**Reconstruction in Greek topicalization: How do properties move?**

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## Abstract

This paper argues that Greek topicalization is an A'-movement dependency which is headed by a property-denoting phrase (i.e., of type <e,t>), dislocated to a left peripheral topic position (spec,TopicP). Crucially, at the syntax-semantics interface, the dislocated topic phrase *must* undergo total reconstruction, which means that topicalization is obligatorily mapped to a logical form which only comprises the copy of the topic phrase in the thematic position. Through the study of Greek topicalization I examine the syntax-semantics mapping for movement chains that involve property-phrases (type <e,t>), showing that such a movement chain could not be mapped onto an individual variable or a property-denoting trace. More generally, the present paper provides novel empirical evidence for the claim that property denoting traces do not exist in natural languages (Poole 2017; 2022). As a result, topicalization resorts to total reconstruction as the only logical form which can be directly interpreted by the semantic component.

**Keywords**: topicalization, reconstruction, A'-movement, property, syntax-semantics interface.

## 1. Introduction

The present study focuses on *Greek topicalization* (henceforth *topicalization*). By topicalization, following Alexopoulou & Kolliakou (2002), I will be referring to a specific left-dislocation construction in Greek, an example of which is provided in (1) (Panagiotidis 2002: 76):[1]

(1) Palto, aghorase o Kostas.
coat bought-3SG the Kostas
'Kostas bought a coat.'

In (1), the bare noun leaves the object position and surfaces at the left periphery of the sentence. As its name indicates, topicalization marks the left-dislocated phrase as the topic of the sentence (more on this below). The base order of (1), before the dislocation of the topic-phrase, is the VSO (see (2)), which is generally assumed the basic word order in Greek (see Oikonomou et al. 2020: section 2.1.1 and references therein):

(2) Aghorase o Kostas palto.
bought-3SG the Kostas coat
'Kostas bought a coat.'

Having said that, postverbal subjects, as in (1) and (2), probably surface in their base position (spec,vP/VoiceP), while preverbal subjects, which are widespread in Greek as in the unmarked SVO order (see (4) below), are assumed to occupy a left-peripheral topic position (Tsimpli 1995 among others).

[1] Topic-marking examples are translated with SVO sentences, since topic-dislocation in English does not always result in well-formed sentences (e.g., '*Coat, Kostas bought.').

According to the previous literature, which is very limited, topicalization should be considered a twin construction to Clitic Left Dislocation (CLLD) (Panagiotidis 2002; Alexopoulou & Kolliakou 2002 and especially Dimitriadis 1994, who suggests the term Exceptional CLLD (E-CLLD) for sentences like (1)). Note that Greek CLLD (see (3), from Panagiotidis 2002: 76) is also considered a topic-marking dependency (Tsimpli 1990; Anagnostopoulou 1994; Iatridou 1995 among others).

(3) To palto, to=aghorase o Kostas.
the coat it=bought-3SG the Kostas
'Kostas bought the coat.'

The minimal difference between topicalization and CLLD, is that the former lacks a doubling clitic.[2] It should be stressed that Greek lacks (overt) subject clitics, thus the morphological distinction between CLLD and topicalization collapses, when it comes to subject topics. Consider (4), which can in principle be either topicalization or CLLD.

(4) [Enas astinomikos], sinodhefse tus fitites sto spiti tus.
a policeman accompanied-3SG the students to-the home their
'A policeman accompanied the students to their home.'

For this reason, subject-topicalization is not considered further in this paper (see Georgiou 2022: section 3.4.1, for a discussion).

Through the study of Greek topicalization, I explore the syntax – semantics mapping for movement dependencies; that is, how a syntactic movement chain is mapped to a transparent logical form, which can be directly translated by the semantic component. More specifically, I investigate the LF-representation of sentences that involve a movement chain, headed by a *property*-denoting topic phrase (of type <e,t>).[3] The results of this inquiry reinforce the conclusion of previous work that *traces* of type <e,t> do not exist in natural languages (Poole 2017; 2022).

In the following section, I establish that topicalization is a topic-marking strategy. Section 2 is also concerned with the distribution of topicalization. In Section 3, I discuss some properties of topicalization which clearly show that it is an A'-movement dependency. Section

[2] In the news-register (TV, newspapers), topic-marking sentences invariably appear without doubling clitics (Alexopoulou & Kolliakou 2002; Roussou & Tsimpli 2006). Thus, a topic-marking sentence, which would appear as CLLD in colloquial Greek (i), typically surfaces without a doubling clitic in the news-register ((ii) from Alexopoulou & Kolliakou 2002: 196):

(i) Apistefto re! Tin parastasi, *(ti)=skinothetise o Karolos Kun.
unbelievable dude the performance it=directed-3SG the Karolos Koun
'That's unbelievable dude! Karolos Koun directed the performance.'

(ii) Ti parastasi, skinothetise o Karolos Kun.
the performance directed-3SG the Karolos Koun
'Karolos Koun directed the performance.'

The construction that this paper is concerned with should not be confused with 'news-register topicalization' sentences. First, topicalization, in contrast to 'news-register topicalization' is not restricted to the news register or any other pragmatic context. Second, as we will see below, the distribution of topicalization is sensitive to the semantics of the dislocated topic-phrase. No such restriction holds for 'news-register topicalization' sentences.

[3] More accurately, *properties* are functions from possible worlds (*s*) to sets of individuals, i.e. type <s,<e,t>>, however in this paper I will use the extensional type of properties <e,t>, for simplicity reasons.

4 investigates the LF-representation of topicalization, concluding that topicalization obligatorily undergoes total reconstruction (interpretation of the low copy and deletion of the high copy). The correlation between the LF-behavior of topicalization (mandatory total reconstruction) and its distribution (<e,t>-type topics) is discussed in Section 5. The results of the paper are summarized in Section 6.

## 2. Some preliminaries on topicalization

### 2.1. Discourse function of topicalization

Following Reinhart's (1981) *aboutness* view of topichood, I assume that topic-marking sentences have a dual function: first the speaker identifies the topic of the sentence with the topic phrase and second they provide new information about this topic. This section establishes that topicalization, like CLLD, is a topic-marking construction. Specifically, it is shown that topicalization exhibits a number of properties which are also found in CLLD, but not in *focus-fronting* sentences.

Dimitriadis (1994) shows that topicalization, like CLLD, may express *old*, *discourse-given* information. This sets topicalization (and CLLD) apart from focus-fronting sentences which are in general incompatible with old information. The following examples are slightly modified from Dimitriadis (1994: 100). In (5B) and (6B) respectively, CLLD and topicalization target the phrase (*to*) *palto* with a salient antecedent (underlined) in the preceding A's question. The example of topicalization given in (6) involves a bare noun, rather than a definite DP, because definite DP-topics may not occur in topicalization sentences in the first place (see below).

(5) A: Pjos aghorase <u>to palto</u>? ('Who bought the coat?')
B: [To palto], to=aghorase o Kostas.
The coat it=bought-3SG the Kostas
'Kostas bought the coat.'

(6) A: Pjos aghorase <u>palto</u>? ('Who bought a coat?')
B: [Palto], aghorase o Kostas.
coat bought-3SG the Kostas
'Kostas bought a coat.'

Old information is not an option for the focus-fronted phrase in the sentence in (7B) though, which is clearly infelicitous. The focus-pitch accent is indicated with small caps.

(7) A: Pjos aghorase <u>to palto</u>? ('Who bought the coat?')
B: #[TO PALTO] aghorase o Kostas.
the coat bought-3SG the Kostas
'Kostas bought THE COAT.'

Moreover, CLLD and focus-fronting sentences involve different intonational patterns. Baltazani (2002) shows that in CLLD sentences, which she considers topic-marking constructions, the dislocated topic phrase and the rest of the sentence form separate intonational phrases (Int-P), with a boundary tone in between. Each intonational phrase has its own pitch accent (indicated with small caps), roughly, as in (8).[4] The comma (,) after the dislocated phrase denotes the boundary tone that follows the topic phrase.

(8) [Int-P To palTO], [Int-P to=aghorase o KOstas]

[4] See Féry (2007) for the same observation in German topicalization.

Focus-fronting sentences are expressed with a different intonational pattern. More precisely there is no boundary tone between the focus-phrase and what follows. The focus phrase receives the nuclear pitch accent, while the words that follow the focus-fronted constituent get *de-accented* (Baltazani 2002). To my knowledge, there are no studies on the prosody of Greek topicalization. However, it is clear to native speakers that the intonational properties of CLLD (e.g., separate intonational phrases, each with its own pitch accent and lack of de-accentuation of the rest of the sentence) are present in this construction as well, as in (9) (see also Alexopoulou & Kolliakou 2002: 222, for this observation).

(9) [Int-P palTO], [Int-P aghorase o KOstas].

Having said that, for a quick diagnostic of the discourse-function (focus vs. topic) of dislocated phrases in the examples below, one can rely on the intonational properties of these two constructions and more specifically on the fact that focus-fronting is associated with de-accentuation of the material that follows the focus-fronted phrase, while de-accentuation does not arise in topicalization sentences at all (Baltazani 2002). I return to this diagnostic below, where I compare between topicalization and focus-fronting with respect to their scope-reconstruction behavior.

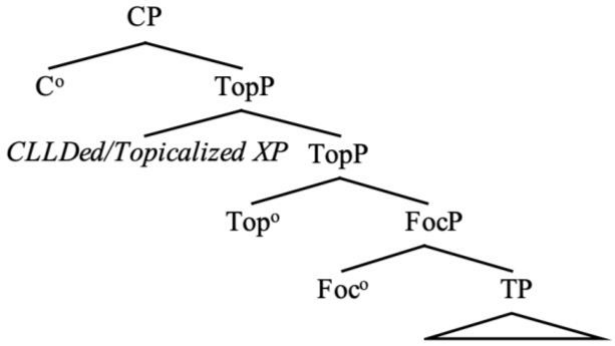
These are not the only differences between topic-marking constructions and focus-fronting. In the *Appendix*, I present further syntactic, semantic and pragmatic properties, listed in *Table 1*, that keep CLLD and focus-fronting apart. Crucially, as *Table 1* demonstrates, topicalization aligns with CLLD, a topic-construction, rather than with focus-fronting.

**Table 1.** Topic-marking properties across topicalization, CLLD, and focus-fronting.

| Property | CLLD | Topicalization | Focus Fronting |
|---|---|---|---|
| Old information | √ | √ | X |
| Separate intonational phrases | √ | √ | X |
| Multiplicity | √ | √ | X |
| Focus-fronted XP > dislocated XP | X | X | – |
| Dislocated XP > focus-fronted XP | √ | √ | – |
| Contrastive topic interpretation | √ | √ | X |
| [TOPIC [COMMENT ]] | √ | √ | X |

So far, we concluded that topicalization is a true topic-marking dependency (see Alexopoulou & Folli 2019). Moreover, following Rizzi (1997), I assume that topic-marking is syntactically encoded through a functional projection Top(ic)P in the left periphery. On this view, the dislocated topic (CLLDed or topicalized) phrase targets the specifier position of the TopP, as in (10) below.

(10)




Note that, as (10) demonstrates, the derivational component of the Grammar does not distinguish between CLLDed and topicalized phrases. In both CLLD and topicalization chains, the topic-XP forms an AGREE chain with the head of the TopP, the PROBE. (Chomsky 2001; more on this below). Therefore, from the perspective of narrow syntax, 'CLLD' and 'topicalization' actually refer to a unique topic-marking syntactic construction, call it *Topic-fronting*, triggered by a [TOP] feature, which targets the spec,TopP. Along these lines, the terms 'CLLD' and 'topicalization' are used in a purely descriptive manner referring to the presence or the absence of doubling clitics in *Topic-fronting* (analogously to terms like 'gap-relatives' and 'resumptive relatives' often found in the literature), without this however having any consequences on how narrow syntax merge CLLDed and topicalized phrases in the left periphery.[5] I return to the derivation of topicalization below.

### 2.2. Distribution of topicalization

It has been argued in previous studies that Greek topicalization and CLLD are in complementary distribution, depending on the referential properties of the left-dislocated topic phrase (Dimitriadis 1994; Alexopoulou & Folli 2019). The dislocation of a *referential* topic phrase requires CLLD, whereas the dislocation of a *non-referential* topic results in topicalization (Alexopoulou & Folli 2019). Along these lines, a referential definite topic phrase requires clitic doubling, excluding topicalization.

(11) [To palto], *(to=)aghorase o Kostas.
the coat, it=bought-3SG the Kostas
'Kostas bought the coat.'

The same holds for referential or 'specific' indefinites which, as (12) (taken from Alexopoulou & Folli 2019: 440–441) demonstrates, necessarily undergo CLLD. Under the specific reading of the indefinite in (12a), *mia kokini fusta* refers to a certain skirt the speaker has in mind. This reading is promoted by (12b).

(12) a. [Mia kokini fusta], *(tin=)psahno edho ke meres . . .
a red skirt her=look-for-1SG here and days
'A red skirt, I've been looking for it for a few days . . .'

b. ke dhen boro na thimitho pu tin echo vali.
'but I cannot remember where I put it.'

By contrast, non-referential topics exclude doubling clitics. The topicalization example in (1), repeated here as (13), involves a *non-referential bare noun*.

[5] The nature and the role of clitics in CLLD-chains will not concern us here (see Georgiou 2022).

(13) [Palto], (*to=)aghorase o Kostas.
coat, it=bought-3SG the Kostas
'Kostas bought a coat.'

In addition, the following example shows that *non-specific indefinites* disallow CLLD (Alexopoulou & Folli 2019: 441). The continuation in (14b) suppresses the referential reading of the indefinite topic phrase.

(14) a. [Mia kokini bluza], (*tin=)psahno edho ki enan mina.
a red blouse her=look-for-1SG here and one month
'A red blouse, I've been looking for for a month now'

b. . . . ke de boro na vro kamia pu na mou aresi.
' . . . and I cannot find one that I like anywhere.'

In a recent paper, Angelopoulos & Sportiche (2021: section 5.3.3) argue that in CLLD sentences with a modal verbal form, the indefinite topic phrase may receive a non-specific interpretation. For example, in (15) below the CLLDed indefinite DP may refer to *any good dog* ('free choice reading', in Angelopoulos & Sportiche's 2021 terms).

(15) [Enan kalo skilo] dhen tha ton=htipagha pote.
a good dog not would CL=beat-1SG.IMP ever
'I would never beat a (any/certain) good dog.'

These examples seem to challenge the correlation between specificity and clitic-doubling outlined in the previous paragraphs. In the present paper, following the *parametrized choice-function* approach to specific indefinites (Kratzer 1998), I argue that the 'free-choice reading' of the topic phrase in (15) shows that the dog denoted by the specific indefinite covaries with the possible worlds introduced by the modal operator. Evidence for this approach comes from Russian, a language that distinguishes between specific and non-specific indefinites morphologically (see Eremina 2012 and references therein). Eremina (2012) notes that, while *–to indefinites* in Russian are restricted to wide-scope/specific readings, they may also receive a non-specific interpretation in modal contexts, as in (16) (from Eremina 2012: ex. 47):

(16) Petia budet schastliv, jesli kakaja-*to* devushka pridet.
Petia will be-happy if some girl come-FUT
'Petia will be happy if some girl comes.'

It is therefore argued that specific indefinites involve a world variable (an 'implicit argument' in Kratzer 1998) which in modal contexts gets bound by the modal-operator with this giving rise to the quasi-non-specific interpretation described above. As a result, I conclude that given an analysis of specific indefinites along the lines of Kratzer (1998), examples with modal operators like (15) do not threaten the correlation between clitic-doubling and specificity in topic-marking sentences.

In short, topicalization is a topic-marking dependency which is restricted to non-referential topic phrases. I return to the distribution of topicalization in more detail in Section 5, where I argue that topicalization is restricted to property-denoting topic phrases (i.e., topics of type <e,t>).

## 3. Topicalization is A'-movement

In this section I examine the syntactic derivation of topicalization dependencies. More specifically I apply a number of tests which show that topicalization is an *A'-movement* dependency.

The first piece of evidence for a movement analysis of topicalization comes from island-sensitivity. In particular, a movement analysis predicts that the extraction of topicalized phrases out of strong islands is prohibited. Indeed, the island sensitivity of topicalization is already discussed in Dimitriadis (1994). (17) illustrates a topicalization chain out of a relative clause island and (18) across an adjunct, both of them strong islands.

(17) *[Palto]$_1$, o Janis sinadise [$_{island}$ tin kopela pu dhen forai $t_1$ pote].
coat the John met-3SG the girl that not wear-3SG never
'John met the girl who never wears a coat,.'

(18) *[Katharistres]$_1$, o ipurghos paretithike [$_{island}$ afu proselave $t_1$].
cleaners the minister resigned-3SG after hired-3SG
'The minister resigned after he had hired some cleaners.'

The second test concerns the reconstruction properties of topicalization. The term *reconstruction* refers to the fact that the low copy of a moved phrase is present at LF as suggested by certain interpretational reconstruction effects (Chomsky 1995). Reconstruction thus can be used as a test to detect movement. As will be seen below, the reconstruction properties of topicalization suggest a movement analysis.

In (19), topicalization shows reconstruction for Binding Condition C (Lebeaux 1988; Chomsky 1995; Fox 1999). The null subject *pro$_1$* seems to c-command a copy of the topic phrase in a lower position (marked with *t$_2$*). As a result, the R-expression *tu Kosta$_1$* within the low-copy is c-commanded by a coreferential pronoun, violating Condition C.

(19) *[Fotoghrafies tu Kosta$_1$]$_2$, pro$_1$ stelni sti Maria $t_2$.
pictures of Kostas sends-3SG to-the Mary
'He sends pictures of Kostas to Mary.'

To be more accurate, the Condition C effect in (19) indicates *A-bar* movement, as it is a well-known fact that *A*-movement bleeds Condition C (see Takahashi & Hulsey 2009 and the references therein). To illustrate, in (20) the subject of the matrix clause *John's mother* has raised from the embedded clause, below the pronoun 'him$_1$'. However, no disjoint reference effects between *John* and *him* are detected.

(20) [John$_1$'s mother]$_2$ seems to him$_1$ to be $t_2$ smart.

A question that arises at this point concerns the position from which topicalized phrases A'-move to the left-periphery. In (21) the topic phrase exhibits disjoint-reference effects with the postverbal epithet-subject *o malakas* in spec,vP or spec,VoiceP (see Oikonomou et al. 2020: section 2.1.1). This means that the launching site of the A'-movement of topicalized phrases is below the postverbal subject position.

(21) *[Fotoghrafies tu Kosta$_1$]$_2$, postari [o malakas]$_1$ $t_2$.
pictures of Kostas posts-3SG the asshole
'The asshole posts pictures of Kostas.'

Moving on, topicalization allows reconstruction for pronominal binding: a pronoun within the displaced topic-phrase can be bound by a QP in a lower position:

(22) [Fotoghrafies tu baba tu$_1$]$_2$, dhen efere [kanenas mathitis]$_1$ t$_2$.
pictures the father his not brought-3SG no student
'No student brought pictures of his father.'

In (22), there is a copy of the displaced topic phrase, below the QP *kanenas mathitis* (*t$_2$*) and as a result the pronominal variable *tu$_1$* within the topic-DP can be bound by the QP without problems. This means that the topic phrase has moved from a position below the subject-QP. Further evidence is provided by anaphor binding reconstruction below. To conclude, the reconstruction properties of topicalization argue for a movement analysis. It is worth mentioning that reconstruction tests have been also applied to Greek CLLD in support of a movement analysis (Grohmann 2003 and more recently Angelopoulos & Sportiche 2021 and Oikonomou et al. 2022; see Anagnostopoulou 1994; Iatridou 1995; Tsimpli 1995; Philippaki-Warburton et al. 2004 among others for a base-generation analysis of CLLD).

Finally, A'-movement can be diagnosed by Weak Crossover (WCO) (see Safir 2017 for an overview). Descriptively, WCO refers to the unavailability of a moved element to bind an intervening embedded pronoun, from its landing site:

(23) *[Who]$_1$ does [his$_1$ mother] love t$_1$?

From this perspective, the detection of WCO effects in topicalization in (24) provides further support for the A'-movement analysis. I return to the WCO-sensitivity of topicalization in the next section.

(24) *[Kapjon fititi]$_1$, proselave [o pateras tu$_1$] t$_1$.
some student hired-3SG the father his
'His father hired some student.'

In sum, Greek topicalization involves A'-movement of the topic phrase to spec,TopP. I argue that an uninterpretable [uTop]-feature on the head of TopP (Top$^o$) turns it into a PROBE, looking for a matching interpretable [iTop]-feature. This feature is detected on the topic-phrase, which becomes a GOAL for AGREE with Top$^o$. Top$^o$ then agrees with the topic-phrase and checks its [uTop]-feature. On top of that, Top$^o$ bears an [EPP] feature which attracts the topic-phrase to spec,TopP (Chomsky 1995; 2001).

(25) Greek topicalization: [$_{TopP}$ topic$_{[iTop]}$ [$_{TopP}$ Top$^o$$_{[\sout{uTop}],[\sout{EPP}]}$ [$_{TP}$ . . . [$_{VP}$ . . . ~~topic~~$_{[\sout{iTop}]}$ . . .]]]]

AGREE

As already mentioned, some of the diagnostics of movement presented above such as reconstruction for Condition C and pronominal binding carry over to CLLD as well (Grohmann 2003; Angelopoulos & Sportiche 2021). This means that (25) might also extend to CLLD, arguably with some intermediate steps (see Grohmann 2003; Angelopoulos & Sportiche 2021; see Georgiou 2022: section 4.6 for arguments against this analysis). As a result, the *topic* in (25) may stand for either a topicalized or a CLLDed phrase. This is in line with the assumption that narrow syntax does not distinguish between CLLDed and topicalized phrases and the idea of a unified syntactic *topic-fronting* construction proposed above.

## 4. Topicalization at LF

This section will argue that topicalization chains are associated with a specific representation at LF, which is derived by *total reconstruction*. When a moved element undergoes total reconstruction, only its lower copy is interpreted, by deletion/neglection of the higher copy, as

in (26) (see Aoun & Benmamoun 1998; Sauerland & Elbourne 2002; Sportiche 2016, for different perspectives on this phenomenon).

(26) Greek topicalization at LF: [$_{TopP}$ ~~topic~~ [$_{TP}$ . . . <topic> . . . ]]

(26) is supported by three independent arguments which pertain to (i) *scope reconstruction*, (ii) *late-merge of adjuncts* and (iii) *anaphor-binding in long-distance dependencies*.

### 4.1. Scope reconstruction

When it comes to scope, syntax goes hand in hand with the semantics. Simply put, $\alpha$ takes scope over $\beta$, if $\alpha$ c-commands $\beta$ at LF. Consider (27) (modified from Alexopoulou & Kolliakou 2002: 222).

(27) [Kapjo traghudi], protine kathe musikos.
some song recommended-3SG every musician
'Every musician recommended a (potentially different) song.'

(27) involves a displaced existential topic phrase and a universally quantified DP in the post-verbal subject position.[6] As Alexopoulou & Kolliakou (2002) observe, (27) admits the inverse scope reading, according to which every musician recommended a different song (∀>∃). Here

[6] Given the resemblance between topicalization and focus-fronting (i.e., left-dislocation plus lack of clitic doubling) a reviewer asks what kind of diagnostic could exclude that (27) is a focus-fronting setntence, as in (i):
(i) [KAPJO TRAGHUDI] protine kathe musikos.

First, the comma after the topicalized phrase in (27) indicates a boundary tone and a separate intonational phrase with a pitch accent for the rest of the sentence. Indeed, Alexopoulou & Kolliakou (2002: 222) explicitly indicate a pitch accent on the postverbal subject, as in (ii). By contrast, what follows the focus-phrase in (i) gets de-accented (see section 2.1).
(ii) [kapjo traGHUdhi], protine kathe musiKOS.

Second, as shown in the Appendix, we can add a focus-fronted phrase to the left periphery of the topicalization sentence, without problems as in (iii):
(iii) [Kapjo traghudhi], [MOLIS HTES] protine kathe musikos.
some song just yesterday recommended-3SG
every musician
'Every musician recommended a (potentially different) song ONLY YESTERDAY.

The counterpart of (iii) with two separated phonologically marked focus-phrases is ungrammatical, irrespective of the intended interpretation.
(iv) *[KAPJO TRAGHUDHI], [MOLIS HTES] protine kathe musikos.
some song just yesterday recommended every musician
'Every musician recommended A SONG ONLY YESTERDAY.'

On another note, (ii) is relevant to a different question that arises with respect to the narrow scope reading of the topicalized phrase in (27). In (27) the universal subject-QP in the sentence-final position receives a (focus) pitch-accent (see (ii)), thus it could be assumed that this is related to the fact that the subject-QP outscopes the topicalized phrase. However, as can be seen in (iii) the focus-fronted adverbial *molis htes*, triggers the de-accentuation of the rest of the sentence including the postverbal subject-QP. This however does not change the scopal behavior of the topicalized phrase in (iii) which still receives the narrow scope reading.

I argue that the inverse scope reading is derived by total reconstruction of the topicalized phrase, as in (27') (Hornstein 1995; Lechner 1998).[7]

(27') [~~Kapjo traghudi~~], protine kathe musikos <kapjo traghudi>

It could be argued that the inverse scope reading of (27) is derived by QR of the universal quantifier, rather than by scope reconstruction of the topic phrase. This possibility however is excluded in long-distance topicalization chains as in (28):

(28) [CP-1 Kapjo traghudhi akusa [CP-2 oti protine kathe musikos]].
some song heard-3SG that recommended-3SG every musician
'I heard that every musician recommended some (different) song.'

Under the standard assumption that QR is clausebound, the narrow scope reading of the topicalized existential QP cannot be derived without total reconstruction.

For comparison reasons, consider now the CLLD sentence in (29) (see Alexopoulou & Kolliakou 2002: 222). Again, the topic phrase is an existential QP, dislocated to the left-periphery. The only difference is that it is now doubled by a clitic.

(29) [Kapjo traghudi], to=protine kathe musikos.
some song it=recommended-3SG every musician.
'A (specific) song, every musician recommended.'

Interestingly, now we only get the surface scope reading (∃>∀): there is a unique song which was recommended by every musician. The inverse scope reading of CLLDed indefinites is blocked (Alexopoulou & Kolliakou 2002). Oikonomou et al. (2020; 2022) have experimentally confirmed this observation in recent studies.[8]

So far, we have seen that topicalized phrases *may* totally reconstruct to a lower position at LF. In the present paper though, I will argue for a stronger claim, namely that topic phrases in Greek topicalization *must* undergo total reconstruction, excluding surface scope readings. To show that, we need to examine topicalization sentences in scenarios that keep the surface and inverse scope reading apart. As will be shown below, topicalization sentences cannot describe scenarios that exclude the reconstructed reading. Consider the sentence in (30) with the topicalized negative DP *kanena arthro* 'no paper' and the numeral DP *dhio krites* 'two referees' in the post-verbal subject position. Moreover, to avoid a FOC-accent on the postverbal subject (see fn. 6, example (ii)), which could be argued to be responsible for a wide-scope reading of the subject, (30) involves an adverbial phrase in the sentence-final position. This way the

[7] The same conclusion is drawn from sentences where the topic phrase reconstructs below negation or modal verbs.

[8] Oikonomou et al. (2022) report a high acceptance rate (54%) for inverse scope readings of *CLLDed numerals* (though the surface scope reading is preferred (87%)):

(i) [Dhio vivlia] ta=dhjavase kathe mathitis.
two books them=read-3SG every student
'Every student read two books.'
Inverse scope: for every student there are two (or more) possibly different books that he read.'

According to these authors the inverse scope reading of CLLD numerals is derived by *split scope*, with the numeral expression (as a quantifier over degrees) interpreted in its surface position, while the NP-restrictor in the object position, roughly as in (ii):

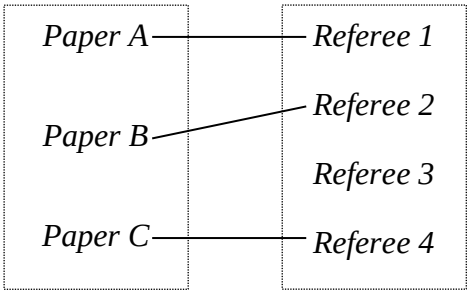
(ii) [Dhio ~~vivlia~~] ta=djavase kathe mathitis [~~djio~~ vivlia]

adverbial phrase receives the FOC-accent which is normally assigned to the right edge of the sentence. I return to this issue in more detail in section 5.1.1.

(30) [Kanena arthro], dhen perasan dhio krites persi.
no paper not pass-3PL two referees last-year
'Two referees accepted no papers.'

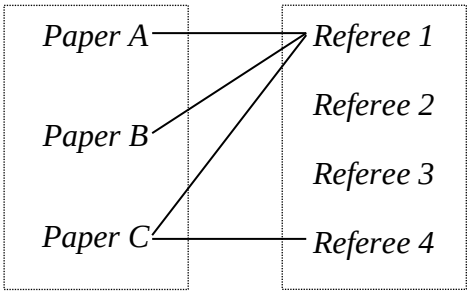
Now imagine that I have submitted three papers for review and each paper was assigned to four referees. In order for any paper to be published it needs to be approved by at least two of the referees. In *Figures 1* and *2*, the lines linking the papers with the referees denote an approval relation. *Figure 1* represents a scenario which is compatible only with the surface scope reading of (30), according to which none of the papers was approved by two referees. That is, no paper is published in this scenario. At the same time, this specific scenario falsifies the inverse scope reading.

**Figure 1.** Surface scope scenario (false in inverse scope reading).




On the other hand, *Figure 2* represents a scenario which is compatible only with the inverse scope interpretation of (30): there are two referees (2 and 3) for whom it is true that none of them accepted any of the papers. *Figure 2* is incompatible with the surface scope reading, because Paper C was accepted by Referee 1 and Referee 4.

**Figure 2.** Inverse scope scenario (false in surface scope reading).




It turns out that while (30) can be used to describe the scenario illustrated by *Figure 2*, it cannot characterize the surface scope context in *Figure 1*. This means that the topicalized negative DP obligatorily receives a narrow scope reading (2>no). This scope behavior suggests that the topicalized negative DP obligatorily undergoes total reconstruction below the numeral QP.

(30') ~~[Kanena arthro]~~, dhen perasan dhio krites [kanena arthro] persi.

As expected, the CLLD counterpart of (30), in (31), can only describe the surface scope scenario in *Figure 1*, where none of the papers was accepted by two referees, hence none of

them will be published. Moreover, (31) is false in the inverse scope scenario (*Figure 2*), where Paper C is approved by two referees (Referee 1 and 4).

(31) [Kanena arthro], dhen to=perasan dhio krites persi.
no paper not it=pass-3PL two referees last-year
'No paper was approved by two referees.'

In the rest of this section, I will give two more arguments in favor of the obligatory total reconstruction analysis of topicalization.

### 4.2. Late Merge of Adjuncts

The second argument involves obviation of Binding Condition C in sentences with *late-merge (LM) of adjuncts*. It is a well-known fact, first noticed by Freidin (1986) and Lebeaux (1988), that adjuncts do not reconstruct for Condition C, as seen in example (32) reproduced from Heycock (1995: ex32).

(32) Which claim [$_{adjunct}$ that John$_1$ made] was he$_1$ willing to discuss?

On the standard analysis, the adjunct-relative clause is adjoined after the wh-phrase has moved (Lebeaux 1988; Chomsky 1995 among others).[9]

(32') [Which claim [$_{adjunct}$ that John$_1$ made]] was he$_1$ willing to discuss <which claim>?
↑
*late-merge*

Crucially, the material that undergoes total reconstruction cannot feed late adjunction, because it is not interpreted in its higher position(s) (see Takano 1995; Heycock 1995; Sportiche 2016).

With this in mind, we can now compare topicalization and CLLD, with respect to total reconstruction. Angelopoulos & Sportiche (2021: ex11a-b) have independently shown that CLLD permits LM of adjuncts. Compare (33) with (34), a CLLD and a topicalization sentence respectively, whose intended meaning is that the president feels very uncomfortable looking at the pictures that incriminate him.

(33) %[Tis fotoghrafies pu enohopiun ton proedhro$_1$]$_2$, pro$_1$ dhen
the photos that incriminate-3PL the president not
theli na pro$_1$ tis=vlepi t$_2$ kan.
want-3SG to them=see-3SG.SUBJ even
'He does not want to even look at the pictures that incriminate the president.'

(34) *[Fotoghrafies pu enohopiun ton proedhro$_1$]$_2$, pro$_1$ dhen
photos that incriminate-3PL the president not
theli na pro$_1$ vlepi t$_2$ kan.
want-3SG to see-3SG.SUBJ even
'He does not want to even look at pictures that incriminate the president.'

An additional pair ((35)-(36)) is provided, for reasons of concreteness. The intended meaning of these sentences is that Kostas didn't invite the people who have hurt him.

(35) %[Ta atoma pu plighosan ton Kosta$_1$]$_2$, pro$_1$ dhen ta=kalese t$_2$

[9] In the present study I use late-merge of adjuncts as a diagnostic tool, leaving aside the theoretical problems of the late-merger mechanism (Sportiche 2019; Chomsky 2020).

the people that hurt-3PL the Kostas not them=invited-3SG
pote sto neo tu spiti.
never at-the new his house
'He never invited the people who hurt Kostas to his new home.'

(36) *[Atoma pu plighosan ton Kosta$_1$]$_2$, pro$_1$ dhen kalese t$_2$
people that hurt-3PL the Kostas not invited-3SG
pote sto neo tu spiti.
never at-the new his house
'He never invited the people who hurt Kostas to his new home.'

The judgments are subtle and subject to variation.[10] However, there is a clear pattern regarding the availability of counter-cyclic merge of adjuncts in the pairs illustrated above. This pattern speaks in favor of the hypothesis pursued in this section: topicalization must undergo total reconstruction and LM is blocked for all speakers, whereas CLLD does not undergo total reconstruction and LM of relative clause adjuncts is possible, at least for some speakers.[11]

### 4.3. Reconstruction for Anaphor binding

One more piece of evidence in favor of the total-reconstruction analysis of topicalization comes from anaphor binding. To begin with, in the topicalization sentence (37), the topic phrase contains an anaphor which must be locally bound by a DP antecedent in satisfaction of Binding

[10] As for the acceptability of the above sentences, I created a questionnaire with six pairs of CLLD and topicalization sentences with *adverbial adjuncts* and *relative-clause adjuncts* containing a co-referring R-expression. This questionnaire was distributed to six native speakers for their judgments without further information about what was investigated. For five of the speakers, CLLD and topicalization sentences with adverbial adjuncts were equally bad, thus these cases are left aside. When it comes to relative clause-adjuncts, my informants can be divided into two categories. The first group (three speakers) again found all these sentences equally ungrammatical (this is also the case for the one of the reviewers). The grammar of these speakers seems to be less tolerant to late-merge. On the other hand, the judgments provided above represent the answers of the speakers of the second category (three speakers). For the speakers of this group, Condition C is (fully or marginally) obviated in CLLD, whereas Condition C effects are constantly detected in topicalization.

[11] Here is a short note on the reconstruction of topicalized direct objects (DOs) with respect to indirect object DPs (IndO-DP). Without going into details, IndO-DPs asymmetrically c-command DOs in Greek (see Angelopoulos & Sportiche 2021 and references therein). The fact that in (i) the R-expression *ton proedhro* may corefer with the dative clitic can be taken then to indicate that topicalized DPs do not totally reconstruct below IndO-DPs and allow LM.

(i) ?[Fotoghrafies pu enohopiun ton proedhro$_1$] dhen tu$_1$=dhihnun pote
pictures that incriminate-3PL the president not CL-DAT=show never
'They don't show pictures that incriminate the president to him.'

The problem with this analysis is that Condition C is bled even when the co-referring R-expression is found within a complement-phrase rather than in an adjunct (Anagnostopoulou 1994; Angelopoulos & Sportiche 2021). In (ii), the R-expression may corefer with a dative clitic or an IndO-epithet.

(ii) ?[Fotoghrafies tu proedhru$_1$] dhen (tu$_1$=)dhihnun (tu kaimenu$_1$) pote
pictures the president not CL-DAT=show the poor never
'They don't show pictures of the president to him/the poor.'

The comparison between (i)-(ii) suggests that the lack of Condition C in (i) does not rely on the late-insertion of the relative clause. Rather, we could assume that Condition C in these cases is bled due to a short A-movement step of the topicalized phrase across the IndO-DP, but not across the postverbal subject position (cf. Angelopoulos & Sportiche 2021). I leave this issue to future research.

Condition A (see Anagnostopoulou & Everaert 1999, on the syntactic behavior of Greek anaphor *eaftos*).

(37) [Fotoghrafies tu eaftu $tu_1]_2$, anevazi sinehia [o Kostas]$_1$.
pictures the self his uploads-3SG continuously the Kostas
'Pictures of himself, Kostas uploads all the time.'

In (37) the topic phrase reconstructs below the postverbal subject, to its external-merge position, providing the anaphor with a local c-commanding antecedent (*o Kostas*). However, if I am right that topicalization undergoes total reconstruction, a more complicated behavior is expected in long-distance dependencies.

The long-distance topicalization chain in (38) involves movement of the topic to the left periphery of the matrix clause (CP1), through the left periphery of the embedded clause (CP2). This chain consists of (at least) three copies of the topic phrase. On the assumption that topicalization mandatorily undergoes total reconstruction, only the lower copy will be interpreted at LF.

(38) Topicalization: [$_{CP1}$ [$_{TopP}$ ~~[topic]~~ . . . [$_{CP2}$ ~~[topic]~~ . . . [$_{VP}$ . . . [topic] . . . ]]]]

Given that Greek anaphors must be bound locally, we obtain the following predictions regarding anaphor reconstruction in topicalization.[12] The antecedent in the embedded clause is in a local relation with the reconstructed topic phrase, and anaphor binding proceeds without problems (39a). By contrast, in (39b), the antecedent in the matrix clause is too far away from the reconstructed anaphor, violating Condition A (see Huang 1993; Heycock 1995).

(39) a. [$_{CP1}$ [$_{TopP}$ ~~[topic]~~ . . . [$_{CP2}$ ~~[topic]~~ . . . <u>antecedent</u> . . . [topic] . . . ]]]

b. *[$_{CP1}$ [$_{TopP}$ ~~[topic]~~ . . . <u>antecedent</u> . . . [$_{CP2}$ ~~[topic]~~ . . . [topic] . . . ]]]

In the following I provide the relevant minimal pairs. Compare (40) with (41):[13]

(40) [Minisi kata tu eaftu $tu_2]_1$, ipe i Maria oti katethese
charges against the self his said-3SG the Mary that pressed-3SG
<u>o Kostas$_2$</u> $t_1$.
the Kostas
'Mary said that Kostas pressed charges against himself.'

(41) *[Minisi kata tu eaftu $tu_2]_1$, ipe <u>o Kostas$_2$</u> oti katethese
charges against the self his said-3SG the Kostas that pressed-3SG
i Maria $t_1$.
the Mary

[12] The following contrast (confirmed by 4 speakers) shows that *DP-internal anaphors* are not exempt from Condition A:

(i) I Maria ipe oti <u>o Kostas$_1$</u> katethese [$_{DP}$ minisi kata tu eaftu $tu_1$].
the Mary said-3SG that the Kostas submitted-3SG chargesagainst the self his
'Mary said that Kostas pressed charges against himself.'

(ii) *<u>O Kostas$_1$</u> ipe oti i Maria katethese [$_{DP}$ minisi kata tu eaftu $tu_1$].
the Kostas said-3SG thatthe Mary submitted-3SG chargesagainst the self his
'Kostas said that Mary pressed charges against himself.'

[13] These results were confirmed by four of the five native speakers I consulted. For one speaker (40) and (41) are both fine.

‘Kostas said that Mary pressed charges against himself.’

The data in (40)-(41) confirm the predictions that are laid out in (39), lending further support to the obligatory total reconstruction analysis of topicalization.[14]

### 4.4. WCO-effects

Returning to the WCO-sensitivity of topicalization (see (24)), recall that the left-dislocated topic phrase may not bind into the subject from its surface position. I would like now to argue that the total reconstruction analysis of topicalization offers a direct explanation to these WCO effects. As we have seen above, the dislocated topic phrase undergoes total reconstruction below the subject as in (24’). This means that neither of the copies of the topic phrase can bind the intervening pronoun, since the lower copy does not c-command the subject-internal pronoun, while the c-commanding higher copy is not interpreted at all. The intended reading, under co-indexation of the topic phrase and the intervening pronoun, is thus ruled out.

(24’) *~~[Kapjon fititi]$_1$~~, proselave [o pateras tu$_1$] [kapjon fititi]$_1$
some student hired-3SG the father his some student
‘His father hired some student.’

To summarize, Greek topicalization is a topic-marking strategy that involves A’-movement of a non-referential topic phrase to the spec,TopP. Moreover, the moved topic phrase obligatorily undergoes total reconstruction which means that all, but the lowest copy of the topic phrase, are neglected by LF:

(42) LF: [$_{TopP}$ ~~topic~~ [$_{TP}$ . . . <topic> . . . ]]

(42) raises a question with respect to the topic-interpretation of topicalized phrases, though. How do they receive a topic-interpretation, if the semantic component has only access to the low copy which, according to (42), is not associated with the topic-marking projection (TopP) in any direct way? If we consider the syntactic derivation of topicalization more carefully, we will see that this problem is only apparent. As explained above (see (25)), movement of

[14] As a reviewer observes, sentences with anaphors within topicalized ‘*picture-of* DPs’ seem to allow binding by an antecedent in the matrix clause (i):

(i) [Fotoghrafies tu eaftu tu$_2$]$_1$, ipe o Kostas$_2$ oti anevazi i Maria t$_1$
pictures the self his says-3SG the Kostas that uploads-3SG the Mary
sinehia.
continuously
‘Kostas says that Mary uploads pictures of himself all the time.’

This observation was independently made by two of my informants. Does this mean that these cases do not involve total reconstruction? As a matter of fact, the same speakers argue that ‘pictures of himself’ in contrast with other DP-internal anaphors (e.g., charges against himself, see fn.13) allow long-distance binding as in (ii):

(ii) O Kostas$_1$ lei oti i Maria anevazi [fotoghrafies tu eaftu tu$_1$].
the Kostas says-3SG that the Mary uploads-3SG pictures the self his
sinehia
continuously
‘Kostas says that Mary posts pictures of himself all the time.’

The grammaticality of (ii) suggests that (i) is not true counterevidence against the total-reconstruction analysis of topicalization. A question that arises is why especially ‘pictures-of-himself’ allow long-distance binding. I will leave this issue for future research.

topicalized phrases is mediated by an AGREE chain which involves a [Top]-feature. In short, the low copy of the topicalized phrase bears an interpretable topic-feature, as in (43):

(43) LF: [$_{TopP}$ ~~topic$_{[iTop]}$~~ [$_{TP}$ . . . <topic$_{[iTop]}$> . . . ]]

Given (43), I argue that the assignment of the topic-interpretation in topicalization is guided by the topic-feature on the low copy of the topicalized phrase.

An additional issue that arises for the total reconstruction analysis, concerns the *Criterial Freezing Principle* proposed by Rizzi (2006 and later works). According to a reviewer, the topic phrase in (43), which A'-moves to satisfy a topic-criterion (in the sense of Rizzi 1997) should be frozen in the *criterial position* spec,TopP, without being able to move higher or reconstruct lower. It should be noted that the main assumption that underlies the freezing principle is that movement, as a last resort operation, is driven by certain interface requirements. In particular, A'-movement satisfies the *scope-discourse properties* of the moving phrase, which are relevant to the semantic interface (see Rizzi 2006: 99, following Chomsky 2001). However, while for instance the scope and discourse requirements of wh-phrases in questions coincide, as both are met at spec,CP (under the assumption that wh-phrases introduce an existential quantifier which takes scope over the 'question nucleus'), this is not the case in the topicalization chains examined in this paper. The scope position of topic-phrases in topicalization is their base-position while their discourse-position is the left-peripheral spec,TopP. Given this ambivalent nature of the semantics of topicalized phrases, it is not clear what their criterial position actually is. Here I propose that the total reconstruction analysis (and the total reconstruction operation in general) can be reconciled with the Criterial Freezing Principle if we assume that *discourse properties* (i.e., Top, Foc, Q, etc.) determine the criterial/freezing position for overt movement, while *scope properties* determine the freezing position for reconstruction, where in this case 'freezing' means that a copy in a scope-position cannot be deleted at LF.

This section established that topicalization must undergo total reconstruction, nevertheless a deeper explanation for the LF-representation of this construction is still missing. It is not clear yet why the topic phrase in a topicalization sentence must totally reconstruct. Below I will attempt to draw a correlation between this behavior of topicalization and the distribution of this construction, after showing that topicalization is restricted to topic phrases of a specific semantic type.[15]

## 5. Distribution of topicalization and total reconstruction

### 5.1. Distribution of topicalization revisited

As mentioned in Section 2.2, Alexopoulou & Folli (2019) argue that topicalization is restricted to non-referential topic phrases (while CLLD involves referential topics). In this section my aim is to capture the distribution of topicalization in semantic/type-theoretic terms.

[15] For instance, Heycock (1995) proposes that *non-referential* phrases, in contrast to *referential* ones, undergo total reconstruction. Following Heycock, it could be argued that topicalization leads to total reconstruction precisely because it is restricted to non-referential topic-phrases (see 2.2.). However, the notion of *referentiality* is problematic given that a (widely accepted) formal definition for this notion is missing. Interestingly, Cresti (1995: 82) points out that "[t]he label 'referential' seems to hint at some distinction that the syntax can't make" (see also de Swart 2001). Here, I adopt this view and I propose that the referential/non-referential distinction of topic phrases should be stated on formal semantic grounds (see 5.1).

Specifically, I will show that Greek topicalization is restricted to property-denoting (<e,t>) topic phrases (44).[16]

(44) *Propertyhood Condition on topicalized phrases:*
*[$_{TopP}$ $XP_{1\text{-}\alpha}$ [ . . . $t_1$ . . . ]], where $\alpha \neq$ <e,t>

The argument proceeds in two steps: (a) in 5.1.1, I examine certain cases of topicalization (with topic-marked bare nouns, weak indefinites, CPs, quantificational phrases) focusing on the semantic type of the topic phrase in each case. It is shown that these topics have been independently analyzed as phrases of type <e,t>; (b) in 5.1.2, I provide independent evidence for the property type analysis from *existential constructions*.

### 5.1.1. The semantic type of topicalized phrases

To begin with, in (45) a bare singular noun is left-dislocated by topicalization. The use of a doubling clitic leads to strong ungrammaticality. The same holds for plural bare nouns (e.g., *ruha*, 'clothes') and for bare mass nouns (e.g., *zahari*, 'sugar'):

(45) [Palto], (*to=)aghorase o Kostas.
coat, it=bought-3SG the Kostas
'A coat, Kostas bought.'

In this paper I assume that bare nouns in Greek denote properties (<e,t>) (see McNally 1995; see Kallulli 2000 for Greek).[17] This analysis accounts for their basic semantic properties (e.g., narrowest scope).[18] In (46), I assume that the bare nominal combines with the verb through the

[16] A reviewer presents this type-restriction as a paradox, arguing that A'-dependencies in general may target a wide array of different types of phrases. This however is not entirely true. For instance QR targets phrases of type <<e,t>,t>. Also, on the assumption that wh-phrases in wh-questions are existential quantifiers ('*[Which paper]$_{-3}$ did you read?*') (but see Rullman & Beck 1998), wh-extraction chains are restricted to quantificational phrases, while non-quantificational phrases (type *e* or <e,t>) are excluded.

[17] In a recent paper, Alexopoulou & Folli (2019: section 2) conclude that bare nouns in Greek denote individuals (*e*), rather than sets of individuals (<e,t>). In particular, the authors show that Greek bare nouns (GrBN) differ from their Spanish/Catalan counterparts (SCBN) with respect to a number of interpretational and syntactic properties. For instance, Spanish/Catalan bare singular nouns are number-neutral, licensing singular and plural interpretations (see Espinal 2010), while Greek bare singlular nouns allow only singular/atomic interpretations. For Alexopoulou & Folli (2021), these differences indicate that Spanish/Catalan bare nouns denote properties, while Greek bare nouns denote individuals. However, this line of argumentation is misleading, for Espinal (2010) argues that the aforementioned properties (e.g., number-neutrality) show that bare nouns denote *properties of kinds* (as opposed to the *properties of individuals*). Other nominals in Spanish/Catalan that denote *sets of individuals/sums* such as singular indefinites or bare plurals behave as Greek bare nominals regarding these properties. A fuller discussion on Greek bare nouns is left for future research. For now, consider (i) below which is a discourse-anaphora test showing that bare nouns in Greek, in contrast to definite DPs, do not denote individuals (cf. (48) in the main text).

(i) Dhen dhjavasa #[vivlia]$_{-1}$/ [ta vivlia]$_{-1}$. pro dhen ta$_{-1}$=vrika endhiaferonta.
Not read-1SG books the books I not them=found-1SG interesting
'I didn't read the books. I didn't find them interesting.'

[18] Bare nouns in Greek, unlike English bare nouns, do not denote *kinds* (Roussou & Tsimpli 1994; Alexopoulou & Folli 2019). Kind interpretation in Greek requires the definite article. Compare the Greek example and its English translation in (i) (modified from Alexopoulou & Folli 2019: 453).

(i) [*(Ta) skilia] ine katikidhia zoa.
the dogs are domestic animals

semantic mechanism *Predicate Restriction*, proposed by Chung & Ladusaw (2003) exactly for these cases. More specifically, at the VP-level, the object *palto* does not combine with the verb *aghorase* through *function application*. Instead, it merges as a restrictive modifier of the verb. The effect of that is that the property-denoting bare noun *palto* only specifies that what was bought was a coat, without saturating the internal argument of the verb. The object position is subsequently closed by an existential closure operator at the level of the extended VP (46b).

(46) a. O Kostas aghorase palto.
the Kostas bought-3SG coat
'Kostas bought a coat.'

b. ∃x[bought(x,Kostas) & coat(x)]

The <e,t>-type analysis carries over to topicalized *weak indefinites* (see de Swart 2001). Recall that topic-marked weak/non-referential indefinites with existential interpretation (as opposed to *specific indefinites*) undergo topicalization (see (14)) (Dimitriadis 1994; Alexopoulou & Folli 2019). This is not only the case with singular indefinites (e.g., *a/some NP*) but also with plural indefinites in their non-specific interpretation, such as *many, some* ("*mn*", "*sm*" in Milsark (1977)) and cardinals (*two*).

(47) [Dhio/Kapjies/Poles kokines bluzes], aghorase i Maria.
two/some/many red blouses bought-3SG the Mary
'Mary bought two/many/some red blouses.'

We can employ discourse-anaphora to diagnose the specificity/referentiality of topic-marked indefinites. The indefinite in topicalization (48a) is non-specific and cannot antecede the pronoun in (48b). This is possible for the CLLDed indefinite in (49a) though, which should then be considered a specific indefinite.

(48) a. [Dhio mathimata]$_1$, dhen epelekse kanenas fititis. (topicalization)
two courses not chose-3SG no student
'No student chose two courses.'

b. #Ta$_1$ dhidhaski enas pierighos tipos.
'They are taught by a weird guy.'

(49) a. [Dhio mathimata]$_1$, dhen ta=epelekse kanenas fititis. (CLLD)
two courses not them=chose-3SG no student
'No student chose two courses.'

b. Ta$_1$ dhidhaski enas pierighos tipos.
'They are taught by a weird guy.'

Negation in the above examples is used to prevent the indefinite from introducing a new discourse referent, which could function as the antecedent of the pronoun. Non-specific indefinites, interpreted as phrases of type <e,t>, fall into the descriptive generalization that property-denoting topics undergo topicalization, excluding clitic-doubling.

'Dogs are domestic animals.'

Let us now move on to topicalized CPs, as in (50) (see Dimitriadis 1994; Tsakali 2006; Angelopoulos 2019).[19]

(50) [CP Oti pahina], (*to=)epimeni i Maria.
that got-fat-1SG it=insist-3SG the Mary
'Mary insists that I got fat.'

Crucially, the verb *epimeno* 'insist' allows *oti*-CP complements (51a), while it excludes DPs (51b). This means that what moves in (50) is a CP-constituent rather than a DP (see Takahashi 2010 and references therein).[20]

(51) a. I Maria epimeni [CP oti pahina].
the Mary insist-3SG that got-fat-1SG
'Mary insists that I got fat.'

b. *I Maria epimeni [DP afto].
the Mary insist-3SG that
'*Mary insists that.'

How does (50) fit in with the generalization in (44)? If (44) is on the right track CP-topics in topicalization must denote sets of individuals. Indeed, Moulton (2015), following Kratzer (2006), argues that *that-clauses* denote predicates of individuals with propositional content, of type <e,<s,t>> (see Moulton 2017: 295, for Greek *oti*-clauses). This line of analysis implies that *oti*-clauses combine with nouns through *(intensional) predicate modification*:

(52) [DP O [NP-<e,<s,t>> [NP-<e,<s,t>> ishirismos] [CP-<e,<s,t>> oti pahina] ]].
the claim that got-fat-1SG
'The claim that I got fat.'

[19] That left-dislocated CPs move and are not base-generated in their surface position (Koster 1978; Alrenga 2005), is shown by the contrast between (i) and (ii). In (i) there is a copy of the left dislocated CP below the subject, which triggers Condition C effects. See Angelopoulos (2019) for a relevant discussion on CLLDed CPs (but see Lechner 1998: 4.4, for evidence for lack of syntactic reconstruction in German CP-scrambling).

(i) a. *[Oti skotosa to baba tis Marias$_1$] pro$_1$ epimeni, para tis dhiaveveosis
that killed-1SG the father the Mary insists-3SG despite the assurance
tis astinomias.
the police
'Mary insists that I killed her father, ignoring the assurance given by the police.'

b. [Oti skotosa to baba tis$_1$] i Maria$_1$ epimeni para tis dhiaveveosis
that killed-1SG the father her the Mary insists-3SG despite the assurance
tis astinomias.
the police
'Mary insists that I killed her father, ignoring the assurance given by the police.'

[20] CLLD of CPs in Greek is possible with verbs that allow a DP-complement (e.g., *ksero* 'know', *ekfrazo* 'express'). In these cases, the sentential constituent can optionally be headed by a definite determiner (see Georgiou 2022: 47*ff*).

(i) [(to) oti lipithika], to=eksefrasa apo ti proti stighmi.
the that was-sad-1SG it=expressed-1SG from the first moment
'I expressed my sorrow from the very first moment.'

The predicate-modification analysis in (52), and by extension the <e,<s,t>> type of the *oti*-clause, are justified by the fact that the noun *ishirismos*, in contrast to the verb *ishirizome* (claim), does not allow complements (see the discussion in Moulton 2017: 293).

(53) Ishirizome afto.
claim-1SG that
'I claim that.'

(54) *O ishirismos aftu.
the claim that
'*The claim of that.'

Interestingly, Greek allows sentential constituents to be headed by a definite determiner (i.e., nominalized CPs), as in (55) (from Roussou 1991: ex45b).

(55) [To oti lei psemata] ine fanero.
the that tell-3SG lies be-3SG obvious
'That she tells lies is obvious.'

According to Moulton (2017: 295), in these cases the definite determiner is a iota-operator which takes the predicate-denoting CP and returns an individual. Hence these cases from Greek argue in favor of the property-analysis of *oti*-clauses which then comply with the propertyhood condition in (44).[21]

Moving on, an obvious problem is posed by the observation that some quantificational phrases (QPs) seem to be able to undergo topicalization. This is clearly at odds with the generalization in (44), because on the standard assumptions QPs are of type <<e,t>t>. In (56) and (57), the topic is a neg(ative)-word and a modified numeral, respectively (more examples of topicalized QPs are given below).

(56) [Kanena fititi], dhen kalese o Kostas.
no student not invited-3SG the Kostas
'Kostas invited no students.'

(57) [Perisotera apo pede arthra (pano sto thema)], dhimosiefse o Kostas.
more than five papers (on this topic) published-3SG the Kostas
'Kostas published more than five papers on this topic."

[21] A question arises with respect to the semantic composition of (51a): how *that*-clauses combine with verbs? As a reviewer points out, Moulton's (2015) remnant-movement analysis excludes movement of CPs above AspP. Consequently, CP-movement to spec,TopP, as in (50), should be ungrammatical. This is a good point to clarify that, although I adopt Moulton's claim about the semantic type of that-clauses (originally proposed by Kratzer 2006), I am not committed to his analysis about how *that*-clauses are combined with verbs. As Moulton (2015: fn.14) himself notes, alternative analyses do exist. For instance, Kratzer (2006) suggests that embedded clauses are combined with verbs by the semantic mechanism *Predicate Restriction* (Chung & Ladusaw 2003), introduced above. Crucially, this mechanism does not exclude CP-movement and it thus fits better with CP-topicalization in Greek. On the other hand, Moulton's (2015) analysis derives the ungrammaticality of CP-extraction in English as in (i).

(i) *[That I got fat], Mary insists.

Whether both approaches are needed to capture this CP-extraction contrast between English and Greek will not concern me here.

Before we procced it should be noted that the topicalization sentences with QP-topics above are significantly improved when realized with a focus pitch accent on the postverbal subject. (56') illustrates the intonational properties of (56).

(56') [KaNEna fititi]CT, dhen kalese [o KOstas]FOC.

This intonational pattern is characteristic of *contrastive topicalization* (CT) sentences, which involve a CT-accent and a FOC-accent in different positions (Büring 2003). This state of affairs suggests that a CT interpretation facilitates the topicalization of a QP. The very same observation is made by Giurgea (2015) and É. Kiss & Gyuris (2003) for topic-marking of QPs in Romanian and Hungarian, respectively. Turning to the scope-reconstruction of topicalized QPs, we have already seen above (section 4.1) that topicalized phrases obligatorily receive a narrow scope reading ((30) repeated here as (58)):

(58) [Kanena arthro], dhen perasan dhio krites persi.
no paper not pass-3PL two referees last-year
'Two referees did not accept any paper.' (*no>two, two>no)

Recall that in (58), to avoid the FOC-accent on the postverbal subject (cf. 56'), which could be argued to force the wide-scope reading of the subject, I have added the adverbial phrase *persi* 'last year' in the right edge of the sentence, receiving the FOC-accent.

Crucially, this scope-behavior is not expected under the view that these elements are true quantificational phrases (e.g., of type <<e,t>t>). It is a well-known fact that true QPs give rise to scope ambiguities. Consider the following sentence with a focus-fronted negative QP which takes either wide or narrow scope with respect to the subject (no>two, ?two>no). The prosodic properties of focus-fronting are laid out in section 2.1.

(59) [KANENA ARTHRO] dhen perasan dhio krites persi.
no paper not pass-3PL two referees last-year
'No paper did two referees accept last year.'

As a conclusion, true quantificational phrases (type <<e,t>,t>) can be targeted by focus-fronting, which is not constrained by any propertyhood condition. Scope-ambiguity in these cases is therefore expected. On the other hand, as we have seen topicalized neg-words (as well as other (modified) numeral-DPs) do not give rise to scope-ambiguity. There is thus independent motivation for assigning a non-quantificational analysis to these phrases. In particular, given the fact that these elements follow the other topicalized DPs examined so far (existential bare nouns and indefinites) in showing total reconstruction, it is tempting to analyze them as property-denoting elements of type <e,t>.[22] Below we will see that such proposals have already been advanced in previous studies.

Neg-words, such as *kanenas* 'nobody' or *kanenas fititis* 'no student' have been analyzed either as *quantifiers* (Haegeman & Zanuttini 1991; Giannakidou 2000) or as *indefinites* (Ladusaw 1992, Zeijlstra 2004; cf. Tsimpli & Roussou 1996). Following the latter view, I suggest that topicalized neg-words in Greek are non-negative indefinites which denote sets of individuals. On this view, neg-words fall into the generalization in (44), that only <e,t>-phrases undergo topicalization.

[22] Relevant proposals about individual-denoting and property-denoting QPs in topic-marking constructions can be found in Constant (2014) and É. Kiss & Gyuris (2003). More relevant is the conclusion of É. Kiss & Gyuris (2003) that non-referential/QP-topics in Hungarian must denote properties.

As for the rest of QPs which are able to undergo topicalization in Greek (e.g., *dhio fitites* 'two students'), it is generally assumed that generalized quantifiers turn into properties through the type-shifting function *BE* (Partee 1987; de Swart 2001). The semantic denotation of topicalized QPs requires further discussion, nevertheless, in the next section I provide further evidence in favor of a property-denotation of this class of DPs.

To recapitulate, it was shown that bare nouns, non-specific indefinites, CPs and certain QPs (such as neg-words, modified numerals QPs) may undergo topicalization. What is common to this diverse class of phrases is that all allow a property denotation, satisfying the propertyhood condition on topicalized phrases.

### 5.1.2. Existential construction in Greek

In this subsection I employ the existential construction to test the hypothesis that topicalization is restricted to property-denoting (<e,t>) phrases. According to Milsark (1977), only weak DPs may occupy the post-copular position in the English existential construction "*there is* DP". The distinction between *strong DPs* (e.g., definites, strong indefinites, all/every DPs etc.) and *weak DPs* (e.g., weak indefinites) is responsible for the contrast between (60) and (61):

(60) a. *There is the/each/every glass on the table

b. *There are two of the/most glasses on the table

(61) a. There is a glass on the table.

b. There are some/many/two glasses on the table.

Several analyses (Heim 1987; McNally 1998) suggest that the strong/weak dichotomy reflects the semantic type of DPs. Accordingly, the distribution of the existential construction can be reduced to a type-theoretic restriction. More specifically, I follow here McNally's (1998) proposal that only property-DPs (of type <e,t>) may surface in the post-copular position (*pivot*) of an existential construction (see also de Swart 2001; Chung & Ladusaw 2003) :

(62) **there be XP*, if XP is not of type <e,t>

Existential sentences in Greek can be formed with the impersonal existential verb *ehi* (lit: 'has'), as in (63) (see McNally 2016; Kampanarou 2021).

(63) Ehi [potirja] pano sto trapezi.
has-3SG glasses on to-the table
'There are glasses on the table.'

*Ehi* can also combine with strong DPs. In these cases though the sentence can only be assigned a possessive reading with a null subject (64-65).

(64) Ehi [to/kathe potiri] pano sto trapezi.
has-3SG the/every glass on to-the table
'She has the/every glass on the table.'

(65) Ehi [ta perisotera/ ola ta potirja] pano sto trapezi.
has-3SG the most/ all the glasses on to-the table
'She has the/the most/all the glasses on the table.'

Definite DPs cooccur with the impersonal *ehi* in the so-called *presentational constructions* (Cruschina 2012; McNally 2016):

(66) *Ehi* [DP to kotopulo] sto psijio.
has-3SG the chicken in-the fridge
'There is [the chicken] in the fridge.'

Following previous studies, I argue that presentational uses of 'ehi' should be distinguished from existential sentences (McNally 2016).[23]

If the above is on the right track, both topicalization and existential construction require a property-denoting phrase. It is then predicted that the phrases which undergo topicalization (e.g., bare nominals, non-specific indefinites, neg-words), may appear as complements of existential *ehi*, due to their <e,t>-type. This expectation is borne out: (66) for bare nominals; (67) - (68) for singular and plural indefinites; (69) for neg-words:

(67) Ehi [ena potiri] pano sto trapezi.
Has-3SG one glass on to-the table
'There is one glass on the table.'

(68) Ehi [polla potirja] pano sto trapezi.
Has-3SG many glasses on to-the table
'There are many glasses on the table.'

(69) Dhen ehi [kanena potiri] pano sto trapezi.
not has-3SG no glass on to-the table
'There are no glasses on the table.'

(70b) below lists some of the QPs that are excluded from the topicalization construction. In (71b) it is shown that it is exactly these QPs that are also excluded from existential sentences:

(70) [ *Q-det* arthra (pano sto thema)], dhimosiefse o Kostas.
papers (on this topic) published-3SG the Kostas
'Kostas published *Q-det* papers on this topic'

a) OK: *kapja* (some), *pede* (five), *pola* (many), *dhiafora* (several), *kapja ligha* (a few), *ligha* (few), *pano/perisotera apo pede* (more than five), *lighotera apo pede* (less than five), *tulahiston pede* (at least five), *katholu . . . dhen* (not any … not)

[23] For instance, Cruschina (2012: 102), based on Italian data, proposes that presentational sentences in contrast to existential ones cannot be negated. This appears to be generally the case in Greek as well.

(i) Dhen ehi [kotopulo] sto psijio. Tha prepi na feris (Existential: Bare N)
not has chicken in-the fridge will need to bring-2SG
'There is no chicken in the fridge. You got to bring some.

(ii) ?Dhen ehi [to kotopulo] sto psijio. Fae kati alo. (Presentational: Definite DP)
not has the chicken in-the fridge eat-2SG something else
'There isn't (the) chicken in the fridge. Eat something else.'

However, as the following counterexample (provided by a reviewer) shows, exceptions do exist. These cases are not discussed further in this paper.

(iii) An dhen ihe [to kotopulo tis mamas su] sto psijio, tha ihame
if not has the chicken her mum your in-the fridge would have-1PL
pinasi.
be-hungry
'If your mum's chicken was not in the fridge, we would be very hungry.'

b) *: *ta perisotera* (the most), *ola ta* (all the)

(71) Ehi [ *Q-det* vivlia] pano sto trapezi.
has-3SG books on the table
'There are *Q-det* papers on the table'

a) OK: *kapja* (some), *pede* (five), *pola* (many), *dhiafora* (several), *kapja ligha* (a few), *ligha* (few), *pano/perisotera apo pede* (more than five), *lighotera apo pede* (less than five), *tulahiston pede* (at least five), *dhen . . . katholu* (not . . . not any)
b) *: *ta perisotera* (the most), *ola ta* (all the)

This correlation provides strong evidence in favor of the claim that topicalized QPs must have access to a property-denotation (<e,t>).

Finally, let us examine how some DPs that cannot be topicalized, such as definites and specific indefinites, behave in existential constructions. It has been already shown in (64) that definite DPs do not sit comfortably in the complement position of existential verbs. As for the case of specific indefinites, compare (72) with (73) (based on Milsark 1977; Heim 1987). Recall that, I have already argued that specific indefinites are excluded from topicalization in section 2.2. (72) involves the interrogative (non-existential) verb *rotao* 'ask', therefore its complement – the indefinite *kapjes erotisis* 'some questions' – may receive either a non-specific interpretation, according to which the indefinite has any question whatsoever in its denotation or a specific interpretation on which the indefinite picks out a contextually salient question. By contrast, in the existential sentence (73) with the impersonal verb *ehi*, the specific interpretation of the indefinite is blocked.

(72) Tha ine periergho an dhen *rotisun* [kapjes erotisis] ton proedhro.
will be-3SG strange if not ask-3PL some questions the president
'It will be strange, if they don't ask the president some (any/specific) questions.'

(73) Tha ine perirgho an dhen *ehi* [kapjes erotisis] ja ton proedhro.
will be-3SG strange if not has-3SG some questions for the president
'It will be strange, if there aren't some (any/#specific) questions for the president.'

As a result, definite DPs and specific indefinites are excluded from topicalization sentences and existential sentences for the same reason. They lack a property denotation. It is a common assumption that both are individual-denoting phrases: the former through an iota-operator (Heim & Kratzer 1998: 75); the latter as the result of application of a choice function operator (Reinhart 1997; Kratzer 1998).

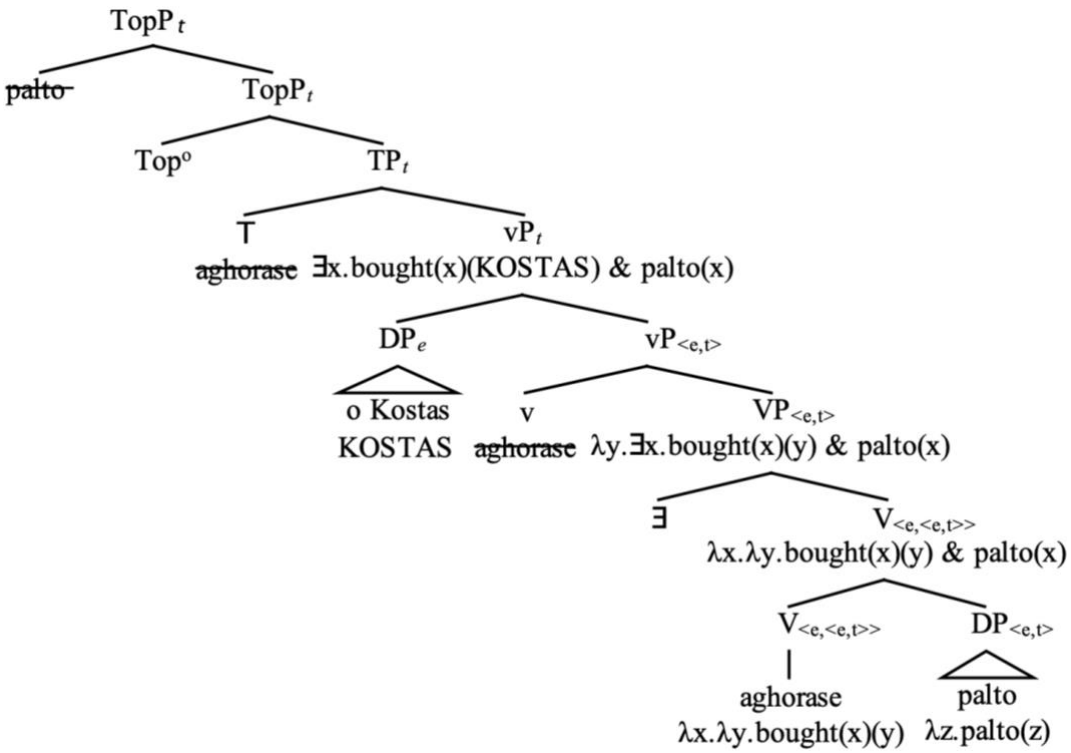
As an interim summary, Greek topicalization is a topic-marking construction (Section 2.1) which involves A'-movement of the topic phrase to spec,TopP (Section 3). Furthermore, topicalization shows mandatory total reconstruction, which means that the topic-phrase must be interpreted in its base position (Section 4). In addition, I proposed a descriptive generalization for the distribution of topicalization, according to which topicalization is restricted to property-denoting (<e,t>) topic phrases. (74) summarizes the results of the discussion so far.

(74) Greek topicalization at LF: [$_{TopP}$ ~~topic$_{<e,t>}$~~ [$_{TP}$ . . . <topic$_{<e,t>}$> . . . ]]

For reasons of clarity, (75) illustrates how the semantic composition of topicalization sentences proceeds:[24]

(75) a. Palto, aghorase o Kostas.
coat bought-3SG the Kostas
'Kostas bought a coat.'

b.




What is still missing however is a principled explanation for the fact that the topic phrase in Greek topicalization *must* totally reconstruct. In what follows I will argue that mandatory total reconstruction in topicalization is related to the semantic type of the left-dislocated topic phrase.

### 5.2. Total reconstruction and property-denoting traces

In a recent work, Poole (2017; 2022) concludes that the syntax-semantics mapping for movement chains does not allow traces ranging over properties (see also Sauerland 1998: section 6.1). This claim is schematically given in (76):[25]

(76) *$XP_1$ . . . . . $T_{1\text{-}<e,t>}$

[24] (75b) presumes that verbs reconstruct into their base-position (probably due to their semantic type, see Poole 2022: 7.2.4).

[25] More accurately, Poole (2017; 2022) argues in favor of a stronger generalization, namely that movement can only map onto individual-type traces (*Trace Interpretation Constraint*). That is both property and generalized-quantifier traces are excluded. As for the metatheoretical question why such a constraint holds, Poole (2017: section 5.3) discusses the hypothesis that this might be an economy constraint on the syntax-semantics mapping of movement.

How then is movement of phrases of type <e,t> represented at LF? In these cases, the moved phrase must be interpreted in its base-position, through what is here called total reconstruction, as in (77) (see Poole 2017; 2022).

(77) ~~XP<e,t>~~ . . . . . XP<e,t>

Crucial to Poole's claim is the observation that certain syntactic positions can only host property-denoting phrases. The best-known case is the pivot of an *existential construction*, already introduced above (McNally 1998, among others).

(78) **there be XP*, if XP is not of type <e,t>

Heim (1987) notes that (78) also constrains traces created by movement, therefore movement chains that leave a trace of type *e* must not be able to target the post-copular position in existential sentences.[26] Having said that, the existential construction is expected to affect sentences which are otherwise scopally ambiguous.

For instance, it has been observed that when it comes to existential constructions, as in (79), the amount wh-question must scope below the modal *should*, i.e., it can only receive the reconstructed interpretation (SHOULD > HOW MANY) (Rullman 1995; Cresti 1995).

(79) [How many books]$_1$ there should be _ on the table?

(78) requires that the pivot in (79) must be filled with an <e,t>-type element. This forces the restrictor of the wh-phrase to reconstruct deriving the narrow scope interpretation (Romero 1998):

(80) a. [How ~~many books~~]$_1$ there should be [many books]$_{<e,t>}$ on the table?
b. For what n: there should be n-books on the table

Note that if the Grammar allowed <e,t>-type traces, the dislocated wh-phrase would be able to be interpreted in its surface position with a wide scope reading, binding an <e,t>-type variable, contrary to what we actually find. Poole concludes that <e,t>-traces do not exist; thus the wh-phrase must reconstruct into its base position.[27]

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[26] *English topicalization* for instance always leaves a trace of type *e* (Poole 2017; 2022). As (78) predicts, the individual-denoting trace in the post-copular position rules (i) out (Poole 2017: 9) (cf. Postal 1998).
(i) *[A potato]$_1$, there is $t_1$-$_e$ in the pantry.

[27] An additional piece of evidence in favor of this conclusion comes from Sauerland (1998: 6.1). In (i) (Sauerland 1998: 273), the complement of the cardinal *san* ('three') undergoes scrambling (A-movement) to a TP-adjoined position. Such examples may either receive a specific/partitive reading or a non-specific/cardinal reading.

| | | | | | | |
|---|---|---|---|---|---|---|
| (i) [Urenokotta | hon-o]$_1$ | John-wa | Mary-ni | [$t_1$ | san=satu] | ageta. |
| left-unsold | books-ACC | John-TOP | Mary-DAT | | three=CL | gave |

'John gave Mary three (of the) unsold books.'

Sauerland argues that on the non-specific interpretation, the moved complement of the cardinal quantifier is of type <e,t>. Therefore, these examples seem to parallel the Greek topicalization sentences, in the sense that both involve movement of a property-denoting phrase. Interestingly, while A-movement generally obviates reconstruction for Condition C, the non-specific reading of (ii) (Sauerland 1998: 273) is blocked because of the intervening coreferential pronoun (*kanozyo-ni*).

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| (ii) [Mary-ga$_2$ | sukina | hon-o]$_1$ | John-wa | kanozyo-ni$_2$ | [$t_1$ | san=satu] | ageta. |
| Mary-NOM | likes | books-ACC | John-TOP | herDAT | | three=CL | gave |

The present subsection tried to establish two points: (i) property traces do not exist; (ii) when a moved phrase may not leave an individual-denoting trace, it is forced to totally reconstruct. These points become relevant in the next section, where I discuss the reconstruction behavior of Greek topicalization.

### 5.3. Total reconstruction in topicalization

Greek topicalization is a movement dependency which is interpreted through total reconstruction. However, in order to examine the source of total reconstruction in topicalization, let us take a step back: (81) demonstrates movement of a topic phrase to the left periphery without the total reconstruction step. This allows us to explore all the analytical options for the LF-representation of such a movement chain.

(81) Greek topicalization: $[_{\text{TopP}}\ \text{topic}_{<e,t>}\ [_{\text{CP}}\ \ldots\ t\ \ldots\ ]]$

Given the semantic type of the moved topic, there are at least three possible LF-representations for (81) which should be considered:

(82) a. LF: $[_{\text{TopP}}\ \text{topic}_{<e,t>}\ [_{\text{CP-}<<e,t>t>}\ \lambda T_{<e,t>}\ \ldots\ T_{<e,t>}\ \ldots\ ]]$

b. LF: $[_{\text{TopP}}\ \text{topic}_{<e,t>}\ [_{\text{CP-}<e,t>}\ \lambda x_{e}\ \ldots\ x_{e}\ \ldots\ ]]$

c. LF: $[_{\text{TopP}}\ \sout{\text{topic}_{<e,t>}}\ [_{\text{CP-}t}\ \ldots\ \text{topic}_{<e,t>}\ \ldots\ ]]$

In what follows I will argue that (82a) and (82b) are blocked for independent reasons. Specifically, I will show that these LF-representations cannot be translated by standard semantic mechanisms; hence Greek topicalization resorts to total reconstruction (82c).

Let us start from the representation with the property-denoting trace in (82a), where the λ-binder inserted by *Predicate Abstraction* ranges over a property-type variable giving rise to a derived predicate of properties (<<e,t>,t>) at the CP level. Then the derived predicate is saturated by the dislocated topic phrase. This is the analysis followed by É. Kiss & Gyuris (2003) for the Hungarian QP-topicalization sentences. However, in the previous section I argued, following Poole (2017; 2022), that property-denoting traces are not available in natural languages. This essentially blocks the LF-representation in (82a) where topicalization is mapped onto a property-denoting trace ($T_{<e,t>}$).

It should be noted that traces of higher type (e.g., $T_{<<e,t>t>}$) are widely assumed to be implicated in the process of *semantic reconstruction* (e.g., Cresti 1995; Rullman 1995; Lechner 1998). Specifically, semantic reconstruction refers to the fact that a trace of a higher type allows the moved element to scope in its base position. On the other hand, *syntactic reconstruction* posits an actual copy in the base position of the moved phrase at the LF-level. Crucially, as Romero (1998) and Fox (1999) highlight, semantic reconstruction does not lead to a violation of Binding Condition C, which applies at LF. Thus, reconstruction for Condition C has become a standard diagnostic for syntactic reconstruction (vs. semantic reconstruction) (e.g., Keine & Poole 2018; Lechner 2019). Against this background, the fact that Greek topicalization systematically exhibits Condition C reconstruction effects (see (19)) argues against semantic reconstruction or property-denoting traces.

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'John gave Mary three of the books she liked.' (partitive, *cardinal)

Sauerland concludes that the moved <e,t>-type complement (which gives rise to the non-specific/cardinal interpretation) is necessarily interpreted in its base position. If traces of type <e,t> were available, the moved NP would be interpreted in its landing position binding an <e,t>-trace without violating Condition C.

Having excluded property traces, I proceed to the LF-representation with λ-abstraction over individual variables ($x_e$), as in (82b) repeated here as (83):

(83) LF: [$_{TopP}$ topic$_{<e,t>}$ [$_{CP-<e,t>}$ λ$x_e$ . . . $x_e$ . . . ]]

λ-abstraction over $x_e$ derives a predicate over individuals (<e,t>). Above, I omitted the last step of the derivation of (83) in which the derived predicate combines with the dislocated topic phrase. As the reader might have noticed, both constituents are of type <e,t>, thus none of them can apply to its sister constituent, by *Function Application*. But the derivation may proceed by *Predicate Modification*, an operation that takes two sets and returns their intersection (Heim & Kratzer 1998). Therefore, the composition of the dislocated topic phrase (TOPIC) with the derived predicate (indicated here as COMMENT) results in a property-denoting constituent:

(84) $[\![\text{TopicP}]\!]_{<e,t>} = [\![\text{TOPIC}]\!]_{<e,t>} \cap [\![\text{COMMENT}]\!]_{<e,t>}$

The problem with (84) is that it fails to assign to [TopicP] – a sentential constituent, in the sense that all the arguments of the verb are saturated – a propositional semantic type (cf. (75b)).[28]

The proposition-type of [TopicP] is independently justified by the fact that this constituent may be selected by the complementizer *oti* ('that'), as in (85). Following Kratzer (2006), Moulton (2015) and others, I assume that the complementizer takes a proposition and returns a predicate (see section 5.1.1, for relevant evidence). Therefore (82) is not a possible LF-representation for Greek topicalization sentences.

(85) Ksero *oti* [$_{TopicP}$ palto, aghorase o Janis].
know-1SG that coat bought-3SG the John.
'I know that John bought a coat.'

Moreover, there is vast empirical evidence showing that Greek topicalization is not mapped onto individual variables. First, I made clear in Section 4 that a characteristic property of Greek topicalization is that the topic phrase is restricted to narrow scope readings, that is, it is interpreted within the scope of subject QPs, modals and negation. This property of topicalization clearly contradicts the LF-representation in (83) which predicts a wide scope reading for dislocated topic phrases.

An additional argument against the view that the copy of a topicalized phrase translates into an individual variable at LF comes from the existential construction, introduced in Section 5.1.2. Recall that the existential impersonal verb *ehi* requires a property-denoting pivot. When movement targets the pivot of the existential construction it must leave a property denoting phrase, as in (84):

(86) XP$_{-1}$ . . . . . *ehi* XP$_{-1<e,t>}$

[28] A reviewer asks how we can exclude an analysis with a covert existential-closure operator above TopicP, that unselectively binds the free individual-type variables in the topic phrase and in the trace position, followed by abstraction over world-variables:
(i) [λw [$_{TopP}$ ∃ [$_{TopP}$ $[\![\text{TOPIC}]\!]_{<e,t>} \cap [\![\text{COMMENT}]\!]_{<e,t>}$]]]

In this paper, I presume that weak NPs (as the topic phrase in (83)) are existentially closed at the level of VP (cf. Mapping Hypothesis, Diesing 1992). As a result, at the vP-level we get a truth-value denotation which can be combined with tense/modality heads. Against this background, we could assume that the grammar blocks the existential closure of weak NPs at a higher level in order to avoid this kind of problems.

Against this background, the fact that Greek topicalization may freely target the pivot of the existential construction (as illustrated by (87)) is one more piece of evidence that Greek topicalization does not involve individual-type traces.[29]

(87) [Potirja], ehi <potirja> pano sto trapezi.
glasses has-3SG on to-the table
'There are glasses, on the table.'

To conclude, out of three theoretically possible LF-representations for Greek topicalization (82a-c) two are blocked by the Grammar. More specifically it has been shown that the LF-representations with an individual or a property denoting trace are excluded for independent reasons. As a consequence, Greek topicalization resorts to total reconstruction which is the only well-formed – hence interpretable by the semantic component – LF-representation.

## 6. Conclusions

The present paper investigated Greek topicalization, a topic-marking dependency. topicalization involves A'-movement of a property-denoting (<e,t>) topic phrase to the left periphery of the sentence. What is special about topicalization is the fact that it mandatorily shows total reconstruction. This means that only the copy in the base position of the movement chain is interpreted.

The present study proposed that the reconstruction behavior of topicalization stems from the semantic type of the moved phrase. In particular, given the property-type denotation of topicalized phrases, only the total reconstruction analysis results in a well-formed LF-representation. More precisely, topicalization chains cannot be mapped onto individual or property traces, therefore they resort to total reconstruction. Through the study of Greek topicalization, the present paper provides novel empirical evidence and lends further support to Poole's conclusion that property traces do not exist. Specifically, if property traces existed, the systematic total reconstruction in Greek topicalization could not be explained without further assumptions.

## Abbreviations:

1 = 1st person

3 = 3rd person

SG = singular

PL = plural

NOM = nominative

ACC = accusative

[29] Similar arguments can be constructed with *naming* and *change-of-color verbs* (see Poole 2017 and the references therein). If we are right that these verbs require a property in the position of the *name argument* and the *color-term* respectively, then the fact that Greek topicalization can target these positions shows that the copy of the topic in these chains is not interpreted as an individual variable:

(i) [Jani]$_{<e,t.>}$, onomasa <Jani>$_{<e,t>}$ ton skilo mu.
John named-1SG the dog my
'I named my dog John.'

(ii) [Prasino]$_{<e,t>}$, evapsa <prasino>$_{<e,t>}$ to musi mu .
green dyed-1SG the beard my
'I dyed my beard green.'

DAT = dative

CL = clitic

IMP = imperfective

FUT = future

SUBJ = subjunctive

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**Supplementary file 1: Appendix. Topic-marking properties of topicalization**

I compare topicalization with CLLD and focus-fronting with respect to a number of (phonological, syntactic, semantic and pragmatic) properties, which are standardly associated with topic-marking.

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