Indefinite Object Drop in Modern Greek:
Towards a minimalist typology of null objects*

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1 Data: IOD in Greek
1.1 The core pattern
Basic observations:
• Only indefinite objects can be dropped.
  ▶ Object gaps and clitics are in complementary distribution.

(1) Q: Efere o Nikos vivlia?
  bring.pstpst.pfv.3sg the.m.nom.sg Nick.nom.sg book.acc.pl
  ‘Did Nikos bring books?’

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A: Ne, (*ta) efere.
    yes them bring.pst.pfv.3sg
     ‘Yes, he brought.’
= Yes, he brought books.

(2) Q: Efere o Nikos ta vivlia?
    bring.pst.pfv.3sg the.m.nom.sg Nick.nom.sg the.n.acc.pl book.acc.pl
     ‘Did Nikos bring the books?’
A: Ne, *(ta) efere.
    yes them bring.pst.pfv.3sg
     ‘Yes, he brought them.’

• This asymmetry holds regardless of how (in)definiteness is marked lexically.

(3) Q: Efere o Nikos { merika / kapça / liya
    bring.pst.pfv.3sg the.m.nom.sg Nick.nom.sg { several / some / a.few
    / deka / tulaçiston deka / parapano apo deka / tipota }
    / ten / at.least ten / more than ten / any }
    vivlia?
    book.acc.pl
     ‘Did Nikos bring {several / some / a.few / ten / at.least ten / more than ten / any } books?’
A: Ne, *(ta) efere.
    yes them bring.pst.pfv.3sg
     ‘Yes, he brought.’
= He brought {several / some / a.few / ten / at.least ten / more than ten / any } books.

(Giannakidou and Merchant 1997: 142)

(4) Q: Efere o Nikos { ola ta / ke ta dio /
    bring.pst.pfv.3sg the.m.nom.sg Nick.nom.sg { all the / both /
    ta perisotera } vivlia?
    most } book.acc.pl
     ‘Did Nikos bring {all the / both / most } books?’
A: Ne, *(ta) efere.
    yes them bring.pst.pfv.3sg
     ‘Yes, he brought them.’

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1 Glossing abbreviations: 1 = first person, 2 = second person, 3 = third person, ACC = accusative, DEF = definite, F = feminine, IMPFV = imperfective, M = masculine, N = neuter, NEG = negative, NOM = nominative, PFV = perfective, PL = plural, POSS = possessive, PRS = present, PST = past, PTCP = participle, Q = question particle, SG = singular, SUBJ = subjunctive.
1.2 Stranded numerals and weak quantifiers

Weak quantifiers and numerals may be stranded before the object gap:

(5) Q: Eferes liya vivlia?
   bring.pst.pfv.2sg a.few.acc.pl book.acc.pl
   ‘Did you bring a few books?’
A: Efera (liya) ___ .
   bring.pst.pfv.1sg some.acc.pl
   ‘Yes, I brought (some) [books].’

(6) O the.m.nom.sg Nikos nom.sg aɣorase δio pukamisa.
    the.m.nom.sg buy.pst.pfv.3sg two shirt.acc.pl the.m.nom.sg
Kostas omos den aɣorase (δio) ___ .
    however neg buy.pst.pfv.3sg two
   ‘Nikos bought two shirts. Kostas, however, did not buy (two) [shirts].’

1.3 Obligatory antecedents

Antecedents are obligatory:

(7) # O the.m.nom.sg Nikos nom.sg efera ___ .
    the.m.nom.sg Nick.nom.sg bring.pst.pfv.3sg

- Antecedentless null objects of this kind are bad even with an arbitrary interpretation (unlike in Italian).

(8) a. Questo esercizio mantiene ___ sani.
    this exercise keep.prs.3sg healthy.pl
b. * Afti i askisi kratai ___
    this.f.nom.sg the.f.nom.sg exercise.nom.sg keep.prs.3sg
    healthy.iɣii(-s).
   ‘This exercise keeps one healthy.’
    (Panagiotidis 2002: 71)

- Greek separately allows verbs to surface with suppressed internal arguments in the absence of an antecedent.
  - These are lexically restricted and probably follow from valency reduction in the lexicon (Merchant 2018: 237-242).
(9) I Ariadni {majirepse / efaje /
the.NOM.SG.F Ariadne.NOM.SG cook.PST.PVF.3SG eat.PST.PVF.3SG
διαβασε / palepse / flirtare).
read.PST.PVF.3SG fight.PST.PVF.3SG flirt.PST.PVF.3SG
'Ariadne [cooked / ate / read / fought / flirted].'

(Merchant 2018: 239)

2 Ellipsis, not deep anaphora

Panagiotidis (2002): IOD cannot be reduced to either of the two deep-anaphoric devices usually implicated in null object constructions, namely pro or variables.

2.1 Not pro

• (Subject) pro is typically definite.

• In languages where it can be indefinite, it receives a generic/arbitrary interpretation. As seen in (8), this is not a possibility in Greek.

2.2 Not variables

IOD does not show A’ properties. To see this, compare IOD to null objects in European Portuguese (EP), which have standardly been analysed as variables (Raposo 1986).

(10) Complex NPs

Q: Does Manel have guns?

i. * Eu informei la polícia da possibilidade de o Manel ter
informed the police of the possibility that the Manel has
_ no cofre.
in safe

ii. Pliroforisa tin astinomia ja to
inform.PST.PVF.3SG the.ACC.SG.F police.ACC.SG about the.N.ACC.SG
enδexomeno na eci __ o Manel
possibility.ACC.SG subj have.SUBJ.3SG the.M.NOM.SG Manel.NOM
sto xrimatokivotio.
in.the.M.ACC.SG safe.ACC.SG
'I told the police about the possibility that Manel has [guns] in the safe.'

(11) Sentential subjects

a. I knew that IBM sells computers, but...

b. * que venda __ a particulares supreende me.
that sells to individuals surprises me
c. to oti pulai se idiotes me
the.n.nom.sg that sell.prs.3sg to individual.acc.pl.m me.acc.sg
ekplisi.
surprise.prs.3sg
‘I knew that IBM sells computers, but that it sells [computers] to individuals surprises me.’

(12) Adjuncts

a. The pirate arrived at his lair carrying gold.

b. * Partiu depois de ter guardado no cofre.
left after that have kept in the safe
Intended: ‘He left after he kept [it] in the safe’

Q: Did you go shopping for sugar?

A: den piya sta maγazia jati
neg.go.pst.pfv.3sg to.the.n.acc.pl shop.acc.pl because
içes filaksi esi.
have.pst.ipfv.3sg keep.ptcp you
‘I didn’t go to the shops because you had kept [sugar].’

(13) Wh-islands

Q: Is there any paracetamol?

i. * eu sei [em qual gaveta], Manel guardou ti.
I know in which drawer Manel keeps

ii. ksero [se pio sirtari], kratai o
know.prs.1sg in which.acc.sg.n drawer.acc.sg keep.prs.3sg
the.m.nom.sg Manel.nom
‘I know which drawer Manel keeps [paracetamol] in.’

(14) Parasitic gaps

Q: Did you find any movies from your childhood?

i. Vi na TV sem reconhecer.
saw on TV without recognising

ii. * lóa stin tileorasi xoris na
see.pst.pfv.1sg on.the.f.acc.sg TV.acc.sg without to
recognise.subj.1sg
‘I saw [movies from my childhood] on TV without recognising [them].’

(all examples adapted from Panagiotidis 2002: 72-73)
2.3 Ellipsis diagnostics in IOD

Extraction:

(15) [ɣia ti mama tu], o Markos
    for the.ACC.SG.F mom.ACC.SG 3SG.POSS the.NOM.SG.M Markos.NOM
    eftiakse turta. ɣia to baba tu, δen
    make.PST.PFV.3SG cake.ACC.SG for the.ACC.SG.M dad.ACC.SG 3SG.POSS NEG
    eftiakse ___ .
    make.PST.PFV.3SG

'For his mom, Markos made a cake. For his dad, he didn't make [a cake].'

(adapted from Merchant 2018: 264: (121))

Agreement:

(16) Q: Efere o Nikos vivlia?
    bring.PST.PFV.3SG the.M.NOM.SG Nick.NOM.SG book.ACC.PL
    'Did Nick bring books?'
    A1: Ne, efere merika ___ .
        yes bring.PST.PFV.3SG some.ACC.PL.N
        'Yes, he brought some.'
    A2: * Ne, efere merikus ___ .
        yes bring.PST.PFV.3SG some.ACC.PL.M
    A3: * Ne, efere merikes ___ .
        yes bring.PST.PFV.3SG some.ACC.PL.F

2.4 Weakly equivalent ellipses

Two distinct elliptical operations capable of deriving null objects:

(17) Verb-stranding ellipses (VSE)                       (18) Argument ellipses

Which one is responsible for IOD?

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3 IOD is not VSE: two arguments

3.1 Argument 1: recovery of adverbials under ellipsis

VSE involves deletion of a verbal constituent; hence it must also delete adverbs contained within that constituent. These adverbs must then be interpretable at the ellipsis site.

- This is the case with English 'VP' ellipsis.

(19) John cleaned the vase carefully, but Mary didn’t ___.

= Mary didn’t clean the vase.

= Mary didn’t clean the vase carefully.

- But in IOD, adverbs are never recoverable at the ellipsis site.

(20) O the.m.nom.sg Nikos aɣorazi sixna metoçes. O the.m.nom.sg buy.prs.3sg often stock.acc.pl the.m.nom.sg

Kostas omos ñen aɣorazi ___ .

Kostas.nom.sg however neg buy.prs.3sg

'Nikos often buys stocks. Kostas, however, does not.'

= Kostas does not buy stocks.

≠ Kostas does not buy stocks often.

(often, the second-lowest adverb in the Cinque hierarchy, was chosen here to control for any potential complications regarding the precise landing site of verb-raising in Greek)

- Merchant (2018), who argues in favor of a VSE analysis of IOD: The adverb recovery facts are indeed a problem.

3.2 Argument 2: Weak quantifier/numeral stranding

Recall that weak quantifiers and numerals may be stranded in IOD:

(21) Q: Efere o Nikos διο vivlia?

bring.pst.pfv.3sg the.m.nom.sg Nick.nom.sg two book.acc.pl

'Did Nikos bring two books?'

A: Ne, efere διο __.

yes bring.pst.pfv.3sg two

'Yes, he brought two.'

(22) Q: Eferes merika vivlia?

bring.pst.pfv.2sg a.few.acc.pl book.acc.pl

'Did you bring a few books?'

A: Efera merika __.

bring.pst.pfv.1sg some.acc.pl

'Yes, I brought some.'

- If IOD is VSE, these elements should not appear overtly, as they are embedded within the VP and never move beyond it.
4 IOD as argument ellipsis

4.1 The basic idea


(23) a. \([\text{DP} \, \emptyset \, [\text{NumP} \, \emptyset \, [\text{NP} \, e]]]\)
b. \([\text{DP} \, D_{\text{clitic}} \, [\text{NumP} \, \emptyset \, [\text{NP} \, e]]]\)

(Panagiotidis 2002: 74)

Our task here: elaborate on the schema in (23).

4.2 What gets elided?

If weak quantifiers and numerals are relatively low in the extended nominal projection (Zamparelli 2000), then their apparent optionality can be explained as the simultaneous availability of different ellipsis heights within DP.

(24) Q: Efere o Nikos δio vivlia?
bring.pst.pfv.3sg the.m.nom.sg Nick.nom.sg two book.acc.pl
‘Did Nikos bring two books?’
A: Ne, efere (δio) __ .
yes bring.pst.pfv.3sg two
‘Yes, he brought (two) [books].’

(25)

(26) Q: Eferes merika vivlia?
bring.pst.pfv.2sg a.few.acc.pl book.acc.pl
‘Did you bring a few books?’
A: Efere (merika) ___ .

bring.pst.pfv.1sg some.acc.pl

‘Yes, I brought (some) [books].’

(27)

VP

V

efera

brought.1sg

DP

D

Ø

NumP ellipsis

NP ellipsis

NumP

NP

merika

some

N

vivlia

books

- A ‘null object’, then, is (in some sense) epiphenomenal: it arises from the interaction between argument ellipsis, which silences a portion of the DP, and the realization of indefinite D, which is null in Greek.

4.3 Why no definite null objects?
Because clitics are base-generated outside the ellipsis site (and move further beyond it).

Evidence that Greek clitics are Ds:

- Morphological argument (along the lines of Postal 1969): (Third person) clitics have the same morphology as the definite article (Drachman 1997; Anagnostopoulou 1999; Tsimpli and Stavrakaki 1999; Alexiadou 2001; Mavrogiorgos 2010). Cf. Romance (Cardinaletti 1994; Cyrino 1994; Uriagereka 1995).

  ▶ No surprise here from a diachronic perspective: both the definite article and third-person clitics originated from the Ancient Greek demonstrative (Manolessou 2002; Manolessou and Horrocks 2007; Guardiano 2013).

- Psycholinguistic evidence: Tsimpli and Stavrakaki (1999) study the production of a Greek-speaking SLI child, Eva, is characterised by omissions of material that is obligatory in normally developed adult production. Clitics and definite articles behave as a natural class in Eva’s speech: there is a correlation between omissions of clitics, especially in the third person, and omissions of the definite article (as well as strong pronouns and wh-phrases).

(28) Q: Efere o nikos ta vivlia?

bring.pst.pfv.3sg the.m.nom.sg Nick.nom.sg the.n.acc.pl book.acc.pl

‘Did Nikos bring the books?’
A: Ne, *(ta) efere.
    yes them bring PST PFV 3SG
    ‘Yes, he brought them.’

(29)

• Disclaimer:
  ▶ In fact, there’s reason to think that ellipsis does not take place with clitics, and hence that clitics do not introduce a (full) NP to begin with.

5 Cross-linguistic implications

• What do these findings mean in a wider, cross-linguistic context?

Three generalizations on null arguments and/or the D-system.

5.1 Generalization I

(30) Dimitriadis’ generalization (weak thesis)
    '[L]anguages that have IOD lack (overt) indefinite clitics...while the languages that have full object drop have lost the relevant definite object clitics’

(modified from Dimitriadis 1994b: 18-19)

Dimitriadis (1994a) explored this observation beyond Greek: he showed that it holds for Bulgarian, Brazilian Portuguese and Quiteño Spanish.

5.1.1 Bulgarian

Bulgarian shows IOD, just like Greek. The two languages show similar clitic paradigms.
Null objects in Modern Greek

(31) Q: Nosiš li palto?

wearPRS.2SG Q coat

ʼAre you wearing a coat?ʼ

A: Nosja (*go)

wearPRS.1SG it

ʼIʼm wearing [one]ʼ

(32) Q: Nosiš li si palto-to?

wearPRS.2SG Q refl coat-the

ʼAre you wearing your coat?ʼ

A: Nosja *(go)

wearPRS.1SG it

ʼIʼm wearing itʼ

5.1.2 Quiteño Spanish

• Quiteño differs from Greek and Bulgarian in allowing definite null objects.

• Quiteño has lost third-person DO clitics (los, las in mainland Spanish); etymologically indirect les has taken over.

• But in sentences that already contain an IO clitic, we do not find les. Instead, we get a null object where we would expect a DO clitic in mainland Spanish.

(33) a. Dá-me-lo. (mainland Spanish)

give2SG.imp-me-it

ʼGive it to meʼ

b. Dá-me ___ (Quiteño)

give2SG.imp-me

ʼGive it to meʼ

(34) a. Bueno, yo te lo saco (mainland Spanish)

well I you it removePRS.1SG

ʼWell, Iʼll remove it from youʼ

b. Bueno, yo te ___ saco (Quiteño)

well I you removePRS.1SG

ʼWell, Iʼll remove it from youʼ

(Suñer and Yépez 1988: 512-513)

5.1.3 Brazilian Portuguese

In Brazilian Portuguese, definite null objects are allowed:

(35) Ontem o João pos o dinheiro no cofre, mas Pedro guardou ___ na gaveta.

putPST.PRS.3SG the money in safe but Pedro keepPST.PRS.3SG ___ in drawer

ʼYesterday João put the money in the safe, but Pedro kept [it] in the drawerʼ

Crucially, unlike Greek (and European Portuguese), Brazilian Portuguese has lost third-person accusative clitics.
5.1.4 A pattern emerges

In the languages we have been examining, null objects occur just where there is a gap in the clitic system. This complementarity seems to hold well beyond Greek.

(36) Dimitriadis' generalization (strong thesis)
Null objects occur just where pronominal clitics cannot appear.

• What could the strong thesis follow from?
• Is it true?

5.2 Generalization II

(37) Tomioka's generalization

'All languages which allow discourse pro-drop allow (robust) bare NP arguments...[N]ull pronouns in...[d]iscourse...[p]ro-[d]rop lan-
guages are...NP ellipsis without determiner stranding.'

(Tomioka 2003: 321, 336)

(38) a. $[\text{DP } \varnothing [\text{NP full}]]$ bare noun
b. $[\text{DP } \varnothing [\text{NP e}]]$ discourse pro-drop

Tomioka’s generalization seems important in (at least) the following ways.

• pro-drop is linked directly to the ‘article system’. Is it possible to reduce variation in pro-+drop to variation in the D-system?
  ▶ Barbosa (forthcoming) and Roberts (In progress) for null subject languages (NSLs): all NSLs involve a minimal nP, and differences emerge from the realisation of NP(E) and agreement.

• We effectively get rid of licensing: it reduces to the interaction of the D system with null NP anaphora (cf. IOD).

• We can begin to understand the previous generalization: it follows from the wider link between the D-system and null anaphora (in this case, ellipsis).

5.3 Testing Dimitriadis’ generalization

(39) Dimitriadis’ generalization (strong thesis)
Null objects occur just where pronominal clitics cannot appear.

• Most languages in the table conform.
• Some conform, but not straightforwardly.
  ▶ Quiteño: The conditioning factor is the D-system with all its realisational quirks; not just the presence vs absence of D.
Towards a Minimalist typology of null objects

- There’s an intuition here that we may be tempted to retain.
- Let’s adopt the caveats above, focussing just on the conforming languages, and assume that null anaphora for these NOs is an ellipsis site.
- We may be able to compile a typology of NOs based on the following criteria:
  1. What heads in the extended nominal projection NP(E) are morphologically realized?
  2. What constituents in NP(E) can be elided?
- NB such an approach would situate variation largely at PF/morphology.
Obstacles:

- No extensive typology of ellipsis. Lack of research on:
  - Precisely which constituent(s) is affected by each ellipsis 'type' in a given language
  - Implicational universals in ellipsis
- More widely, no real understanding of what determines the availability of different ellipses.

The following generalization represents a promising way to deal with some of the problems above.

5.5  **Generalization III**

An idea (theoretically, rather than empirically, motivated) from Saito (2007: 204):

\[(41)\]

* Saito's conjecture
  'The presence of...argument ellipsis implies the absence of agreement.'

- This is why argument ellipsis is available in Japanese (Oku 1998), which arguably has the negative setting of the 'phi-parameter' (Kuroda 1988).
- If the conjecture is correct, we know what argument ellipsis follows from, paving the way for a principled approach to variation in NOs.
- This conjecture might also provide a link with null subjects, via agreement...
- But:
  - The conjecture clearly doesn't hold for languages like Greek, which has both argument ellipsis and phi-features on \(v\).
    - A possible solution: phi-features on \(v\) are optional in Greek, such that Greek is (sometimes) the micro-parametric version of the Japanese setting of the 'phi-parameter'.
    - Or: it is phi-bearing (nominal) projections themselves that cannot be elided.

If phi-bearing nominal projections cannot be elided, then we make another welcome prediction from the perspective of (40): we should not expect to find cases of DP ellipsis where DP is phi-marked.

Apparent counterexamples:

- Finnish (Holmberg 2005). But Finnish doesn't have articles.
- Brazilian Portuguese under Cyrino (2013). But bare nouns occur very freely in BP.
Hence, it is far from clear that these cases actually involve ellipsis of DP, rather than a smaller nominal constituent.

If this generalisation holds, the approach to variation sketched here is feasible, in principle. If it doesn’t, then DP ellipsis is, (like VSE), yet another proviso on the approach.

6 Conclusion

IOD in Modern Greek is the product of the interaction between argument ellipsis and the realization of D.

The complementarity between pronominal clitics and NOs holds well beyond Greek, and seems to be symptomatic of a wider connection between null arguments and the D-system.

A theory capitalizing on this interaction would allow us to get rid of traditional licensing conditions, and perhaps address variation in NOs and NSs simultaneously.

To actually implement such an approach, we need a richer understanding of the typology of ellipsis.

Hopeful directions to this end have been proposed, but further testing remains to be done.

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