

Indefinite null objects in Greek: Distinguishing between weakly equivalent ellipses*

Lefteris Paparounas
University of Pennsylvania
lefteris@sas.upenn.edu

NYU Syntax Brown Bag
February 22, 2019

0 Outline

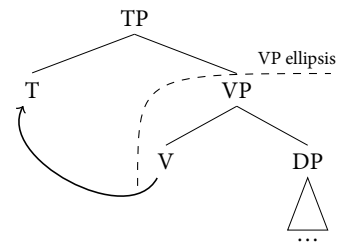
1. Background: distinguishing between weakly equivalent mechanisms
2. Data: IOD in Greek
3. Ellipsis, not deep anaphora
4. Why no definite null objects?
5. IOD is not VSE: three arguments
6. IOD as argument ellipsis
7. Why no VSE?
8. Conclusion

*This is joint work with Ioanna Sitaridou. We are grateful to Luke Adamson, Theresa Biberauer, Kajsa Djärv, David Embick, Alex Kalomoiros, Julie Anne Legate, Jim McCloskey, Ian Roberts and Milena Šereikaitė for feedback. We also thank audiences at SinFonJA 11 and LSA 2019 for discussion. Usual disclaimers apply.

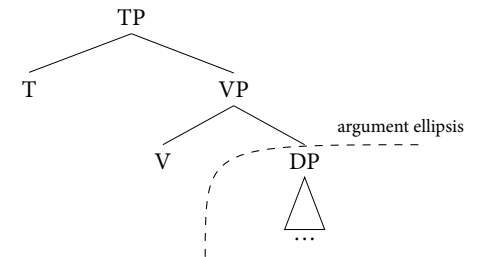
1 Background: distinguishing between weakly equivalent mechanisms

- Argument ellipsis (AE) and Verb-Stranding Ellipsis (VSE) are generally capable of deriving the same surface outcome.
- How do we distinguish between them?¹

(1) *Verb-stranding ellipsis (VSE)*



(2) *Argument ellipsis*



¹For AE, see Oku (1998), Kim (1999), Takahashi (2008), Şener and Takahashi (2010),

Today:

- Empirical focus: Indefinite Object Drop (IOD) in Greek.
 - ▶ Generalization: indefinite objects can be dropped; definite ones cannot.
- The definiteness restriction follows from the interaction of ellipsis and cliticization.
- IOD is the outcome of argument ellipsis, not VSE.
- The lack of VSE in Greek may follow:
 - ▶ From the lack of VP ellipsis altogether.
 - ▶ From a bleeding interaction between VP ellipsis and verb-raising.

2 Data: IOD in Greek**2.1 The core pattern**

Basic observations:

- Only indefinite objects can be dropped.
 - ▶ Object gaps and clitics are in complementary distribution.

- (3) Q: Efere o Nikos vivlia?
 bring.PST.PFV.3SG the.M.NOM.SG Nick.NOM.SG book.ACC.PL
 ‘Did Nikos bring books?’
- A: Ne, (*ta) efere.
 yes them bring.PST.PFV.3SG
 ‘Yes, he brought.’
- = Yes, he brought books.

Takahashi (2014), and Landau (2018). For VSE, see Doron (1990, 1999), Goldberg (2005), Huang (1991), Otani and Whitman (1991), McCloskey (1991), and Gribanova (2013, 2017).

- (4) Q: Efere o Nikos ta
 bring.PST.PFV.3SG the.M.NOM.SG Nick.NOM.SG the.N.ACC.PL
 vivlia?
 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.

- (5) Q: Efere o Nikos { merika /
 bring.PST.PFV.3SG the.M.NOM.SG Nick.NOM.SG { several /
 kapça / liya / ðeka / tulaçiston ðeka / parapano apo
 some / a.few / ten / at.least ten / more than
 ðeka / tipota } vivlia?
 ten / any } 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)

- (6) Q: Efere o Nikos { ola ta /
 bring.PST.PFV.3SG the.M.NOM.SG Nick.NOM.SG { all the /
 ke ta ðio / ta perisotera } vivlia?
 both / 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.'

- IOD is not restricted to plural objects.
 - ▶ Singular indefinites, both count (7) and mass (8), can be dropped.

(7) Q: Aȳorases efimeriða?
buy.PST.PFV.2SG newspaper.ACC.SG
'Did you buy a newspaper?'

A: Oçi, ðen boresa na vro ____.
no NEG can.PST.PFV.1SG SUBJ find.PFV.1SG
'No, I couldn't find [a newspaper].'

(8) Q: Aȳorases zaxari?
buy.PST.PFV.2SG sugar.ACC.SG
'Did you buy sugar?'

A: Oçi, ðen boresa na vro ____.
no NEG can.PST.PFV.1SG SUBJ find.PFV.1SG
'No, I couldn't find [sugar].'

(adapted from Merchant 2018: 235)

- IOD is also not restricted to question-answer contexts:

(9) O Nikos mazepse
them.NOM.SG Nick.NOM.SG picked.PST.PFV.3SG
fraules ke o Kostas
strawberry.ACC.PL and them.NOM.SG Kostas.NOM.SG
pulise ____.
sell.PST.PFV.3SG
'Nick picked strawberries and Kostas sold [strawberries].'

2.2 Stranded numerals and weak quantifiers

When the antecedent contains a weak quantifier or numeral, this element may be stranded before the gap:

(10) Q: Eferes liȳa vivlia?
bring.PST.PFV.2SG a.few.ACC.PL book.ACC.PL
'Did you bring a few books?'

A: Efera (liȳa) ____.
bring.PST.PFV.1SG some.ACC.PL
'Yes, I brought (some) [books].'

(11) O Nikos aȳorase ðio pukamisa.
the.M.NOM.SG Nikos.NOM.SG buy.PST.PFV.3SG two shirt.ACC.PL
O Kostas omos ðen aȳorase
the.M.NOM.SG Nikos.NOM.SG however NEG buy.PST.PFV.3SG
(ðio) ____.
two
'Nikos bought two shirts. Kostas, however, did not buy (two) [shirts].'

2.3 Obligatory antecedents

Antecedents are obligatory:

(12) # O Nikos efere ____.
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).

(13) 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
 ___ iyii(-s).
 healthy.(-PL)
 ‘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; Merchant (2018: 237-242) derives them from a valency reduction operation in the lexicon.

- (14) I Ariađni {majirepse /
 the.NOM.SG.F Ariadne.NOM.SG cook.PST.PFV.3SG
 efaje / ðiavase / palepse /
 eat.PST.PFV.3SG read.PST.PFV.3SG fight.PST.PFV.3SG
 flirtare}.
 flirt.PST.PFV.3SG
 ‘Ariadne {cooked / ate / read / fought / flirted}’

(Merchant 2018: 239)

In a nutshell:

- Indefinite objects can be dropped.
- Definite ones cannot.
- Antecedents are obligatory.
- Weak quantifiers and numerals may be stranded before the ellipsis site.

3 Ellipsis, not deep anaphora

IOD cannot be reduced to deep anaphora: it does not involve *pro* or topic-bound variables.

3.1 Not a null pronoun

- (Subject) *pro* is typically definite.
- In languages where it can be indefinite, it receives a generic/arbitrary interpretation. As seen in (13), this is not a possibility in Greek.

3.2 Not variables

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

- (15) *Complex NPs*

Q: Does Manel have guns?

- *Eu informei la policia da possibilidade de o
 I informed the police of.the possibility that the
 Manel ter ___ no cofre.
 Manel has in safe
- Pliroforisa tin astinomia ja
 inform.PST.PFV.3SG the.ACC.SG.F police.ACC.SG about
 to enðexomeno na eçi ___
 the.N.ACC.SG possibility.ACC.SG SUBJ have.SUBJ.3SG
 o Manel sto
 the.M.NOM.SG Manel.NOM in.the.M.ACC.SG
 xrimatokivotio.
 safe.ACC.SG
 ‘I told the police about the possibility that Manel has
 [guns] in the safe.’

(16) *Sentential subjects*

- a. I knew that IBM sells computers, but...
- b. *que venda __ a particulares suprende me.
that sells to individuals surprises me
- c. to oti pulai __ se iđiotes
the.N.NOM.SG that sell.PRS.3SG to individual.ACC.PL.M
me eklisi.
me.ACC.SG surprise.PRS.3SG
'I knew that IBM sells computers, but that it sells [computers] to individuals surprises me.'

(17) *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: đen piya sta mayazia jati
NEG go.PST.PFV.3SG to.the.N.ACC.PL shop.ACC.PL because
içes filaksi __ esi.
have.PST.IMPF.3SG kept.PTCP you
'I didn't go to the shops because you had kept [sugar].'

(18) *Wh-islands*

Q: Is there any paracetamol?

- i. *eu sei [em qual gaveta]_i Manel guardou __ t_i.
I know in which drawer Manel keeps
- ii. ksero [se pio sirtari]_i
know.PRS.1SG in which.ACC.SG.N drawer.ACC.SG
kratai __ o Manel t_i.
keep.PRS.3SG the.M.NOM.SG Manel.NOM
'I know which drawer Manel keeps [paracetamol] in.'

(19) *Parasitic gaps*

Q Did you find any movies from your childhood?

- i. Vi __ na TV sem reconhecer.
saw on TV without recognising
- ii. *Iđa __ stin tileorasi xoris
see.PST.PFV.1SG on.the.F.ACC.SG TV.ACC.SG without
na anaynoriso.
to recognise.SUBJ.1SG
'I saw [movies from my childhood] on TV without recognising [them].'

(all examples adapted from Panagiotidis 2002: 72-73)

3.3 *Ellipsis diagnostics in IOD*

Extraction:

- (20) [ya ti mama tu], o
for the.ACC.SG.F mom.ACC.SG 3SG.POSS the.NOM.SG.M
Markos eftiakse turta. [ya to
Markos.NOM make.PST.PFV.3SG cake.ACC.SG for the.ACC.SG.M
baba tu], đen eftiakse __.
dad.ACC.SG 3SG.POSS NEG 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:

(21) Q: Efere o Nikos
bring.PST.PFV.3SG the.M.NOM.SG Nick.NOM.SG
merika vivlia?
some.ACC.PL.N book.ACC.PL
'Did Nick bring some 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

A2: *Ne, efere merikes ____.
yes bring.PST.PFV.3SG some.ACC.PL.F

Sloppy readings, sometimes used as a diagnostic for ellipsis, can also be found in IOD:

(22) Q: Efere o Nikos merika
bring.PST.PFV.3SG the.M.NOM.SG Nick.NOM.SG book.ACC.PL
apo ta vivlia tu?
some of the.N.ACC.PL book.ACC.PL his
'Did Nikos_i bring some of his books?'

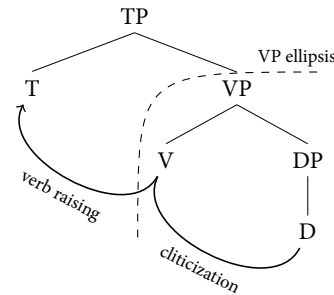
A: Oçi, o Kostas efere ____.
No the.M.NOM.SG Kostas.NOM.SG bring.PST.PFV.3SG
'No, Kostas_j brought [some of his_j / _i books].'

However, sloppy readings may not be a foolproof diagnostic: these readings can arise in the absence of ellipsis (Merchant 2013), and may in fact characterize deaccenting in general (Tancredi 1992).

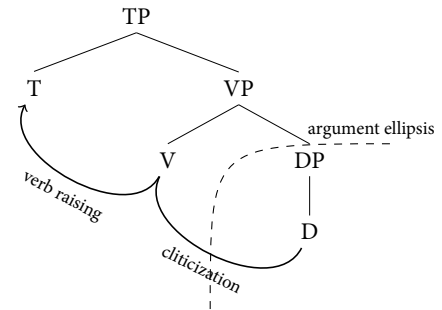
4 Why no definite null objects?

- Greek clitics are D heads (Drachman 1997; Anagnostopoulou 1999; Tsimpli and Stavrakaki 1999; Alexiadou 2001; Mavrogiorgos 2010)
- They are base-generated in object position, cliticizing by head movement (cf. Uriagereka 1995; Roberts 2010)

(23) *Cliticization and VSE*



(24) *Cliticization and AE*



Prediction: when the definite article is found in a context where it is *not* able to cliticize, it should undergo ellipsis.

- This prediction is borne out.
 - The preposition *se* appears autonomously except when followed by the definite article:

(25) a. *se + bare indefinite*

Mu aresi na pijeno se polis tu
my likes SUBJ go to cities of.the
eksoteriku.
abroad

'I like going to cities in other countries.'

- b. *se* + *indefinite article*
 Vreθikame tiça se mia
 meet.NONACT.PST.PFV.1PL accidentally to a
 paralia.
 beach
 ‘We bumped into each other by chance on a beach.’
- c. *se* + *definite article*
- i. * Molis bika se to sinema.
 just enter.PST.PFV.1SG to the cinema
 - ii. Molis bika sto sinema.
 just enter.PST.PFV.1SG to.the cinema
 ‘I’ve just entered the cinema.’

- Crucially, the prepositional determiner *st-* inflects for case, gender and number:

- (26) a. Pao stu Petru.
 go.1SG to.the.GEN.SG.M Peter.GEN
 ‘I’m going to Peter’s (house).’
- b. Pao stis Marias.
 go.1SG to.the.GEN.SG.F Mary.GEN
 ‘I’m going to Mary’s (house).’
- c. Mi fonazis stus pezus!
 don’t shout.2SG to.the.ACC.PL.M pedestrians
 ‘Don’t shout at pedestrians!’

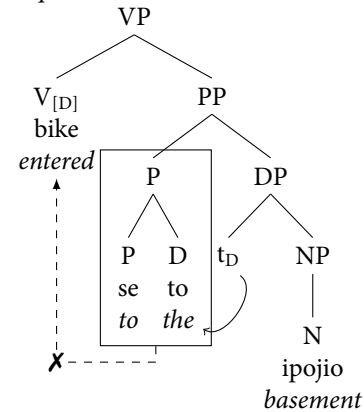
- Contrary to the normal pattern, a definite object *may* be dropped when it is introduced by *st-*:

- (27) a. I Maria vrike to ipojio, ala o Petros
 the Mary found the basement but the Peter
 ðen *(to) vrike.
 NEG the found
 ‘Mary found the basement, but Peter didn’t.’

- b. I Maria bike sto ipojio, ala o Petros
 the Mary entered to.the basement but the Peter
 ðen (*sto) bike.
 NEG to.the entered
- c. I Maria bike sto ipojio, ala o Petros
 the Mary entered to.the basement but the Peter
 ðen bike (*sto).
 NEG entered to.the
 ‘Mary entered the basement, but Peter didn’t.’

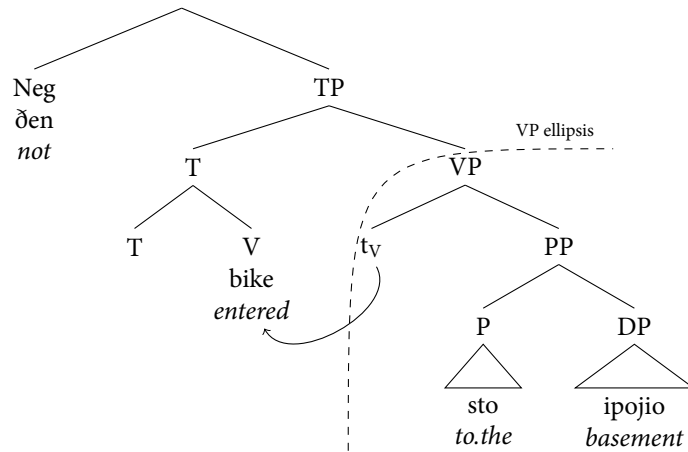
- That *st-*-introduced definites pattern with indefinites in this way is expected under the current analysis:

(28) *Step 1: no cliticization*

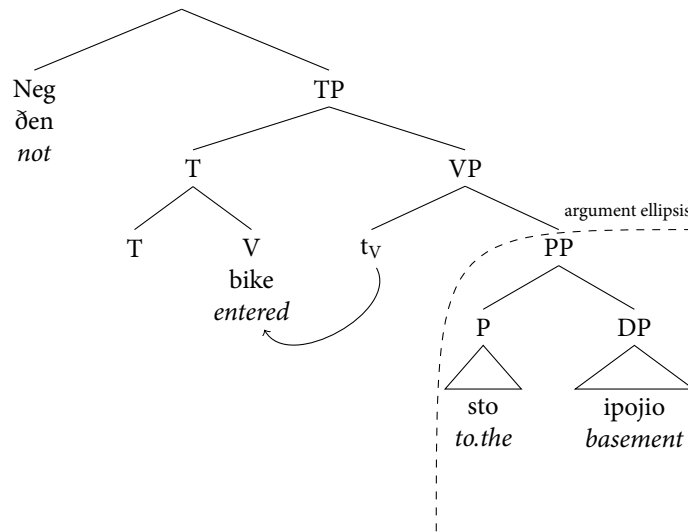


(29) Step 2: ellipsis

a. VSE



b. argument ellipsis



5 IOD is not VSE: three arguments

We will repeatedly refer back to Merchant (2018), who argues for a VSE-based analysis of IOD.

5.1 Argument 1: Weak quantifier/numeral stranding

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

(30) Q: Efero o Nikos duo vivlia?
bring.PST.PFV.3SG the.M.NOM.SG Nick.NOM.SG two book.ACC.PL

‘Did Nikos bring books?’

A: Ne, efero (duo) __.

yes bring.PST.PFV.3SG two

‘Yes, he brought (two) [books].’

(31) 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) [books].’

- If IOD is VSE, these elements should not appear overtly: they are embedded within the VP.

► NB they don’t cliticize.

5.2 Argument 2: 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 (Park 1997; Oku 1998).

- This is the case with English VP ellipsis, and with high verbal ellipsis in Greek, where manner adverbs are VP-internal (Alexiadou 1997: 130-143).

(32) John cleaned the vase carefully, but Mary didn't ____.
= Mary didn't clean the vase carefully.

(33) O Nikos ayorase aperiskepta
the.M.NOM.SG Nikos.NOM.SG buy.PST.3SG recklessly
metoçes ke o Kostas episis ____.
stock.ACC.PL and the.M.NOM.SG Kostas.NOM.SG also
'Nikos bought stocks recklessly, and Kostas also.'
= Kostas also bought stocks recklessly.

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

(34) O Nikos ayorase aperiskepta
the.M.NOM.SG Nikos.NOM.SG buy.PST.3SG recklessly
metoçes. O Kostas omos ðen
stock.ACC.PL the.M.NOM.SG Kostas.NOM.SG however NEG
ayorase ____.
buy.PST.3SG
'Nikos bought stocks recklessly. Kostas, however, did not.'
= Kostas did not buy stocks.
≠ Kostas did not buy stocks recklessly.

- Merchant (2018): These facts are indeed a problem.

5.3 Argument 3: missing antecedents

Merchant (2018: 263) adapts a Hebrew example from Landau (2018) into Greek. This example involves the *missing antecedent test* of Grinder and Postal (1971).

- (35) a. O Petros eftiakse turta
the.NOM.SG.M Petros.NOM make.PST.PFV.3SG cake.ACC.SG
akoluθondas ti sindaji. Itan
following the.ACC.SG.F recipe.ACC.SG be.PST.3SG
nostimi.
delicious.NOM.SG.F
'Petros made a cake by following the recipe. It was delicious.'
i. O Markos ðen eftiakse ____.
the.NOM.SG.M Markos.NOM NEG make.PST.PFV.3SG
#Itan aiðiastiki.
be.PST.3SG disgusting.NOM.SG.F
'Markos didn't make [one]. #It was disgusting.'
ii. O Markos oçi. Itan
the.NOM.SG.M Markos.NOM no be.PST.3SG
aiðiastiki.
disgusting.NOM.SG.F
'Not Markos. It was disgusting.'
iii. O Markos ðen eftiakse
the.NOM.SG.M Markos.NOM NEG make.PST.PFV.3SG
turta akoluθondas ti sindaji.
cake.ACC.SG following the.ACC.SG.F recipe.ACC.SG
Itan aiðiastiki.
be.PST.3SG disgusting.NOM.SG.F
'Markos didn't make a cake by following the recipe. It was disgusting.'

(Merchant 2018: 263)

- (35a-i), (35a-ii) and (35a-iii) are three different possible continuations of (35a).
- Let's focus on (35a-i). The essence of this test: a VSE analysis predicts that the chunk *it was disgusting* of (35a-i) should be felicitous, contrary to fact.

- ▶ A VSE analysis would assume that the null object in (35a-i) results from ellipsis of a whole VP, specifically of a VP like that in the antecedent clause, one which contains the VP adjunct *by following the recipe*.
- ▶ If this adjunct is present in the structure of (35a-i), and has been elided, then it must be in the scope of the negative particle *den*.
- ▶ As such, the ellipsis site in (35a-i) should mean ‘Markos did not make a cake *by following the recipe*’. Hence, a continuation like ‘It was disgusting’ should be perfectly licit.
- ▶ **But** (35a-i) cannot mean that Markos did not make a cake by following the recipe; it can only mean that Markos did not make a cake at all.
- ▶ This is why the follow-up ‘It was disgusting’ is infelicitous: there is no antecedent for ‘it’, since no cake was made.
- ▶ In other words, (35a-i) must be the elided version not of (35a-iii), repeated here as (36a), but rather of (36b).

- (36) a. O Markos den eftiakse
 the.NOM.SG.M Markos.NOM NEG make.PST.PFV.3SG
 turta akoluθondas ti sindaji.
 cake.ACC.SG following the.ACC.SG.F recipe.ACC.SG
 Itan aiðiastiki.
 be.PST.3SG disgusting.NOM.SG.F
 ‘Markos didn’t make a cake by following the recipe. It was disgusting.’
- b. O Markos den eftiakse
 the.NOM.SG.M Markos.NOM NEG make.PST.PFV.3SG
 turta. #Itan aiðiastiki.
 cake.ACC.SG be.PST.3SG disgusting.NOM.SG.F
 ‘Markos didn’t make a cake. #It was disgusting.’

The bottom line: similarly to the adverb test, the missing antecedent test shows that material contained within VP is not elided in the case of Greek null objects like (35a-i); hence, these null objects cannot be the outcome of VSE.

5.3.1 Merchant’s (2018) response and its problems

Merchant (2018): the facts of the missing antecedent test can be made compatible with VP ellipsis.

- The infelicity of the continuation in (35a-i) follows not from the lack of an antecedent for the pronoun, but from independent facts concerning the prosodic properties of the sentence.

Merchant begins by noting that focus-sensitive operators such as English *only* require that their associate receive a pitch accent. If their associate is elided, this prosodic requirement is not met, resulting in ungrammaticality.

- (37) a. Abby will only play [the flute]_F at the recital, not the piano.
 i. Ben also will only play [the flute]_F at the recital.
 ii. * Ben also will only play ~~[the flute]_F~~ at the recital.

(Merchant 2018: 264)

Merchant assumes that Greek *den* is like English *only*: it is a focus-sensitive operator. In this view, its associate in (35a-iii) is the verbal adjunct. That is, (35a-iii) is parallel to (37a-i):

- (38) O Markos den eftiakse turta
 the.NOM.SG.M Markos.NOM NEG make.PST.PFV.3SG cake.ACC.SG
 [akoluθondas ti sindaji]_F.
 following the.ACC.SG.F recipe.ACC.SG
 ‘Markos didn’t make a cake [by following the recipe]_F.’ (He made it in some other way, not according to the recipe)

(Merchant 2018: 264)

- If (35a-iii) is parallel to (37a-i), then (35a-i) is bad for the same reason that (37a-ii) is: the associate of the focus operator has gone missing.

- In this view, the infelicity of (35a-i) arises from an independent factor, namely, the properties of focus-sensitive operators, and not from the lack of an antecedent for the pronoun.
- Hence, the ungrammaticality of (35a-i) is not a problem for a VSE analysis of Greek null objects.

Furthermore, Merchant argues, this focus-based approach can help us understand the difference between the ungrammatical (35a-i) and the minimally different but grammatical (35a-ii).

- (35a-ii) contains the negative particle *oçi* ‘no’. Unlike the verbal negator *ðen*, *oçi* never appears preverbally, and can be used as a stand-alone answer to yes/no questions, just like English *no*.
- *oçi*, Merchant stipulates, is not a focus-sensitive operator, so, unlike *ðen*, it does not have an associate that must be overt. Hence, (35a-ii) is grammatical.
- Problems with this response:
 - ▶ Independent evidence that *ðen* is focus-sensitive is not given. (The parallelism with English *only* is not convincing by itself: there is no reason *a priori* to expect Greek *ðen* and English *only* to behave alike.)
 - * NB the account may be salvaged by assuming that *all* negators are focus-sensitive operators; but then we lack an explanation for why one negator should be focus-sensitive, but not the other.
 - ▶ It does not seem to explain what it is intended to explain.
 - * It predicts that the first sentence of (35a-i) is ungrammatical, contrary to fact. It is in fact the continuation *itan aiðiastiki* that’s bad, but the focus-based approach does not bear on this sentence.
- But if we do away with Merchant’s focus approach, do we lose the explanation of the difference between (35a-i) and (35a-ii)?

- No: (35a-ii) does not involve ellipsis in the first place.
 - ▶ Hence, the focus-based approach not actually explain the difference between them.
 - ▶ An ellipsis-less approach to *oçi* does explain the difference, regardless of whether *oçi* is focus-sensitive: even if it is, no ellipsis of its associate has taken place in (35a-ii).
- There are two pieces of evidence suggesting that (35a-ii) does not involve ellipsis.
 - ▶ Ellipsis is generally optional: if it is possible to elide structure, it is also possible to have it be overt. For example, (35a-i) is the elided counterpart of (35a-iii). But consider what would happen if we attempted to derive (35a-ii) with the supposedly elided VP surfacing overtly:

(39) * O Markos oçi eftiakse
 the.NOM.SG.M Markos.NOM no make.PST.PFV.3SG
 turta (akoluθontas ti
 cake.ACC.SG following the.ACC.SG.F
 sindayi).
 recipe.ACC.SG
 Intended: ‘Markos didn’t make a cake (by following the recipe).’
 - ▶ Secondly, while extraction is perfectly grammatical with *ðen*, as in (40a), extracting from an *oçi*-introduced clause is impossible, as in (40b).²

²It must be noted that there is a further puzzle here: (40b) is grammatical without an overt subject.

(i) Gia to baba tu, o Markos eftiakse turta. Gia ti mama tu oçi.
 for the dad his the Markos made cake for the mom his no
 ‘For his dad, Markos made a cake. For his mom, he didn’t.’

The intonational break shown by the comma in (40b) is not necessary in (i).

- (40) a. Gia to baba tu, o Markos eftiakse turta.
for the dad his the Markos made cake
Gia ti mama tu, o Markos ðen eftiakse.
for the mom his the Markos NEG made
- b. * Gia to baba tu, o Markos eftiakse turta.
for the dad his the Markos made cake
Gia ti mama tu, o Markos oçi.
for the mom his the Markos no
'For his dad, Markos made a cake. For his mom,
he didn't.'

For all these reasons, a VSE approach to IOD, articulated even as carefully as that of Merchant's, seems inappropriate for IOD.

6 IOD as argument ellipsis

6.1 The basic idea

Giannakidou and Merchant (1997) and Panagiotidis (2002): IOD involves DP-internal null anaphora, and the realization of D is what derives the complementarity between null objects and clitics.

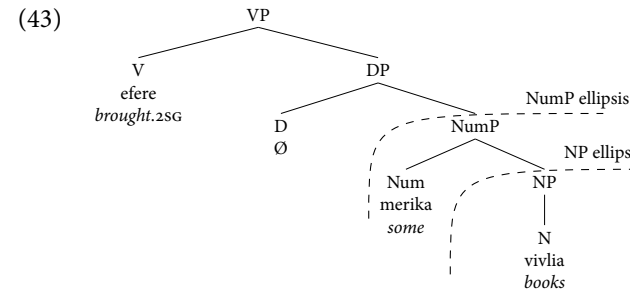
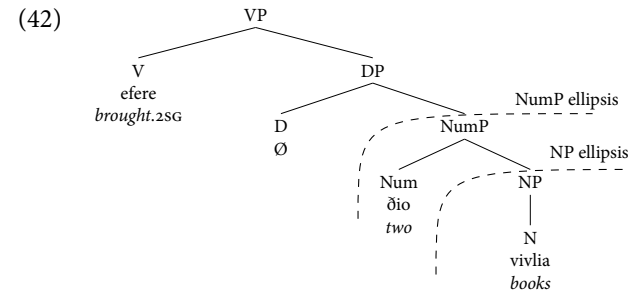
- (41) a. $[_{DP} D_{clitic} [_{NumP} \emptyset [_{NP} e]]]$
b. $[_{DP} \emptyset [_{NumP} \emptyset [_{NP} e]]]$

(Panagiotidis 2002: 74)

Our task here: elaborate on the schema in (41b).

6.2 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:



- 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 D, which is null in Greek.
 - ▶ (NB this structure has been proposed by Tomioka (2003) as the representation of radical pro-drop in East Asian languages...)

6.3 Implications

- Argument ellipsis cannot be an areal feature of East Asian languages
 - ▶ Hebrew (Landau 2018), Persian (Sato and Karimi 2016) and now Greek all show the process.
- Greek lacks all of the putative correlates of argument ellipsis, but still has the process itself.

- ▶ Greek does not lack agreement (Saito 2007) or D (Cheng 2013), and it does not have scrambling (Oku 1998) or radical *pro*-drop (Sakamoto 2017).

7 Why no VSE?

A deeper question: *why* does Greek lack VSE?

- VSE is a composite process: it relies on the presence of verb-raising and of VP ellipsis.
- Greek has verb raising.

(44) Itan safes oti to peði ekapse **epitiðes** ti supa.
 was clear that the child burned intentionally the soup
 ‘It was clear that the child burned the soup intentionally’

(Merchant 2018: 232)

- The absence of VSE may then be due to:
 - ▶ Either the absence of VP ellipsis
 - ▶ Or the derivational timing of VP ellipsis relative to verb-raising.

Does Greek have VP ellipsis?

7.1 Scenario 1: Greek has VP ellipsis

- No ellipsis after the perfective auxiliary *have* or after negation:

(45) a. *I Maria eçi teliosi tin eryasia tis ke i
 the Maria has finished the homework her and the
 Ana eçi __ episis.
 Ana has also
 Intended: ‘Maria has finished her homework and
 Anna has, too’

- b. *O Petros ine ikanos, ala o Aleksanðros ðen
 the Petros is capable but the Alexander NEG
 __.

Intended: ‘Petros is capable, but Alexander isn’t.’

(Merchant 2018: 229-230)

- But we do find ellipsis of non-verbal predicates following the copula:

(46) a. I Maria ðen ine ikani, ala i Aleksanðra ine
 the Maria is NEG capable but the Alexandra is
 __.

‘Maria isn’t capable, but Alexandra is.’

- b. I Maria ine sto spiti, ala i Aleksanðra
 the Mary is NEG at.the home but the
 ðen ine __.
 Alexandra NEG is
 ‘Maria is at home, but Alexandra isn’t.’

c. I Maria ine kali maθitria, ala i Aleksanðra
 the Maria is good student but the Alexandra
 ðen ine __.
 NEG is

‘Maria is a good student, but Alexandra isn’t.’

- Merchant (2018): this is ellipsis of PredP, which he takes to be equivalent to *vP*.

7.1.1 A puzzle

If it is true that Greek has VP ellipsis, we are seemingly led to a paradox. Schematically:

- Greek does not have VSE.
- Greek does raise the main verb beyond the verbal shell.
- Greek does have a form of ‘VP ellipsis.’
- Hence, Greek has both verb-raising and VP ellipsis, but not the combination of the two (=VSE).

The problem: How is it possible that Greek has both verbal ellipsis and movement of the finite verb out of VP, but not the combination of the two operations?

7.1.2 A solution

Greek is not alone in exhibiting this puzzle.

- Sailor (2018): verbal ellipsis *bleeds* verb movement in Mainland Scandinavian.
 - ▶ Sailor notes that, although the Mainland Scandinavian languages have both verbal ellipsis and verb-raising (to C; V2), they do not show the VSE pattern.
 - ▶ Illustrating with Danish (all data from Sailor 2018: 5-7):

(47) *Danish has VP ellipsis*

Mona og Jasper havde vask-et bilen, eller
 Mona and Jasper have.PST wash-PTCP car.DEF or
 rettere Mona havde ____.
 rather Mona have.PST

‘Mona and Jasper had washed the car, or rather Mona had.’

(48) *Danish has V2*

- a. Peter har ofte drukket kaffe om morgenen.
 Peter has often drunk coffee in the.morning
 ‘Peter has often drunk coffee in the morning.’
- b. Peter drikker ofte kaffe om morgenen.
 Peter drinks often coffee in the.morning
 ‘Peter often drinks coffee in the morning.’
- c. Om morgenen har Peter ofte drukket kaffe.
 in the.morning has Peter often drunk coffee
 ‘Peter has often drunk coffee in the morning.’
- d. Om morgenen drikker Peter ofte kaffe.
 in the.morning drinks Peter often coffee
 ‘Peter often drinks coffee in the morning.’

(49) *Danish does not have VSE*

*Mona og Jasper vaskede bilen, eller rettere
 Mona and Jasper wash.PST car.DEF or rather
 Mona vaskede ____.
 Mona wash.PST

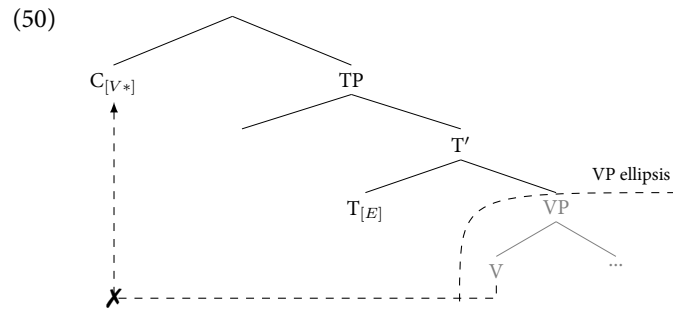
Intended: ‘Mona and Jasper washed the car, or rather Mona did.’

Sailor (2018: 12) accounts for these facts as follows:

[L]anguages such as those in the Mainland Scandinavian sub-family have the correct ingredients to generate the V-stranding VPE pattern, yet the order in which those ingredients are added to the derivational recipe results in a bleeding configuration instead.

His account in brief:

- Assumptions:
 - ▶ VPE is triggered by the presence of the [E] feature on T (for this feature, see Merchant 2001)
 - ▶ V2 is movement of the main verb to C triggered by a strong [V*] feature on that head
- The essence:
 - ▶ When T is merged, VPE makes the verb inaccessible for later operations. C is merged too late for the [V*] feature to be able to probe inside VP.

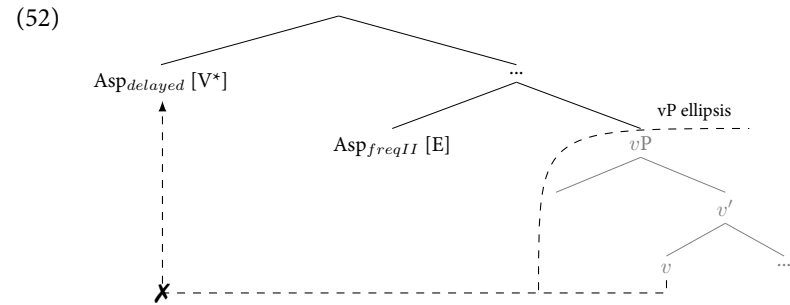


Greek may be parallel to Mainland Scandinavian in this sense.

- Where exactly does the Greek verb move to?
 - ▶ We saw it lands above *intentionally*; it also lands below *finally*:

(51) a. Prospaθisa na to apofiyo, ala telika
 try.PST.PFV.1SG SUBJ it avoid.PFV.1SG but finally
 ekapsa ti supa.
 burn.PST.PFV.1SG the.ACC.SG.F soup.ACC.SG
 ‘I tried to avoid it, but I ended up burning the soup.’

Then Greek is just like Mainland Scandinavian, but at a more fine-grained level:



7.1.3 Implications

- As noted by Sailor, we cannot capture these facts in a theory where
 - ▶ Head movement is not in the narrow syntax, or
 - ▶ Ellipsis is not triggered syntactically.
- Adding to these points:
 - ▶ Ellipsis and phases
 - * Ellipsis cannot happen all at once (i.e. after the derivation has been completed).
 - * But ellipsis also cannot coincide with cyclic spell-out. If it did, then in our case the verb should be able to escape the VP just as it does in a normal derivation by phase.
 - * In other words, ellipsis must take place immediately (in our case, before spell-out of the VP is triggered).
 - ▶ Granularity
 - * Unlike the Scandinavian case, it’s clear that we need more than one head in the general ‘T’ domain in order to get the Greek facts.

- In fact, under a C-T-V-*v* view of the clausal spine, both [V*] and [E] would be on T/Asp, and would be satisfied in parallel, hence we would predict the existence of VSE in Greek.
- We need to be able to dissociate the feature triggering verb movement from the feature triggering ellipsis; in the Greek case, this is possible only with at least some granularity in the clausal spine.
 - ▶ This approach makes strict predictions as to the availability of VSE: this operation should only be possible if VP ellipsis and verb-raising are carried out by features of the same head.
- Broader point: a derivational syntax seems to allow (and in fact predict) the possibility that syntactic operations are ordered, with interesting implications not just for locality.

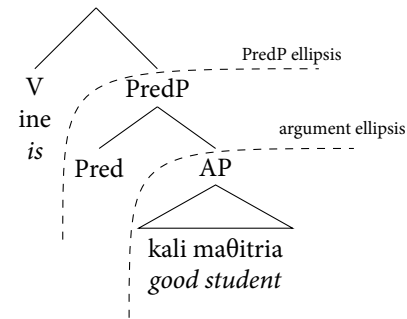
7.2 Scenario 2: Greek does not have VP ellipsis

Let's revisit the examples that Merchant (2018) takes to be derived by PredP/*v*P ellipsis.

- (53) I Maria ine kali maθitria, ala i Aleksanðra ðen ine ____.
 the Maria is good student but the Alexandra NEG is
 'Maria is a good student, but Alexandra isn't.'

- How do we know this is ellipsis of PredP?
- It could just as well be ellipsis of the complement of Pred.

(54)



- If post-copular gaps are derived by argument ellipsis, there is no evidence that Greek has VP ellipsis; hence VSE should be impossible.

8 Conclusion

- The restriction of object drop to indefinite DPs follows from the interaction of ellipsis with cliticization.
- Weak equivalence problem resolved: IOD gaps are derived by argument ellipsis, not VSE.
- Why does Greek lack VSE?
 - ▶ Because, even though it has VP ellipsis, this operation bleeds head movement
 - ▶ Or because it lacks VP ellipsis altogether.

References

- Alexiadou, Artemis. 1997. *Adverb placement: A case study in antisymmetric syntax*. *Linguistik Aktuell/Linguistics Today* 18. Amsterdam: John Benjamins.
- Alexiadou, Artemis. 2001. *Functional structure in nominals: Nominalization and ergativity*. *Linguistik Aktuell/Linguistics Today*. Amsterdam: John Benjamins.
- Anagnostopoulou, Elena. 1999. "Conditions on clitic doubling in Greek". In *Clitics in the languages of Europe*, ed. by Henk van Riemsdijk, 761–798. Berlin: Mouton de Gruyter.
- Cheng, Hsu-Te. 2013. "Argument Ellipsis, Classifier Phrases, and the DP Parameter". Doctoral dissertation, University of Connecticut.
- Doron, Edit. 1990. *V-movement and VP-ellipsis*. Unpublished manuscript, The Hebrew University of Jerusalem.
- Doron, Edit. 1999. "V-Movement and VP Ellipsis". In *Fragments: Studies in ellipsis and gapping*, ed. by Shalom Lappin and Elabbas Benmamoun, 124–140. Oxford: Oxford University Press.
- Drachman, Gaberell. 1997. "Some properties of clitics (with special reference to Modern Greek)". In *Studies on Universal Grammar and typological variation*, ed. by Artemis Alexiadou and Tracy Alan Hall, 219–248. *Linguistik Aktuell/Linguistics Today*. Amsterdam: John Benjamins.
- Giannakidou, Anastasia, and Jason Merchant. 1997. "On the interpretation of null indefinite objects in Greek". *Studies in Greek Linguistics* 17: 141–155.
- Goldberg, Lotus M. 2005. "Verb-Stranding VP Ellipsis: A Cross-Linguistic Study". Doctoral dissertation, McGill University.
- Gribanova, Vera. 2013. "Verb-stranding verb phrase ellipsis and the structure of the Russian verbal complex". *Natural Language & Linguistic Theory* 31: 91–136.
- Gribanova, Vera. 2017. "Head movement and ellipsis in the expression of Russian polarity focus". *Natural Language & Linguistic Theory* 35 (4): 1079–1121.
- Grinder, John M., and Paul M. Postal. 1971. "Missing antecedents". *Linguistic Inquiry* 2 (3): 269–312.
- Huang, C.-T. James. 1991. "Remarks on the status of the null object". In *Principles and parameters in comparative grammar*, ed. by Robert Freidin. Cambridge, Mass: MIT Press.
- Kim, Soowon. 1999. "Sloppy/Strict Identity, Empty Objects, and NP Ellipsis". *Journal of East Asian Linguistics* 8 (4): 255–284.
- Landau, Idan. 2018. "Missing objects in Hebrew: Argument ellipsis, not VP ellipsis". *Glossa: A Journal of General Linguistics* 3 (1) (76): 1–37.
- Mavrogiorgos, Marios. 2010. *Clitics in Greek: A Minimalist account of proclisis and enclisis*. *Linguistik Aktuell/Linguistics Today*. Amsterdam: John Benjamins.
- McCloskey, James. 1991. "Clause structure, ellipsis and proper government in Irish". *Lingua* 85 (2): 259–302.
- Merchant, Jason. 2001. *The syntax of silence: Sluicing, islands and the theory of ellipsis*. Oxford: Oxford University Press.
- Merchant, Jason. 2013. "Diagnosing ellipsis". In *Diagnosing syntax*, ed. by Lisa Lai-Shen Cheng and Norbert Corver, 537–542. Oxford: Oxford University Press.
- Merchant, Jason. 2018. "Verb-stranding predicate ellipsis in Greek, implicit arguments, and ellipsis-internal focus". In *A reasonable way to proceed: essays in honor of Jim McCloskey*, 228–269. University of California eScholarship.
- Oku, Satoshi. 1998. "A theory of selection and reconstruction in the minimalist perspective". Doctoral dissertation, University of Connecticut.
- Otani, Kazuyo, and John Whitman. 1991. "V-Raising and VP-Ellipsis". *Linguistic Inquiry* 22 (2): 345–358.
- Panagiotidis, Phoevos. 2002. *Pronouns, clitics and empty nouns: 'Pronominality' and licensing in syntax*. *Linguistik Aktuell/Linguistics Today*. Amsterdam: John Benjamins.
- Park, Myung-Kwan. 1997. "The Syntax of VP Ellipsis in Korean". *Language Research* 33: 629–648.
- Raposo, Eduardo. 1986. "On the null object in European Portuguese". In *Studies in Romance Linguistics*, ed. by Osvaldo Jaeggli and Carmen Silva-Corvalán, 373–390. Dordrecht: Foris.
- Roberts, Ian. 2010. *Agreement and head movement: Clitics, incorporation and defective goals*. Cambridge, Mass: MIT Press.
- Sailor, Craig. 2018. "The typology of head movement and ellipsis: a reply to Lipták and Saab (2014)". *Natural Language & Linguistic Theory* 36 (3).
- Saito, Mamoru. 2007. "Notes on East Asian argument ellipsis". *Language Research* 43: 203–227.
- Sakamoto, Yuta. 2017. "Escape from Silent Syntax". Thesis.
- Sato, Yosuke, and Simin Karimi. 2016. "Subject-object asymmetries in Persian argument ellipsis and the anti-agreement theory". *Glossa: A Journal of General Linguistics* 1: 1–31.
- Şener, Serkan, and Daiko Takahashi. 2010. "Ellipsis of arguments in Japanese and Turkish". *Nanzan Linguistics* 6: 79–99.
- Takahashi, Daiko. 2008. "Quantificational null objects and argument ellipsis". *Linguistic Inquiry* 39 (2): 307–326.

- Takahashi, Daiko. 2014. "Argument ellipsis, anti-agreement and scrambling". In *Japanese syntax in comparative perspective*, ed. by Mamoru Saito, 88–116. Oxford University Press.
- Tancredi, Chris. 1992. "Deletion, deaccenting, and presupposition". Doctoral dissertation, MIT.
- Tomioka, Satoshi. 2003. "The semantics of Japanese null pronouns and its cross-linguistic implications". In *The interfaces: Deriving and interpreting omitted structures*, ed. by Kerstin Schwabe and Susanne Winkler, 321–339. Linguistik Aktuell/Linguistics Today. Amsterdam: John Benjamins.
- Tsimpli, Ianthi Maria, and Stavroula Stavrakaki. 1999. "The effects of a morphosyntactic deficit in the determiner system: The case of a Greek SLI child". *Lingua* 108 (1): 31–85.
- Uriagereka, Juan. 1995. "Aspects of the Syntax of Clitic Placement in Western Romance". *Linguistic Inquiry* 26 (1): 79–123.
- Zamparelli, Roberto. 2000. *Layers in the Determiner Phrase*. New York: Garland Publishing.