



Failed clitic doubling of plural indirect objects in Greek

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1 Introduction

- Greek allows Clitic Doubling (CD) of both direct objects (DOs) and indirect objects (IOs):¹

(1) **(Tis)** **(ta)** edhos-a **tis** **Marias ta** **ghlika**.
CL.F.SG.GEN CL.N.PL.ACC give.PFV-PST.1SG D.F.SG.GEN M.GEN D.N.PL.ACC sweets.ACC
'I gave Maria the sweets.'

- CD in Greek is usually optional and is associated with semantic effects: familiarity/topicality for DOs, with the conditions less clear for IOs (e.g. [Anagnostopoulou, 1994, 2003, 2017](#)).
- Even though CD in Greek has received a lot of attention in the literature (see [Anagnostopoulou 2017](#) and [Angelopoulos 2019](#) for recent overviews), the following puzzle has generally gone unnoticed:
- ☞ CD of indirect objects is significantly degraded (strongly ungrammatical for many speakers, mildly ungrammatical for some) in the third person plural ([Anagnostopoulou 2017](#), fn.18, 46, [Souganidis 2017](#), 32):

(2) a. **(Tu)** edhik-s-a **tu** **pedhiu** mia
CL.N.SG.GEN show-PFV-PST.1SG D.N.SG.GEN child.N.SG.GEN INDF.F.SG.ACC
ikona.
picture.F.SG.ACC
'I showed the child a picture.'

b. **(*?Tus)** edhik-s-a **ton** **pedhion** mia
CL.N.PL.GEN show-PFV-PST.1SG D.N.PL.GEN child.N.PL.GEN INDF.F.SG.ACC
ikona.
picture.F.SG.ACC
'I showed the children a picture.'

- Without the clitic, a plural indirect object in the genitive(=dative) is grammatical.²

¹ We are grateful to Elena Anagnostopoulou, Gereon Müller, and the audience at the Syntax-Morphology Colloquium of the University of Leipzig for feedback. All errors are our own. Abbreviations follow the Leipzig Glossing rules with the following additions: CL = clitic, D = determiner, NACT = non-active.

² However, genitive plural IOs are generally marked, following a more general pattern of genitive plural markedness

- A 3rd-person plural clitic alone without a full DP object is also grammatical:

(3) **Tus** to edhos-a.
 CL.PL.GEN CL.N.ACC give.PFV-PST.1SG
 ‘I gave it to them.’

Main claims:

- We show that the ungrammaticality of CD of 3rd-person plural IOs is due to a morphological case mismatch between the clitic *tus* and the determiner *ton* of the doubled DP, and we provide an analysis.
- We argue that the data provide support for movement-based theories of CD in Greek, and in particular those which treat the clitic and doubled DP (or D) as part of a chain.
- The data indicate a new diagnostic for distinguishing between object agreement and clitic doubling: if morphological mismatches of the Greek type lead to ungrammaticality, then the phenomenon must be an instance of CD, and not object agreement.

Roadmap:

- §2 CD of IOs is ungrammatical due to a morphological case mismatch
- §3 An argument for movement-based approaches to CD
- §4 The analysis
- §5 Exceptions in Greek
- §6 Conclusion

2 CD of IOs is ungrammatical due to a morphological case mismatch

- Greek DPs morphologically distinguish between 4 cases: nominative, genitive, accusative, and vocative. The Ancient Greek dative has been lost, and (morphological) genitive is used in dative contexts instead.
- The inflectional paradigm of clitics is generally identical to that of the definite article, with the only exception found in the genitive plural: there is a genitive-accusative syncretism for the clitic, but not for the article.

	M.Cl	M.Det	N.Cl	N.Det	F.Cl	F.Det
Sg.Gen	tu	tu	tu	tu	tis	tis
Sg.Acc	ton	ton	to	to	tin	tin
Pl.Gen	tus	ton	tus	ton	tus	ton
Pl.Acc	tus	tus	ta	ta	tis	tis

! The intuition is that, due to the nature of the connection between the clitic and the object DP, **the morphological case mismatch leads to ungrammaticality.**

across Greek dialects (e.g. [Mertyris 2014](#)).

- There are various arguments in favor of a morphological explanation (and not an explanation appealing to the syntax of plural IOs, for example).

1. Ungrammaticality is not restricted to ditransitives. Monotransitive verbs that assign genitive also show the restriction:

(4) ***Tus** telefonis-a **ton pedhion.**
 CL.PL.GEN/ACC telephone.PFV-PST.1SG D.N.GEN.PL children.N.GEN
 ‘I called the children.’

2. The strongest piece of evidence comes from dialectal variation in the morphological expression of dative.

- While the syntax of double object constructions (including the case assignment mechanism) is the same in Standard and Northern Greek ([Anagnostopoulou & Sevdali 2020](#), but see [Anagnostopoulou 2018](#) for some differences), dative is syncretic with accusative in the latter. CD of plural IOs is grammatical in this case:

(5) **Ta** edhos-a **ta pedhia** tis tsantes.
 CL.N.PL.ACC give.PFV-PST.1SG D.N.PL.ACC children.N.ACC D.FEM.PL.ACC bags.F.ACC
 ‘I gave the children the bags.’
 ([Souganidis, 2017](#), 33)

- Certain Greek dialects (e.g. Cypriot Greek) display plural genitive-accusative syncretism not only in the clitic paradigm, but also in (at least part of) nominal inflection. [Mertyris \(2014\)](#), in his study of the diachrony of the syncretism, traces its source back to CD contexts: plural genitive IOs surfaced as accusative in the context of *tus*.^{3, 4}

(6) lalo **tus** ekin-on → lalo **tus** ekin-us →
 talk.1SG CL.PL.GEN/ACC those-PL.GEN speak.1SG CL.PL.GEN/ACC those-PL.ACC
 lalo ekin-us
 speak.1SG those-PL.ACC
 ‘I talk to those’
 (adapted from [Mertyris 2014](#): 145)

- Side remark: there seems to exist inter- and intra-speaker variation regarding the “degree” of ungrammaticality of plural IO CD. Similar judgments are often reported for cases in which syncretism ameliorates ill-formed syntactic structures (e.g. [Sigurðsson & Holmberg, 2008](#), fn. 27), pointing towards a morphological problem.

- The Greek pattern is, to our knowledge, the first documented case of syncretism causing an otherwise grammatical structure to crash.

- Note, however, that there is no requirement for phonological identity of the determiner and the clitic.

³ [Mertyris \(2014\)](#) argues that first and second person pronouns (and clitics) lost their genitive forms in the 10th century, with 3rd person clitics following in the 12-13th century.

⁴ [Mertyris \(2014\)](#) also notes that plural IOs exceptionally surface with accusative case in CD contexts with *tus* in other Greek dialects as well (see [Mertyris 2014](#): 146-147 on Standard Greek and [Mertyris 2014](#): 80, fn. 84 on the dialect of Zakynthos).

- (7) Tha to etrogh-a ena sokolataki.
 FUT CL.N.SG.ACC eat-PST.1SG INDF.N.SG.ACC chocolate.N.ACC
 'I would eat a chocolate.'

- This indicates ungrammaticality is due to a mismatch in the *features* spelled out by the exponents, and not the form *per se*.

3 An argument for movement-based approaches to CD

3.1 Previous theories of Clitic Doubling

Movement-based analyses: Clitic + DP form a chain

1. **Movement + M-Merger:** A-movement of the object DP to Spec ν P with subsequent M-merger (Matushansky 2006 a.o.) of the raised DP and the functional head (e.g. Harizanov, 2014; Kramer, 2014).
2. **'Big DP':** the clitic and the DP are base-generated as a big DP in object position (the clitic is similar to a floating quantifier), with the clitic subsequently moving out (e.g. Uriagereka, 1995; Nevins, 2011).
3. **Long head movement:** the D head of a DP in object position undergoes long head movement to T (Preminger 2019 a.o.).
4. **Feature movement:** the features of the DP object move to T (e.g. Anagnostopoulou, 2003).

Agreement-based/hybrid accounts: Clitic + DP do not form a chain

1. **Object agreement:** the clitic is an object agreement marker (e.g. spells out features on ν , via Agree with the DP object).
2. **CliticP:** there is a Clitic Phrase in the middle field (above the thematic subject position)
 - the DP object moves to the specifier of that Clitic Phrase where it agrees with the clitic (Sportiche, 1996)
 - the DP moves to the edge of the ν P and agrees with CliticP from there (Angelopoulos, 2019)
 - the clitic may spell out either the copy of the DP in the specifier position or the head of the Clitic Phrase via Spec-Head Agree (Angelopoulos & Sportiche, 2021)

CD of IOs

- The above theories have been (mostly) developed for CD of DOs, with less attention given to CD of IOs.
- For Spanish, there is a consensus in the literature that CD of IOs differs from CD of DOs, with the former usually analyzed as an agreement marker or an Appl head (e.g. Bleam, 1999; Cuervo, 2003, 2010).
- Anagnostopoulou (2003, 2017) argues that CD of IOs in Greek differs from Spanish, and should be analyzed in terms of movement.

3.2 An argument for movement

- Syncretism is widespread in agreement and, to our knowledge, never leads to a crash:

- in fact, syncretism has been reported to ameliorate feature mismatches created by the syntax (Bjorkman 2021 and references therein).
- If the clitic and the DP form a movement chain, we have a morphological case mismatch in the plural between the clitic and the full DP.
 - cross-linguistically, phenomena that involve pronominal copies may allow person mismatches, but never tolerate case and number mismatches (van Urk, 2018).
- The crash caused by syncretism in the plural thus provides one more argument in favor of movement-based approaches, but only those that assume that the clitic and the DP (or its D head) form a movement chain.
 - for Greek, this is added to evidence for movement from reconstruction and intervention effects (e.g. Anagnostopoulou 2003; Angelopoulos & Sportiche 2021, but see Paparounas & Salzmann 2021 for counterarguments).
- The Greek data also provide a new diagnostic to distinguish between object agreement and clitic doubling (Preminger 2009; Nevins 2011; Yuan 2021 a.o.).
 - If a morphological mismatch between the clitic and the doubled DP leads to ungrammaticality of the Greek type, then the phenomenon must be an instance of CD and not object agreement.
 - The implication is not bidirectional: *grammatical* mismatches do not help distinguish between CD and object agreement.
 - Morphological case mismatches for phenomena analyzed as CD/in terms of movement have been reported for at least Choctaw, Yimas (Tyler & Yuan, 2019) and some dialects of Basque (Arregi & Nevins, 2012).

4 The analysis

4.1 Our assumptions about case in Greek

- Following Michelioudakis (2014), among others, we assume that Greek has an abstract dative case, despite the lack in *morphological* dative.
 - We remain agnostic as to the mechanism of case assignment for dative (see Anagnostopoulou & Sevdali 2020 and references therein for discussion).
- Following Alexiadou & Müller (2008), we assume the following featural decomposition for syntactic case:⁵
 - (8) a. NOM: [+sbj, -gov, -obl]
 - b. ACC: [-sbj, +gov, -obl]
 - c. GEN: [+sbj, +gov, +obl]
 - d. DAT: [-sbj, +gov, +obl]

⁵ Alexiadou & Müller (2008) propose these features for Russian, but do not use +/-sbj for Greek, since it is not essential to account for syncretism in their system. The feature is needed in our system, however, because dative is taken to be a distinct case from genitive and accusative.

- We assume the following vocabulary entries for the clitic *tus* and the article *ton*:⁶

- (9) a. $tus \leftrightarrow [+gov, +pl]$
 b. $ton \leftrightarrow [+obl, +pl]$

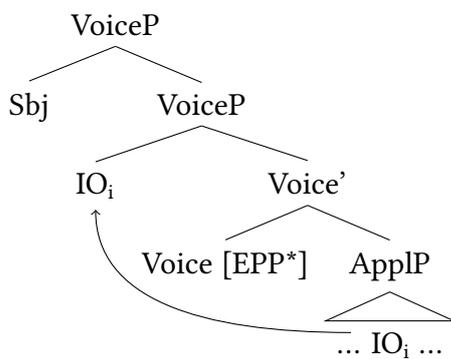
- We assume that [+gov] is regularly impoverished in dative contexts in Greek, resulting in syncretism with genitive. For plural clitics, we assume that a more specific Impoverishment rule applies, which deletes [+obl] and results in syncretism with accusative.⁷

- (10) a. $[+obl] \rightarrow \emptyset / [__ +gov, +pl, +pron]$
 b. $[+gov] \rightarrow \emptyset / [__ +obl]$

4.2 Our account for the ungrammaticality of the mismatch

- Our analysis crucially relies on the clitic and the doubled DP forming a syntactic chain, but can be applied to any of the movement-based CD analyses that make reference to chains.
- We will use Harizanov's (2014) approach for illustration (e.g. Angelopoulos 2019 has recently argued that such a theory is compatible with data from reconstruction).
- We assume the following structure for a ditransitive clause in Greek in which CD of the IO takes place:

- (11) Object movement to Spec-Voice

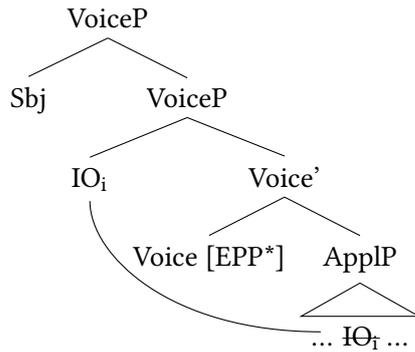


- The functional head - Voice - has an EPP feature that attracts the object to its Spec-position for interpretive reasons.
- In (11), the two copies of the indirect object constitute an A-Chain.
- At the Syntax-PF interface, one of the copies is normally deleted (Chain Reduction).
- Under normal circumstances, the lower copy would be deleted:

⁶ The article *ton* is used for all 3 genders, so we assume there is a general Impoverishment rule targeting gender in oblique contexts. *Tus* is used for all three genders in oblique contexts, but only for masculine in accusative contexts. This can be captured if masculine is the unmarked gender in Greek (with *tus* thus not being specified for masculine).

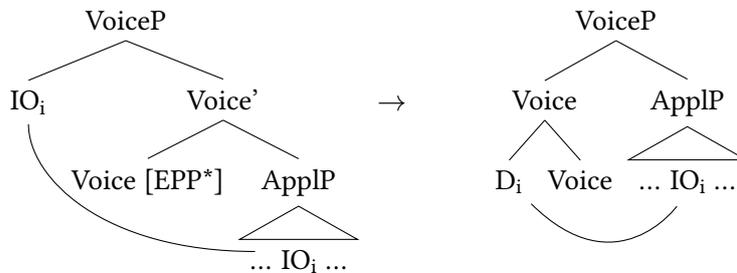
⁷ This would be the general rule in Northern Greek dialects where dative is syncretic with accusative.

(12) Chain Reduction



- A DP may, however, escape Chain Reduction. In [Harizanov \(2014\)](#), the higher copy of the DP undergoes M-merger with the functional head, whereupon the DP is reduced to its highest projection label (including its features) and merged with the functional head:⁸

(13) M-Merger (before Chain Reduction):



! Crucially, we assume that the link between the two copies remains intact.

- We assume the following order of operations:

(14) Chain Reduction < Impoverishment < Vocabulary Insertion

- We propose the following constraint on Impoverishment:

(15) If Impoverishment affects a node (marked for spellout) of a chain, it has to take place in all copies (marked for spellout) of that chain.

- We also assume that Impoverishment takes place bottom up and in cycles triggered by phases (in a similar fashion to how Vocabulary Insertion takes place; see [Kalin & Weisser 2021](#) for a recent overview):
 - These two assumptions together mean that Impoverishment at a lower node will not affect Impoverishment at a higher node, but Impoverishment at a higher node will have to apply in all lower copies of the chain.

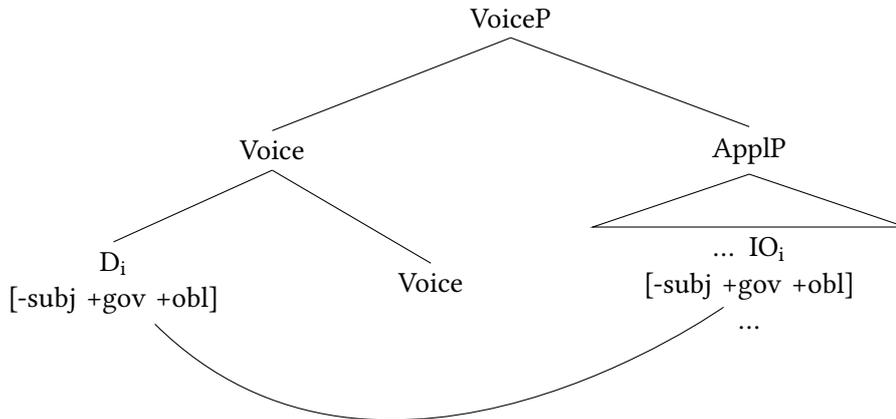
⁸ An alternative can be found in [van Urk \(2018\)](#): he proposes a special [PF+] features, available on the functional head, that protects the DP from being deleted.

- Recall the Impoverishment rules for Greek clitics mentioned above:

- (16) a. $[+obl] \rightarrow \emptyset / [___ +gov +pl +pron]$
 b. $[+gov] \rightarrow \emptyset / [___ +obl]$

- In the CD configuration, we have two copies of the IO marked for spellout in a chain.

- (17) *CD configuration:*



- The Impoverishment rule in (16-b) applies to the lower copy, deleting [+gov].
- Next, the Impoverishment rule in (16-a) applies to the higher copy, deleting [+obl].
 - At this stage, this Impoverishment rule has to also apply at the lower copy.
 - But the context for the rule is not met (+gov, +pron are not present).
 - The rule cannot apply and the derivation crashes.
- In examples without CD, only the higher copy is pronounced, and thus the constraints on Impoverishment do not apply. The Impoverishment rule in (16-a) takes place in the higher copy, and *tus* is inserted.

- (18) *Tus edhos-a ena sokolataki.*
 CL.PL.GEN/ACC gave-1SG INDF.N.SG.ACC chocolate.N.ACC
 ‘I gave them a chocolate.’

5 Exceptions in Greek

5.1 Clitic Left Dislocation

- Clitic Left Dislocation (CLLD) of plural IOs is grammatical, especially when there is an intonational break present:

- (19) **Ton pedhion,** *(**tus**) edhos-a ena vivlio.
 D.PL.GEN children.N.GEN CL.PL.ACC give.PFV-PST.1SG INDF.N.SG.ACC book.N.ACC
 ‘The children, I gave them a book.’

- CLLD differs from CD in a number of ways (e.g. [Anagnostopoulou, 2003, 2017](#)).

- There are many alternative analyses (see [Angelopoulos & Sportiche 2021](#) for a recent overview), but all of them can account for the grammaticality of plural IOs:
 - Base-generation analyses (e.g. [Anagnostopoulou, 1994](#)): the clitic and the DP do not form a movement chain and thus no problem should arise from the feature mismatch between the clitic and the DP.
 - Movement analyses (e.g. [Angelopoulos & Sportiche, 2021](#)): The DP moves to the left periphery (e.g. SpecCP). Our analysis can capture the grammaticality:
 - * the clitic and the doubled DP undergo Impoverishment in different cycles, because they belong to different phases. Thus, we predict that there should be no crash because of Impoverishment.

5.2 First and second person pronouns

- In the plural, both 1st- and 2nd-person full pronouns and the corresponding clitics have syncretic genitive/accusative forms, and so there is no morphological case mismatch. CD is grammatical (and in fact strongly preferred or obligatory for some speakers).
 - In terms of our analysis, the context for the Impoverishment rule in (16-a) is met in both copies of the chain.

- (20) a. **(Mas)* edhos-e **emas** ena vivlio.
 CL.1PL.GEN/ACC give.PFV-PST.3SG 1PL.GEN/ACC INDF.N.ACC book.ACC
 ‘(S)he gave us a book.’
- b. *?(Mas)* idh-e **emas**.
 CL.1PL.GEN/ACC see.PFV-PST.3SG 1PL.GEN/ACC
 ‘(S)he saw us.’

- What is perhaps unexpected is the grammaticality of CD in the singular: the full pronoun is syncretic for genitive and accusative, but the clitic is not.

- (21) a. **(Mu)* to edhos-e **emena**.
 CL.1SG.GEN CL.N.SG.ACC give.PFV-PST.3SG 1SG.GEN/ACC
 ‘(S)he gave it to me.’
- b. *?(Me)* idh-e **emena**.
 CL.1SG.ACC see.PFV-PST.3SG 1SG.GEN/ACC
 ‘(S)he saw me.’

- Why is the morphological mismatch tolerated in this case?
 - [Tsakali \(2006\)](#) shows that singular local person pronouns are the only pronouns in Greek where CD is obligatory.
 - The obligatoriness of CD in these cases together with the grammaticality of the morphological mismatch may indicate that CD of these pronouns is different from CD of other DPs in the language (e.g. it may be best analyzed in terms of agreement and not movement).
 - If local person CD is analyzed in terms of movement, our analysis can account for the grammaticality if we assume the VI below for the syncretic full pronouns:

(22) emena ↔ [+auth, -part, -pl, -sbj]

- In contrast to the situation with *tus*, in singular local person contexts, it is the more general Impoverishment rule (the one in (16-b)) that applies at the higher copy.
- Its context is thus met in the lower copy, which means that [+gov] would be deleted and the vocabulary item in (22) can be inserted.

5.3 Psych verbs

- One type of psych-verbs in Greek belong to Belletti & Rizzi's (1988) *piacere*-class predicates. For these predicates, the experiencer appears in the genitive and CD is obligatory (Anagnostopoulou, 1999, 2003):

(23) To dhiavasma *(tu) ares-i tu Jani.
 D.N.SG.NOM reading.N.NOM CL.M.SG.GEN please-3SG D.M.SG.GEN Janis.M.GEN
 'Janis likes reading'

- CD of plural genitive experiencers is judged grammatical (or at least, significantly improved) by most speakers that we consulted. So, there seems to be an asymmetry between CD of genitive IOs and genitive experiencers.

(24) dhen tus ark-i ton afentikon na nik-un.
 not CL.PL.GEN/ACC suffice-3SG D.PL.GEN bosses.M.GEN SBJV win-3PL
 'The bosses are not content with just winning.'
<https://lefterisp.wordpress.com/author/lefterisp/page/4/> (accessed March 5th)

- CD of experiencers differs from CD of IOs for a number of additional diagnostics:
 - While CD of IOs is optional, CD of experiencers is obligatory (Anagnostopoulou 2003 a.o.).

(25) dhen *(tus) ark-i ton afentikon na nik-un.
 not CL.PL.GEN/ACC suffice-3SG D.PL.GEN bosses.M.GEN SBJV win-3PL
 'The bosses are not content with just winning.'

- While CD comes with semantic effects (i.e. subject to Heim's 1982 Prominence Condition and incompatible with focus), no such effects arise with CD of experiencer arguments (e.g. Anagnostopoulou, 1999; Alexiadou & Anagnostopoulou, 2019; Angelopoulos, 2019).⁹

(26) Tha tu ares-e akoma ke tu Jani afto to
 FUT CL.M.SG.GEN please-3SG even D.M.SG.GEN Jani.M.GEN this.N.NOM D.N.NOM
 arthro.
 article.N.NOM
 'Even John would like this paper.'
 (Angelopoulos, 2019, 19)

- Fronted experiencers of *piacere*-type psych verbs behave like quirky subjects for binding, unlike fronted objects. (Anagnostopoulou 2003 argues that fronted experiencers are in an A-position, unlike fronted objects, which are in an A'-position.)

⁹ However, it has to be noted that this has been better investigated for accusative objects/experiencers, and less so for their genitive counterparts.

- Genitive - nominative alternations are possible for (some) experiencers ([Anagnostopoulou & Sevdali, 2020](#)), but not for goals.

- (27) a. Tu Jani tu ares-un i kolakies.
 D.M.SG.GEN Janis.M.GEN CL.M.SG.GEN please-3PL D.F.PL.NOM flatterings.F.PL.NOM
 ‘Janis likes flatterings.’
 b. O Janis ares-k-ete se kolakies.
 D.M.SG.NOM Janis.M.NOM please-NACT-3SG to flatterings.F.ACC
 ‘Janis is pleased with flattering words.’
 ([Anagnostopoulou & Sevdali, 2020](#), 1001)

- (28) a. Estil-a tis Marias ena vivlio.
 send.PFV-PST.1SG D.F.SG.GEN Maria.F.GEN INDF.N.SG.ACC book.N.ACC
 ‘I sent Maria a book.’
 b. *I Maria stalth-ik-e ena vivlio.
 D.F.N.NOM Maria.F.NOM send-NACT-3SG INDF.N.SG.ACC book.N.ACC
 ‘Maria was sent a book.’

- While these differences between experiencers and goals do not provide an answer to the puzzle (i.e. why the morphological mismatch in the plural is tolerated in the former, but not the latter), we believe that they at least indicate the possibility that the syntax of CD is different for experiencers.
 - Interestingly, [Baker & Kramer \(2018\)](#) discuss similar effects in Amharic: CD of experiencers is special in not displaying pronominal properties. They argue that the underlying syntax of experiencers is the same as that of goals, with the following difference:
 - * While goal IOs stay at the edge of Voice, experiencers further move to T.
 - * There is evidence that fronted experiencers are in an A position in Greek ([Anagnostopoulou, 2003](#)).
 - * Such a movement step would reverse the relative order of the two copies: now it is the general Impoverishment rule that has to apply on both ends, and its context is met in the lower copy.
 - * However, this means that both Impoverishment rules would take place and both [+obl] and [+gov] would be deleted at the clitic site, making *tus* (which is specified for [+gov]) unavailable for Vocabulary Insertion.
 - * We thus leave CD of experiencers as a topic for further research.

6 Conclusion

- We have argued that the ungrammaticality of CD of 3rd-person plural IOs in Greek is due to a morphological mismatch between the form of the clitic and the doubled DP, and we have formalized our solution in terms of constraints on Impoverishment.
- The data provide support for movement-based approaches to CD and give a new diagnostic for distinguishing between CD and object agreement.
- Even though CD in Greek has often been analyzed in terms of movement ([Anagnostopoulou 2003](#) a.o.), recent analyses either use Agree ([Paparounas & Salzmann, 2021](#)) or propose a hybrid analysis, where the doubled DP moves, but does not necessarily form a chain with the clitic ([Angelopoulos, 2019](#)).

- Angelopoulos (2019) explicitly states that his data are compatible with a Harizanov-style analysis, and his analysis can be recast using a movement chain (this is, in fact, a possibility in the analysis in Angelopoulos & Sportiche 2021).
- Paparounas & Salzmänn (2021) use data from First Conjunct CD to argue against movement, and it is a topic for further research to see how those data can be reconciled with our data. However, we note that a direct comparison is difficult at the moment:
 - Their data come primarily from CD of DOs, while ours all come from CD of IOs. Thus, our argument for movement cannot be extended to DOs without further diagnostics.
 - First Conjunct CD is much easier with local person first conjuncts (for example, for Maria Kouneli First Conjunct CD with 3rd person is ungrammatical), and these are exactly the cases where the morphological case mismatch is allowed, suggesting an Agree analysis. This raises the possibility of a hybrid approach, where CD of local person arguments involves Agree without movement, while CD of 3rd person arguments also involves movement.

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