

#### RESEARCH

# Reconstructing Clitic Doubling

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This paper systematically investigates reconstruction properties of Greek clitic doubled objects, motivates an analysis, and shows how this new evidence distinguishes between the numerous existing analyses of Clitic Doubling (CD). It is shown that CD-ed objects are externally merged in argument positions, not adjunct (*pace* Philippaki-Warburton et al. 2004) and that they must undergo XP/X<sub>max</sub> movement, by contrast to non CD-ed objects, into the middle field between vP and TP, like A-scrambling (Sportiche 1996). Alternative analyses where the doubled object undergoes X<sup>0</sup>/X<sub>min</sub> movement (Alexiadou & Anagnostopoulou 1997; Preminger 2019 i.a.) or feature movement (Anagnostopoulou 2003; Marchis & Alexiadou 2013) are shown to be unable to capture this data. Furthermore, the paper argues that CD-ed XPs undergo movement into the middle field in order to license a syntactic feature that relates to their interpretive properties. It also considers the interpretive properties of clitics, and shows that they are expletive determiners lacking semantic import. Lastly, it suggests that clitics can only be present if certain locality conditions are satisfied.

Keywords: clitic doubling; clitics; scrambling; reconstruction

#### 1 Introduction

This paper explores and provides concrete answers about the syntactic position in which Greek CD-ed objects enter the derivation, the kind of syntactic movement they undergo and the height of the syntactic positions that are involved in this movement dependency. This is certainly not the first attempt in the literature. Several previous analyses have undertaken this task without reaching consensus though. Thus, one can find analyses in which the CD-ed XPs enter the derivation as arguments (Sportiche 1996; Anagnostopoulou 2003; Harizanov 2014; Baker & Kramer 2018 i.a.) or as adjuncts (Warburton 1977; Aoun 1985; Philippaki-Warburton 1987; Philippaki-Warburton et al. 2004 i.a.). This is one point in which the possible analyses of CD diverge. Another point has to do with the kind of movement that CD-ed objects undergo. For instance, CD-ed objects have been argued to undergo  $XP/X_{max}$  movement from the thematic position into the middle field, as in scrambling of the Germanic languages (cf. Uriagereka 1995; Sportiche 1996; Harizanov 2014), or to stay in situ and the doubling clitic to be a spell out of feature movement (cf. Anagnostopoulou 2003; Marchis & Alexiadou 2013), plain head movement (cf. Alexiadou & Anagnostopoulou 1997) or long head movement (cf. Rezac 2008; Roberts 2010b; Preminger 2019).

This paper resolves the conflicts that arise in these previous analyses by looking at interpretive properties, specifically, reconstruction properties, which as I discuss, bear directly on the more adequate analysis of Greek CD, and rule out several types of analyses which have been pursued in the literature. Concretely, I show using a set of well-established reconstruction diagnostics that CD-ed direct objects of Greek can only be interpreted in two positions, below the indirect object and in the middle field. The middle field position

is situated above vP but lower than the position where dative clitics are interpreted, and it is an A-position, as CD-ed objects can bind from there into lower syntactic positions. The position below the indirect object is the argument position where CD-ed objects enter the derivation before they undergo  $XP/X_{max}$  movement into the middle field. Furthermore, I show that feature or long head movement analyses have to be precluded because they cannot account in a principled way for the fact that CD-ed objects have interpretive properties different from these of undoubled objects. Lastly, building on Angelopoulos & Sportiche (2018) and on new data involving CD of experiencer arguments, I draw two new independent conclusions regarding the grammatical contribution of clitics. The first is that Greek clitics do not have referential import. Moreover, clitics are not specified with features such as –Focus or + familiar; only their associate XP i.e. the CD-ed object is. Given this, I propose as in Kallulli (2008), that CD-ed objects must undergo movement into a middle field syntactic position, like scrambled XP objects of Hindi or the Germanic languages, in order to license the –Focus or + familiar feature via Spec head.

Showing that arguments in Greek can undergo scrambling into the middle field has a number of theoretical consequences. First, it corroborates the conclusion in Sportiche (1996) that scrambling of the type found in Hindi or other languages is a lot more pervasive in natural languages than is usually thought. Second, since the alternative  $X^0/X_{min}$  analyses of CD are ruled out, the paper further concludes that scrambling can only be realized as  $XP/X_{max}$  movement cross-linguistically, and that it cannot be parameterized e.g. as  $X^0/X_{min}$  movement, (*pace* Alexiadou & Anagnostopoulou 1997; 1998). In addition, given that CD is realized as  $XP/X_{max}$  movement instead of  $X^0/X_{min}$ , an additional conclusion of this paper is that XP movement is the preferred mode of syntactic remerge (*pace* Preminger 2019), as has independently been argued in Koopman & Szabolcsi (2000); Mahajan (2003); Cinque (2005; 2010).

The paper proceeds with an overview of previous literature on CD, showing the conflicts that arise and the lack of clear conclusions as to whether Greek doubled objects are adjuncts or arguments. Section 2 presents reconstruction diagnostics. These diagnostics show that CD-ed objects enter the derivation as arguments, and that they undergo an A-movement step, which can only be  $XP/X_{max}$  targeting a position between vP and the position in which dative clitics are interpreted (Section 3). Section 4 discusses different approaches to CD which do not integrate an  $XP/X_{max}$  movement step and shows that these approaches cannot account for the interpretive properties of CD-ed objects. In the same section, I also show that clitics do not have interpretive import that matters for binding purposes. Section 5 shows that CD-ed objects are interpreted as –Focus and that this interpretive property is encoded as a syntactic feature that needs to be licensed via movement to the middle field (cf. Kallulli 2000), like A-scrambling of Hindi or Japanese. This section also shows that the position to which CD-ed objects move is not the clitic position. Section 6 discusses few tentative ideas regarding the optional presence of clitics in CD and residual issues. Section 7 concludes.

# 1.1 CD-ed objects: Adjuncts or arguments

This section presents the current state of affairs about analysis of Greek CD in the literature and shows that the empirical data discussed in this literature are compatible with different assumptions about the kind of position i.e. argument or adjunct, that CD-ed objects can occupy.

To start with, previous literature on CD has concluded that the doubled objects of Greek are arguments considering syntactic positions where adjuncts are excluded and testing whether CD-ed objects can occur in them. The syntactic positions that were tested are the subject positions of e.g. control or ECM, and it was observed that CD-ed

objects can occur in them, as shown in (1). Given this, it was concluded that Greek CD-ed objects can be arguments (cf. Collins 1990; Schneider-Zioga 1994; Sportiche 1996; Anagnostopoulou 1999a).

- (1) a. O Janis tin ekane tin Maria na chari. the John.NOM 3S.F.ACC made.3S the Maria.S.F.ACC na be happy.3S 'John made Maria happy.'
  - b. O Janis tin perimeni ke tin Maria na paraponethi. the John.NOM 3s.F.ACC expect.3s and the Maria.s.F.ACC na complain.3s 'John expects Maria to complain.'

However, most recently, Philippaki-Warburton et al. (2004) argue that constructions like the ones in (1) are compatible with an analysis of CD in which doubled objects are adjuncts with the clitic first merging in the argument position. Under this view, (1a) "must be analysed as an object control construction, where the DP [ti Maria] is the double to the clitic 'tin' and an adjunct in VP followed by the complement clause in subjunctive." Philippaki-Warburton et al. also claim that examples like (1b) can be analyzed along similar lines as object control. While this is not the view that will be adopted in this paper, the data in (1) are compatible with the alternative presented in Philippaki-Warburton et al. (2004) challenging the conclusions of Collins (1990); Schneider-Zioga (1994); Sportiche (1996) and Anagnostopoulou (1999a).

Anagnostopoulou (2003) argues that Greek CD-ed objects can occur in argument positions on the basis of a distributional difference in doubling of Greek and Romance languages. Concretely, Anagnostopoulou shows that CD-ed objects can surface before postverbal focused subjects, as in (2). Anagnostopoulou also notes that the subject in this case can bear main sentence stress like in plain VOS orders.

- (2) Anagnostopoulou (to appear: 59a-b)
  - a. Pjos tin efaghe tin turta? who 3.S.F.ACC ate.3S the cake.S.F.ACC 'Who ate the cake?'
  - b. Tin efaghe tin turta o Janis.
    3.S.F.ACC ate.3s the cake.S.F.ACC the John.NOM
    'John ate the cake.'

On the other hand, she claims that the surface order in (2b) is never attested in Romance languages e.g. Peninsular Spanish and Catalan, which independently allow an object to be preceded by a doubling clitic. Anagnostopoulou (2003) argues that the CD-ed object in (2b) occupies a syntactic position, which is only available for arguments, and that this is also the position that undoubled objects occupy when they surface in the VOS order. In particular, the assumption that Anagnostopoulou (2003) adopts from previous literature for this order is that it is derived via leftward A-movement of the object from the argument position into a position higher than the post-verbal subject. She concludes that Peninsular Spanish and Catalan do not allow the surface order in (2) because these languages have only clitic right dislocation. Clitic right dislocated objects have distinct distributional properties because they do not occupy argument positions like CD-ed objects. Importantly, in a recent intonation study, Revithiadou & Spyropoulos (2009) show that in the VOS order, the object always forms a distinct prosodic unit from the verb if it is doubled by a preceding clitic. On the other hand, if the object is not doubled by a clitic it can form a prosodic unit with the verb. This finding suggests that CL<sub>i</sub>-VO,S order cannot be treated

on a par with the plain VOS one (*pace* Anagnostopoulou 2003). Furthermore, Krapova & Cinque (2008: 29b) present data showing that the order in (2b) with a focused subject, exactly like in Greek, is allowed in Italian, as illustrated in (3).

(3) Non l' ha mangiata, la torta, neanche Gianni. not 3.S.F.ACC has.3s eat.PART the cake.S.F.ACC not even Gianni 'Not even Gianni ate the cake.'

As Krapova & Cinque (2008) point out, this finding poses a problem for the claim, e.g. in Anagnostopoulou (2003), that doubling of languages like Italian or other Romance languages e.g. Catalan or Peninsular Spanish, should be treated as a distinct syntactic phenomenon from CD.<sup>1,2</sup> Now, since the CD vs. right dislocation distinction of Anagnostopoulou (2003) is weakened in light of the Italian facts and the intonation study of Revithiadou & Spyropoulos (2009), (2b) cannot show conclusively whether the CD-ed object is an argument, therefore, the adjunct status of CD-ed objects (Philippaki-Warburton et al. 2004) is a possible alternative, which cannot be immediately ruled out. This view holds that the doubled object in (2b) is a left adjunct above Spec vP where the postverbal subject is hosted. Again, the view of Philippaki-Warburton et al. (2004) will not be adopted but it cannot be rejected on the basis of (2).

Finally, let us consider the data in (4a) and (4b). These data illustrate that possessor extraction is possible out of undoubled definites (cf. Horrocks & Stavrou 1987). On the other hand, Philippaki-Warburton et al. (2004) and Revithiadou & Spyropoulos (2009) point out that CD-ed objects block possessor extraction for focus or *wh*-movement, (5):

- (4) a. Odhighisa [ to aftokinito tu Jorghu]. drove.1s the car.S.N.ACC the George.GEN 'I drove George's car.'
  - b. Pjanu<sub>j</sub> odhighises [ to aftokinito  $t_j$ ]? whose GEN drove 2s the car.s.n.ACC 'Whose car did you drive?'
- (5) a. To $_i$  odhighises [ to aftokinito tu Jorghu] $_i$ . 3S.N.ACC drove.2S the car.S.N.ACC the George.GEN 'I drove George's car.'
  - b.  $*[Tu\ Jorghu]_j\ to_i\ odhighises\ [to\ aftokinito\ t_j]_i$  the George.GEN 3S.N.ACC drove.2s the car.s.n.ACC 'George's car I drove.'
  - c. \*[Pjanu] $_j$  to $_i$  odhighises [ to aftokinito  $_j$ ] $_i$ ? whose GEN 3S.N.ACC drove.2S the car.S.N.ACC 'Whose car did you drive?'

Based on this observation, Philippaki-Warburton et al. (2004) and Revithiadou & Spyropoulos (2009) claim that the behavior of CD-ed objects with respect to extraction is not expected in an analysis in which the CD-ed objects are arguments, like the correspond-

<sup>&</sup>lt;sup>1</sup> Note that the doubled object of (3) is separated with commas while the doubled object of Greek in (2) is not. This should not be taken to illustrate any potential intonational differences between the two. Greek doubled objects form distinct prosodic units (cf. Revithiadou & Spyropoulos 2009) like the doubled objects of e.g. Portuguese or Spanish do (cf. Vallduví 1993; Zubizarreta 1998).

Note also that in a number of recent works including Krapova & Cinque (2008) it is claimed that in Romance, doubled objects with preceding clitics enter the derivation as arguments (cf. Cecchetto 1999; Cardinaletti 2002 for Italian and Villalba 1998 for Catalan).

ing undoubled ones in (4). Note, however, that (4b) does not form real minimal pairs with (5b) and (5c). CD-ed objects are necessarily marked as –Focus whereas undoubled objects are not (cf. Warburton 1975; Kallulli 2000). More specifically, Warburton (1975: 568–569) argues that CD-ed objects cannot be stressed or focal. The fact that Greek CD-ed objects are marked as –Focus is illustrated in (6) where it is shown that the CD-ed DP cannot be combined with a focus marker like *akoma*-'even' (cf. Kallulli 2000):

(6) I Maria (\* tin) episkeftike akoma ke tin Indhia. the Maria.NOM 3S.F.ACC visited.3s even the India.S.F.ACC 'Maria even visited India.'

Now, since the CD-ed DP has to be –Focus, I argue that (5b) is ruled out because the possessor argument hosted within the CD-ed DP cannot be marked as +Focus and undergo focus movement. Similarly, (5c) is ruled out because *wh*-items are obligatorily +Focus (cf. Horvath 1986; Brody 1990 i.a.). In other words, the possessor cannot undergo focus or *wh*-movement in which case it would have to be +Focus possibly because the whole doubled DP, that is, *to aftokinito tu Jorghu* in (5a), constitutes a –Focus domain. Given this, the syntactic position of CD-ed objects cannot be revealed by the data in (5b) and (5c) because the extraction restrictions in these examples are expected to arise regardless of the syntactic position of the CD-ed object i.e. adjunct or argument.

To sum up, the discussion so far must have shown that the question regarding the position in which doubled objects enter the derivation in Greek has not yet been sorted out. The following sections aim to bring further clarity in this discussion. This is achieved by using new evidence which is derived from a systematic investigation of the reconstruction properties of Greek doubled objects.

# 2 Background on reconstruction

This section summarizes the assumptions that will be adopted regarding reconstruction. These assumptions were also adopted in Angelopoulos & Sportiche (2018), who explore the reconstruction properties of Clitic Left Dislocated objects in Greek and French. I adopt the following assumptions:<sup>3</sup>

- (7) a. Reconstruction is a property of movement dependencies only.<sup>4</sup>
  - b. Movement is modeled as copying (the copy theory of traces). Reconstruction arises when a trace is interpreted at LF: in other words, with low-XP the trace of high-XP, reconstruction of high-XP = interpret low-XP.
  - c. Total reconstruction refers to the situation in which only a low trace is interpreted at LF: total reconstruction = delete high-XP & interpret low-XP.<sup>5</sup>

Let us now consider a few examples. (8) illustrates reconstruction effects with A-bar movement (cf. Sportiche 2017). Here, a pronoun within the *wh*-moved phrase can be interpreted as a variable bound by the quantifier phrase (QP) which does not outscope it. The pronoun can be interpreted as a bound variable only if it is interpreted within the scope of the quantifier i.e. if it is c-commanded. Thus, the moved constituent has to undergo reconstruction in this particular case, as shown in (9). The fact that reconstruc-

<sup>&</sup>lt;sup>3</sup> These assumptions are justified in minimalist terms in Fox (1999; 2000); Takahashi & Hulsey (2009); Sportiche (2016; 2017).

<sup>&</sup>lt;sup>4</sup> Except possibly for some pseudo-cleft constructions, (cf. Sharvit 1999).

<sup>&</sup>lt;sup>5</sup> Sportiche (2016) shows that a moved element can be interpreted in various positions. For instance, in addition to total reconstruction, Sportiche shows that it is possible for a moved element to be interpreted both in its first merge position and in the position it moves to.

tion is possible suggests that A-bar movement "can leave a contentful copy", as Takahashi & Hulsey (2009: 390) argue,<sup>6</sup> in the argument position of the verb.

- (8) Sportiche (2017: 9a, 10a)
  - a. No politician, ignores [many of his, collaborators].
  - b. [Which of his, collaborators] does no politician, ignore?
- (9) [Which picture of his, father] does no politician, ignore [picture of his, father]?

A-bar movement obligatorily leaves a contentful copy. This fact is exemplified with sentences like (10) where Condition C blocks a coreferential relation between the proper name and the subject pronoun.

# (10) \*Which picture of John, does he, like?

Condition C effects like the one in (10) shows that A-bar movement is the only derivational option from below the position of the triggering pronoun. If there was no movement involved in (10), we should not observe any Condition C violation. In addition, if A-bar movement did not leave a contentful copy, it would be totally unclear why Condition C ensues. Furthermore, like A-bar moved constituents, A-moved constituents can undergo total reconstruction for purposes of pronominal binding, as shown in (11). This shows that A-movement can leave a contentful copy.

(11) Sportiche (2017: 55a)

Pictures of his; child seemed to everyone, to be good [pictures of his, child].

Next, I consider cases in which Condition C is bled. These are cases in which a proper name (or definite description) is contained in an adjunct or a relative clause combining with a moved constituent, as in (12).

(12) Which picture that Picasso, likes a lot did he, sell?

These effects have been accounted for by late merging the relative clause (cf. Lebeaux 1991 i.a.). I will be referring to these effects in terms of Late Merge, however, the reference to this term is only used for descriptive purposes i.e. to describe the reconstruction effects accounted for by Late Merge.<sup>7,8</sup> Importantly, the effects accounted for by Late Merge can be used to detect the syntactic height of movement, as in Cecchetto (1999). For instance, (12) shows that *which picture* has undergone movement to a position higher than the pronoun. The *wh*-phrase can be interpreted at LF in this position which allows the relative clause to undergo Late Merge. Condition C does not ensue after Late Merge has taken place because the proper name is not in the c-command domain of the pronoun.

<sup>&</sup>lt;sup>6</sup> A contentful copy is a copy whose content can be fully interpreted at LF.

<sup>&</sup>lt;sup>7</sup> See Sportiche (2016) for a discussion of the serious problems of Late Merge accounts and an alternative.

An anonymous reviewer points out that Late Merge cannot cover all cases of Principle C bleeding, and therefore, cannot be used as a diagnostic for binding or reconstruction since there is no principled way to know what exactly one is dealing with. Indeed, like the reviewer correctly points out there are different cases of Principle C bleeding. For instance, A-movement as well is well-known to bleed Condition C (see Sportiche 2016 for discussion). Nonetheless, the Late Merge effects that I am using here to detect height of merge are not different cases. They are all based on a single well-known and fairly established in previous literature case where merger of a relative clause can bleed Condition C. Importantly, extensive previous research on clitic constructions has used this particular diagnostic exactly like I do here in order to diagnose height of movement (cf. Cecchetto 2000; Koopman 2007 and Angelopoulos & Sportiche 2018 i.a.). Moreover, to my knowledge, the findings arising from the application of this particular diagnostic have never been contested. Instead, they are discussed as valid in the relevant literature (cf. Cardinaletti 2002).

#### 3 Reconstruction in CD

In this section I lay out the key facts from a nearly exhaustive investigation of the reconstruction properties that CD-ed direct objects exhibit in Greek in order to determine if they enter the derivation as arguments or adjuncts and if they undergo movement, what kind of movement they undergo and to which syntactic positions. I show that CD-ed objects enter the derivation as arguments and that they do not move higher than the subject or the dative clitic. Moreover, I present data showing that CD-ed objects move to a vP peripheral position and that this movement has to be XP/X<sub>mov</sub> movement.

# 3.1 CD-ed objects are arguments

In this section I show that CD-ed objects enter the derivation as arguments. To start with, consider (13a) which shows that a plain undoubled direct object hosting a pronoun can be interpreted in the argument position where the pronoun is bound by an indirect object QP scoping below negation, as shown in the translation. In (13b), I show that binding into the CD-ed direct object is possible under identical conditions i.e. with the quantifier scoping below negation.

- (13) a. Dhen edhiksa se kapjo fititi $_i$  to paso tu $_i$ . not showed.1s to some student.ACC the ID.S.N.ACC his.GEN 'I did not show his ID to any student.'
  - b. Dhen to edhiksa se kapjo  ${\rm fititi}_i$  to paso  ${\rm tu}_i$ . not 3.S.N.ACC showed.1s to some student.ACC the ID.S.N.ACC his.GEN 'I did not show his ID to any student.'

This new finding shows that CD-ed objects can be interpreted in the argument position exactly like undoubled arguments and be bound by a low scoping quantifier. In Section 3.4, I show that CD-ed objects undergo obligatorily an A-movement step into the middle field. Given this, I argue that the bound interpretation in (13b) becomes possible under total reconstruction of the CD-ed direct object from the middle field into a position below the indirect object QP, which is the argument position occupied by the undoubled object in (13a).<sup>9,10</sup>

Importantly, previous literature has concluded that Greek CD-ed objects cannot undergo reconstruction. In particular, Alexiadou & Anagnostopoulou (1997) point out that the direct object can bind into a PP indirect object as shown in (14a). However, since PPs cannot be CD-ed in Greek, Alexiadou & Anagnostopoulou construct examples with CD of dative indirect objects as in (14b), where it is shown that pronominal binding is not possible in this case.

- (14) Alexiadou & Anagnostopoulou (1997: 6a–b)
  - a. O Janis sistise kathe jineka, s-ton melodiko the John.NOM introduced.3s every woman.ACC to-the future adra tis, husband.ACC her.GEN 'John introduced every woman to her future husband.'
  - b. \*O Janis tu sistise kathe jineka, tu melodiku the John.NOM 3S.M.DAT introduced.3s every woman.ACC the future adra tis, husband.S.M.DAT her.GEN 'John introduced every woman to her future husband.'

<sup>&</sup>lt;sup>9</sup> The discussion above shows that the binding patterns in Bulgarian which in Harizanov (2014) have been taken to show that A-moved elements cannot totally reconstruct for pronominal binding need to be reconsidered.

<sup>&</sup>lt;sup>10</sup> This position can be in the complement position of the verb or a case position where direct objects move to get Case.

Based on the contrast between (14a) and (14b), Alexiadou & Anagnostopoulou conclude that the CD-ed indirect object in (14b) is interpreted in a position higher than the direct object due to (some kind of) movement that the CD-ed object undergoes to this higher position. In addition, they assume that pronominal binding is not possible into the CD-ed indirect object because it cannot undergo total reconstruction below the direct object. Note that the detail that Alexiadou & Anagnostopoulou (1997) do not discuss is that the two sentences in (14) do not form a minimal pair. In (14a), the indirect object is a PP whereas in (14b), it is a dative DP. Moreover, pronominal binding is not expected to be possible in (14b) because bare direct object QPs cannot bind into undoubled dative indirect objects in the first place (cf. Anagnostopoulou 2003). This latter fact is illustrated below:

- (15) a. \*O Janis sistise tu melodiku adra tis, kathe the John.NOM introduced.3s the future husband.DAT her.GEN every jineka, woman.ACC 'John introduced every woman to her future husband.'
  - b. \*O Janis sistise kathe jineka<sub>j</sub> tu melodiku the John.NOM introduced.3s every woman.ACC the future adra tis<sub>j</sub>.
    husband.DAT her.GEN
    'John introduced every woman to her future husband.'

Given the above, I argue that the data presented in Alexiadou & Anagnostopoulou (1997) do not pose any challenge to the conclusion that CD-ed direct objects can undergo reconstruction.

# 3.2 CD-ed XPs do not move higher than the subject

This section examines whether CD-ed objects can be interpreted higher than the subject. Thus, I compare only for the purposes of this section the interpretive properties of CD-ed objects to these of C(litic) L(eft) D(islocat)ed ones. 11 CLLD-ed objects are used as a benchmark case, as they surface in the left periphery above the subject, and as shown in (16), can be interpreted in the left periphery.

(16) [Tis fotoghrafies pu o Janis<sub>k</sub> evghale s-to Parisi] pro<sub>k</sub> the photos.PL.F.ACC that the John.NOM took.3s in-the Paris.ACC he.NOM tis ksechase (sto sirtari tu).

3PL.F.ACC forgot.3s in-the drawer.ACC his.GEN
'He forgot (in his drawer) the photos that John took in Paris.'

In (16), the CLLD-ed object is combined with a relative clause that contains a proper name i.e. *pu o Janis evghale sto Parisi*, and the proper name is shown to be able to corefer with the silent subject of *ksechase*. This shows that the CLLD-ed object can be interpreted in the left periphery, allowing the relative clause to undergo Late Merge with it, which in turn is responsible for bleeding Condition C, as the proper name ends up being interpreted outside the c-command domain of the silent subject pronoun in (16). If CD-ed objects could occur in the left periphery either in the specifier of a TopicP or as adjuncts to a left peripheral projection, like CLLD-ed objects, they should be able to bleed Condition C when they combine with a relative clause. If they do not bleed Condition C, this will in turn suggest

<sup>&</sup>lt;sup>11</sup> See Angelopoulos & Sportiche (2018) for a detailed examination of the interpretive properties of CLLD-ed objects in Greek and French.

that CD-ed objects do not move higher than the subject or that they cannot adjoin to any projection higher than the subject. Note that the latter would be totally unexpected if CD-ed were DP adjuncts as they should in principle be allowed to freely adjoin XPs at different levels. Interestingly, I show that when a CD-ed object combines with a relative clause containing a proper name, coreference between the proper name and the silent subject is blocked, (17).<sup>12</sup>

(17) pro<sub>k</sub> tis ksechase [tis fotoghrafies pu o Janis<sub>k</sub> he.NOM 3PL.F.ACC forgot.3s the photos.PL.F.ACC that the John.NOM evghale s-to Parisi]. took.3s. in-the Paris.ACC 'He forgot the photos that John took in Paris.'

Similar facts have first been reported for Italian in Cecchetto (1999); Cardinaletti (2002) and for Dutch in Koopman (2007: 171). I take these facts to provide evidence that CD-ed objects are not adjuncts in Greek, and that if they undergo any movement step, this movement step must be targeting a position below the position where silent subject pronouns are hosted. In Rizzi (1986), this position has to be Spec TP where *pro* undergoes movement in order to be identified. More recently, the idea that *pro* is in Spec TP had been defended in Rizzi (1997); Cardinaletti (2004); Holmberg (2005) and Roberts (2010a). Following this previous literature, I assume that subject *pro* is indeed in Spec TP. Moreover, I assume that *pro* can only be interpreted in Spec TP. In other words, *pro* cannot undergo reconstruction to Spec vP where it originates. I suggest that this is so as a result of the fact that A-moved pronouns do not undergo reconstruction. In Sportiche (2017), the fact that A-moved pronouns do not reconstruct was shown on the basis of the following pair from English (see also Angelopoulos & Sportiche 2018):

- (18) Angelopoulos & Sportiche (2018: 42a–b)
  - a. \*He, seems to John,'s father to be  $t_{i}$  happy.
  - b. It seems to John,'s father that  $he_{k}$  is happy.

(18a) is ruled out under a coreference reading between *he* and *John*. However, if the raised pronoun could undergo reconstruction, it should be binding theoretically equivalent to (18b). The fact that it is not suggests that A-moved pronouns do not reconstruct.<sup>13</sup>

This judgment was confirmed in a short informal survey conducted with fifteen native speakers of Modern Greek. It was found that all speakers including the author have very strong judgments blocking coreference between the proper name and the pronoun in (17). It is important that while there was no variation in the judgment for (17), 4/15 speakers though did not have clear judgments about (16). An anonymous reviewer disagrees with the judgment in (17). It is unclear at this point what to make of this difference in judgment. I have so far not encountered speaker variation, and am not aware of cross-linguistic disputes in this area (see Cecchetto 1999 for Italian, or Koopman 2007 for Dutch). Perhaps the distance separating the pronoun and the name plays a role. The fact that Condition C can be alleviated with distance (which can be a few words) has most recently been discussed in Adger et al. (2017). This effect of distance might also give the impression that corefence is possible in (17) if, for instance, the proper name in the relative clause is placed after the verb. This judgment is in fact reported by an anonymous reviewer, however, it is not shared by five other native speakers that were consulted or by the author of this paper.

<sup>&</sup>lt;sup>13</sup> I assume that *pro* undergoes movement and that it is in Spec TP. The first assumption, namely, that subjects move finds support in Section 3.4.1 where it is shown that subjects can undergo reconstruction into a lower position from which they must have undergone movement (see Alexiadou & Anagnostopoulou 2000 and Anagnostopoulou 2003 for similar conclusions). There is a different view according to which subjects in Greek never move. They either stay very low in the structure or they are base generated in a high Topic position (cf. Alexiadou & Anagnostopoulou 1998 and Alexiadou & Anagnostopoulou 2001). This alternative view cannot account for the reconstruction properties of subjects. Furthermore, it has been argued in previous literature that Greek has a T with a strong D-feature (cf. Alexiadou & Anagnostopoulou 1998). This feature can be licensed by merging *pro* in Spec TP. Alternatively, Alexiadou & Anagnostopoulou (1998)

# 3.3 CD-ed objects do not move higher than dative clitics

In this section I examine the interaction with respect to Condition C between CD-ed direct objects and dative clitics in order to determine the relative height of movement of the first with respect to the latter. In previous literature, Condition C has been argued to rule out coreference between a dative clitic and a definite description hosted within an undoubled direct object, (19a). This literature also reports that if the direct object is CD-ed, Condition C is obviated, as in (19b).

- (19) Alexiadou & Anagnostopoulou (1997: 10a–b)
  - a. \*O Janis tis, epestrepse to vivlio tis Marias, the John.NOM 3S.F.DAT returned.3s the book.S.N.ACC the Maria.GEN simiomeno.

noted

'John returned Mary's book to her noted.'

b. ?O Janis  $\operatorname{tis}_i$  to epestrepse to vivlio tis the John.NOM 3S.F.DAT 3.S.N.ACC returned3s the book.S.N.ACC the Marias $_i$  simiomeno.

Maria.GEN noted

'John returned Mary's book to her noted.'

Based on this contrast, Alexiadou & Anagnostopoulou conclude that Condition C is obviated in (19b) because the doubled object undergoes (some kind) of A-movement across the dative clitic. <sup>14</sup> With that said, I would like to argue that there are confounds in the minimal pair in (19), and as a result of this, that it is not clear whether CD-ed objects move higher than the dative clitic. Let me clarify, first, that genitive and dative are morphologically syncretic in Greek. Thus, (19b) in the absence of the two clitics is ambiguous between (20a) and (20b). <sup>15</sup>

- (20) a. O Janis epestrepse [to vivlio tis Marias] simiomeno. the John.NOM returned.3s the book.s.n.ACC the Maria.GEN with notes 'John returned Maria's book with notes.'
  - b. O Janis epestrepse [to vivlio] [tis Marias] simiomeno. the John.NOM returned.3s the book.s.N.ACC the Maria.DAT with notes 'John returned the book to Maria with notes.'

In (20a), *tis Marias* functions as possessor forming one constituent with the direct object *to vivlio. Simiomeno* is a secondary predicate taking *to vivlio tis Marias* as subject. In (20b), *tis Marias* is a single constituent functioning as a dative indirect object. In this case, *simiomeno* is extraposed into a position after its subject, that is, *to vivlio.* <sup>16</sup> Now, if two clitics are present, they can enter dependencies with different arguments. For

have argued that v-to-T movement can license this strong feature. In the latter case, *pro* is possibly encoded as a D-feature on the verb. In both analyses, it is crucial that movement of *pro* to the T domain is required in one way or another.

<sup>&</sup>lt;sup>14</sup> In Alexiadou & Anagnostopoulou (1997) this movement step is realized as head movement.

<sup>&</sup>lt;sup>15</sup> In (20b) and in following examples, the use of DAT in the gloss in only meant to indicate a syntactic difference i.e. the fact that the DP in question is an indirect object, and not a morphological difference since *tis Marias* in both (20a) and (20b) is identical in form.

<sup>&</sup>lt;sup>16</sup> The fact that secondary predicates can extrapose is shown below where *simiomeno* follows the PP indirect object.

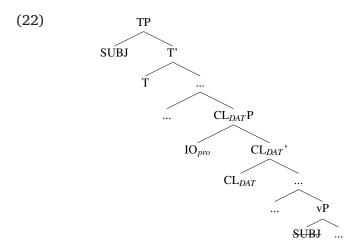
<sup>(</sup>i) I Maria epestrepse to vivlio s-tin Elena simiomeno. the Maria.NOM returned.3s the book to-the Elena with notes 'Maria returned the book to Elena with notes.'

instance, the accusative clitic to can associate with to vivlio tis Marias, which forms a single constituent, as in (21a). Or, to can associate with the direct object to vivlio in which case tis Marias functions as a dative argument associating with the dative clitic tis, as in (21b).

- (21) a. O Janis tis to epestrepse [to vivlio tis the John.NOM 3S.F.DAT 3S.N.ACC returned.3S the book.S.N.ACC the Marias] simiomeno. Maria.GEN with notes
  - b. O Janis  $\operatorname{tis}_j$  to epestrepse [to vivlio] [tis the John.nom 3s.f.dat 3s.n.acc returned.3s the book.s.n.acc the Marias] simiomeno.

    Maria.dat with notes

Importantly, Condition C between *tis Marias* and *tis* is not expected to arise in (21b) because the two associate via CD. Anagnostopoulou (1994: 127–128) who also observes this structural ambiguity notes that (21b) needs to be suppressed in order to diagnose clearly if Condition C is bled in (21a) or not. Yet, Alexiadou & Anagnostopoulou (1997) treat (19b) as one unambiguous string and conclude without further discussion that "the condition C effect disappears once the direct object *to vivlio tis Marias* is doubled." However, given the confound in these examples, this conclusion is not supported by these data. In fact, I show that Condition C is not expected to be bled in CD of direct objects, and, therefore, that the conclusion that Alexiadou & Anagnostopoulou (1997) report is a result of the confound discussed in Anagnostopoulou (1994). Concretely, let us assume that dative clitics are interpreted in Spec CL<sub>DAT</sub>P and that this position is lower than the subject position, as in Sportiche (1996) (see discussion in Section 3.4.1 for comparison with different analyses of clitic constructions and for more details of Sportiche's analysis).<sup>18</sup>



Let us also take (23a) as a benchmark case showing that the dative clitic c-commands the undoubled direct object.

<sup>&</sup>lt;sup>17</sup> Anagnostopoulou (1994) had concluded that CD does not bleed Condition C. This conclusion is not taken into consideration in Alexiadou & Anagnostopoulou (1997).

<sup>&</sup>lt;sup>18</sup> I also assume as in Angelopoulos & Sportiche (2018) that the pronoun that clitics associate with have undergone A-movement to the Clitic position and as a result of this, that they cannot undergo total reconstruction, as discussed already. Recall that in Sportiche (1996), clitics head CliticPs in the middle field.

- (23) a. \*I Maria tu<sub>i</sub> epestrepse [tis fotoghrafies pu o the Maria.NOM 3S.M.DAT returned.3s the photos.PL.F.ACC that the Janis<sub>i</sub> evghale sto chionodhromiko].

  John.NOM took.3s in-the ski resort.ACC

  'Maria returned to him the photos that John took in the ski resort.'
  - b. \*I Maria  $tu_i$   $tis_j$  epestrepse [tis fotoghrafies the Maria.NOM 3s.M.DAT 3PL.F.ACC returned.3s the photos.PL.F.ACC pu o Janis $_i$  evghale sto chionodhromiko] $_j$ . that the John.NOM. took.3s in-the ski resort.ACC 'Maria returned to him the photos that John took in the ski resort.'

In (23a), coreference between the clitic and the proper name in pu o Janis evghale sto chionodhromiko is blocked due to Condition C. If there is a copy of the CD-ed direct object higher than Spec  $CL_{DAT}P$  in (22), <sup>19</sup> Late Merge of the relative clause with this higher copy should bleed the Condition C effect seen in (23a), as the proper name would not be in the c-command domain of the dative clitic. (23b) shows that coreference between the dative clitic and the proper name in the relative clause is blocked after CD suggesting that there is no higher copy of tis fotoghrafies higher than Spec  $CL_{DAT}P$ , which would allow Late Merge of the relative clause. I conclude based on this that CD-ed direct objects do not move higher than Spec  $CL_{DAT}P$  in (22). Having clarified this, the next section shows that although CD-ed objects do not move higher than the position in which dative clitics are interpreted, they still undergo movement into a lower vP peripheral specifier.

# 3.4 CD-ed objects obviate WCO

It has been known for a long time in several languages such as Lebanese Arabic (cf. Aoun 1981) or Greek (cf. Agouraki 1992; Alexiadou & Anagnostopoulou 1997; 2000; Anagnostopoulou 2003) that CD can obviate WCO effects. This effect is illustrated in the following examples, where a pronoun embedded within a subject cannot be bound by an undoubled quantifier in the direct object position, (24a), while if the quantifier is CD-ed, the bound interpretation becomes possible, (24b).

- (24) a. \*I mitera tu<sub>i</sub> sinodhepse to kathe phedhi<sub>i</sub>. the mother.NOM his.GEN escorted.3s the every kid.S.N.ACC 'His mother did not escort every kid.'
  - b. I mitera tu<sub>i</sub> to sinodhepse to kathe phedhi<sub>i</sub>. the mother.NOM his.GEN 3S.N.ACC escorted.3S the every kid.S.N.ACC 'His mother did not escort every kid.' (Anagnostopoulou 2003: 293)

In what follows, I present an account for these facts assuming that the CD-ed object undergoes  $XP/X_{max}$  movement to a vP peripheral specifier. I argue that this movement step is an A-movement step from the argument position. Subsequently, I discuss that competing approaches that do not take CD-ed object to undergo  $XP/X_{max}$  movement from the argument position fall short in accounting for the absence of WCO in CD and the correlation with Hindi or Japanese A-scrambling.

# 3.4.1 CD as $XP/X_{max}$ movement

In this section, I argue that the absence of WCO in CD can only be accounted for in analyses of CD that integrate one XP movement step in the syntactic derivation underly-

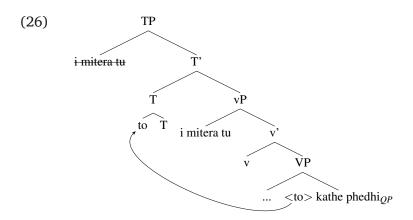
 $<sup>\</sup>overline{\ }^{19}$  The exact height of the  ${\rm CL}_{DAT}$ P does not really matter. It could be higher than T, as in Angelopoulos & Sportiche (2018) or below T, as in Sportiche (1996). In both approaches these clitic positions are lower than the subject.

ing CD. These analyses have been proposed in different versions in Sportiche (1996) and in Uriagereka (1995), or more recently in Harizanov (2014). In addition, these analyses share the assumption that doubled XPs undergo movement, like scrambling, but they make different assumptions regarding the relation between the clitic and the associate XP. In Sportiche (1996), clitics are heads situated above vP/VP but (for non-subjects) below TP that attract an agreeing XP. In Uriagereka (1995), the clitic and the doubled XP enter the derivation together in a BIG DP configuration, and they are separated by subsequent movement of the clitic and the XP (see also Kayne 1972; Torrego 1992; Belletti 1999; Papangeli 2000; Nevins 2011 for different versions of BIG DP analyses). In Harizanov (2014), doubled DPs undergo movement embedded within a KP to a vP specifier. Postsyntactic operations turn the higher KP occurrence into a clitic. I do not adopt Harizanov's analysis due to a more general skepticism in recent literature in regard to the existence of post-syntactic operations (cf. Koopman 2017 and Kayne 2018). As for the two approaches in Sportiche (1996) and Uriagereka (1995), the differences between them are subtle and often inconsequential (see discussion in Angelopoulos & Sportiche 2018). I adopt the analysis of Sportiche (1996) in order to be consistent with Angelopoulos & Sportiche (2018), where the same set of reconstruction diagnostics were used for the analysis of Greek and French Clitic Left Dislocation. Turning to CD again, I argue that doubled XPs undergo one short A-movement step to a middle field position above vP.<sup>20</sup> This position is lower than the subject or Spec CL<sub>DAT</sub>P where dative clitics are interpreted, therefore, the fact that dative clitics give rise to Condition C with CD-ed direct objects, as we saw in Section 3.3, follows straightforwardly. In addition, since this middle field position is an A-position, I suggest that CD-ed direct objects can bind from this A-position into Spec vP where subjects can undergo reconstruction, as shown in the LF representation in (25), obviating WCO.<sup>21</sup>

(25) 
$$\left[ \sum_{XP} \text{ to kathe phedhi } \left[ \sum_{X} X \right] \left[ \sum_{P} \text{ i mitera tu} \right] \left[ \sum_{P} V \right] \left[ \sum_{P} \text{ to kathe phedhi } \right] \right] \right] \right]$$

# 4 Different approaches to CD 4.1 CD as Feature movement

In previous literature, it was argued that CD can obviate WCO assuming that CD-ed DPs form an A-chain with the clitic. The clitic which is the head of the chain is assumed to move to T via feature movement, and it is argued to bind from this position into Spec vP where the subject can undergo reconstruction, as shown in the LF representation below (cf. Anagnostopoulou 1999b; 2003; Marchis & Alexiadou 2013 i.a.).



<sup>&</sup>lt;sup>20</sup> If the CL<sub>ACC</sub>P is lower than the CL<sub>DAT</sub>P, CD-ed direct objects probably move to CL<sub>ACC</sub>P after movement to XP in (25).

<sup>&</sup>lt;sup>21</sup> The fact that there can be a copy of the subject in Spec-vP undermines the proposal of Alexiadou & Anagnostopoulou (1998), who argue that preverbal subjects are base generated in a left peripheral topic position.

Notably, the feature movement analyses never explicitly formulated Binding Theory in terms of features, therefore, it is unclear on what grounds the assumption that features can bind can be evaluated. At any rate, I argue that the real challenge the feature movement account faces is that it relies on the rather doubtful assumption that features can act as binders in the first place. Feature movement was first motivated in Chomsky (1995) to account for the agreement facts in the expletive constructions of English and Italian shown in (27b) and (27a).<sup>22</sup>

#### (27) Cardinaletti (1997: 1b–c)

- a. **pro** \*arriva/ arrivano tre ragazze. pro arrive.3s/ arrive.3P three girls
- b. There \*arrives/arrive three girls.

Here, Chomsky (1995) argues that features of the associate undergo covert movement into T where they check the  $\emptyset$ -features of the verb. As Chomsky (1995) supports, these features can bind and license PRO in cases like (28a). Chomsky further observes that, by contrast to PRO, reflexive binding cannot be licensed in expletive constructions, as shown in (28b).

# (28) Chomsky (1995: 40a, 44)

- a. There arrived three men (last night) without identifying themselves.
- b. \*There seem to each other [t to have been many linguists given good job offers.]

Cardinaletti (1997: 525) points out other instances from previous literature where binding and control are subject to distinct licensing requirements (cf. Rizzi 1986) and concludes that "both agreement and control are triggered by simple feature movement, whereas binding requires that the antecedent be the whole category (not just some features)." Similarly, Lasnik (1999: 183) shows that pronominal binding is not allowed in expletive constructions, (29), and concludes like Cardinaletti (2008) that feature movement cannot license binding.

#### (29) Lasnik (1999: 183)

- a. Some defendant, seems to his, lawyer to have been at the scene.
- b. \*There seems to his, lawyer to have been some defendant, at the scene.

Based on the conclusions of Cardinaletti (1997) and Lasnik (1999), I reject the feature movement analysis of CD, as there is no independent motivation for feature movement playing a role in binding.

In the next section, I turn to the grammatical distribution of clitics. Building on Angelopoulos & Sportiche (2018), I show that there is no independent motivation for the doubling clitic to have referential import that matters for binding. This suggests even more strongly that the clitic should not be able to bind into anything, like it was shown to be the case with the raised features in English expletive constructions. Based on this finding, the next section also argues that the long head movement analyses of CD must be ruled out because as with the feature movement analysis, they cannot account for the fact that CD-ed objects exhibit interpretive properties as these of objects e.g. of Hindi, that have undergone movement into the middle field.

<sup>&</sup>lt;sup>22</sup> An anonymous reviewer points out that under current theoretical assumptions feature movement has been reduced to Agree.

### 4.2 CD as Long Head movement

Having pointed out preliminary observations about the issues with respect to binding that the feature movement accounts face, I discuss next the most closely related analyses presented more recently in Rezac (2008); Roberts (2010b) and Preminger (2019). These works assume that CD-ed objects are arguments and that they stay in situ, as in the feature movement analysis. Furthermore, they propose that instead of feature movement, the D-head of the doubled object undergoes long head movement into T or other lower heads. These approaches do not explore WCO in CD, however, since the doubled XP stays in situ, the fact that WCO is obviated in CD can make sense only if the doubling clitic, which is the D head of the CD-ed object has referential properties and thus, can be interpreted after long head movement in a higher functional domain. The issue that arises with this view is that Greek clitics do not have interpretive import. This fact has been shown in previous work on the basis of cases in which a reflexive is CD-ed, as in (30).

(30) O Jorghos $_i$  ton aghapai [ton eafto tu] $_i$ . the George 3s.m.acc loves.3s the self.s.m.acc his.gen 'George loves himself.'

In (30), the accusative clitic doubles an anaphor bound by the subject (cf. Iatridou 1986). If clitics had interpretive import and could enter referential/binding dependencies, they should have the index of the anaphor which is the element that the clitic associates with in (30). Nevertheless, if this was true, the clitic should give rise to a Principle B violation because it would be locally bound by the subject, as illustrated in (31).

(31) \*O Jorghos, ton, agaphai. the George 3.S.M.ACC loves.3S 'George loves him.'

Collins (1990) and Angelopoulos & Sportiche (2018) argue that accusative clitics do not give rise to Principle B violations in (30) because they are expletive elements, like expletive determiners, lacking referential import. In Angelopoulos & Sportiche (2018), this claim also finds further support in the fact that clitics in Greek and French can double elements that lack reference such as embedded clauses or predicates e.g. adjectives, in French.<sup>23</sup> Under their analysis, which I adopt, only the element that the clitic associates with has referential properties. In (30), this element is the anaphor, and in plain cliticization, this element is a silent pronoun:

# (32) O Jorghos ton, aghapai **pro**,.

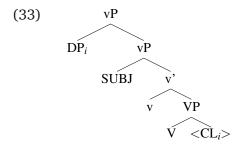
Furthermore, in Angelopoulos & Sportiche (2018), the silent pronoun does not remain in situ. Instead, it has to move to the specifier of the phrase headed by the clitic for indentification purposes, exactly like silent *pro* has been argued to be identified by T in null subject languages (cf. Rizzi 1986).

Now, since the clitic is an expletive determiner and lacks reference, it should not be able to bind or change anything with respect to WCO, therefore, the analysis of Rezac (2008); Roberts (2010b), and Preminger (2019) predicts that the CD-ed and plain objects should be interpreted in situ and that they should not differ in terms of interpretive properties. However, this prediction is wrong since, as we saw, CD-ed objects can obviate WCO effects with the subject.

<sup>&</sup>lt;sup>23</sup> I would like to refer the reader to the discussion in Angelopoulos & Sportiche (2018) for more detailed argumentation of the fact that Greek clitics lack reference.

# 4.3 CD-ed objects as adjuncts

Under the account in Philippaki-Warburton et al. (2004), the doubled DP is base generated as adjunct e.g. to vP in (33), and the clitic first merges as an argument of the verb and undergoes  $X_{min}/X_{max}$  movement to some higher projection. Here, the doubled DP should not be able bind into anything under the assumption possibly that "adjunct" positions do not have the properties of A-positions (see Angelopoulos et al. 2018 for data showing that binding from adjuncts is not possible in Greek). Moreover, the clitic cannot bind or be interpreted, because accusative clitics, as we discussed, are expletive determiners lacking referential import. The issues that arise here is that, like in previous analyses, the fact that WCO is obviated in CD cannot be accounted for.



# 5 CD as A-scrambling

This section argues that Greek CD-ed XPs undergo movement, like scrambling, into the middle field to license a syntactic feature related to their interpretive properties. In Section 5.1, following Kallulli (2000), I suggest that this feature is –Focus. On the other hand, in Section 5.2, I show that Greek clitics are not lexically specified as + familiar or –Focus. Since clitics are empty of such features, I suggest that the interpretive properties that CD-ed objects exhibit in Greek should be dissociated from properties of the clitic.

#### **5.1 CD and Information Structure**

CD-ed definites have been argued in extensive previous literature of Greek to "[...] resemble pronominals in that they cannot be understood as novel, a fact which can be taken to suggest that they obey the *Prominence Condition*" (cf. Anagnostopoulou 1999a: 771). The *Prominence Condition* was proposed in Heim (1982) and was argued to apply to pronouns like *him* in (34).<sup>24</sup>

(34) John read a book about Schubert and wrote to him.

In (34), *him* being subject to the *Prominence Condition* can only refer to *Schubert*, who has been previously asserted. On the other hand, the definite in (35) is different and can also have the author of the book about Schubert as referent despite the fact that there is no previous mention of an author.

(35) John read a book about Schubert and wrote to the author.

Anagnostopoulou (1994; 1999a; 2007) argues using evidence from examples like (36) that Heim's *Prominence Condition* also applies to CD-ed objects.

<sup>&</sup>lt;sup>24</sup> In Heim (1982), the *Prominence Condition* is defined as follows: for a pronominal definite NP<sub>i</sub> to be felicitous w.r.t. a file F, i must be a *prominent* element of DOM(F). In her file theory, she argues "[...] that a file is not just an amorphous bunch of cards, but is organized in such a way that a small number of cards enjoy a privileged place, "on the top of the file", so to speak. These are always the cards that the file clerk had to handle most recently, i.e., that were most recently introduced or updated."

(36) Anagnostopoulou (1999a: 19)

O Jannis dhiavase ena vivlio jia ton Arthur Miller enthusiastike the John read.3S a book about the Arthur Miller got enthusiastic.3S ke thelise na (ton) ghnorisi ton singrafea apo koda. and wanted.3S na 3.S.M.ACC get to know.3S the author.S.M.ACC from close 'John read a book about Arthur Miller, he got enthusiastic, and he wanted to get to know the author.'

It is argued that in the presence of the doubling clitic, the definite *ton singrafea*—'the author' can only be interpreted as familiar and like *him* in (34) it can only have Arthur Miller as its referent, which has been previously asserted. On the other hand, if the clitic is absent, Anagnostopoulou claims that the definite is free to pick the author about the book for Arthur Miller or Arthur Miller himself as a possible referent. Moreover, Anagnostopoulou also argues that CD-ed objects are obligatorily interpreted as familiar because the doubling clitics are contentful. This claim is explored in more depth in Marchis & Alexiadou (2013) who building on Anagnostopoulou's claims propose that Greek accusative and dative clitics are contentful determiners encoding familiarity in the sense that they are subject to Heim's *Prominence Condition*. I argue that the judgments this previous literature reports do not hold uniformly with objects of different predicates. For instance, I show that the direct object of *skotoso*—'kill' in (37) exhibits different behavior.<sup>25,26</sup>

(37) Diavasa ena arthro ja tin mitera mu. Itan toso apesio pu read.1s an article about the mother mine was.3s so terrible that ithela na (ton) skotoso ton sigrafea.

wanted.1s na 3s.m.ACC kill.1s the author.s.m.ACC

'I read an article about my mother. It was so terrible that I wanted to kill the author.'

In (37), the CD-ed definite is free to pick the author of the book as referent despite the fact that there is no previous mention of the author.<sup>27</sup> This suggests that depending on the lexical semantics of the verb, there can be cases in which CD-ed objects do not have to be subject to the *Prominence Condition*. Furthermore, note that there is a very sharp contrast if instead of a CD-ed DP in (37), there is a bare clitic:

(38) \*Dhiavasa ena arthro ja tin mitera mu. Itan toso apesio pu read.1s an article about the mother mine. was.3s so unfair that ithela na ton skotoso.

wanted.1s na 3s.m.ACC kill.1s

'I read an article about my mother. It was so terrible that I wanted to kill him.'

Here, it is quite clear that the sentence is strongly ruled out if the pronoun in (38) has the non-familiar reading under which it corefers with the author of the book. This contrast between (37) and (38) is very sharp and this fact is quite unexpected if Heim's *Prominence Condition* applies invariantly both to CD-ed objects and clitics. With this conclusion in mind, I turn next to more data challenging the idea that CD-ed XPs are always subject to

<sup>&</sup>lt;sup>25</sup> Note that examples like (36) have been recycled in the literature with *ghnorisi*-'know'. For instance, Alexiadou (2014: 23) who also discusses Anagnostopoulou's claims as correct reproduces examples with the same predicate.

<sup>&</sup>lt;sup>26</sup> I would like to thank Christos Christopoulos for bringing such examples to my attention.

<sup>&</sup>lt;sup>27</sup> The intuition reported in (37) has been confirmed in an informal study with fifteen native speakers.

the *Prominence Condition*. For instance, let us consider the well-formed examples in (39) and (40) where it is shown that generic definites can undergo CD.<sup>28</sup>

- (39) I Sofia dhen to lipate to hrima. the Sofia.NOM not 3.S.N.ACC care.3S the money.S.N.ACC 'approx. Sofia does not care about money.'
- (40) Akoma ce an dhen tin theoruse tin alghevra simantiki/
  even if not 3.S.F.ACC consider.3s the algebra.S.F.ACC important/
  endiaferusa, tha eprepe na tin parakoluthisi.
  interesting, would have na 3.S.F.ACC attend.3s
  'Even if she did not consider algebra important/interesting, she would still have to attend it.'

*To hrima*–'money' or *tin alghevra*–'algebra' are generic definites, still, they can be CD-ed although they do not need to have been asserted previously.<sup>29</sup> Further support to the assumption that CD-ed objects do not always obey the *Prominence Condition* comes from indefinites as in (41), that can undergo CD although they do not require any previous mention:

- (41) a. Tha to etrogha ena sokolotaki tora. would 3.S.N.ACC eat.1S a small chocolate.S.N.ACC now 'I would now eat a small chocolate.'
  - b. Dhen tha tu milusa enos sovaru fititi etsi. not would 3.s.m.dat talk.1s a serious student.s.m.dat like that 'I would not talk like that to a serious student.'

In (41a) and (41b), ena sokolataki-'small chocolate' and enos sovaru fititi-'a serious student' can be CD-ed and they do not need to have been asserted previously. Sokolotaki in (41a) can refer to any any kind of small chocolate e.g. white or black. Similarly, sovaru fititi in (41b) refers to any serious student and not to a particular one that has been previously mentioned. Notably, the fact that indefinites can be doubled by a clitic has been observed since very early in the literature (see Anagnostopoulou 1994 and references therein). Kallulli (2000) also shows that CD-ed indefinites have the same distributional properties like CD-ed definites e.g. in ECM constructions, small clauses and object control. Moreover, Kallulli (2000), who observes that CD-ed objects are not uniformly subject to the Prominence Condition, like I do here, proposes an alternative analysis according to which CD-ed objects in Greek are uniformly marked as -Focus. In addition, she proposes that -Focus is a syntactic feature that CD-ed objects carry and license via movement into the middle field. Here, I adopt from her analysis the main idea that movement in CD has to take place in order to license a syntactic feature that relates to their -Focus interpretation. Interestingly, scrambled objects e.g. in the Germanic languages or Hindi, have been argued in previous literature to associate with certain interpretative properties, which, as with CD-ed objects, are licensed via movement to a middle field syntactic position (cf. Broekhuis & Corver 2016 i.a.). Moreover, scrambled objects have also been shown to obviate WCO (cf. Mahajan 1990; Miyagawa 2009 i.a.), which like I argued for CD, is due

<sup>&</sup>lt;sup>28</sup> (39) was found in naturally occurring context on the Internet:

i. https://www.tovima.gr/2010/06/27/opinions/to-eptaimero-toy-diodwroy-500/

<sup>&</sup>lt;sup>29</sup> In (41b), the CD-ed definite is the subject of a small clause. In Sportiche (1996), it is argued that CD-ed objects in this position are arguments. Moreover, (41b) has been checked with fifteen native speakers, who confirmed the judgment presented here.

to A-movement of the scambled object into the middle field.<sup>30</sup> I argue that these similarities between A-scrambling and CD of objects in Greek are not accidental. Instead, they suggest that movement of CD-ed XPs is the correlate of the  $XP/X_{max}$  movement step of A-scrambling, as has been proposed in a number of previous works (Sportiche 1996 i.a.).

# 5.2 Clitics are not +familiar or -focus

As discussed in the previous section, previous analyses have proposed that clitics have semantic import. For instance, clitics have been assumed to be lexically specified as + familiar (cf. Marchis & Alexiadou 2013) or as –Focus in which case they can license the –Focus property of CD-ed objects via Spec head (cf. Kallulli 2000). In this section, I argue that if we take into consideration more predicates, it becomes quite clear that clitics are not intrinsically specified with any of these two properties. The predicates I focus on here are experiencer predicates of Class II or III in the typology of Belletti & Rizzi (1988). These predicates allow CD of the experiencer, as shown in (42):

- (42) a. Akoma ke tu Jani tha tu arese afto to arthro. even the John.S.M.DAT would 3S.M.DAT like.3s this the paper.NOM 'Even John would like this paper.'
  - b. Tha tu arese akoma ke tu Jani afto to arthro. would 3s.m.dat like.3s even the John.s.m.dat this the paper.Nom 'Even John would like this paper.'

(42) shows that a dative experiencer, that is, tu Jani, can be doubled by a clitic, which can surface before or after the experiencer. In both cases, it is crucial that despite the presence of the doubling clitic, the experiencer can be +Focus, as shown by the fact that it can combine with akoma ke-'even', which is a focus particle. Moreover, I show in (43) and (44) that doubled experiencers, dative or accusative, can be wh-items.  $^{33}$ 

- (43) Ke pjanu dhen tu aresi to kalokeri? and who.S.M.DAT not 3S.M.DAT like.3S the summer.NOM 'Who does not like summer?'
- (44) Ke pjon dhen tha ton endhiefere aloste? and who.s.m.ACC not would 3s.m.ACC be interested.3s though 'Who would not be interested though?'

The clitics used to double experiencers e.g. *tu* and *ton* in (42), (43) and (44), are identical in form and distribution to the clitics used in doubling of arguments with distinct theta roles e.g. themes, therefore, it cannot be argued that experiencers associate with special clitics. Moreover, doubled experiencers combining with similar focus particles or being realized as *wh*-items are not only available in Greek. For instance, Krapova & Cinque (2008: 268–270)

<sup>&</sup>lt;sup>30</sup> There are different approaches discussing the properties of this A-movement step, why it has to take place, or more specifically, whether it has to take place e.g. for case. For instance, Broekhuis & Corver (2016) argue that there is a low A-position in Dutch that serves as landing site for scrambled objects that express old-information. They also propose that this position also serves as a case position that scrambled objects have to move to for case. On the other hand, Miyagawa (2009: 115–116) argues that A-scrambling in Japanese is not related to case and claims that the traditional A/A-bar and the interpretive effects that go with it are due to different properties that movement acquires if it happens within a single transfer domain or across different ones (see also Van Urk 2015 and Safir 2018 for different accounts of the A/A-bar distinction).

 <sup>&</sup>lt;sup>31</sup> See also Anagnostopoulou (1997) who argues that experiencers do not have to be familiar in her own terms.
 <sup>32</sup> See Giannakidou (2006; 2007) and references therein for discussion of *akoma ke* and other Greek focus particles.

<sup>&</sup>lt;sup>33</sup> Source: https://www.thegreeksenergy.com/t5350-topic http://www.kathimerini.gr/212177/article/epikairothta/a8lhtismos/telos-epoxhs-gia-ton-niko-grammatiko

show that doubled experiencers in Bulgarian can be +Focus or *wh*-items and hence, propose that doubling of experiencers constitutes a distinct syntactic phenomenon. Given the above, I conclude that Greek clitics are not intrinsically specified as +familiar or -Focus (*pace* Kallulli 2000; Marchis & Alexiadou 2013) and as a result of this, that the interpretive properties of CD-ed objects or the position in which they license their interpretive properties should be dissociated from the clitics and the clitic position. Building on this conclusion, the next section provides an account for the optional presence of clitics with -Focus DPs.

# 6 CD and Movement 6.1 Optional CD

In previous literature it has been argued that direct object CD is an optional phenomenon (cf. Anagnostopoulou 2007 i.a.). Building on this claim, this section aims to show that this optionality is not unrestricted. In particular, building on findings of recent literature, I tentatively argue that the presence or the wholesale absence of clitics in CD is constrained and that the constraints that apply are syntactic. Let me start the discussion by taking into consideration sentences like (36) from Anagnostopoulou (1994). Recall that in her analysis clitics mark doubled DPs as familiar. Now, since familiar definite DPs do not have to be CD-ed, as we saw in (36), Anagnostopoulou (2007) argues that CD of direct objects is an optional phenomenon. Similarly, citing data from Agouraki (1993); Kallulli (2000: 20) explicitly argues that "it is not the case that for the direct object DP to be interpreted as [–Focus], it has to be clitic doubled (e.g. Greek)." Let us consider some of the data Kallulli considers:

(45) Agouraki (1993: 154)
Pjos (to) idhe to pedhi?
who 3s.N.ACC saw.3s the kid.s.N.ACC
'Who saw the kid?'

In (45), the subject is a *wh*-item, that is +Focus and the rest of the sentence is marked as -Focus. Kallulli (2000) argues that despite the fact that the direct object is -Focus in this example, it does not have to be CD-ed and concludes that CD is less strict—and hence optional I add—in Greek. Interestingly, I show next that a crucial difference between the CD-ed -Focus DPs and the undoubled ones is that only the first can be shown to move to the middle field. For instance, let us consider the following minimal pair.

- ton Yanni Tsarouchi ke (46)Maria a. Ι diavase ena vivlio ja the Maria.NOM read.3s a book about the Yanni Tsarouchi and anarotithike: ton ektimise pote ikojenia tu, ton wondered.3s 3s.M.ACC appreciated.3s never the family his.GEN the zografo,? painter.S.M.ACC 'Maria read a book about Yanni Tsarouchi and wondered: did his family ever appreciated the painter?'
  - b. \*I Maria diavase ena vivlio ja ton Yanni Tsarouchi ke the Maria.NOM read.3s a book about the Yanni Tsarouchi and anarotithike: ektimise pote i ikojenia tu, ton wondered.3s appreciated.3s never the family his.GEN the zografo? painter.s.m.ACC 'Maria read a book about Yanni Tsarouchi and wondered: did his family ever appreciated the painter?'

<sup>&</sup>lt;sup>34</sup> Anagnostopoulou (1994) discusses cases in which CD is obligatory. These are cases in which the CD-ed DP is an epithet. I would like to thank Elena Anagnostopoulou for bringing this fact to my attention.

In both examples, the direct object is a definite DP, ton zografo—'the painter' referring to a previously introduced individual, that is, ton Yanni Tsarouchi. Moreover, the direct object is —Focus, as it is part of a yes/no question, where the verb only is focused (see Kallulli 2000 for similar examples). (46a) shows that WCO with the subject can be obviated if the object, ton zografo, is CD-ed. On the other hand, the direct object cannot bind the pronoun in the subject, thus, (46b) is ruled out under the indicated bound reading. In Section 4.2, I argued in light of the WCO facts that doubled DPs undergo movement above the vP from where they can bind into a reconstructed subject. Nonetheless, since undoubled —Focus DPs do not behave similarly with respect to WCO, it makes sense to conclude that, if they have to move to a certain syntactic position where they can license their interpretive properties, they do not move as high as the doubled ones. Concretely, I propose that there are two distinct syntactic positions differing in syntactic height where CD-ed DPs can license the —Focus property. The lower one is indicated as YP in (47b) and is situated between VP and vP. The higher one is shown as XP in (47a) and it is higher than the vP, like I argued before.

(47) a. 
$$\left[ \sum_{XP} DP \left[ \sum_{X'} X \left[ \sum_{P} \left[ \sum_{DP} ... \right] \left[ \sum_{V} V \left[ \sum_{VP} V \right] \right] \right] \right] \right]$$
  
b.  $\left[ \sum_{P} \left[ \sum_{DP} ... \right] \left[ \sum_{V} V \left[ \sum_{P} DP \left[ \sum_{V'} Y \left[ \sum_{P} V \right] \right] \right] \right] \right]$ 

Let us also assume that clitics are base generated in the middle field between XP and TP in (47a) like in Sportiche (1996), and that they can be present if and only if they can Agree with an object DP.<sup>35</sup> In (47a), the direct object undergoes movement to Spec XP higher than the vP phase. Moreover, after movement, the direct object is in the same phase with the clitic. Being in the same phase, the clitic and the direct object can stand in an Agree relation. On the other hand, the direct object does not escape the first phase i.e. the vP in (47b), therefore, it is not in the same phase with the clitic. If this is correct, the prediction is that the clitic should be present in the sentence corresponding to the syntactic structure in (47a), though not in (47b). Indeed, (46a) where the clitic is present corresponds to (47a) whereas (46b) where the clitic is absent corresponds to (47b). Based on these facts, I (tentatively) conclude that indeed clitics are present if they are local enough —possibly in the same phase— with their associate. Increasing the distance between two as in (47b) results in the wholesale absence of the clitic.

Interestingly, Preminger (2009) focuses on CD in Basque and observes that the presence of doubling clitics depends on locality. In fact, he argues that CD always conforms to a locality condition. In Basque, he proposes that this condition (roughly) is the *clausemate condition*. Preminger argues that dative morphemes in Basque enter a CD dependency with their associate. Under this view, dative clitics are present on the Basque auxiliary only if they are in the same clause with their associate. On the other hand, if this local relation is broken, Preminger claims that this results in the wholesale absence of the dative morpheme. In Greek, the locality condition between the clitic and its associate needs to be defined in more local terms as it is not sufficient for clitics to be in the same clause with their associate. With this in mind, let us now turn to issues and open questions that future research needs to address. For instance, it is important to understand the locality conditions imposed by Greek CD in more precise terms. Or, it is crucial whether clitics are optional or whether they are syntactically present but silent.<sup>36</sup> Lastly, it is an

<sup>&</sup>lt;sup>35</sup> See Preminger (2019) for the idea that CD involves an agreement relation.

<sup>&</sup>lt;sup>36</sup> In bare cliticization, one could claim that the clitic is obligatorily present because its associate i.e. *pro*, undergoes obligatory scrambling into the middle field for "identification". In fact, one could even argue that in Romance languages like colloquial Central and Southern Italian, the head of XP of (47a) is *a* of the following example:

open question at this point why only doubled experiencers but e.g. not doubled themes, can be *wh*-items or combine with focus particles.

#### 6.2 Residual Issues

In this section I discuss a residual issue that has to do with extraction out of CD-ed objects. As discussed in Section 1.1, possessor extraction has been argued in two previous works to be ungrammatical (cf. Philippaki-Warburton et al. 2004; Revithiadou & Spyropoulos 2009). On the other hand, an anonymous reviewer points out that Anagnostopoulou (2007: 19c–d, 23c) presents grammatical sentences showing that CD-ed objects permit possessor extraction:<sup>37</sup>

- (48) a. Foresa to forema tis Marias. wore.1s the dress.ACC the Maria.GEN 'I wore Maria's dress.'
  - b. Tinos foreses to forema? whose.GEN wore.2s the dress.ACC 'Whose dress did you wear?
  - c. Tinos to foreses to forema? whose.GEN 3S.F.ACC wore.2s the dress.ACC 'Whose dress did you wear?

Indeed, (48c) is grammatical, however, one needs to control for the fact that *tis Marias* in (48a) or *tinos* in (48c) can also function as dative arguments as I discussed previously. In the latter function, (48a) is interpreted as *I put the dress on Mary* and (48b)–(48c) as *on whom did you put the dress?*. In order to control for the ambiguity, I presented (48b) and (48c) to fifteen native speakers in different contexts that were compatible with *tinos* as possessor or indirect object. All speakers had strong judgments that *tinos* in (48c) cannot be a possessor while they all found it acceptable if *tinos* is interpreted as *on whom.*<sup>38</sup> On the other hand, they reported that both readings are available in (48b). These results confirm the intuition presented in Philippaki-Warburton et al. (2004) and Revithiadou & Spyropoulos (2009) that CD-ed object block possessor extraction.

# 7 Conclusion

In this paper, I argued that CD-ed objects in Greek enter the derivation as arguments and undergo  $XP/X_{max}$  movement, like A-scrambling, into a position lower than Spec TP and the position where dative clitics are interpreted. I also discussed that there is a lot more in showing that Greek CD involves an  $XP/X_{max}$  movement step. First, it provides evidence

Under this approach, a does not directly merge with its surface DP complement. A merges above VP and functions as a probe attracting its surface complement DP from the object position to the middle field, as Kayne (2000; 2005) has proposed for Italian de and French a of causative constructions. Like in Greek (47a), the clitic has to be overt as a result of the fact that the DP has been attracted by a to the middle field in (i). In the absence of a, the object is not attracted to the middle field (cf. Cardinaletti 2002) and the clitic is absent due to lack of locality, as in (47b).

<sup>(</sup>i) Cardinaletti (2002: 6a)

L' abbiamo invitato noi, a Gianni. 3s.m.acc have.1pL invited we, a Gianni 'We have invited John'

<sup>&</sup>lt;sup>37</sup> As pointed out by an anonymous reviewer, Harizanov (2014) presents examples with possessor extraction in Bulgarian as grammatical. Nonetheless, in the absence of information about the interpretive properties of Bulgarian CD-ed objects, the Bulgarian data are uninformative.

<sup>&</sup>lt;sup>38</sup> I would also like to thank a few Greek linguists, Marika Lekakou, Maria-Margarita Makri, Dimitris Michelioudakis, Anna Roussou, Christos Vlachos and Arhonto Terzi, who also confirm the judgments I report here.

that argument scrambling of the type we observe in the Germanic languages, Hindi or Japanese is a pervasive, as was originally proposed in Sportiche (1996), and that scrambling cannot be parameterized as  $X^0/X_{min}$  movement (pace Alexiadou & Anagnostopoulou 1997). As a consequence of this, I argued that CD does not support the idea that  $X^0/X_{min}$  movement is the preferred mode of syntactic remerge (pace Preminger 2019). Furthermore, I showed that Greek clitics do not have referential import or other properties e.g. –Focus, based on two facts; first, that the content of clitics does not matter for binding purposes and second, that clitics can combine with – or +Focus DPs. Lastly, I provided a phase based analysis to account for the optional presence of clitics with –Focus DPs.

#### **Abbreviations**

The following glosses are used in this paper: S = singular; PL = plural; 1 = First person; 2 = Second person; 3 = Third person; F = feminine; M = masculine; N = neutrum; NOM = Nominative; ACC = Accusative; GEN = Genitive; DAT = Dative; CL = clitic. An example marked with '\*' or '#' means that the example is unacceptable for grammatical or semantic/pragmatic reasons, respectively.

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# Competing Interests

The author has no competing interests to declare.

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