they would satisfy the prosodic requirement by proxy). As mentioned earlier, whether the edge of TP is actually a prosodic edge in SG is something that needs to be further investigated. This is important, as it may be the crucial factor that will allow us to decide between the two analytic options discussed here (recall that the syntactic evidence available is compatible with both options), and it highlights the importance of prosody for this kind of approach to cliticization. In addition, the morpho-syntax of imperatives in SG and CG (and of non-finite enclisis more generally) would need to be carefully reconsidered in relation to each option.

Summing up, in this section I argued that although enclisis is basically the product of a morpho-syntactic requirement and an Edge requirement (which is prosodic in nature), an additional morphological/affixal requirement seems to be implicated. The latter becomes manifest only in certain environments, and I argued that non-finite enclisis in CG and SG is exactly such an environment. In particular, I showed that imperative features in CG and SG are merged in H, however due to their affixal property (a morphological property) they trigger obligatory spell-out of T in H (and hence, obligatory enclisis). Medieval Greek, on the other hand, differs in that it inserts imperative features in T (although not gerund-related features). Close to the end of this section I also offered some speculative remarks on why SG lacks finite enclisis, which I linked to additional loci of parameterization, as these follow from the current model.

5. Conclusion

The main claim of this paper was that finite enclisis in CG and non-finite enclisis in CG and SG are amenable to a decompositional analysis of the EPP. In particular, the first head c-selecting TP, H, which contains an unvalued morpho-syntactic feature, has a contingent PF requirement imposed on it, what I call the Edge Requirement. According to this requirement, the Edge of H must be spelled-out locally and only once. This derives the complementary distribution pattern attested in finite enclisis. In addition, and on the basis of non-finite enclisis, which is obligatory and does not observe a complementary distribution pattern, I argued that the Edge Requirement is a prosodic requirement, related to the

function of H, which is to mark the edge of a domain (syntactically, pragmatico-semantic, and phonologically), rather than a morpho-syntactic requirement. Although there are various approaches in the literature on finite enclisis (cross-linguistically, but also in CG) which have pointed out the importance of the EPP for the analysis of finite enclisis (see e.g. Rivero & Terzi 1995, Terzi 1999a,b for CG; Benincá 2006; Poletto 2014 for Old Italian and Medieval Romance; Fernández-Rubiera 2013 for Asturian; Roberts 2012 for Tobler-Mussafia languages and Slavic languages), typically this involves a morpho-syntactic EPP. The novelty of my approach is that it postulates a PF (part of the) EPP (see also Revithiadou 2006, 2007), which is local and constrained by economy. One advantage of this approach is that it derives all the attested patterns on the basis of a hypothesis which has been shown by Landau (2007) to work on both theoretical and empirical grounds. A second advantage is that it is simple and more easily falsifiable, in that the Edge Requirement is imposed on a structurally and functionally defined head (and not in terms of feature content, which renders the EPP a morpho-syntactic or morphological effect rather than a prosodic one). Although here we do not have the chance to test some of the predictions this theory makes, author (in progress) shows that a local PF EPP (as opposed to a morpho-syntactic EPP, which is neutral to the local vs. distal distinction) makes the correct predictions with regard to relative operators and more generally to low/local vs. high/distal constituents across a number of languages exhibiting finite enclisis. A final but equally important contribution made by this paper is that it sets apart those constituents which trigger proclisis from those which trigger enclisis *in terms of their hierarchical position in the clausal structure*. This approach is novel, and it has led to the empirical generalization given in section 3.2.2, and subsequently to the formulation of an explicit theoretical hypothesis about the EPP vis-à-vis clausal architecture (based on a pre-existing theoretical model, namely the assumption that the distinction between theme and rheme (a distinction with morpho-syntactic, semantic/pragmatic and phonological correlates) is structurally represented in the clause). Moreover, it has direct implications for other issues. For example, if preverbal subjects in CG trigger enclisis because they are merged higher than H, this predicts that they should have topic properties (e.g. they are referential expressions or take wide scope). If this turns out to be true (a highly likely hypothesis), then enclisis would constitute a test for subject topics in CG (a test not available in SG for independent reasons).⁴⁴ Various questions arise at this point: e.g. how are we to analyse certain peripheral constituents which trigger only enclisis (see e.g. Agouraki 2015)? How is CG enclisis related to second position cliticization? How is CG enclisis related to V2 phenomena, which also involve a C-T interaction vis-à-vis the EPP? How is the lack of finite enclisis in languages like SG to be explained? And finally, are there other domains that have

⁴⁴ I would like to thank an anonymous reviewer for making this point clear to me. The same reviewer asks if I assume that preverbal subjects in CG are in a topic position. What is clear is that preverbal subjects which trigger enclisis behave on a par with preverbal objects which are topics (as they are clitic left dislocated). On the basis of this evidence, the null hypothesis is that preverbal subjects are also topics (and this seems to be the case in better studied languages like European Portuguese). Although I am not aware of any systematic study on the topichood properties of preverbal subjects in CG, I expect that at least some of the preverbal subjects in CG are indeed topics (namely, those that are referential and take wide scope, which typically correlate with enclisis). As mentioned also in the discussion, further investigation will show beyond reasonable doubt whether this is accurate.

the same EPP requirement? If yes, what are these domains, which are their properties, and do they share properties?⁴⁵ Although all these questions are relevant to the proposed analysis, they cannot be addressed appropriately within the limits of the current paper.

⁴⁵ I would like to thank an anonymous reviewer for pointing out this issue to me.

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