

# Topic Strategies and the Internal Structure of Nominal Arguments in Greek and Italian

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In this article, we argue that a set of unexpected contrasts in the interpretation of clitic-left-dislocated indefinites in Greek and Italian derive from structural variation in the nominal syntax of the two languages. Greek resists nonreferential indefinites in clitic left-dislocation, resorting to the topicalization of an often bare noun for nonreferential topics. By contrast, clitic left-dislocation is employed in Italian for topics regardless of their definite/indefinite interpretation. We argue that this contrast is directly linked to the wide availability of bare nouns in Greek, which stems from a structural difference in the nominal syntax of the two languages. In particular, we hypothesize that Greek nominal arguments lack a D layer. Rather, they are Number Phrases. We situate this analysis in the context of Chierchia's (1998) typology of nominals. We argue that, on a par with Italian nouns, Greek nouns are [-arg, +pred]. However, they do not employ a syntactic head (D) for type-shifting to ⟨e⟩. Rather, they resort to covert type-shifting, a hypothesis that is necessary to account for the distribution and interpretations of bare nouns in Greek, vis-à-vis other [-arg, +pred] languages like Italian and French.

*Keywords:* Greek, Italian, clitic left-dislocation, nominal syntax, bare nouns, indefinites

## 1 Introduction

Since the early 1990s, the syntax of clitic left-dislocation (CLLD) has attracted interest in the literature on Greek and Italian because of its syntactic properties that distinguish it from *wh*-movement and its interaction with discourse structure (see, e.g., Cinque 1990, Anagnostopoulou 1994, Tsimpli 1995, Rizzi 1997). CLLD shows mixed syntactic properties in relation to movement

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diagnostics. It is sensitive to islands, a standard indication of movement, but does not give rise to weak crossover effects and does not license parasitic gaps as *wh*-movement does. In this respect, it patterns with English topicalization, which also shows these contradictory properties regarding movement. To accommodate the properties of topicalization within a theory of  $\bar{A}$ -movement, Lasnik and Stowell (1991) postulate two types of  $\bar{A}$ -operators: quantificational (*wh*, QR (Quantifier Raising), focus) and anaphoric (topic, null operator in *tough*-movement, and nonrestrictive relative clauses). The crucial property of anaphoric operators like the topic operator in topicalization is that it does not bind a variable. Rather, topicalized phrases are linked to the in-situ element of the dependency (a *null epithet*) through coreference. Building on Lasnik and Stowell's analysis of English topicalization, Tsimpli (1995) and Rizzi (1997) explicitly analyze the pronominal in Greek and Italian CLLD as an overt counterpart of the gap (null epithet) element of English topicalization. As in English topicalization, the clitic-left-dislocated phrase is linked anaphorically to the in-situ element of the dependency (the pronominal clitic), through coreference. Sensitivity to islands is accounted for by  $\bar{A}$ -movement, while the absence of variable binding explains the absence of weak crossover and parasitic gaps.

In this context, we generally expect clitic-left-dislocated phrases to receive the same interpretations in Greek and Italian. Moreover, if both CLLD and topicalization are attested within a language, we do not expect variation in interpretation if all that differs between the two structures is the PF realization of the in-situ element.<sup>1</sup> However, despite these expectations, there are important interpretive differences between Greek and Italian CLLD that point to the need for a more refined analysis of the variation between the two languages. These contrasts are the starting point of our investigation.

The key difference concerns the interpretation of clitic-left-dislocated indefinites. Greek clitic-left-dislocated indefinites systematically resist a nonreferential interpretation, as shown in (1) (from Alexopoulou and Kolliakou 2002:224). Thus, (1c), which imposes a referential interpretation of the clitic-left-dislocated antecedent 'a red skirt' in (1a), is a felicitous continuation of (1a). By contrast, (1b) is not felicitous<sup>2</sup> because it imposes a nonreferential interpretation of the clitic-left-dislocated antecedent.<sup>3</sup>

- (1) a. Mia kokini fusta tin psahno edho ke meres . . .  
       a red skirt it look.for.1SG here and days  
       'I've been looking for a red skirt for a few days . . .'  
       b. ≠. . . ke dhe boro na vro kamia pu na m'aresi.  
           and not can.1SG SUBJ find.1SG none that SUBJ me-please.3SG  
       '. . . and I cannot find any that I like.'

<sup>1</sup> Indeed, we do not expect differences between English topicalization and Italian or Greek CLLD, but a comprehensive discussion of this prediction is beyond our current scope.

<sup>2</sup> We use the symbol ≠ to indicate infelicity.

<sup>3</sup> Unless otherwise stated, all pronouns are clitics in the Greek examples, but we have removed this information from the glosses for simplicity and ease of exposition. Similarly, we have generally removed gender and case-marking information from glosses of Greek nominals (nouns, adjectives, pronouns, articles), except for genitive marking.

- c. ... ke dhe boro na thimitho pu tin eho vali.  
 and not can.1SG SUBJ remember.1SG where it have.1SG put  
 '... and I cannot remember where I put it.'

The corresponding Italian example (2a) is ambiguous. Both (2b) and (2c) are felicitous continuations of (2a).

- (2) a. Una gonna rossa la cerco da un po' ...  
 a skirt red her.CL look.for.1SG for a while  
 'A red skirt I've been looking for for a while ...'  
 b. ... ma non ne ho trovata nessuna che mi piaccia.  
 but not of.them.CL have.1SG found none.FEM that me please.3SG.SUBJ  
 '... but I have not found any that I like.'  
 c. ... ma non riesco a ricordarmi dove l'ho messa.  
 but not reach.1SG to remember where her.CL-have.1SG put  
 '... but I cannot remember where I put it.'

To express an indefinite topic as in (2b), Greek resorts to topicalization as in (3), which characteristically involves a gap instead of a clitic (Alexopoulou and Kolliakou 2002:224, (51)).

- (3) a. Fetos i modha ine apesia; idhika i bluzes ine aparadhektes.  
 'I hate this year's fashion; the blouses are especially outrageous.'  
 b. Mia kokini bluza psahno edho ki ena mina ke dhe boro na  
 a red blouse look.for.1SG here and one month and not can.1SG SUBJ  
 vro puthena kamia pu na m'aresi.  
 find.1SG anywhere any.one that SUBJ me-like.3SG  
 'A red blouse I've been looking for for a month now and I cannot find one  
 that I like.'

The above facts call for a finer analysis of variation between Greek and Italian regarding CLLD. The properties of the clitic pronominals in the two languages appear relevant since the source of the interpretive contrast in Greek is the alternation between gap and pronominal clitic.

This interpretive difference calls into question the analysis of the alternation between gaps and pronominal clitics as merely a case of PF alternation. Rather, such facts indicate that the properties of the in-situ element in an anaphoric  $\bar{A}$ -chain matter. In this article, we argue that, in order to account for the interpretive variation between Greek and Italian CLLD, we need to complement the existing account based on anaphoric chains with an account of the properties of the pronominal elements at the bottom of these dependencies and, in turn, the properties of their antecedents heading the CLLD dependency. In other words, we need to complement the existing analysis of CLLD with an account of the variation of the syntax of nominals in the two languages.

Italian nominal arguments are standardly analyzed as DPs (Giusti 1993, Longobardi 1994). Since Horrocks and Stavrou 1987, Greek nominal arguments have also been analyzed as DPs (see also Stavrou 1991). This view remains dominant in the Greek literature to date, modulo Kolliakou's (2003) work on Greek definites and two proposals treating some cases of Greek bare

nouns as NPs by Tomioka (2003) and Tsimpli and Papadopoulou (2005). We will depart from the dominant DP analysis of Greek nominals and argue that the key structural difference between Greek and Italian nominal syntax is the absence of a D layer from Greek nominal arguments. We will draw extensive evidence from the distribution and properties of bare nouns in Greek and from a comprehensive comparison of Greek bare and definite nouns with bare and definite nouns in a variety of languages in the context of the typologies proposed by Chierchia (1998b), Bošković (2008), and Bošković and Gajewski (2011). As we will demonstrate, the empirical diagnostics show that Greek does not exhibit some crucial properties of article/D languages like Italian, but it also differs from languages like English and Slavic that allow bare nouns to refer to kinds. We will argue that Greek instantiates a type not previously considered theoretically: a language with predicative nouns that nevertheless lacks a syntactic head (D) to resolve the mismatch between the semantic types of properties  $\langle\langle e, t \rangle\rangle$  and individuals  $\langle\langle e \rangle\rangle$ . We will argue that, instead, Greek has to resort to covert type-shifting for bare indefinites. We will show that our hypothesis can capture the properties of Greek nominals but also account for the interpretive possibilities of pronominals in CLLD, capturing the crosslinguistic variation.<sup>4</sup>

Our starting point in section 2 is the syntactic and semantic properties of Greek bare nouns and the critical ways in which Greek differs from Italian. In section 3, we discuss the differences between the two languages in the context of Chierchia's (1998b) nominal mapping parameter, reaching the conclusion that Greek lacks a D layer. We consider definites in section 4, providing a comprehensive review of Greek nominals in the context of the typological diagnostics proposed by Bošković (2008) and arguing that the Greek definite article does not instantiate a D head. We return to CLLD and topicalization in section 5, showing first how CLLD mirrors various anaphoric patterns in the two languages and then discussing how the variation in the nominal syntax can help explain the crosslinguistic contrasts in anaphoric construals. Finally, we discuss the possible source of variation between Greek and Italian in section 6, and offer conclusions in section 7.

## 2 Bare Nouns in Greek

A significant difference between Greek and Italian is the wide availability of bare nouns in the former, contrasting with their restricted availability in the latter. As illustrated in (4), Greek bare nouns can be singular as well as plural.

- (4) a. I Maria vrike dada gia ta pedhia.  
       the Maria found nanny for the children  
       'Maria found a nanny for the children.'
- b. Bikan kleftes ke sikosan ta pada.  
       broke.in.3PL burglars and lifted.3PL the all  
       'Burglars broke in and took everything.'

<sup>4</sup> A preliminary discussion and analysis of this set of facts is presented in Alexopoulou and Folli 2011.

- c. Dhiadhilotes pīrpolisan maghazia ke aftokinita stus dhromus yiro apo  
demonstrators set.on.fire.3PL shops and cars in.the streets around from  
to Politehnio.  
the Politehnio  
'Demonstrators set on fire shops and cars in the streets around the School of Engi-  
neering.'

In Italian, by contrast, bare nouns are licensed in restricted environments, with bare singulars generally being excluded (Benincà 1980, Longobardi 1994, Chierchia 1998b). Consider the Italian counterparts of Greek (4a) in (5).

- (5) a. Maria ha trovato una baby-sitter/\*baby-sitter per i bambini.  
Maria has found a babysitter/\*babysitter for the children  
'Maria found a babysitter for the children.'  
b. Gianni sta cercando un idraulico/\*idraulico.  
Gianni is looking.for a plumber/\*plumber  
'Gianni is looking for a plumber.'

In addition, Italian makes productive use of the bare partitive construction (6a–b) (Chierchia 1998a), whereas Greek uses both bare mass and bare count nouns (7)–(8).

- (6) a. Del vino si è rovesciato.  
of.the wine REFL PAST spill  
'Some wine got spilled.'  
(adapted from Chierchia 1998a:73)  
b. Vogliamo degli artisti.  
want.1PL of.the artists  
'We want artists.'
- (7) a. Trehi nero apo to solina.  
run.3SG water from the pipe  
'Water runs from the pipe.'  
b. Hithike krasi sto trapezomadilo.  
was.spilled wine on.the tablecloth  
'Wine was spilled on the tablecloth.'
- (8) Thelume kalitehnes ya-na . . .  
want.1PL artists to  
'We want artists to . . .'

In what follows, we review the properties of Greek bare nouns. First, we consider whether they should be analyzed as incorporated properties or arguments, establishing that they are arguments (section 2.1). Then, we show that they are available in both subject and nonsubject positions and therefore do not exhibit the structural restrictions of Italian bare nouns (section 2.2). Finally, we consider their interpretations (section 2.3).

### 2.1 Evidence That Bare Nouns Are Not Incorporated Properties

Evidence from their morphology, syntax, and interpretation clearly suggests that Greek bare nouns are not incorporated properties. In particular, in terms of their morphology, bare nouns are marked for case, gender, and number, just like any other argument, in contrast to incorporated arguments, which, crosslinguistically, may show reduced morphology (Farkas and de Swart 2003).

From the point of view of their syntactic behavior, they can be left-dislocated (9a), undergo (focus) movement (9b), or be passivized (9c), like any other argument.<sup>5</sup>

- (9) a. Dhanio, xerume pia trapeza tha mas dhosi.  
loan know.1PL which bank will us give.3SG  
'A loan, we know which bank will give it to us.'
- b. GHAMO theli, ohi tsiliburdhismata.  
marriage want.3SG not affairs  
'He's after marriage, not affairs.'
- c. Plastes taftotites ekdhothikan mono stin Katohi (ohi ston Emfilio).  
fake identity.cards were.issued only in.the Occupation (not in.the Civil.War)  
'Fake identity cards were issued only during the Occupation period (not during the Civil War).'

Importantly, bare nouns can be modified like their nonbare counterparts, as illustrated in (10).

- (10) a. Aghorase akrivo aftokinito.  
bought.3SG expensive car  
'She bought an expensive car.'
- b. Theli dada me ptihio.  
want.3SG nanny with degree  
'She wants a nanny with a degree.'
- c. KALOS yatros ton exetase (min anisihis).  
good doctor him examined.3SG (not worry.2SG)  
'A good doctor examined him, don't worry.'

We turn next to the interpretation of bare nouns. The literature has shown that incorporated bare singulars exhibit number neutrality, that is, compatibility with both atomic (singular) and plural interpretations, despite their singular morphology (Farkas and de Swart 2003, Espinal 2010). Greek bare singulars are only compatible with an atomic interpretation. Thus, (11a) denotes

<sup>5</sup> Panagiotidis (2003) points out that a predicate like *perno telefono* 'take phone' is ambiguous between 'I get (= buy/fetch) a phone' and 'I make a phone call'. Interestingly, even under the latter interpretation, where *telefono* could be taken as semantically incorporated into the meaning of the whole predicate, the bare noun can be dislocated.

- (i) Telefono dhe bori na pari i MARINA; ine mikro pedhi.  
phone not can.3SG SUBJ take.3SG the Marina is small child  
'Marina cannot make a phone call; she's only a child.'

We would like to thank Phoivos Panagiotidis for bringing this point to our attention.

reading of *one* newspaper;<sup>6</sup> characteristically, (11c) is ungrammatical with the singular, exactly because the predicate necessitates a plural interpretation (compare with *stamp collector* in English).

- (11) a. Dhiavase efimeridha.  
 read.3SG newspaper  
 ‘She read a newspaper.’ (*reading of one newspaper*)  
 b. Dhiavase efimeridhes.  
 read.3SG newspapers  
 ‘She read newspapers.’ (*reading of more than one newspaper*)  
 c. Mazevi \*ghramatosim-o/ghramatosim-a.  
 gather.3SG stamp/stamps  
 ‘She collects stamps.’

Greek bare singulars cannot license plural interpretations, as in (12) and (13) (adapted from Espinal 2010:986, (4a)). The second sentence in (12) is infelicitous; Greek contrasts in this respect with languages like Catalan, where bare nouns with singular morphology may still license plural interpretations in contexts like (12) (Espinal 2010).

- (12) Psahno aftokinito; ≠ena mikro ya tin poli ki ena fortighaki ya ekdhromes.  
 look.for.1SG car ≠one small for the city and one van for trips  
 ‘I’m looking for a car; ≠a small one for the city and a van for trips.’

Further, Greek bare nouns have atomic interpretations in contexts like (13), where their Catalan counterparts are number-neutral and compatible with plural readings. For instance, (13a) cannot be followed by a continuation like ‘but the kids picked them’ where the pronoun ‘them’ needs a plural antecedent. Similarly, (13b) cannot be followed by a continuation like ‘The police checked them’. Finally, (13c) cannot mean ‘I am a car collector’.<sup>7</sup>

- (13) a. I amigdhalia evgale luludhi.  
 the almond.tree made.3SG flower  
 ‘The almond tree had a flower.’

<sup>6</sup> A reviewer asks whether, in an imperfective example where the activity interpretation is facilitated, a singular bare noun can denote an unspecified number of something. Example (i) confirms the atomic interpretation for singular bare nouns, on a par with (11a).

(i) Dhiavaze efimeridha.  
 read.3SG newspaper  
 ‘She was reading a newspaper.’ (*reading of one newspaper*)

<sup>7</sup> With focal stress on the verb, we can get the implicature of more flowers, accounts, or cars in (13). We think this is due to the fact that any indefinite interpreted existentially is true even if more than one such entity exists. In other words, the Greek examples in (13) are no different than their English translations. One reviewer wonders whether the availability of the plural vs. singular reading is related to relevance effects, just like the contrast between *Everyone who had a dime put it in the meter* and *Everyone who had a credit card used it to pay the bill*. While relevance is at stake for understanding the interpretation of (12) and (13), it cannot explain the difference between Greek and Catalan in the basic cases, since identical syntactic structures are not expected to give rise to different implicatures.

- b. Eho loghariasmo stin ethniki.  
 have.1SG account in.the national  
 ‘I have an account in the National Bank.’
- c. Eho aftokinito.  
 have.1SG car  
 ‘I have a car.’

Espinal (2010) further notes that bare singulars in Catalan are restricted to cases where the predicate (verb + bare singular) denotes a characterizing property of the subject. This assumption explains the contrast between (14a) and (14b) (from Espinal 2010:993, (18)). (14a) involves a characterizing property of the external argument, that of being a car owner, while (14b) does not. Building on Espinal and McNally 2011, Espinal (2010) assumes that only ‘have’ predicates are compatible with these characterizing interpretations. Example (14b), then, is infelicitous because it cannot be analyzed as a ‘have’ predicate.

- (14) a. Tengo coche.  
 have.1SG car  
 ‘I have a car.’ (It could be one or more than one; I am a car owner.)
- b. ≠Limpio coche.  
 clean.1SG car  
 ‘I’m cleaning a car.’

Greek examples of the type in (14a) can certainly be interpreted as providing a characterizing property of the subject. However, bare singulars can appear as objects of a wider range of verbal predicates, as we have shown in (4a) and (8). Moreover, in examples like (10c) the bare noun is a subject, yet the predicate does not denote a characterizing property of the subject.<sup>8</sup> Further, note that while B’s reply is not felicitous in the minimal context of (15), a similar expression is fine in (16).

- (15) A: Ti kanis?  
 what doing.2SG  
 ‘What are you doing?’
- B: ≠?Katharizo aftokinito.  
 clean.1SG car  
 ‘I am cleaning a car.’
- (16) A: Pu vriskete o Yanis?  
 where is.3SG the Yanis  
 ‘Where is Yanis?’

<sup>8</sup> See section 2.2 for bare nouns in subject position.



- B: Katharizi eklisia; katalavenis; tha ton dhume se kamia vdhomada pali.  
 clean.3SG church understand.2SG will him see.1PL in a week again  
 ‘He’s cleaning a church. You know; we won’t see him for a week.’

Suppose that speaker B owns a company that takes on cleaning of public buildings such as schools, churches, and gyms. Assuming shared knowledge between A and B that cleaning a church is the most difficult and time-consuming of these jobs, B’s reply is natural, since ‘cleaning a church’ is a predicate that is implicitly contrasted with ‘cleaning a gym or a school’. Note that these are not characterizing predicates in Espinal’s sense, because they do not mean that Yanis is a “church cleaner,” a “gym cleaner,” or a “school cleaner.”

Additional evidence that Greek bare nouns are arguments comes from the types of adjectives that can modify them. Bare singulars in Catalan can combine with classifying modifiers as in (17a) but resist qualitative and descriptive adjectives as in (17b–c) (from Espinal 2010: 988–989, (8)–(9)). *Llarga* ‘long’, *escocesa* ‘Scottish’, and *de quadres* ‘plaid’ denote types of skirts, while *alta* ‘tall’ and *malalta* ‘ill’ in (17c) can only modify individual entities.

- (17) a. Per a aquest espectacle necessitareu faldilla llarga/escocesa/de quadres.  
 for to this event need.FUT skirt long/Scottish/plaid  
 ‘For this event you will need a long skirt/a kilt/a plaid skirt.’  
 b. \*Necessiten faldilla feta a Singapur/neta.  
 need skirt made in Singapore/clean  
 c. \*Té parella alta/malalta.  
 has partner tall/ill

In contrast, Greek bare singulars can denote individuals, as indicated by the availability of the descriptive and qualitative adjectives in (18b–c).

- (18) a. Tha hriastite makria/skotseziki/plise fusta.  
 will need.2PL long/Scottish/plaid skirt  
 ‘You will need a long skirt/a kilt/a plaid skirt.’  
 b. Tha hriastite fusta rameni stin Indhia/kathari fusta.  
 will need.2PL skirt sewn in.the India/clean skirt  
 ‘You will need a skirt sewn in India/a clean skirt.’  
 c. Ehi arosto pedhi/psilo gomeno.  
 has.3SG ill child/tall boyfriend  
 ‘She has an ill child/a tall boyfriend.’

To summarize, the evidence reviewed in this section comes from the morphological makeup of bare nouns and from their ability to be dislocated as ordinary arguments, to be modified by adjectives, and to accept both qualitative and descriptive adjectives. Finally, the atomic interpretation of bare singulars is evidence for their argumenthood. All these facts point to the conclusion that Greek bare nouns denote individuals. They can be arguments and cannot be analyzed as (incorporated) properties. This is a conclusion also reached independently by Lazaridou-Chatzigeorga and Alexandropoulou (2013) on the basis of investigating Greek bare singulars in the Hellenic National Corpus.

## 2.2 Greek Bare Nouns in Subject Position

We now turn to the syntactic environments licensing bare nouns in Greek. The first critical question is whether Greek bare nouns can appear in subject position. This is the position from which bare nouns are generally barred in Italian. Chierchia (1998b) captures this by stating that licensing of bare nouns depends on government by a lexical head and therefore is limited to objects in Italian.<sup>9</sup> One important difference between Greek and Italian is that in Greek, subjects occurring preverbally—for instance, in a surface SVO structure—have in fact undergone movement as topics or foci to a left-peripheral position (Philippaki-Warbuton 1985, Tsimpli 1995, Alexiadou and Anagnostopoulou 1998, Roussou and Tsimpli 2006).<sup>10</sup> Since early analyses of Greek clause structure (Philippaki-Warbuton 1985), VSO is derived from an underlying SVO after V-to-T raising. Following V-to-T movement, the subject can then move to a left-peripheral position as topic or focus. Thus, we need to evaluate the availability of bare noun subjects in the various possible positions where Greek subjects can appear. We first test their availability in their canonical postverbal position. As shown in (19), they are acceptable there.<sup>11</sup>

- (19) a. Bikan kleftes ke sikosan ta pada.  
broke.in.3PL burglars and lifted.3PL the all  
'Burglars broke in and took everything.'
- b. Efaghan mirmigjia ta melomakarona.  
ate.3PL ants the honey.cookies  
'Ants ate the honey cookies.'
- c. Ton exetase ofthalmiatros ke tu ipe oti hriazete yalia.  
him examined.3SG eye.doctor and him.GEN said.3SG that need.3SG glasses  
'(An) eye doctor examined him and told him that he needs glasses.'
- d. Emfanistikan alepudhes sta horia tu kabu.  
appeared.3PL foxes at.the villages the.GEN lowlands.GEN  
'Foxes appeared around the villages of the lowlands.'
- (20) a. Efaye podikos to kalodhio.  
ate.3SG mouse the wire  
'A mouse ate the wire (the wire has been eaten by a mouse).'
- b. Eki pu kimotan eklepsan perastiki ton Petros.  
there that was.sleeping.3SG robbed.3PL passers.by the Petros  
'As he was sleeping, passers-by robbed Petros.'

<sup>9</sup> We take it that for our descriptive purposes the relevant notion of government is sufficiently clear; we will therefore refrain from reconstructing it in more current Minimalist terms.

<sup>10</sup> Roussou and Tsimpli (2006) argue that there is an exception to the generalization that preverbal subjects are either topics or foci in Greek. They argue that subjects of statives, generic subjects, and subjects of middle constructions in fact appear in Spec,TP. However, this view is contested by Kotzoglou (2013). Here, we will follow the more standard view in the Greek literature that preverbal subjects are not in Spec,TP.

<sup>11</sup> We assume a broad focus prosody for the examples in (19) and (20) with nuclear stress on the rightmost edge of the sentence, to avoid focal stress on the subject.

- c. Epitelus! Bike pelatis sto maghazi.  
 at.last came.in.3SG customer in.the shop  
 ‘At last, a customer came in the shop.’
- d. Epitelus! Filise yineka to Yani.  
 at.last kissed.3SG woman the Yanis  
 ‘Finally, a woman kissed Yanis.’

As shown by Lazaridou-Chatzigoga and Alexandropoulou (2013), bare nouns can be subjects of passive verbs (21) and appear in control structures (22) (from Lazaridou-Chatzigoga and Alexandropoulou 2013:245, (21)–(22)).

- (21) Htes to vradhi dhothike dexiosi stin presvia tis Vulgharias.  
 yesterday the evening was.given reception at.the embassy the.GEN Bulgaria.GEN  
 ‘Yesterday evening, there was a reception at the Bulgarian embassy.’
- (22) I sigenis tu Otsalan epsahnan xenodhohio na tus dhehti.  
 the relatives the.GEN Öcalan were.searching.3PL hotel SUBJ them accept.3SG  
 ‘Öcalan’s relatives were looking for a hotel to host them.’

Bare subjects can also appear preverbally, as shown in (23). Again they can be singular or plural.<sup>12</sup>

- (23) a. Pedhja fonazan stin platia olo to vradhi.  
 kids shouted.3PL at.the square whole the evening  
 ‘Kids were shouting in the square the whole evening.’
- b. Mihanakia triyirizan stin platia olo to vradhi kornarodas.  
 motorcycles circled.3PL at.the square whole the evening beeping  
 ‘Motorcycles were circling the square the whole evening beeping.’
- c. Dheltadhes ekovan voltes sta Exarhia olo to vradhi.  
 delta.policemen cut.3PL rounds in.the Exarhia whole the night  
 ‘Policemen were going round Exarhia (neighborhood) all night.’
- (24) a. Itan enas hamos; yinekes epsahnan ta pedhja tus mes ta  
 was a disaster women were.looking.for.3PL the children their in the  
 halasmata; pedhja kitazan yiro tus sastismena.  
 ruins children were.looking.3PL around them startled  
 ‘It was a mess; women were looking for their children in the ruins; children were looking around startled.’

<sup>12</sup> Sioupi (2001) notes that bare nominals are excluded from subject position as in (i) (from Sioupi 2001:234, (4a)). She takes such examples to indicate that there is a special structural condition licensing bare nominals, namely, that the bare nominal must be governed. Such structural restrictions are evidence for a null D, which, as in Italian, is not freely available but instead needs to be structurally licensed. However, the preverbal position is not a subject position. Example (i) is more likely ungrammatical because *pedhja* ‘children’ is not a good topic.

(i) \*Pedhja efaghan to psari.  
 children ate the fish  
 ‘Children ate the fish.’

- b. Alepudhes irthan ke perisi.  
foxes came.3PL and last.year  
'Foxes appeared last year as well.'
- c. Karharias ehi na emfanisti s'afti tin periohi apo to 2002.  
shark has.3SG SUBJ appear.3SG in-this the region since the 2002  
'A shark has not appeared in this area since 2002.'
- d. Kleftis dhe spai tetia klidharia me tipota.  
thief not break.3SG such lock with nothing  
'There's no way a thief can break such a lock.'

To summarize, then, subject bare nouns are free to appear in the canonical postverbal subject position and indeed preverbally, where they are standardly analyzed as topics.

### 2.3 Interpretations of Bare Nouns

A dominant question regarding the analysis of bare nouns is to what extent their interpretation is equivalent to that of indefinites. As discussed in detail by Delfitto (2005), bare nouns cannot receive interpretations logically equivalent to those of their counterparts with overt determiners, an observation originally due to Carlson (1977). Consider the examples in (25) and (26) (from Delfitto 2005:218).

- (25) a. John didn't see spots on the floor.  
b. Dogs were everywhere.
- (26) a. John didn't see some spots on the floor.  
b. Some dogs were everywhere.

Example (26a) has a wide scope reading<sup>13</sup> of the indefinite, under which John may have seen many spots, but there are some that he failed to see. This wide scope reading is unavailable in (25a) with the bare noun. Similarly, the bare plural *dogs* in (25b) means that for every (relevant) place there was a different group of dogs. This meaning is unavailable when *some dogs* is used in (26b). Because of such facts, bare nouns are viewed as scopally inert (Carlson 1977, Chierchia 1998b, Farkas and de Swart 2003). Despite their scopal inertia, bare nouns can be bound by adverbs of quantificational genericity like *always* or *often*.

- (27) a. In this country, people are (always) friendly.  
b. When one scares them, dogs are (often) aggressive.

Scopal inertia and the binding facts in (27) have been central to the debate around treating bare nouns as kind-referring expressions and in pursuing a quantificational analysis of bare nouns as indefinites. Below we consider the relevant examples from Greek in order to evaluate how Greek bare nouns fit the current generalizations. Unsurprisingly, Greek bare nouns exhibit the scopal inertia found with their crosslinguistic counterparts. First, on a par with its English transla-

<sup>13</sup> The narrow scope reading is also available.

tion, (28a) means that there were dogs in every place, while (28b) has the implausible meaning that the same set of dogs was omnipresent (Delfitto 2005).

- (28) a. Skilia vriskodan padou/Padou vriskodan skilia.  
 dogs were.found everywhere/everywhere were.found dogs  
 ‘Dogs were everywhere.’  
 b. Merika skilia vriskodan padou.  
 some dogs were.found everywhere  
 ‘Some dogs were everywhere.’

Second, the bare plural cannot scope over negation, as shown in (29a). By contrast, when the noun is preceded by *merikes/kati* ‘some’, the wide scope reading for the indefinite nominal is the preferred one; see (29b).

- (29) a. Dhen idhe roghmes sto tavani.  
 not saw.3SG cracks in.the ceiling  
 ‘She didn’t see cracks in the ceiling.’ (only  $\neg > \exists$ )  
 b. Dhen idhe kati/merikes roghmes sto tavani.  
 not saw.3SG some/some cracks in.the ceiling.  
 ‘He didn’t see some/some cracks in the ceiling.’ (only  $\exists > \neg$ )

A similar contrast is illustrated in (30), where the bare noun *efimeridhes* ‘newspapers’ in (30a) cannot take scope over the universal, unlike *kati/kapies efimeridhes* ‘some newspapers’ in (30b).

- (30) a. Kathe episkeptis dhiavase efimeridhes.  
 each visitor read.3SG newspapers  
 ‘Each visitor read newspapers.’ (only  $\forall > \exists$ )  
 b. Kathe episkeptis dhiavase kati/kapies efimeridhes.  
 each visitor read.3SG some/some newspapers  
 ‘Each visitor read some newspapers.’ ( $\forall > \exists$  or  $\exists > \forall$ )

Finally, the bare plural in (31a) (adapted from Chierchia 1998b:364) cannot scope over the intensional predicate *theli* ‘wants’; hence, only the opaque (*de dicto*) reading is available. By contrast, (31b) is ambiguous between an opaque and a transparent (*de re*) reading for *kapius astinomikus* ‘some policemen’.

- (31) a. I Maria theli na ghnorisi astinomikus.  
 the Maria want.3SG SUBJ meet.3SG policemen  
 ‘Maria wants to meet policemen.’ (only opaque)  
 b. I Maria theli na ghnorisi kapius astinomikus.  
 the Maria want.3SG SUBJ meet.3SG some policemen  
 ‘Maria wants to meet some policemen.’

Bare singulars also show scopal inertia. Singular indefinites preceded by *ena* and *mia* ‘one’ give rise to ambiguity in (32b) and (33b), allowing both a transparent or *de re* reading and an opaque or *de dicto* reading. On the other hand, the bare singular shows no scopal interaction; see (34).

- (32) a. I Maria theli na padrefthi Italo.  
 the Maria want.3SG SUBJ marry.3SG Italian  
 ‘Maria wants to marry an Italian.’ (only opaque)  
 b. I Maria theli na padrefthi **enan** Italo.  
 the Maria want.3SG SUBJ marry.3SG one Italian  
 ‘Maria wants to marry an Italian.’ (ambiguous)
- (33) a. I Maria theli n’aghorasi fusta tu Armani.  
 the Maria want.3SG SUBJ-buy.3SG skirt the.GEN Armani  
 ‘Maria wants to buy an Armani skirt.’ (only opaque)  
 b. I Maria theli n’aghorasi **mia** fusta tu Armani.  
 the Maria want.3SG SUBJ-buy.3SG one skirt the.GEN Armani  
 ‘Maria wants to buy an Armani skirt.’ (3-ways ambiguous)<sup>14</sup>
- (34) a. Dhen idhe mia lakuva sto dhromo.  
 not saw.3SG a hole in.the street  
 ‘She didn’t see a hole in the street.’ ( $\exists > \neg$  or  $? \neg > \exists$ )  
 b. Dhen idhe lakuva sto dhromo.  
 not saw.3SG hole in.the street  
 ‘He didn’t see a hole in the street.’ (only  $\neg > \exists$ )

Greek bare nouns, then, are on a par with their English counterparts regarding scopal inertia. However, they differ from their counterparts in that they cannot be bound by adverbs of quantificational genericity. Examples (35a–b) can only receive an existential interpretation, which is infelicitous and leads to unacceptability.

- (35) a. \*Sti Skotia, astinomiki ine (pada) filiki.  
 in Scotland policemen are (always) friendly  
 ‘In Scotland, policemen are always friendly.’  
 b. \*An ta fovisis, skilia (sinithos) epitithede/ine epithetika.  
 if them scare.2SG dogs (usually) attack/are aggressive  
 ‘If you scare them, dogs (usually) attack/are aggressive.’

As we will discuss in more detail in section 3, the unavailability of binding in the above examples argues against the presence of a (null) operator in the bare noun.

Let us turn to analyses of scopal inertia. In the literature on English bare nouns, scopal inertia and kind reference have been linked to an analysis of bare nouns as distinct from indefinites. For example, according to Carlson (1977) bare nouns map directly to arguments and denote kinds. Kinds are names, and, as such, they do not interact with semantic operators scopally. Chierchia (1998b) builds on the view of bare plurals as kinds, but offers a different analysis whereby scope-shifting operations are constrained by economy, hence do not apply unless they produce alternative

<sup>14</sup> As pointed out to us by Sabine Iatridou, example (33b) additionally allows a third reading according to which Maria is looking for a specific type of Armani skirt.

interpretations. Scope-shifting operations leave behind traces that should be of the same type as the moved constituents. Therefore, kind-denoting nominals would leave behind kind-level traces, leading to identical interpretations in both moved and in-situ cases. As a consequence of economy, movement that will lead to identical interpretations is not expected; hence, no scopal interaction will arise with kinds.<sup>15</sup> In a nutshell, scopal inertia is a consequence of kind reference.

Turning to Greek, the scopal inertia of Greek bare nouns cannot be due to kind reference because, unlike their English counterparts, Greek bare nouns cannot refer to established kinds. This is shown by the unavailability of bare nouns with predicates that are satisfied by established kinds, like the ones in (36) (an observation originally due to Roussou and Tsimpli (1994)).

- (36) a. I dhinosavri/\*Dhinosavri ehun eksafanisti.  
 the dinosaurs have.3PL disappeared  
 ‘Dinosaurs are extinct.’ (bare nominal ungrammatical under the kind reading)
- b. Ta skilia/\*Skilia ine katikidhia zoa.  
 the dogs are domestic animals  
 ‘Dogs are domestic animals.’
- c. ?Dhinosavri ehun eksafanisti.  
 dinosaurs have.3PL disappeared  
 ‘Dinosaurs have disappeared.’ (bare nominal possible only under the existential reading)

Summarizing the available interpretations of Greek bare nouns, we have shown that bare nouns, plural and singular, show the scopal inertia typical of their counterparts in English. Unlike their English counterparts, however, they cannot be bound by adverbs of quantificational genericity nor can they refer to kinds.

### 3 The Nominal Mapping Parameter and the Case of Greek

The facts reviewed in sections 1 and 2 reveal a number of properties of bare nouns that distinguish Greek from English, Italian, Catalan, and Slavic. Greek bare nouns are arguments rather than incorporated properties. They are scopally inert like their English counterparts, but, unlike them, they cannot refer to kinds or be bound by adverbs of quantificational genericity. Given this variation, it is worth considering how Greek can be related to one dominant analysis of the crosslinguistic variation of bare nouns: namely, Chierchia’s (1998b) proposal for a nominal mapping parameter, which has provided a typology of nominals across English, Romance, and Slavic languages.

In his seminal article on reference to kinds across languages, Chierchia (1998b) proposes a semantic parameter according to which languages vary in the way their nouns may be allowed

<sup>15</sup> Alternative analyses treating bare nouns as indefinites involving a null D (e.g., Longobardi 2001) argue that null D does not undergo QR because it lacks lexical content, which is necessary for determiners to undergo scopal movement.

to function as arguments. Accordingly, there is variation across languages in the denotation of nominal categories: nouns may be classified by means of two features, [+/-pred] and [+/-arg]. Chierchia's typology defines five types of languages:

- (37) **[-pred, +arg]:** Every (lexical) noun is mass → (1) Chinese  
 Count/Mass languages  
**[+pred, +arg]:** Bare nouns allowed  
 No article → (2) Slavic  
 Articles → (3) Germanic  
**[+pred, -arg]:** Bare arguments disallowed  
 Null D → (4) Italian  
 No null D → (5) French

Languages with a count/mass distinction are [+pred] and are split into two types, those that are also [+arg] and those that are [-arg]. The former can allow their nouns to shift to kinds and be arguments directly. If a [+arg] language has no articles, then the shifting operations will always be covert. This is the case of Slavic languages. If a [+arg] language has articles, then type-shifting is achieved overtly through the use of the article. Importantly, covert type-shifting is a last resort. Germanic languages, including English, instantiate this option.

In [-arg] languages, every noun is a predicate. The mismatch can be resolved through a syntactic head, typically D, so that a predicative noun is shifted to an argument. French is such a language where no bare nouns are allowed. However, a [+pred, -arg] language can also have a phonetically null syntactic argumentizer  $\delta$ . In this type of language, bare nouns will be restricted, since null  $\delta$  is licensed under certain conditions, such as government by a lexical head (Rizzi 1990). Italian instantiates this possibility.

Let us consider some relevant examples of crosslinguistic variation accounted for by this parametric approach. Starting with the contrast between Italian and English, we have shown that whereas English allows bare plurals (38), Italian necessarily involves a definite article (39a), an indefinite determiner (39b), or the bare partitive construction (39c). According to this proposal, bare nouns in Italian involve a null  $\delta$  (Longobardi 1986, 1994, Chierchia 1998b), which is licensed in governed positions as shown in (39).

- (38) a. Lions are wild animals.  
 b. Dogs are barking in the courtyard.  
 c. Water is dripping from the faucet.  
 ((b) and (c) from Chierchia 1998a)
- (39) a. I leoni sono animali selvaggi.  
 the lions are animals wild  
 'Lions are wild animals.'  
 b. Alcuni cani stavano giocando nel giardino.  
 some dogs were playing in.the garden  
 'Some dogs were playing in the garden.'



- c. Del vino si e' rovesciato.  
 of.the wine REFL PAST spilled  
 'Some wine got spilled.'  
 ((c) from Chierchia 1998a)

For a case of [+arg] languages without articles, let us look at Slavic. Consider some key examples from Russian, shown in (40) (from Chierchia 1998b:361, (27)). Just like English, Russian allows bare plurals to refer to kinds (40e), since [+arg] nouns can shift to kinds. Additionally, covert type-shifting can involve existential ( $\exists$ ) and definite ( $\iota$ ) meanings (40d), since there is no article (D) to block it in these cases (unlike in English). Since Slavic languages are [+arg] and, like English, have a count/mass distinction, they allow bare mass nouns (40a) (with singular morphology). Classifiers like *batona* 'loaf' in *batona khleba* 'loaf of bread' are needed in (40b) and (40c). Singular bare nouns can introduce referents and can be used anaphorically, as in (40d). At its first occurrence, *mal'čik* 'boy' is an indefinite; in its second, an anaphoric definite. Finally, a singular bare noun can be used generically, as shown in (40f).

- (40) a. Ja kupil khleb (\*khleby).  
 I bought bread (\*breads)  
 b. Ja kupil 3 \*(batona) khleba.  
 I bought 3 \*(loaf) of.bread  
 'I bought 3 loaves of bread.'  
 c. Na stole bylo neskolko \*(sortov) syra.  
 on the.table were several \*(types of) cheese  
 d. V komnate byli mal'čik i devočka. Ja obratilsja k mal'čiku.  
 in (the).room were (a).boy and (a).girl I turned to (the).boy  
 e. Dinosavry vymrli. (\*Dynosavr)  
 dinosaurs (are).extinct  
 f. Sobaka obyčnoe životnoe.  
 dog common animal  
 'The dog is a common animal.'

Let us consider how Greek fits into this typology. Greek has a count/mass distinction and therefore is not a Chinese-type language. Crucially, as we saw in examples (36a–c), bare nouns cannot refer to kinds as they do in English and Slavic, a fact indicating that Greek cannot be [+arg] and therefore allow nouns to shift (covertly) to kinds. So Greek nouns must be [+pred, –arg]. There are two language types in this class, no-null- $\delta$  (French) and null- $\delta$  (Italian). Greek cannot be a French-type language since bare nouns are widely available. The alternative discussed by Chierchia is a null- $\delta$  language like Italian. However, there are a number of reasons to believe that Greek is not a null- $\delta$  language. First, as we showed in section 2.2, Greek bare nouns are not restricted to lexically governed positions. They are available in non-lexically governed subject positions, where a null  $\delta$  cannot be licensed according to the theory.

Second, even if we assume weaker licensing conditions on null  $\delta$  in Greek, as suggested by a reviewer, we would nevertheless expect null  $\delta$  to be bound by adverbs in examples of quantifica-

tional genericity (Longobardi 2001, Delfitto 2005). But, as examples (35a–b) illustrate, such binding is impossible in Greek, making the null- $\delta$  analysis problematic. In addition, Greek allows bare singulars alongside the plurals. A null  $\delta$  could be stipulated for singulars, but the question arises why this option is not available in Italian.

In conclusion, Greek must be a [+pred, –arg] language, but cannot be analyzed as a null- $\delta$  language like Italian. Pursuing such an analysis would require significant modifications to current assumptions regarding licensing of null  $\delta$  and binding in contexts of quantificational genericity.<sup>16</sup>

However, there is an alternative route. Perhaps somewhat controversially, let us assume that Greek has no D head—in other words, that even when present, the Greek article does not instantiate a D head. In the case of indefinite bare nouns, lacking a (null) D head, Greek cannot resolve the mismatch between a predicative noun and an argument position by syntactic means; instead, it must resort to covert type-shifting.<sup>17</sup> In the existential sentences in (41), in the absence of a syntactic head a covert operation of existential closure shifts the property denotation of the noun to an existential generalized quantifier, which is an argument.

- (41) a. Ehi tsuhtres/karharia sti thalasa, min bis.  
 has.3SG jellyfish/shark in.the sea don't enter.2SG  
 'There are jellyfish/There is a shark in the sea; don't enter.'  
 b. Ine astinomikos mes to spiti; dhen afinun kanena na bi.  
 is policeman in the house not let.3PL anyone SUBJ enter.3SG  
 'There is a policeman in the house: they don't let anyone enter.'

Notice that Greek lacks an overt (indefinite) determiner like Italian *dei* (see (42)), which is why it needs to resort to covert type-shifting.

- (42) Ci sono delle meduse nel mare, non entrare in acqua.  
 there are of.the jellyfish in.the sea not enter in water  
 'There are jellyfish in the sea; don't go in the water.'

The covert type-shifting in (41) can apply to both singular and plural indefinites, exactly as in the corresponding cases in Slavic languages. However, Greek is a [–arg] language with articles. Since covert type-shifting is a last-resort operation, the article, which has the semantics of  $\iota$ , must be used to overtly shift a property noun to a kind noun as in (43). The crucial difference between Greek and English, then, is that in the latter nouns are [+arg]; therefore, the type-shifting operations  $\cap$  and  $\cup$  that transform kinds into predicates and vice versa are available in English, but not Greek, since only English allows nouns to be either kinds or predicates.

<sup>16</sup> The relevant data in the two languages exhibit a superficial similarity with respect to binding by adverbs of quantificational genericity. Like examples (35a–b) in Greek, examples like (i) are ungrammatical in Italian. In Italian, (i) must be excluded because null D cannot be licensed in a subject position. This explanation cannot apply to Greek, which allows bare subjects.

(i) \*Poliziotti sono gentili.  
 policemen are polite

<sup>17</sup> We would like to express our gratitude to one of the reviewers for suggesting this possibility to us.

- (43) I dhinosavri/\*Dhinosavri ehun exafanisti.  
 the dinosaurs/dinosaurs have.3PL disappeared  
 ‘Dinosaurs are extinct.’ (bare nominal ungrammatical under the kind reading)

As expected, then, the definite article must be used as an overt shifter for the universal interpretation in (44b), the Greek sentence corresponding to (44a) (from Chierchia 1998b:367, (39)).

- (44) a. Computers route modern planes.  
 b. Ta sighrona aeroplana ta kathodighun ipologistes.  
 the modern airplanes them route.3PL computers  
 ‘Computers route modern airplanes.’

Turning to scopal inertia, Greek is like Slavic languages such as Russian in that bare indefinites do not interact scopally with quantifiers yet do allow readings that are impossible for the corresponding examples with an indefinite quantifier; see Greek (28a), repeated in (45a), and (45b) and similar Russian examples discussed in Dayal 2004 and Krifka 2004.<sup>18</sup>

- (45) a. Skilia vriskodan padou./Padou vriskodan skilia.  
 dogs were.found everywhere/everywhere were.found dogs  
 ‘Dogs were everywhere.’  
 b. Sobaki byli vesde.  
 dogs were everywhere  
 ‘Dogs were everywhere.’

While it is not clear to us at the moment how to capture the scopal inertia facts under the assumption that bare nouns involve a covert type-shifter, the point to highlight is that Greek behaves like Slavic languages; therefore, whatever extension of the proposal is needed to account for scopal inertia in these languages would carry over to Greek.

Of course, Greek has several indefinite modifiers—for example, *enas* ‘one, a’ and *kapios* ‘some’. Traditional grammars treat *enas* as an indefinite article, an analysis shown to be incorrect by Markopoulou (2000) on the basis of diachronic and synchronic evidence. We follow Giannakidou and Merchant (1997) and analyze *enas* and *kapios* as pronominal adjectives.<sup>19</sup>

In some existential contexts, as in (46a), *ena* ‘one, a’ is obligatory. There are subtle interpretive differences between the examples in (46). Intuitively, *ena* is used to introduce a discourse referent that will be talked about further. By contrast, the bare noun simply states the existence of an individual. While these subtle differences deserve further investigation, they indicate that

<sup>18</sup> Greek also patterns with Russian in that the corresponding singular examples are not as acceptable as the plural ones, as shown in (ia) for Greek and (ib) for Russian (the latter from Dayal 2004:406, (25a)).

- (i) a. ??Skilos vriskotan padou.  
 dog.SG was.found.SG everywhere  
 ‘There was (a) dog everywhere.’  
 b. ≠Sobaka byla vesde.  
 dog.SG was.SG everywhere  
 ‘A dog was everywhere.’

<sup>19</sup> These items inflect for gender, number, and case and agree with their nouns in these features.

*ena* is not equivalent to the covert type-shifting operation; therefore, overt *ena* cannot block covert type-shifting.

- (46) a. *Mia fora ki enan kero itan ena aghori/\*aghorī ke ena koritsi/\*koritsi.*  
 one time and one time was a boy/\*boy and a girl/\*girl  
 ‘Once upon a time there was a boy and a girl.’  
 b. *Prin apo 3,000 hronia ipirhe liodari stin periohi tis Nemeas.*  
 before from 3,000 years used.to.exist lion in.the area the.GEN Nemea.GEN  
 ‘Three thousand years ago there existed a lion in the area of Nemea.’

Let us now briefly consider mass nouns. Greek, unlike Italian but like English, allows bare mass nouns in strictly episodic sentences like (47a–b). However, the definite article is needed for a kind interpretation, as shown in (48) (from Tsoulas 2008:134, (19)).

- (47) a. *Trehi nero apo to solina.*  
 run.3SG water from the pipe.  
 ‘Water runs from the pipe.’  
 b. *Hithike kراسi sto trapezomadilo.*  
 was.spilled.3SG wine on.the tablecloth  
 ‘Wine was spilled on the tablecloth.’  
 (48) a. *\*(To) nero vrazi stus 100 vathmus.*  
 (the) water boil.3SG at.the 100 degrees  
 b. *\*(To) nero ine ighro.*  
 (the) water is liquid

Essentially then, mass nouns in Greek simply follow the general pattern of count nouns. When interpreted existentially, they appear bare, involving a covert type-shifter; when they denote kinds, type-shifting happens overtly through the definite article. This sets Greek apart from English on the one hand and Italian on the other.

We now turn to the evidence indicating that Greek articles do not instantiate a D head.

## 4 Greek Definites

### 4.1 *The Definite Article*

How to analyze the definite article has been controversial in the Greek literature, not least because it does not exhibit standard properties of a D head. First, the article is not in complementary distribution with demonstratives; in fact, it is obligatory with demonstratives (49). Therefore, the article has been analyzed as a distinct Def (Definiteness) head, selected by D (determiner), which hosts the demonstrative in an example like (49) (Androutsopoulou 1994, 1995).<sup>20</sup>

<sup>20</sup> Alternatively, the article has been viewed as agreement (Karanassios 1992, Stavrou 1996, Mathieu and Sitaridou 2002).

- (49) afto \*(to) vivlio  
 this \*(the) book  
 ‘this book’

In addition, the article can coexist with weak possessive pronouns that are attached to the right of nouns or adjectives (Alexiadou and Stavrou 2000).

- (50) a. to vivlio mu  
 the book my  
 ‘my book’  
 b. to palio mu aftokinito  
 the old my car  
 ‘my old car’

Perhaps most problematically for a head analysis of the article, Greek licenses *polydefinites* or determiner-spreading structures like (51a) alongside *monadic* ones like (51b) (see, e.g., Androutsopoulou 1994, Alexiadou and Wilder 1998, Kolliakou 2003, 2004, Lekakou and Szendrői 2010; also see Alexiadou, Haegeman, and Stavrou 2007 for an overview).

- (51) a. to kokino to podhilato to kenuryo  
 the red the bike the new  
 ‘the new red bike’  
 b. to kokino kenuryo podhilato  
 the red new bike  
 ‘the new red bike’

Both the monadic and the polydefinite structures in (51) refer to *one* bike; thus, the polydefinite structure does not consist of multiple definite phrases, as predicted by a head analysis of the article. To account for this, many analyses stipulate that the article can be expletive, following Androutsopoulou (1994). However, such analyses do not clarify when the article is expletive and when it is not, as pointed out by Kolliakou (2003). In addition, the evidence for the expletive properties of the article is questionable. The main argument in favor of the expletive analysis is the obligatoriness of the article with proper names, as in (52).

- (52) Mu aresi o Messi/\*Messi ala protimo to Maradona/\*Maradona.  
 me.GEN like.3SG the.NOM Messi but prefer.1SG the.ACC Maradona  
 ‘I like Messi but I prefer Maradona.’

However, as the contrasts in (53) and (54) indicate, the article is not expletive even with proper names. (53a) means that Messi does not have properties of Maradona—for example, he is not as good a player, and (53b) means that the referent of *Messi* is not the same as the referent of *Maradona*. Similarly, (54a) means that Greece does not have properties of European countries, and (54b) means that the referent of *Evropi* ‘Europe’ is not the same as the referent of *Germania* ‘Germany’ (there are more countries in Europe). The only difference between these minimal pairs is the definite article preceding the proper names *Maradona* and *Evropi*.

- (53) a. O Messi dhen ine Maradona.  
 the Messi not is Maradona  
 ‘Messi is not a Maradona/like Maradona.’  
 b. Aftos dhen ine o Messi; ine o Maradona; tus berdhepses.  
 this not is the Messi is the Maradona them mixed.up.2sg  
 ‘He is not Messi; he is Maradona; you mixed them up.’
- (54) a. I Eladha dhen ine Evropi.  
 the Greece not is Europe  
 ‘Greece is not (like) Europe.’  
 b. I Germania dhen ine i Evropi.  
 the Germany not is the Europe  
 ‘Germany is not the whole of Europe.’

The contrast extends beyond predicative structures. Example (55a) means that the advisor has properties of Judas (e.g., a traitor), and (55b) means that for instance the doctor has properties of Cassandra (e.g., someone who makes true predictions that no one believes). If these proper nouns were accompanied by a definite article, they would refer to individuals.

- (55) a. Ton simvulepse Iudhas.  
 him advised.3SG Judas  
 ‘He was advised by someone like Judas.’  
 b. Ton exetase Kasandhra.  
 him examined.3SG Cassandra  
 ‘He was examined by someone like Cassandra.’

The above examples confirm that even with proper names, the use of the definite article is not expletive. The second article is also not expletive in polydefinites. As discussed in detail by Kolliakou (2003), the second definite article contributes meaning, as it restricts the range of the first one. This is the case even when proper names are involved. Thus, (56a) presupposes more than one Christina and the polydefinite in (56b) picks out the one with the surname Sevdali.

- (56) a. Pia Hristina tha erthi?  
 who.FEM Christina will come.3SG  
 ‘Which Christina will come?’  
 b. I Hristina i Sevdali.  
 the Christina the Sevdali  
 ‘Christina Sevdali.’

Crucially, when such restrictive modification is not possible for pragmatic reasons, a polydefinite is infelicitous, as shown by (57) (from Kolliakou 2003:75, (14)).

- (57) a. Taxidhepse ston plati Iriniko.  
 traveled.3SG in.the wide Pacific  
 ‘She traveled in the wide Pacific.’

- b. ≠Taxidhese ston Iriniko ton plati.  
traveled.3SG in.the Pacific the wide

If the article can never be expletive, as the above facts show, the analysis of the article as a D head is fundamentally challenged. In this light, it is worth considering the properties of Greek definites in the context of the typology established by Bošković (2008 et seq.), who develops a substantial number of diagnostics to ascertain the structure of traditional noun phrases (TNPs) across languages.

#### 4.2 Bošković's DP/NP Parameter and the Case of Greek

Bošković puts forward a proposal about the typology of nominal arguments, considering primarily syntactic evidence. In a series of papers (2005, 2008, 2012), he argues that the contrast between article languages and articleless languages cannot be reduced to phonological variation, namely, the overt vs. covert realization of D as argued by Longobardi (1994). This is because there are systematic contrasts in the syntax and semantics of these two typological classes that cannot be captured by variation between null and overt D (Bošković 2008). Specifically, Bošković proposes that these systematic contrasts can only be explained if articleless languages have NPs rather than DPs with null Ds. This is based on the following generalizations:<sup>21</sup>

1. Only languages without articles may allow left-branch extraction.
2. Only languages without articles may allow adjunct extraction from TNPs.
3. Only languages without articles may allow scrambling.
4. Multiple *wh*-fronting languages without articles do not show superiority effects.
5. Only languages with articles may allow clitic doubling.
6. Languages without articles do not allow transitive nominals with two genitives.
7. Head-internal relatives display island sensitivity in languages without articles, but not in languages with articles.
8. Polysynthetic languages do not have articles.
9. Only languages with articles allow the majority superlative reading.
10. Articleless languages disallow negative raising; those with articles allow it.
11. Negative constituents must be marked for focus in NP languages.
12. The negative concord reading may be absent with multiple complex negative constituents only in DP negative concord languages.
13. Inverse scope is unavailable in NP languages.
14. Radical pro-drop is possible only in NP languages.
15. Number morphology may not be obligatory in NP languages.
16. Elements undergoing focus movement are subject to a verb adjacency requirement only in DP languages.

<sup>21</sup> Diagnostics 1–10 are presented in Bošković 2008 and diagnostics 11–19 in Bošković 2012.

**Table 1**

Summary of the crosslinguistic contrasts regarding Bošković's diagnostics for the NP/DP distinction

Diagnostics	NP languages	DP languages	Greek
1. Left-branch extraction	Yes	No	Yes
2. Adjunct extraction	Yes	No	Yes
3. Scrambling	Yes/No	No	No
4. Superiority in multiple <i>wh</i> -fronting languages	No	Yes	NA
5. Clitic doubling	No	Yes/No	Yes
6. Double genitives	No	Yes	Yes/No
7. Islands in head-internal relatives	Yes	No	NA
8. Polysynthesis	Yes	No	NA
9. Majority <i>most</i>	No	Yes	Yes
10. Negative raising	No	Yes	Yes
11. Obligatory focus on negative constituents	Yes	No	Yes
12. Negative concord absent with complex negative constituents	No	Yes	No/NA
13. No inverse scope	Yes	No	No
14. Radical pro-drop	Yes	No	No
15. Optional number morphology	Yes	No	No
16. Verb adjacency in focus movement	No	Yes	Yes
17. Exhaustivity for possessors	No	Yes	Yes
18. Obligatory numeral classifier	Yes	No	No
19. Second-position clitics	Yes	No	No

17. Possessors may induce an exhaustivity presupposition only in DP languages.

18. Obligatory numeral classifier systems occur only in NP languages.

19. Second-position clitic systems are found only in NP languages.

In what follows, we consider how Greek behaves with regard to these generalizations (we leave Italian aside as an uncontroversially DP language).

As table 1 illustrates, although Greek patterns with DP languages with regard to the majority of properties listed, it nevertheless patterns with NP languages with regard to two diagnostics: left-branch extraction (LBE) and adjunct extraction. These two diagnostics are crucial to determining whether the structure around the noun is a D head, giving rise to a phase, which in turn is crucial for our proposal.

Before we look at Greek in relation to 1–19, let us first consider Bošković's analysis of these generalizations. The key idea for generalizations 1 and 2 is that D introduces a phase, which restricts extraction possibilities. The Phase Impenetrability Condition allows movement only out of the edge of a phase, Spec,DP in this case. However, a ban on short movement (antilocality) blocks movement that does not cross at least one phrasal boundary. Thus, movement of an adjective like *expensive* to Spec,DP is disallowed in a DP language like English, as shown in (58a) (from Bošković 2008:101, (3)). By contrast, in an NP language like Serbo-Croatian, movement of the



adjective to the left periphery is unproblematic, as illustrated in (58b) (from Bošković 2008:101, (4)).<sup>22</sup>

- (58) a. \*Expensive<sub>i</sub>/ \*That<sub>i</sub> he saw [<sub>t<sub>i</sub></sub> car].  
 b. Skupa<sub>i</sub>/Ta<sub>i</sub> je vidio [<sub>t<sub>i</sub></sub> kola].  
 expensive/that is seen car

Bošković notes that Greek is more liberal with extraction possibilities than expected for a DP language.<sup>23</sup> Following suggestions by Mathieu and Sitaridou (2002), he adopts the view that the Greek article is not a true article, but an agreement marker, thereby rendering the Greek LBE facts irrelevant for his generalization. As mentioned above, we also argue that the Greek article is not a D element; however, we also believe that LBE is important in establishing the structural properties of Greek TNPs, and we will therefore consider the LBE facts in detail below.

Let us start with bare nouns. Consider (59), where LBE is available.<sup>24</sup>

- (59) a. AKRIVO aghorase aftokinito.  
 expensive bought.3SG car  
 'He bought an expensive car.'  
 b. KENURYO aghorase aftokinito, ohi metahirismeno.  
 new bought.3SG car not second-hand

We have already shown that Greek allows bare nouns extensively, a fact that distinguishes it from a DP language like Italian. However, it is important to consider LBE in structures with a demonstrative, since, as we noted earlier, a demonstrative like *afto* 'this' necessarily involves the definite article and is an obvious candidate for a D phase. The demonstrative *afto* can be extracted from the nominal in (60).

- (60) AFTO aghorase to aftokinito.  
 this bought.3SG the car  
 'She bought this car.'

<sup>22</sup> Bošković (2012) further refines this analysis by assuming that in NP languages the NP can be phase-blocking. However, the effect of such phases is only seen in cases of "deep" extraction, as in (i) (from Bošković 2012:198, (77)). Movement of the adjective *pametnih* 'smart' is blocked by the higher NP, which is a phase. The adjective cannot move to the specifier of that NP (from which movement would be possible) because complements of phases cannot move, as argued by Abels (2003) and as shown in (ii) (from Bošković 2012:198, (78)).

- (i) a. On cijeni [<sub>NP</sub> [<sub>N'</sub> [prijatelj<sub>e</sub> [<sub>NP</sub> pametnih [<sub>NP</sub> studenata]]]]].  
 he appreciates friends smart students  
 'He appreciates friends of smart students.'  
 b. ?\*Pametnih<sub>i</sub> on cijeni [<sub>NP</sub> [<sub>N'</sub> [prijatelj<sub>e</sub> [<sub>NP</sub> t<sub>j</sub> [<sub>NP</sub> studenata]]]]].  
 (ii) ?\*Ovog studenta sam pronašla [<sub>NP</sub> knjigu t<sub>j</sub>].  
 this student.GEN am found book  
 'Of this student I found the/a book.'

In earlier work, Bošković (2005) derives the LBE facts from the position of adjectival phrases in DP vs. NP languages.

<sup>23</sup> He cites Androutopoulou 1995 and 1998.

<sup>24</sup> All LBE examples are pragmatically marked; here, we assume that at least one element of the extracted phrase bears sentential stress, as indicated by the small capitals.

The crucial fact here is that the presence of the article does not affect the extraction possibilities. If, for instance, we consider a nominal involving a demonstrative and an adjective such as *afto to akrivo aftokinito* '(lit.) this the expensive car', we see that the demonstrative + article + adjective can undergo LBE.

- (61) a. *Afto to AKRIVO aghorase aftokinito.*  
 this the expensive bought car  
 'She bought this expensive car.'  
 b. *Ke i politiki mas, afto to ELEINO ipegrapsan mnimonio.*  
 and the politicians ours this the wretched signed memorandum  
 'And our politicians signed this deplorable memorandum.'

Note further that the pattern is exactly the same if the nominal involves a numeral + adjective.

- (62) a. *Ena KALO thelo krayon.*  
 one/a good want.1SG lipstick  
 'I would like a good lipstick.'  
 b. *Dhio KALA thelo paradhighmata.*  
 two good want.1SG examples  
 'I would like two good examples.'

In sum, not only does Greek allow LBE even though it has articles—in addition, definite and indefinite phrases behave alike. These examples show that the article is not a phase head; hence, it does not block extraction. If we accept Bošković's analysis of generalization 1, we need to conclude that these Greek nominals have no D.

Bošković's generalization 2 states that languages without articles allow adjunct extraction, as in English (63a), while languages with articles disallow it, as in Serbo-Croatian (63b) (examples from Bošković 2008:102, (8a); 103, (10)).

- (63) a. \*From which city<sub>i</sub> did Peter meet girls<sub>i</sub>?  
 b. *Iz kojeg grada<sub>i</sub> je Ivan sreo djevojke t<sub>i</sub>?*  
 from which city did Ivan meet girls

Again, Greek patterns with an articleless language like Serbo-Croatian rather than with English since its nominals allow adjunct extraction, as in (64).

- (64) *Apo pia poli ghnorise koritsia o Petros?*  
 from who city met.3SG girls the Petros  
 'Petros met girls from which city?'

Note that, as shown by Horrocks and Stavrou (1987), Greek allows possessor extraction; if DPs are phases and if we follow Bošković's argumentation, then the extraction in (65) indicates that the definite article is not a D head.<sup>25</sup>

<sup>25</sup> Horrocks and Stavrou (1987) in fact use this type of evidence to argue for additional structure within the Greek nominal, a DP in their analysis; they link long possessor extraction as in (65) with focus movement within the nominal

- (65) Pianu martira arnithikan na exetasun tin katathesi?  
 who.GEN witness.GEN refused.3PL SUBJ examine.3PL the testimony  
 ‘Which witness’s testimony did they refuse to examine?’

The remaining diagnostics do indeed mostly suggest that Greek patterns with DP languages. Below, we discuss a few diagnostics for which this is not the case. Crucially, it is worth noting that, as Bošković (2008) himself points out, his diagnostics provide correlations between DP languages and certain phenomena rather than absolute definitions.

Let us begin with generalization 6, which states that languages without articles do not allow transitive nominals with two genitive nominal arguments. The idea is that the absence of a second specifier position, Spec,DP, in NP languages entails fewer landing sites. Thus, the unavailability of a second genitive in NP languages follows naturally from the unavailability of a second landing site. Bošković assumes that Greek allows double genitives, presumably on the basis of examples like (66a).<sup>26</sup> However, (66a) does not seem to involve a transitive noun as the generalization requires. Examples with transitive nominals like (66b) and (66c) are ungrammatical. The contrast between the two types of examples relates to Kolliakou’s (1999) generalization that at most one individual-denoting and one property-denoting genitive can be associated with a head noun. Given the ungrammaticality of examples with transitive nouns, whether (66a) is relevant to evaluate the diagnostic is unclear. Nevertheless, (66a) does suggest that more than one specifier position is available. At the same time, the availability of LBE and adjunct extraction that we saw earlier suggests that the available prenominal landing sites in the Greek noun phrase may not necessarily be associated with a D head. This therefore might make this diagnostic irrelevant for establishing whether Greek patterns with DP or NP languages, even if (66a) is a relevant case.

- (66) a. to vivlio tis istorias tu Yani  
 the book the.GEN history.GEN the.GEN Yanis.GEN  
 ‘Yanis’s history book’  
 b. \*i epithesi ton adarton tis polis  
 the attack the.GEN guerillas.GEN the.GEN city.GEN  
 Putative: ‘the attack on the city by the guerillas’  
 c. \*i axiologhisi ton apotelesmaton tis epitropis  
 the evaluation the.GEN results.GEN the.GEN committee.GEN  
 Putative: ‘the committee’s evaluation of the results’

as in (i). They argue that in (i), *tu protu martira* ‘the first witness’s’ moves to a position internal to the nominal, exactly as the *wh*-phrase in (65) moves to CP. They take the article to be a D head allowing focus movement to its specifier. While examples like (i) necessitate movement internal to the nominal, the landing site need not be Spec,DP, as we will demonstrate shortly. Crucially, this explanation can be implemented in our analysis by assuming that the possessor moves to Spec,NumP.

- (i) Arnithikan na exetasun tu protu martira tin katathesi.  
 refused.3PL SUBJ examine.3PL the.GEN first.GEN witness.GEN the testimony  
 ‘They refused to examine the first witness’s testimony.’

<sup>26</sup> This example was suggested to us by an anonymous reviewer.

The next generalization potentially relevant to our discussion is generalization 14, according to which only NP languages license radical pro-drop. As indicated in table 1, Greek is not a radical pro-drop language. Notice, though, that while NP languages can license radical pro-drop, this is not necessary—as illustrated, for instance, by Slavic languages.<sup>27</sup>

In conclusion, Bošković's (2008 et seq.) diagnostics establish that Greek patterns with DP languages in most cases. At the same time, however, LBE and adjunct extraction indicate that there is no D phase blocking extraction and that the article itself is not a D head, which is what is crucial for our proposal.<sup>28</sup>

### 4.3 *Definites as Number Phrases*

The facts reviewed in sections 4.1–4.2 seem to confirm that the Greek article does not behave like a D head. A D analysis cannot explain the existence of polydefinites and the nonexpletive use of the article in these structures and with proper names. In addition, definite nominals allow extraction possibilities indicating the absence of a DP phase. We will therefore assume that the article is not a D head, but a prenominal modifier.<sup>29</sup>

If Greek lacks a D layer, then what is the functional category heading Greek nominals? We propose that Greek nominals, definite and indefinite, involve a lower head—namely, Number—and are uniformly Number Phrases.<sup>30</sup> We adopt Number as the category head as it is the only obligatory functional head above NP. Initial support for this assumption comes from some superficial properties of number marking in Greek and Italian discussed in section 6, though admittedly the question of whether Number or some other functional category heads Greek nominals deserves systematic investigation. Definites, then, are just definite Number Phrases. Further,

<sup>27</sup> The remaining generalizations do not bear directly on whether Greek has a D head that defines a phase. Some can be linked to the existence of a definite article in Greek (e.g., the presence of clitic doubling), whereas others are not applicable.

4: Greek lacks multiple-*wh* questions; therefore, this diagnostic cannot be tested.

5: Greek has clitic doubling (though not in Kayne's (1991) sense).

7: Greek does not have head-internal relatives, except in the case of free relatives that are sensitive to islands, as they are in English and Italian.

9: The Greek counterpart of *most* is *i perissoteri* 'the more'; that is, it implicates the definite article and has the expected reading 'more than half'.

12: Greek is a strict negative concord language, which, according to Giannakidou (2011), never allows the double negation reading. Thus, the relevant examples are never ambiguous in Greek, and, therefore, the question of suppressing the double negation reading does not arise. In this sense, this diagnostic is not applicable to Greek. At the same time, though, the *only* reading available in such examples is the negative concord one, exactly the reading that is available in NP languages but suppressed in DP languages.

<sup>28</sup> As mentioned earlier, Bošković himself endorses the view that the Greek article is not a D element; see footnote 3 in both Bošković 2008 and Bošković 2012.

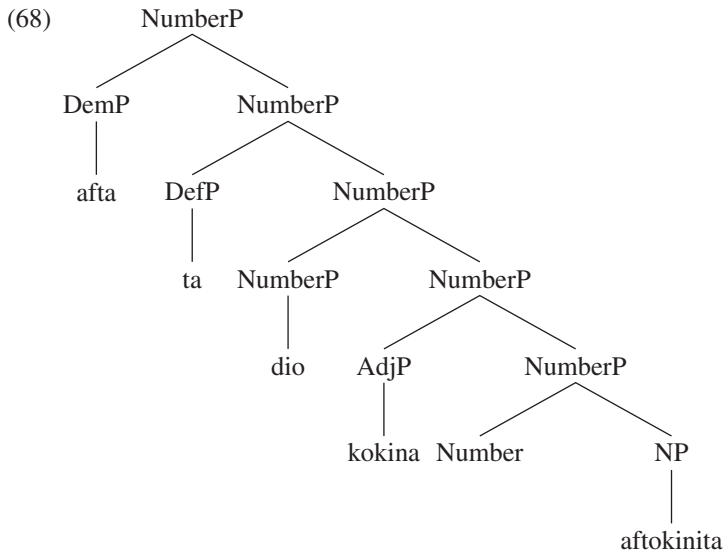
<sup>29</sup> This is just one way to capture the fact that the article is not a D head. Alternatively, the article and clitics may be viewed as agreement elements (see Mathieu and Sitaridou 2002, Mavrogiorgos 2010).

<sup>30</sup> This is not too far from the view of Kolliakou (2003), who takes the definite to be an argument of a noun, appearing in its specifier. Further, Kolliakou assumes that definite and indefinite nominals are all noun phrases. In her Head-Driven Phrase Structure Grammar analysis, any lexical category specified for the head feature *nom* (in turn specified for number, gender, and case) can project a nominal; apart from nouns, articles, numerals, and adjectives share this head feature, reflecting the fact that any of these categories can project a nominal argument on its own.

following Giannakidou and Merchant (1997), we assume that *ena* ‘one’, indefinites like *kapios* ‘some’, and numerals are also pronominal adjectives. This analysis correctly predicts that, leaving aside possible semantic anomaly, more than one of these elements may appear pronominally, as in (67).

- (67) a. *afto to ena aftokinito*  
 this the one car  
 ‘this one car’  
 b. *afta ta dhio kokina aftokinita*  
 these the two red cars  
 ‘these two red cars’

The structure of (67b) is shown in (68).



This structure captures the fact that the noun can be elided from all these structures, as in (69) (Giannakidou and Merchant 1997, Giannakidou and Stavrou 1999, Kolliakou 2003). An adjective alone (69a) or a numeral and an adjective (69d) may be the only (overt) part of a NumP. The definite article in (69b) and (69c) is also the only part of a NumP, but in these uses it is, descriptively, a pronoun.<sup>31</sup> In other words, the pronominal clitic involved in CLLD is an elliptical NumP.<sup>32</sup>

<sup>31</sup> For the (formal) nondistinctness of the article and pronoun systems in Greek, see Roussou and Tsimpli 2006 and references therein. As the authors explain, nondistinctness does not entail identity, since the same element may appear as D or CliticP in their analysis.

<sup>32</sup> Two observations are in order here. First, of course, a definite NumP is very different from a “real” NumP in both semantic terms and PF terms, since the article/pronoun always cliticizes on a host adjective/noun or verb while this is not so for nominals whose only residue is an adjective (e.g., *kokina* ‘red’). The point, though, is that there is no structural

- (69) a. Tu klepsane to aftokinito ke pire kenuryo.  
 his stole.3PL the car and bought.3SG new  
 ‘His car was stolen and he bought a new one.’
- b. **Ta** dhio prota vivlia ine tis Marias; fer’**ta** mu se parakalo.  
 the two first books are the.GEN Maria.GEN bring-them me you beg.1SG  
 ‘The first two books belong to Maria. Bring them to me, please.’
- c. Aghorase kenuryo aftokinito ke to efere na to dhume.  
 bought.3SG new car and it brought.3SG SUBJ it see.1PL  
 ‘He bought a new car and brought it for us to see.’
- d. Psahname ya kero mathimatiko ya ti dhesmi ala kataferame ke  
 looking.for.1PL for time mathematician for the “A-levels” but managed.1PL and  
 vikrame enan exeretiko.  
 found.1PL an excellent  
 ‘We were looking for a mathematician for A-levels for some time, but we managed  
 to find an excellent one’ (so the time we took looking was well spent).

In section 5, we will argue that the absence of D in Greek and the formal nondistinctness between the article and the pronoun combine to account for the contrast with Italian regarding clitic-left-dislocated indefinites and related patterns of anaphoric construal in the two languages. Before we return to CLLD, we consider some further contrasts between the two languages that appear to be linked to the absence of D in Greek.

As mentioned above, Greek pronouns are definite nominals in which the NumP has been elided and only the definite article remains overt. The key difference between the Italian and Greek pronouns, then, is that the former is a DP while the latter is a NumP with a definite specifier. One important consequence of this analysis is that the definite element in Greek (article or pronoun) is optional and, as a result, only appears when relevant/necessary for interpretation. By contrast, the Italian definite article and pronoun are not optional elements; instead, they realize an obligatory category, D, without which Italian nouns cannot be arguments. This important categorial difference between articles and pronominals affects the available interpretations for apparently definite elements in the two languages.

Specifically, consider Giusti’s (2010) observation that in Italian the definite article is preferred in cases like (70) where the interpretation of the head noun is indefinite (example from Giusti 1997:105).

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difference between a definite NP and any other NumP in terms of either extraction possibilities or the distribution of the article in relation to all other pronominal elements.

Second, examples like (i), where the definite article is involved in CP nominalization, may support the view that the article is a head after all. We speculate that the article contributes nominal  $\phi$ -features to C but still does not head the structure.

- (i) (To) pios tha kerdhisi tis ekloyes tha eksartithi apo to pos tha pai i ikonomia.  
 (the) who will win.3SG the elections will depend.3SG from the how will go.3SG the economy  
 ‘Who will win the elections will depend on how things go with the economy.’

- (70) Scommetto che non troverai mai la/?una segretaria di un  
 bet.1SG that not will.find.2SG never the/a secretary of a  
 onorevole che sia disposta a testimoniare contro di lui.  
 member.of.Parliament who can.SUBJ submit.SUBJ a testimony against of him  
 ‘I bet you’ll never find the secretary of a member of Parliament who can testify against  
 him.’

The definite article is banned from such environments in Greek, since it cannot head subjunctive relative clauses.

- (71) \*Dhen prokite na vri ti yineka pu na tu kani ola ta hatiria.  
 not going.to.3SG SUBJ find.3SG the woman that SUBJ him do.3SG all the favors  
 ‘He’s not going to find the woman that will satisfy every whim of his.’

The above contrast can be understood if, as Giusti (1993, 1997, 2002, 2010) proposes, the main role of the Italian article is that of a syntactic/grammatical morpheme acting as the nominalizer of a predicative noun, building a DP argument. By contrast, in Greek the article appears only when needed for semantic/pragmatic reasons, since it is not a head and therefore systematically receives definite/referential interpretations.

These observations and this analysis bear directly on Déchaine and Wiltschko’s (2002) proposal that many of the distributional, binding, and construal properties of pronouns can be derived from categorial differences among pronouns.<sup>33</sup> Specifically, they propose that Romance pronouns lack a D layer and are Pro- $\phi$ Phrases, an assumption that allows these pronouns to function as arguments but also as predicates, as in Italian (72).

- (72) a. Bella lo e’.  
 beautiful it.CL is  
 ‘Beautiful she is.’  
 b. Belle lo sono.  
 beautiful it.CL are  
 ‘Beautiful they are.’

While we share the view that the categorial status of the pronoun is crucial, Déchaine and Wiltschko’s proposal does not allow Greek and Italian pronouns to be distinguished in the relevant ways. In particular, in both Greek and Italian the pronouns can be variables, obey Principle B, and are used as arguments. They cannot but be analyzed as Pro- $\phi$ Phrases, leaving no room for capturing the interpretive differences between the two types.

One final remark relates to the standard assumption that referentiality is an intrinsic property of D (Longobardi 1994, Bošković 2008). Italian examples like (73) challenge this view if, in a language like Italian where the article is unambiguously a D, *lo* can admit nonreferential readings. It is also striking that the systematic link between article/pronominals and referentiality is observed in Greek, a language where these elements resist an analysis as D heads.

<sup>33</sup> See also Asbury 2008 for an application of Déchaine and Wiltschko’s (2002) proposal.

- (73) Gianni sta cercando un idraulico ma non lo trova.  
 Gianni is looking.for a plumber but not him.CL find.3SG  
 ‘Gianni is looking for a plumber but cannot find one.’

A reviewer brings to our attention that *un idraulico* in (73) need not be analyzed as nonreferential; the reviewer points to analyses like Moltmann’s (2013), where, in a situation-semantics approach, one can assume that the indefinite *is* referential in the (relevant) situation that satisfies that predicate. While this is a possible avenue of analysis, it still leaves unanswered why Greek pronouns cannot function in the same way.

We will now return to the original question raised in section 1: why Greek resists nonreferential indefinites in CLLD, whereas they are available in Italian.

## 5 Nominal Syntax, Clitic Left-Dislocation, and Anaphoric Patterns in Greek and Italian

### 5.1 Left-Dislocation of Indefinites in Greek and Italian

As mentioned in section 1, Greek and Italian vary, rather unexpectedly, in the interpretations of indefinites available in CLLD structures. In particular, Greek clitic-left-dislocated indefinites like the one in (74a) systematically resist nonreferential interpretations. The indefinite *mia kokini fusta* ‘a red skirt’ is necessarily interpreted referentially, as indicated by the fact that only (74c) is a felicitous continuation; (74b), which forces the nonreferential interpretation, is not.

- (74) a. Mia kokini fusta tin psahno edho ke meres ...  
 a red skirt it look.for.1SG here and days  
 ‘I’ve been looking for a red skirt for a few days ...’  
 b. ≠ ... ke dhe boro na vro kamia pu na m’aresi.  
 and not can.1SG SUBJ find.1SG none that SUBJ me-please.3SG  
 ‘... and I cannot find any that I like.’  
 c. ... ke dhe boro na thimitho pu tin eho vali.  
 and not can.1SG SUBJ remember.1SG where it have.1SG put  
 ‘... and I cannot remember where I put it.’

By contrast, the corresponding Italian example in (75a) allows both referential and nonreferential interpretations, as shown by the fact that both (75b) and (75c) are felicitous continuations.

- (75) a. Una gonna rossa la cerco da un po’ ...  
 a skirt red her.CL look.for.1SG for a while  
 ‘A red skirt I’ve been looking for for a while ...’  
 b. ... ma non ne ho trovata nessuna che mi piaccia.  
 but not of.them.CL have.1SG found none.FEM that me please.3SG.SUBJ  
 ‘... but I have not found any that I like.’  
 c. ... ma non riesco a ricordarmi dove l’ho messa.  
 but not reach.1SG to remember where her.CL-have.1SG put  
 ‘... but I cannot remember where I put it.’



In section 1, we followed standard assumptions in the literature and assumed that in both languages CLLD involves an anaphoric operator, in the sense of Lasnik and Stowell (1991), to which the (in-situ) pronominal clitic is linked through coreference. We further argued that the interpretive differences shown in (74) and (75) between Greek and Italian cannot be due to PF variation; instead, we hypothesized that the contrast is due to the properties of the pronominal clitic in the two languages and the restrictions it imposes on its antecedent. If this hypothesis is correct, then we expect the anaphoric relation between the clitic-left-dislocated phrase and the pronominal clitic to mirror anaphoric construals outside CLLD in the two languages; in other words, we expect the Italian clitic pronominal to be compatible with nonreferential interpretations outside CLLD and the Greek one to resist nonreferential antecedents. This is exactly the case with the Italian example (73) in section 4.3, where *lo* ‘him.CL’ can pick out a nonreferential antecedent, *idraulico* ‘plumber’, exactly as *la* ‘her.CL’ can pick out a nonreferential antecedent, *rossa* ‘red’, in (75a). Similarly, the Greek example in (76) allows only the referential reading of *enan idhravliko* ‘one plumber’, on a par with the CLLD example in (74a).

- (76) O Yanis psahni enan idhravliko, ala dhe ton vriski puthena.  
 the Yanis look.for.3SG one plumber but not him find.3SG anywhere  
 ‘Yanis is looking for a plumber but cannot find him anywhere.’

Such parallels between CLLD and intrasentential anaphora provide confirming evidence for our hypothesis that the available interpretations in CLLD are due to the interpretive possibilities of the pronominal clitics themselves rather than to variation in CLLD syntax or the properties of the anaphoric operator in CLLD.<sup>34</sup> The challenging question, though, is how to capture this type of variation regarding the (in)compatibility of pronominals with nonreferential antecedents. As suggested in section 4.3, we view such variation in pronominal interpretation as a symptom of the structural contrast between Greek and Italian nominals: as we have shown, a D head is always necessary in Italian for turning predicative nouns into arguments. This is the case for examples like (73) even when a nonreferential reading of the antecedent is intended. In the absence of an alternative D element, the clitic *lo* is used. By contrast, Greek has the option of not using a pronoun, since according to our analysis, Greek nominals are NumPs and Greek can resort to covert type-shifting for argumenthood. Characteristically, no pronoun is used in (77), which instantiates a case of indefinite argument drop (IAD) and where *enan idhravliko* ‘one plumber’ receives a nonreferential interpretation.<sup>35</sup>

<sup>34</sup> We will review analyses adopting these positions shortly.

<sup>35</sup> It is worth noting that more pronominal clitics take part in CLLD in Italian than in Greek. For instance, in plurals there is a choice between two pronominal clitics, *le* and *ne*, depending on the definiteness of the partitive topic.

- (i) Delle segretarie/Di segretarie le/ne trovi facilmente.  
 of.the secretaries/of secretaries them.CL/of.them.CL find.2SG easily  
 ‘Secretaries, you will find them easily.’

Additionally, Italian allows CLLD of PPs (ii). This is unavailable in Greek, where topicalization is used instead (iii).

- (ii) A Roma ci vado domani.  
 to Rome CL.there go.1SG tomorrow  
 ‘To Rome, I will go (there) tomorrow.’

- (77) O Yanis psahni enan idhravliko, ala dhe vriski puthena.  
 the Yanis look.for.3SG one plumber but not find.3SG anywhere  
 ‘Yanis is looking for a plumber but cannot find one anywhere.’ (look-for > ∃)

Let us consider how what we have described so far relates to available analyses of CLLD.

There are potentially two alternative sources for the interpretive contrast in CLLD between Greek and Italian: the syntax of CLLD in the two languages and the properties of the anaphoric operator. Considering syntax first, the distinct interpretations could be due to scope differences arising from distinct syntactic derivations. Indeed, Anagnostopoulou (1994) and Iatridou (1995) take the impossibility of interpreting clitic-left-dislocated indefinites within the scope of an intensional predicate like ‘look for’ as evidence for a base-generation analysis of Greek CLLD. Similarly, Cecchetto (2001) views the availability of the nonreferential (opaque) interpretation in Italian as evidence of reconstruction and therefore proposes a movement analysis for Italian clitic-left-dislocated DPs. According to these analyses, then, Italian and Greek CLLD involve distinct derivations: movement and base generation, respectively. However, there is no independent evidence for this derivational contrast. In fact, in both languages the structures display many standard CLLD properties (no weak crossover, no parasitic gaps, sensitivity to islands, unavailability of clitic-left-dislocated downward-entailing quantifiers; see Cinque 1990, Anagnostopoulou 1994, Tsimpli 1995, Rizzi 1997, Alexopoulou, Doron, and Heycock 2004).<sup>36</sup>

Turning to the properties of the anaphoric operator, various analyses link the referential interpretation of clitic-left-dislocated phrases to their function as discourse topics, which are taken to be compatible only with referential interpretations of indefinites (Reinhart 1982, Philippaki-Warbuton 1985, Anagnostopoulou 1994, Tsimpli 1995, Rizzi 1997, Alexopoulou and Kolliakou 2002, Endriss 2006). However, the Italian clitic-left-dislocated phrases in (75b) challenge the view that topics are exclusively referential.

In contrast, for indefinite topics Greek resorts to topicalization (see (78)), which characteristically involves a gap instead of a clitic (Alexopoulou and Kolliakou 2002:224, (51)).

- (78) a. Fetos i modha ine apesia; idhika i bluzes ine aparadektes.  
 ‘I hate this year’s fashion; the blouses are especially outrageous.’  
 b. Mia kokini bluza psahno edho ki ena mina ke dhe boro na vro  
 a red blouse look.for.1SG here and one month and not can SUBJ find.1SG  
 puthena kamia pu na m’aresi.  
 anywhere any.one that SUBJ me-like.3SG  
 ‘A red blouse I’ve been looking for for a month now and I cannot find one that I like.’

(iii) Stin Athina pao avrio.  
 to.the Athens go.1SG tomorrow  
 ‘To Athens, I (will) go tomorrow.’

<sup>36</sup> But see Haegeman 2006 for some differences.

Unsurprisingly, Greek often involves bare nouns in topicalization (see (79b)), in contrast to Italian, where the dislocated element cannot be bare and the pronominal clitic is obligatory (see (79a)).<sup>37</sup>

- (79) a. Una segretaria \*(la)-trovi facilmente  
 a secretary \*(her.CL)-find.2SG easily  
 ‘A secretary, you will find her easily.’  
 b. Gramatea tha (\*ti) vrite sigura.  
 secretary will (\*her.CL) find.2PL certainly  
 ‘A secretary, you will find her certainly.’

The topicalization example in (80) is ambiguous, unlike its CLLD counterpart. It is ambiguous in the same way as its corresponding focus movement example (81), an indication that topicalization instantiates movement that gives rise to two distinct scope readings.<sup>38</sup>

- (80) Enan idhravliko psahni o YANIS.  
 one plumber look.for.3SG the Yanis  
 ‘A plumber Yanis is looking for.’ (look-for >  $\exists$ ,  $\exists$  > look-for)  
 (81) Enan IDHRAVLIKO psahni o Yanis.  
 one plumber look.for.3SG the Yanis  
 ‘A plumber Yanis is looking for.’ (look-for >  $\exists$ ,  $\exists$  > look-for)

It is worth noting that topicalization of indefinites as in (80) is not productive in Greek, partly because for the opaque reading a bare noun would be preferred. Italian, on the other hand, never needs to resort to topicalization, since the pronominal clitic is compatible with the relevant indefinite readings.

<sup>37</sup> There is some question about the possibility of bare plural nouns in CLLD in Italian. Thus, while (ia) is ungrammatical, a reviewer points out that (ib) is acceptable. As we will discuss later, Italian allows bare plurals under certain conditions (Longobardi 1994), and it is therefore expected that under those conditions, such bare plurals can undergo CLLD. The key point is that a clitic is always obligatory.

- (i) a. \*Segretarie le trovi facilmente.  
 secretaries them.CL find.2SG easily  
 ‘Secretaries, you will find them easily.’  
 b. Libri così importanti non li ho mai letti.  
 books that important not CL have.1SG never read  
 ‘Books that important I’ve never read (them).’

<sup>38</sup> Crucially, (80) contrasts with examples like (i), which show IAD. We will return to these examples in section 5.3.

- (i) O Yanis psahni enan idhravliko, ala dhe vriski puthena.  
 the Yanis look.for.3SG one plumber but not find.3SG anywhere  
 ‘Yanis is looking for a plumber but cannot find one anywhere.’ (look-for >  $\exists$ )

The crucial point is that IAD forces a *de dicto* interpretation of the antecedent in (i). This contrast between IAD and topicalization argues against Dimitriadis’s (1994) proposal that the topicalization example is in fact a case of what he calls empty CLLD involving the same *pro* element implicated in IAD.

To summarize, the interpretive contrast between Greek and Italian is due to the different interpretive restrictions the pronominals place on their antecedents, as they mirror intrasentential anaphora and cannot be derived from either the syntax of CLLD in the two languages or the properties of the anaphoric operator. Therefore, while current analyses of CLLD are important for understanding the syntax of the structure in Greek and Italian, they cannot fully explain the contrast regarding interpretation, which turns on the properties of the clitic pronominals in the two languages—which in turn cannot be understood outside the context of the languages' nominal syntax. As we have demonstrated, we hypothesize that the variation in the interpretation of pronouns is symptomatic of a syntactic difference in the nominal syntax of the two languages that allows the Greek pronominal to be optional, whereas the Italian pronominal is obligatory. In section 5.2, we provide further evidence (from IAD and bare subnominal deletion) that, as expected, the CLLD facts mirror more general anaphoric possibilities in the two languages that are due to the properties of the pronouns.

### 5.2 Anaphoric Construals beyond CLLD: Indefinite Argument Drop and Subnominal Deletion

As shown earlier, the CLLD facts mirror intrasentential anaphora: the Italian pronouns *la* and *lo* in (82) can take a nonreferential antecedent just as in CLLD.

- (82) a. A: Maria ha trovato una baby-sitter?  
 Maria has.3SG found a babysitter  
 'Has Maria found a babysitter?'  
 B: Sì, l'ha trovata.  
 yes her.CL-has.3SG found  
 'Yes, she found one.'
- b. Gianni sta cercando un idraulico ma non **lo** trova.  
 Gianni is looking.for a plumber but not him.CL find.3SG  
 'Gianni is looking for a plumber but cannot find one.'

As expected, in the Greek examples in (83) the pronouns *ti* and *ton* are incompatible with the indefinite bare noun antecedents. The crucial contrast with Italian, though, is that the (object) argument is dropped in Greek (see (83)) but not in Italian (see (84))—a phenomenon first observed by Dimitriadis (1994).<sup>39</sup> (See also Giannakidou and Merchant 1997, Panagiotidis 2002, and Tsimpli and Papadopoulou 2005.)

- (83) a. A: Vrike dada i Maria?  
 found.3SG nanny the Maria  
 'Has Maria found a nanny?'

<sup>39</sup> Dimitriadis (1994) observes the connection between IAD and Greek topicalization, which he refers to as empty CLLD.

- B: Ne, (\*ti) vrike.  
 yes (\*her) found.3SG  
 ‘Yes, she found.’
- b. O Yanis psahni idhravliko ala dhe (\*ton) vriski puthena.  
 the Yanis look.for.3SG plumber but not (\*him) find.3SG anywhere  
 ‘Yanis is looking for a plumber but cannot find one anywhere.’
- (84) A: Ha telefonato qualcuno?  
 has phoned someone  
 ‘Has anyone phoned?’
- B: Si, qualcuno ha telefonato./\*Si, ha telefonato.  
 yes someone has phoned/\*yes has phoned  
 ‘Yes, someone has phoned.’

Another relevant case is contexts of intrasentential anaphora that give rise to the deletion of the nominal antecedent. Consider (85) (from Alexiadou and Gengel 2008:66, attributed to Vieri Samek-Lodovici). In the answer, the noun *tavolo* ‘table’ is elided, leaving the elliptical nominal *uno grande* ‘a big’; the elliptical nominal is headed by *uno*, which consists of the indefinite article and the classifier *o*, followed by the adjective (Alexiadou and Gengel 2008). Finally, the elliptical nominal is doubled by the pronoun *lo*, which in this case is nonreferential.<sup>40</sup>

- (85) A: Vorrei un tavolo grande.  
 would.like.1SG a table big  
 ‘I would like to buy a big table.’
- B: Mi spiace. No **lo** abbiamo, **uno grande**.  
 me displeases.3SG not it have.1PL a big  
 ‘I’m sorry. We do not have a big one.’

Now, compare (85) with a corresponding Greek example in (86). As in Italian, the noun is elided in the answer, leaving the elliptical nominal *kitrino* ‘yellow’. However, there is no determiner or other functional material doubling the elliptical nominal. The only residue is the adjective.

- (86) A: Thelo afti ti fusta se kitrino.  
 want.1SG this the skirt in yellow  
 ‘I would like this skirt in yellow.’

<sup>40</sup> On the basis of examples similar to the ones below, where *ne* in (ib) is obligatory and *uno* is grammatical, Belletti and Rizzi (1981) argue that *ne* involves less structure than DP. However, Cardinaletti and Giusti (1990:2) argue against this position and analyze *ne* as a head Q, although they do not take an explicit position on whether Q is a functional category different from D or the head of D.

- (i) a. Ho letto un lunghissimo libro.  
 have.1SG read a very.long book  
 ‘I have read a very long book.’
- b. Ne ho letto uno/\*un (lunghissimo).  
 of.it have.1SG read one/a very.long  
 ‘I read a very long one.’

**Table 2**

Summary of the crosslinguistic contrasts in the realization of weak indefinites

Structure	Italian	Greek
Indefinite topics (nonreferential)	Clitic left-dislocation of an indefinite nominal	Indefinite or bare nominal linked to a gap
Clitic-left-dislocated indefinites	Nonreferential and referential available	Only referential available
Indefinite argument drop	Unavailable	Obligatory with (some) weak indefinites and bare nouns
Bare subnominal ellipsis	Unavailable Always a D element	May involve a bare adjective

B: Distihos dhen eho kitrini. (Mono mavres mu ehun  
 unfortunately not have.1SG yellow.FEM.SG only black.FEM.PL me have.3PL  
 mini.)  
 left  
 ‘Unfortunately I don’t have a yellow one. (Only black ones are left.)’

Subnominal deletion is another instance of a principled difference between Greek and Italian in the realization of nominals.

The facts presented in this article are summarized in table 2. The key contrast between Italian and Greek presented in the table relates to the realization of weak/nonreferential indefinite nouns: Italian systematically employs articles and pronouns, whereas Greek resorts to bare structures. As a consequence, Italian pronouns are compatible with nonreferential antecedents in intrasentential anaphora or CLLD, whereas Greek pronouns necessarily involve referential antecedents. We view this contrast as a consequence of the more basic contrast between the two languages in the syntax of nominal arguments, namely, the absence of a D layer in Greek.

### 5.3 Indefinite Argument Drop and Bare Subnominal Ellipsis

In this section, we review previous analyses of Greek IAD and move toward integrating the IAD facts into our proposed view of nominals in Greek and Italian. Giannakidou and Merchant (1997) show that Greek IAD involves *recycling of the descriptive content* of the antecedent (or *property anaphora* in Tomioka’s (2003) terms). Crucially, the elided element does not pick out the discourse referent of the antecedent.<sup>41</sup> So, example (87a) does not allow a reading in which ‘Nafsika dried the dishes Napoleodas washed’, a reading available in (87b) where the pronoun is used. Giannaki-

<sup>41</sup> See Giannakidou and Merchant (1997) for a detailed discussion of the properties of IAD. Panagiotidis (2002) excludes a VP-ellipsis analysis of the phenomenon; his main argument is that all restrictions relevant to IAD involve the nominal antecedent and never any verbal element. Further, examples like (i), where the object is dropped but other parts of the VP are overt, indicate that what is dropped is just the object.

dou and Merchant (1997) therefore conclude that an empty *pro* analysis, as proposed by Dimitriadis (1994), is not tenable, since it would predict the coreferential reading in (87b). Rather, they propose that IAD involves recycling of the descriptive content of the antecedent, that is, *pjata* ‘dishes’.

- (87) a. O Napoleodas epline pjata ke i Nafsika skupise.  
the Napoleodas washed.3SG dishes and the Nafsika dried.3SG  
‘Napoleodas washed dishes and Nafsika dried dishes.’ (disjoint reading)
- b. O Napoleodas epline (ta) pjata<sub>i</sub> ke i Nafsika ta<sub>i</sub> skupise.  
the Napoleodas washed (the) dishes and the.NOM Nafsika them dried.3SG  
‘Napoleodas washed (the) dishes and Nafsika dried them.’

That these cases involve property anaphora is further confirmed by the fact that adjectives like *tetios/tetia/tetio* ‘such’ standardly used for concept or property anaphora (Kolliakou 2003) license argument drop.

- (88) A: Vrikes teties (melitzanes)?  
found.2SG such.PL (eggplants)  
‘Did you find such ones (eggplants)?’
- B: Ne, vrika.  
yes found.1SG  
‘Yes, I did.’

Further, Giannakidou and Merchant (1997) establish that IAD is licensed by weak indefinite quantifiers, while strong quantifiers require a pronoun (examples from Giannakidou and Merchant 1997:142).

- (89) A: Efere o Adreas ola ta/ke ta dhio/ta perisotera vivlia?  
brought.3SG the Adreas all the/and the two/the most books  
‘Did Adreas bring all/both/most books?’
- B: Ne, \*(ta) efere.  
yes \*(them) brought.3SG  
‘Yes, he brought them.’
- (90) a. Efere o Adreas merika/kapja/liga/dheka/tulahiston tria/parapano apo  
brought.3SG the Adreas several/some/a.few/ten/at.least three/more from  
tria/tipota/∅ vivlia?  
three/any/∅ books

- 
- (i) Ti mia mera vrike dhulia o Yorgos stu Zoghrafu ke to epomeno proi vrike i Maria  
the one day found.3SG job the Yorgos at.the Zografu and the next morning found.3SG the Maria  
stin Kesariani.  
at.the Kesariani  
‘One day Yorgos found a job in Zografu and the next morning Maria found one in Kesariani.’

‘Did Adreas bring several/some/a few/ten/at least three/more than three/any/∅ books?’

- b. Ne, (\*ta) efere e.  
yes (\*them) brought.3SG e

‘Yes, he brought several/some/a few/ten/at least three/more than three/some/∅ books.’

As shown in (89) and (90), the pronoun and IAD are in complementary distribution, depending on whether the quantifier is strong or weak.

According to our analysis, the weak indefinites in (90) are NumPs; together with Tomioka (2003), we analyze IAD as a case of NumP ellipsis.<sup>42</sup> A NumP ellipsis analysis of IAD accounts for the availability of IAD with subjects in Greek—see Giannakidou and Merchant 1997:142. We further predict that IAD should be unavailable in Italian, since TNPs are always DPs in this language.

One question that remains is why the whole NumP cannot be elided with definites as in (89). We believe that the reason is interpretive. Absence of definite marking gives rise to indefinite interpretations. Consider for instance (91). The answer in (91B) involves a weak indefinite with an elided noun despite the definite antecedent; a definite is not appropriate in this case.<sup>43</sup>

- (91) A: Tis eferes tis valitses?  
them brought.2SG the suitcases  
‘Did you bring the suitcases?’

- B: Efera (kaboses); mu ehun mini tris tesaris akoma.  
brought.1SG (many) me have.3PL left three four still  
‘I brought quite a few; but I still have three or four left.’

Let us now return to (92a), discussed earlier, and consider (92b) as well. These examples indicate that Greek pronouns are incompatible with a nonreferential antecedent.

- (92) a. O Yanis psahni idhravliko ala dhe (\*ton) vriski puthena.  
the Yanis look.for.3SG plumber but not (\*him) find.3SG anywhere  
‘Yanis is looking for a plumber but cannot find one anywhere.’  
b. I Maria epsahne dada ena hrono ke telika (\*ti) vrike  
the Maria was.looking.for.3SG nanny one year and finally (\*her) found.3SG  
meso mias ghnostis.  
through an acquaintance  
‘Maria was looking for a nanny for a year and in the end she found one through an acquaintance.’

<sup>42</sup> The ellipsis analysis preserves the basic intuition of Giannakidou and Merchant (1997), who also propose that IAD involves NP-deletion; however, they assume that the elided NP is headed by a null D.

<sup>43</sup> Some speakers do not accept (91B) without *kaboses* ‘many’. However, the point remains that the acceptability of such examples depends on interpretation.



As noted earlier and illustrated again here, the pronoun *can* take an indefinite antecedent (93a), including a bare noun (93b), as long as the antecedent is interpreted referentially.

- (93) a. O Yanis psahni enan idhravliko, ala dhe ton vriski puthena.  
 the Yanis look.for.3SG one plumber but not him find.3SG anywhere  
 ‘Yanis is looking for a plumber but cannot find him anywhere.’  
 b. O Napoleodas epline (ta) pjata<sub>i</sub> ke i Nafsika ta<sub>i</sub> skupise.  
 the Napoleodas washed (the) dishes and the Nafsika them dried.3SG  
 ‘Napleodas washed (the) dishes and Nafsika dried them.’

By contrast, Italian clitic pronouns can admit nonreferential antecedents, as in (94). As we have argued, a key difference between Greek and Italian is that the definite element is an optional modifier in the former but an obligatory head in the latter. Crucially, the article could not have been omitted in the first instance in (92) if it were a D head. Similarly, a D head is obligatory in (94). In sum, the categorial status of pronouns in the two languages affects their distribution (obligatory in Italian vs. optional in Greek) and consequently the available pronoun construals, as in the case of CLLD.<sup>44</sup>

- (94) Gianni sta cercando un idraulico ma non lo trova.  
 Gianni is looking.for a plumber but not him.CL find  
 ‘Gianni is looking for a plumber but he can’t find one.’

Turning to subnominal ellipsis, the crosslinguistic pattern in (85) and (86) follows straightforwardly from the contrast between DPs and NumPs. Despite the nonreferential antecedent, Italian obligatorily requires a D element, *uno*, in the elliptical structure (note that *uno grande* is doubled by *lo*). By contrast, in Greek there is just a bare adjective.<sup>45</sup>

## 6 Some Speculations on the Crosslinguistic Difference between Greek and Italian

The central claim of this study is that the difference in topic strategies between Greek and Italian derives from the structure of nominals. As shown, the relevant structures reflect the anaphoric possibilities in the two languages, which, crucially, are governed by the structure of the relevant

<sup>44</sup> It is worth noting that when the object is plural, as in (i), the plural clitic *le/li* is not acceptable. Instead, the clitic *ne* is used. In addition, the plural *le* can indeed be used if the answer is positive, but it forces a discourse-transparent reading, which is not the relevant one here.

- (i) A: Maria ha trovato delle aiutanti?  
 Maria has found of helpers  
 ‘Has Maria found helpers?’  
 B: No, non ?le/ne ha trovate.  
 no not them.CL/of.them.CL has found  
 ‘No, she has not.’

- (ii) Gianni sta cercando degli aiutanti per l’ufficio ma non ?li/ne trova.  
 Gianni is looking.for of helpers for the-office but not them.CL/of.them.CL find.3SG  
 ‘Gianni is looking for assistants for the office but cannot find any.’

<sup>45</sup> For a detailed discussion of subnominal deletion in Greek, see Giannakidou and Stavrou 1999. The point is that such subnominal ellipsis can take place within a bare nominal in Greek.

nominal antecedents and pronouns. However, once we move from topic strategies and anaphoric relations to the nominals themselves, the question is whether the variation in nominals correlates with further contrasts in the two languages, or, to put the question somewhat differently, why D is the argumentizer in Italian but not in Greek. We speculate that the morphological and featural makeup of nominal categories in the two languages plays a role in this respect. One key difference is that Greek nominals are systematically marked for number and case (in addition to gender), whereas in Italian, nominals lack case and a number of D elements lack explicit number morphological marking (e.g., *ne* ‘of them’, *si* ‘self’). We speculate that in Greek, case, gender, and number morphology provide categorial marking crucial for the identification of nominal arguments. This view again echoes Giusti’s (1993, 1997, 2002) position that the primary role of the definite article as a functional head is syntactic; that is, it assigns case to its complement NP.

These three features then appear to work in tandem in Greek to provide syntactic marking for a nominal argument. By contrast, in Italian D provides both the syntactic head and the argumentizer. The emerging picture, if correct, would suggest that there is a trading relation between morphological marking on nominal elements and the involvement of a syntactic D head.

This picture is confirmed by some surface differences between Greek and Italian regarding number marking. First, number marking is present in Greek in unexpected places such as mass nouns (Tsoulas 2008, Alexiadou 2010) as shown in (95) (from Tsoulas 2008:133, (9)–(10)).

- (95) a. Trehun nera apo to tavani.  
 drip.3PL water.PL from the.SG ceiling.SG  
 ‘Water is dripping from the ceiling.’  
 b. To patoma itan yemato nera.  
 the.SG floor.SG was full water.PL  
 ‘The floor was full of water.’

By contrast, bare singular arguments and plural mass nouns are not available in Italian. In addition, Italian has at its disposal a set of clitic pronouns that do not display number morphology (e.g., *si*, *ne*), as shown in (96).

- (96) a. Di carne ne mangia.  
 of meat of.it.CL eats  
 ‘He does eat meat.’  
 b. Gianni e Maria si lavano spesso.  
 Gianni and Maria self wash often  
 ‘Gianni and Maria wash themselves often.’

Finally, Italian—like Catalan—has number-neutral bare nouns (in the singular form), as in (97).

- (97) Il pero e’ in fiore.  
 the pear.tree is in flower  
 ‘The pear tree is blossoming.’

While a systematic investigation of these facts is beyond the scope of this article, they point prima facie to a correlation between a D head and weaker nominal morphology in relation to case and number marking.<sup>46</sup>

## 7 Conclusion

As shown in section 1, CLLD has been assumed to be the main topic strategy in Greek and Italian: the topic operator assumed in these structures is linked anaphorically to the in-situ element of the  $\bar{A}$ -dependency (rather than being linked through binding, as is the case in quantificational  $\bar{A}$ -chains). CLLD and topicalization have been viewed as distinct PF realizations of topic-operator structures, the pronominal in CLLD being analyzed as an overt realization of the gap/null epithet involved in topicalization. We showed that the relation between the phrase undergoing CLLD and the pronominal clitic mirrors general anaphoric patterns in the two languages, therefore reinforcing the view of these structures as involving an anaphoric operator. At the same time, we showed that the syntactic category of the pronominals is crucial since it affects their distribution (obligatory vs. optional) and consequently the possible anaphoric construals in each language and the available readings in CLLD. Also crucially, the syntactic category of the pronominal has consequences for interpretation, indicating that the crosslinguistic variation in the realization of topic-operator structures is not confined to PF variation regarding the overtness of the in-situ element. Indeed, our main claim is that the variation in topic structures interacts with the categorial characterization of nominal arguments in the two languages.

<sup>46</sup> A further contrast confirming the systematic involvement of D in Italian where bare nouns are used in Greek relates to the generic questions in (i)–(ii). For instance, *gli occhiali* ‘the glasses’ in (i) and *l’orologio* ‘the watch’ and *la macchina* ‘the car’ in (ii) contain a definite article.

- (i) A: Porti gli occhiali?  
wear the glasses?  
‘Do you wear glasses?’  
B: Sì, li porto.  
yes them.CL wear  
‘Yes, I do.’
- (ii) a. Porti l’orologio?  
wear.2SG the-watch  
‘Do you wear a watch?’  
b. Guida la macchina?  
drive.3SG the machine  
‘Does he drive a car?’

By contrast, the Greek counterparts of these examples involve bare nouns.

- (iii) Foras (\*ta) yialia/ (\*ti) vera/ (\*ta) takunia?  
wear.2SG (\*the) glasses/ (\*the) wedding.ring/ (\*the) high.heels  
‘Do you wear glasses/a wedding ring/high heels?’
- (iv) Odhighis aftokinito?  
drive.2SG car  
‘Do you/Can you drive a car?’

While the above contrast confirms the general pattern of an obligatory D in Italian where Greek employs a bare noun, it is an open question why these apparently generic readings are available in these cases in Greek, whereas, as we have shown, generics and kinds are systematically definite in Greek.

We focused on the realization of indefinite topics, which is where the contrast in the two languages' topic strategies surfaces. Italian allows (nonreferential) indefinite DPs or indeed adjectives to undergo CLLD and be resumed by a clitic. By contrast, Greek CLLD is restricted to referential topics; nonreferential topics are necessarily topicalized. We showed that this contrast reflects a more general pattern according to which Greek pronouns resist nonreferential antecedents, whereas Italian pronouns systematically accept them. We argued that the root of this contrast is the fact that Greek nominals lack a D layer and are instead NumPs. As a modifier of a NumP, the definite article/pronoun in Greek is fundamentally an optional element, appearing only when relevant for interpretation—that is, when a referential antecedent is in the discourse. By contrast, a D pronoun is obligatory in Italian, even when the antecedent is nonspecific. The category of the pronoun then affects its distribution and therefore also affects the possible construals and interpretations.

The variation in topic strategies then is reduced to variation in the syntax of nominal arguments in the two languages. If one accepts these syntactic claims, an important question arises regarding the syntax-semantics interface in Greek: if D is not the argumentizer in Greek, how do nouns in this language become arguments? We argued that, like Italian nouns, Greek nouns are [+pred] and [–arg]. Lacking a D head, Greek resorts to a covert type-shifter for existential interpretations, giving rise to productive use of bare nouns, plural and singular in both subject and object position. This, however, is a last resort. When an overt element encodes the relevant operator, it needs to be used and it blocks covert type-shifting. This is the case for the definite article, which encodes the  $\iota$  operator and is necessarily implicated in kinds.

A number of questions remain open. Can the lack of a D layer in Greek be linked with the richer morphological makeup of Greek nominals and the language's poor inventory of D elements, which contrast with the poorer case and number morphology of Italian nominal elements but that language's wider range of D elements? Which semantic account of definiteness can capture the occurrence of the definite elements in Greek, given that their occurrence is pragmatically-semantically governed?

How do the Italian facts compare with those of other Romance languages? Do other Romance languages allow pronouns to be construed with nonreferential antecedents? Does the availability of NP arguments predict IAD? While these questions await systematic investigation, we predict that the finer variation in the interpretive possibilities of CLLD and topicalization structures across Romance should reflect variation in the languages' nominal structure.

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