SHORT OBJECT SHIFT AND DITRANSITIVE STRUCTURE IN GREEK*

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1 Introduction

Alexiadou (1999), Philippaki-Warburton (2001), Georgiafentis (2001), among others, discuss the possibility of an object shift derivation of surface VOS patterns in Greek. This paper focuses on somewhat less studied cases of object displacement to a position lower than the surface position of the subject, as in the ditransitive pattern in (1).

(1) a. I Lena edhose ena stilo s-to Niko DPACC >PP
   the.NOM Lena.NOM gave.3SG a.ACC pen.ACC to-the.ACC Nick.ACC
b. I Lena edhose s-to Niko ena stilo PP>DPACC
   the.NOM Lena.NOM gave.3SG to-the.ACC Nick.ACC a.ACC pen.ACC
   “Lena gave a pen to Nick.”

I propose a short object shift (SOS) analysis of the DPACC>PP order in (1a). The SOS / A scrambling analysis presented here is supported by the placement of depictives in ditransitives and other data. It in turn supports the hypothesis that PP>DPACC is the base order in Greek ditransitive constructions (Bowers and Georgala 2007).

The paper is organized as follows. In section 2 I present the Greek data. In section 3 I describe the theoretical framework I employ to analyze ditransitive constructions. In section 4 I argue that the underlying order in the prepositional construction in Greek is se-PP>DPACC and that DPACC >se-PP is derived by SOS / A scrambling of the DPACC to the outer specifier of vP.

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Greek ditransitives and word order variation

2.1 Goal constructions

Greek has a variety of ditransitive constructions, in which the indirect object surfaces either as a PP, a DP or a clitic with morphological genitive or accusative case. In this paper I focus on goal ditransitives, which appear both in the double object and the prepositional construction.

In the double object construction (DOC) the indirect object (IO) bears genitive case, and the direct object (DO) accusative. Both GEN>ACC and ACC>GEN orders are licit, as illustrated in (2).

(2) a. I Lena edhose tou Nikou ena
       the.NOM Lena.NOM gave.3SG the.GEN Nick.GEN a.ACC pen.ACC
       GEN>ACC
b. I Lena edhose ena stilo tou Nikou
       the.NOM Lena.NOM gave.3SG a.ACC pen.ACC the.GEN Nick.GEN
       ACC>GEN
       “Lena gave Nick a pen.”

In the prepositional construction (PC) the extra object is a complement of the preposition se “to,” and the DO bears accusative case. Both se-PP>ACC and ACC>se-PP word order permutations are grammatical, as shown in (3).

(3) a. I Lena edhose s-to Niko ena stilo
       the.NOM Lena.NOM gave.3SG to-the.ACC Nick.ACC a.ACC pen.ACC
       PP>ACC
b. I Lena edhose ena stilo s-to Niko
       the.NOM Lena.NOM gave.3SG a.ACC pen.ACC to-the.ACC Nick.ACC
       ACC>PP
       “Lena gave a pen to Nick.”

2.2 Anagnostopoulou (2003) on goal ditransitive constructions

Goal DOCs are analyzed by Anagnostopoulou (2003) by positing a single structure involving an applicative head vAPPL above VP (4).
Anagnostopoulou (2003) applies Barss’s and Lasnik’s (1986) c-command tests to Greek and shows that GEN>ACC (2a) is the base order. Example (5) (Anagnostopoulou 2003: 140-141) shows evidence from the each... the other test.

(5) a. Estila tis mias miteras to pedhi tis alis sent.1SG the.GEN one.GEN mother.GEN the.ACC child.ACC the.GEN other.GEN
“I sent each mother the other’s child.”
b. *Estila tis miteras tou alou to ena pedhi sent.1SG the.GEN mother.GEN the.GEN other.GEN the.ACC one.ACC child.ACC
“I sent each child to the other’s mother.”

The word order ACC>GEN (2b) can only be derived by A-bar scrambling of the accusative DO to a position higher than the genitive IO. The movement must have A-bar properties because the fronted accusative DP cannot bind an anaphor inside the genitive DP (compare 5b to 5c).

(5) c. *Estila to ena pedhi tis miteras tou alou sent.1SG the.ACC one.ACC child.ACC the.GEN mother.GEN the.GEN other.GEN
“I sent each child to the other’s mother.”

Anagnostopoulou (2003, 2005), following Marantz (1993), among many others, argues that the applicative head is absent in prepositional goal ditransitives where indirect objects are introduced in the root level. Moreover, Anagnostopoulou (2005) analyzes
both (6a) and (6b) as base generated orders in Greek.

(6) a. ACC>se-PP  b. se-PP>ACC

\[
\begin{array}{c}
\text{vP} \\
\text{Subj} \\
\text{v'} \\
\text{v} \\
\text{VP} \\
\text{DP}_{	ext{THEME}} \\
\text{V'} \\
\text{V} \quad \text{se-PP}_{	ext{GOAL}} \\
\end{array}
\]

Anagnostopoulou notes that the binding facts in the PC are not the same as in the DOC. In the PC, whichever argument is leftmost binds the other (7). The binding facts in (7) (Anagnostopoulou 2003: 166-167) lead Anagnostopoulou to conclude that both orders, se-PP>ACC and ACC>se-PP, are base generated. Note, however, that Condition A effects apply throughout the derivation to DPs in A positions (Kayne 1981, van Riemsdijk and Williams 1981, Burzio 1986, Belletti and Rizzi 1988, among others). So, the pattern where the accusative DO binds the se-PP can be a derived position for the DO.

(7) ACC>se-PP
a. Estila to ena pedhi s-ti mitera tou alou
   sent.1SG the.ACC one.ACC child.ACC to-the.ACC mother.ACC the.GEN other.GEN
   “I sent each child to the other’s mother.”

b.*Estila to pedhi tis alis s-ti mia mitera
   sent.1SG the.ACC child.ACC the.GEN other.GEN to-the.ACC one.ACC mother.ACC
   “I sent the other’s child to each mother.”

se-PP>ACC

b. *Estila s-ti mitera tou alou to ena pedhi
   sent.1SG to-the.ACC mother.ACC the.GEN other.GEN the.ACC one.ACC child.ACC
   “I sent each child to the other’s mother.”

d. Estila s-ti mia mitera to pedhi tis alis
   sent.1SG to-the.ACC one.ACC mother.ACC the.ACC child.ACC the.GEN other.GEN
   “I sent the other’s child to each mother.”

Moreover, base generation of both relative orders of PP and DP_{ACC} raises
questions from the standpoint of the Uniform Theta-Role Assignment Hypothesis (Baker 1988): specifically, while the theme argument is the specifier of V in (6a), it is the sister of V in (6b).

Anagnostopoulou justifies base generation of both structures by appeal to Marantz’s (1993) proposal that certain thematic roles are such that it does not matter where the one is merged relative to the other. However, the thematic role of the IO in the goal ditransitive construction, namely potential recipient goal, is not one of the thematic roles mentioned by Marantz (1993). Marantz proposes that thematic roles, such as instrument, affected object locative, and inalienable possessor, which are affected simultaneously in the same event as the theme, may be higher or lower than the theme. On the other hand, benefactives, malefactives, datives of interest, alienable possessors and directional locatives, which are separate from and sequentially later than the event affecting the theme, must be higher than the theme. Marantz’s system thus provides no support for freely generating recipient goal se-PPs in two distinct locations.

In the next section, I briefly introduce the framework I employ to analyze DOCs and PCs in Greek.

3 Theoretical framework: Georgala et al. (2008)

Following Georgala et al. (2008), my analysis of the Greek data retains Marantz’s (1993) generalization that applicatives occupy a single position across languages, above VP, but it also preserves Pylkkänen’s (2002, 2008) insight that the main arguments in low applicatives are introduced in the VP domain. Crucially, Pylkkänen’s distinction between high (what I call thematic) and low (what I call raising) applicatives follows from whether the applicative head introduces an argument or not.

In particular, raising applicatives function as pure functional heads licensing an argument inside the VP, as in (8b). Thematic applicatives introduce an argument in their specifier by external Merge under Agree (Chomsky 2000), but do not select an argument in their specifier by external Merge (8a).
As shown in Georgala and Whitman (2009), the distinction between raising and thematic applicatives can be applied to the Greek data. In this paper, I focus on the raising applicative construction in Greek.

Moreover, in the present framework the syntactic position of arguments is determined by thematic role rather than categorical status, i.e., whether they appear in PP or DP arguments of the verb. The behavior of idioms, presented below, supports the view that in Greek both the DOC and the PC may have the same meaning (contra Anagnostopoulou 2003, among others). The tree in (9) shows the common structure of recipient DOCs and recipient PCs in Greek: recipient goals are merged in the same position, [Spec, VP], independently of whether they are realized as DPs or PPs\(^1\) (cf. Bowers and Georgala 2007). Following Larson (2004), locative goals are treated as lowermost V-complements, stranded by the verb that undergoes successive raising through a series of stacked VP “shells” (cf. Miyagawa and Tsujioka 2004, Gracanin-Yuksek 2006, Bowers and Georgala 2007).

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\(^1\) Movement of the *se*-PP to [Spec, ApplP] is not obligatory. The PP moves outside the VP in certain cases; in other cases it stays in its original position. When manner and frequency adverbs intervene between the PP and the DO, as in (i), the PP moves to [Spec, ApplP]. That manner and frequency adverbs can intervene between the PP and the DO suggests that a maximal projection boundary intervenes between the DO and the surface position of the PP.

(i) Estelnes s-ti Lena sihna / amesos lefta
sent.2SG to-the.ACC Lena.ACC often / immediately money.ACC
“You sent money to Lena often / immediately.”
The structure in (9) predicts co-occurrence of recipient and locative goals, which is attested in examples, such as (10). The meaning of (10) is that Nick sent a letter to her apartment in Athens, which is a location, with the intention that she will come to possess it.

(10) O Nikos tis estile ena ghrama s-to the.NOM Nick.NOM CL.3SG.FEM sent.3SG a.ACC letter.ACC to-the.ACC dhiamerisma tis stin Athina apartment.ACC POSS.3SG.FEM to-the.ACC Athens.ACC “Nick sent her a letter to her apartment in Athens.”

Regarding idioms, it is generally assumed that fixed pieces of an idiom must form an underlying constituent syntactically. Based on this assumption the following predictions are made (Richards 2001, Harley 2003, among others):
1. An idiom with a fixed theme should only appear in the DOC.

(11) a. give someone [a headache] THEME
    b. *give a headache to someone
2. An idiom with a fixed goal should only occur in the PC.

(12) a. send someone [to the devil]\textsubscript{GOAL}
   b. *send the devil someone

Contra the prediction in 1, fixed theme idioms are found in the PC both in English (13a) (Rappaport Hovav and Levin 2005) and Greek (13b) (Georgala 2007). As argued by Rappaport Hovav and Levin (2005), fixed theme idioms are found in both variants, because they express a change of possession. Their meaning involves a potential recipient goal that has two possible realizations, like any other potential recipient goal. The derivation in (9) predicts this by base generating recipient goal DPs and PPs in the same position, namely [Spec, VP].

(13) a. Police lend an ear to the victims…
   b. Dhino [tis Lenas] / [s-ti Lena] prasino fos give.1SG the.GEN Lena.GEN to-the.ACC Lena.ACC green.ACC light.ACC
   “I give the green light to Lena.”

As in English, fixed goal idioms are found only in the PC in Greek. This is because fixed goal idioms involve locative goals and not recipients (Rappaport Hovav and Levin 2005). Unlike recipients, locative goals can be realized only as se-PPs in Greek, as illustrated in (14). Following Larson (2004), locative goals are base generated as complements of lower V, as shown in (9).

(14) a. Stelno kapion [s-to dhiaolo]\textsubscript{PP-LGOAL}
    send.1SG someone.ACC to-the.ACC devil.ACC
   b. *Stelno kapion tou dhiaolou]\textsubscript{DP-LGOAL}
    send.1SG someone.ACC the.GEN devil.GEN
    “I send someone to the devil.”

Furthermore, in the literature on English DOCs, Oehrle’s (1976) generalization has been used to show that the DOC and the PC have distinct underlying structure. So, patterns with give, such as (15a), occur in the DOC but not in the PC (15b) in English.

b. *Interviewing Nixon gave a book to Mailer.

As noted by Anagnostopoulou (2005: 86), Oehrle’s generalization does not apply to Greek (16). This may be used as another indication in support of the view that the DOC and PC in Greek can express the same meaning. This is predicted by the analysis in (9), which posits one position for the recipient goal DP and PP.

(16) a. Ta hronia tis eksorias edhosan s-to Theodhoraki
   the.NOM years.NOM the.GEN exile.GEN gave.3PL to-the.ACC Theodorakis.ACC
   tin proti tou epitihia
   the.ACC first.ACC POSS.3SG.MASC success.ACC

d. Ta hronia tis eksorias tou edhosan tou
   the.NOM years.NOM the.GEN exile.GEN CL.3SG.GEN.MASC gave.3PL the.GEN
   Theodhoraki tin proti tou epitihia
   Theodorakis.GEN the.ACC first.ACC POSS.3SG.MASC success.ACC
   “The years of exile gave Theodorakis his first success.”

In section 4 I first present a short object shift / A scrambling analysis of depictive facts in ditransitives, and then use this analysis to show that the underlying order in the PC in Greek is se-PP>ACC.

4 Short object shift and the prepositional construction

In this section I argue for an alternative to Anagnostopoulou’s two underlying orders for the PC. I propose that se-PP>ACC is the base order, while ACC>se-PP is derived by movement.

That the underlying order of the PC is PP>DO has been also argued for English PCs. Using primarily backward binding facts (17d), first noted by Burzio (1986), Kitagawa (1994), Pesetsky (1994), Vukic (2003), and Bowers (forthcoming), among others, demonstrate that even if the anaphor in (17d) is not c-commanded by its antecedent at surface, a reconstruction effect is induced at LF due to movement of the DO. The DOC does not exhibit reconstruction effects, as shown in (17b).

(17) a. Sue showed John and Mary each other’s friends.
   b. *Sue showed each other’s friends John and Mary.
c. Sue showed John and Mary to each other’s friends.
d. Sue showed each other’s friends to John and Mary.

The acceptability of (17d), in contrast to (17b), suggests that the DP containing the reciprocal anaphor in (17d) has been moved from an underlying position to the right of the goal PP.\(^2\)

Greek has no exact counterpart of English reciprocal *each other* binding, but evidence in support of se-PP>ACC as underlying order comes from depictive stranding.\(^3\) Greek depictives are of the English type. They can be predicated of direct objects (18a, 19a), but not of indirect objects (19b), even when the latter bear accusative case, as shown in example (19b).

(18) a. Edhosa tis Lenas [ti bira]i zesti\(i\) gave.3SG the.GEN Lena.GEN the.ACC beer.ACC warm.ACC
   “I gave the beer to Lena cold.”
   b. *Edhosa [tis Lena]i [ghimnis]i ti bira
gave.3SG the.GEN Lena.GEN naked.GEN the.ACC beer.ACC
   *“I gave Lena\(i\) the beer naked.\(i\).”

(19) a. Servira ti Lena [ti bira]i zesti\(i\)
served.3SG the.ACC Lena.ACC the.ACC beer.ACC warm.ACC
   “I served the beer to Lena warm.”
   b. *Servira [ti Lena]i ti bira ghimni\(i\)
served.3SG the.ACC Lena.ACC the.ACC beer.ACC naked.ACC
   *“I served Lena\(i\) the beer naked.\(i\).”

Depictives in Greek can be stranded by A-movement, for example by passive or unaccusative movement (20). Following Stowell (1981), Bowers (1993), Koizumi

\(^2\) Note that Anagnostopoulou’s *each… the other* data in (7) is not exactly parallel to the English reciprocal binding data in (17). While *each other* in (17d) may precede its antecedent, *each… the other* must occur in a fixed surface order in English, as in Greek: (i) Sue showed each child to the other’s friend.
   (ii) *Sue showed the other’s friend to each child.
   These facts indicate that unlike reciprocal binding, *each… other* is of limited utility in determining the underlying order of DO and PP.

\(^3\) Bowers (forthcoming) also uses depictives to show that the to-PP c-commands the theme in English PCs.
(1994), Marusic et al. (2008), among others, I assume that in object-oriented depictives the DO c-commands the depictive underlyingly.

(20) a. I bira servirete kria Passive
    the.NOM beer.NOM serve.3SG.PASS.PRES cold.NOM
    “Beer is served cold.”

    b. Eftase kathisterimenos Unaccusative
    arrived.3SG late.MASC.NOM
    “He arrived late.”

Crucially, depictives can also be stranded by ACC PP depictive stranding, as shown in (21).

(21) Edhosa [ti bira]i s-ti Lena t i zesti i
    gave.1SG the.ACC beer.ACC to-the.ACC Lena.ACC warm.ACC
    “I gave the beer to Lena warm.”

Depictive stranding suggests that the ACC>PP order is derived by some type of movement. I propose that the movement that derives the order ACC PP depictive is SOS / A scrambling of the accusative DP to [Spec, vP].

4 Greek short A scrambling is like Japanese short scrambling in that it appears to be a pure EPP-driven operation (Miyagawa 1997, 2001, among others).

Evidence in support of an A movement analysis comes from weak crossover (WCO) facts. WCO is a standard test for determining underlying order (Saito and Hoji 1983). As illustrated in (22-23), A-bar movement triggers WCO (22b), but A-movement does not (23b).

4 SOS / A scrambling also happens in non-applicative structures, as the example in (i) shows, where the DO precedes a frequency adverb.

(i) Akugha musiki sihna
    listened.1SG music.ACC often
    “I often listened to music.”

5 As Anagnostopoulou (2003) notes the existence of WCO effects in wh-questions has been questioned in Greek by Catsimali (1990), Horrocks (1994), and others. I agree with
(22) a. [Pias miteras], edhoses to pedhi which.FEM.GEN mother.FEM.GEN gave.2SG the.NEUT.ACC child.NEUT.ACC tis;? POSS.3SG.FEM
   “Which mother did you give her child?”
   b. ?*[Pio pedhi], edhoses tis miteras which.NEUT.ACC child.NEUT.ACC gave.2SG the.FEM.GEN mother.FEM.GEN tou;?
   POSS.3SG.NEUT
   “Which child did you give to his mother?”

(23) a. Se [pia miteras], edhoses to pedhi to which.FEM.ACC mother.FEM.ACC gave.2SG the.NEUT.ACC child.NEUT.ACC tis;?
   POSS.3SG.FEM
   “To which mother did you give her child?”
   b. [Pio pedhi], edhoses s-ti miteras which.NEUT.ACC child.NEUT.ACC gave.2SG to-the.FEM.ACC mother.FEM.ACC tou;?
   POSS.3SG.NEUT
   “Which child did you give to his mother?”

Now let us apply the WCO test to the ACC PP depictive stranding pattern. The examples below contrast depictives stranded from an accusative direct object in the DOC (24a-b) with depictive stranding in the PC (24c-d).

(24) a. [Pias miteras], edhoses to pedhi which.FEM.GEN mother.FEM.GEN gave.2SG the.NEUT.ACC child.NEUT.ACC tis; nekro;?
   POSS.3SG.FEM dead.NEUT.ACC
   “Which mother did you give her child dead?”
   b. ?*[Pio pedhi], edhoses tis miteras which.NEUT.ACC child.NEUT.ACC gave.2SG the.FEM.GEN mother.FEM.GEN tou; nekro;?
   POSS.3SG.NEUT dead.NEUT.ACC
   “Which child did you give to his mother dead?”
   c. Se [pia miteras], edhoses to pedhi to which.FEM.ACC mother.FEM.ACC gave.2SG the.NEUT.ACC child.NEUT.ACC tis; nekro;?
   POSS.3SG.FEM dead.NEUT.ACC

Anagnostopoulou, though, in that there is a contrast and apparently a dialect split with respect to WCO judgements.
“To which mother did you give her child dead?”

d. [Pio pedhi]j edhoses s-ti mitera which.NEUT.ACC child.NEUT.ACC gave.2SG to-the.FEM.ACC mother.FEM.ACC toui nekro?
Poss.3SG.NEUT dead.NEUT.ACC

“Which child did you give to his mother dead?”

Strikingly, while the ACC>GEN pattern in the DOC (24b) shows WCO effects, ACC>PP in the PC (24d) does not. This suggests that while ACC>GEN order is derived by A-bar movement, as proposed by Anagnostopoulou, ACC>PP can be derived by A movement, in other words by SOS.

Why should it be possible to A move over a PP goal, but not over a genitive DP goal? I follow Chomsky (2000) and Boeckx (1999) in assuming that prepositions are deficient barriers. According to the structure I proposed in (9), se-PPs and genitive DPs originate in the same position, namely [Spec, VP], and are thus in the same minimal domain (Chomsky 1995) as the DO. With the preposition se “to” constituting a deficient barrier, movement of the DO to [Spec, vP] is not blocked. Unlike se-PPs, genitive DPs are not dominated by a preposition, so strict Attract Closest is observed and raising of the DO is blocked.6 Miyagawa (1997) proposes a similar analysis for numeral quantifier

6 Note that the same analysis can also account for experiencer genitive DPs and se-PPs of mono-clausal NP movement constructions (i), under the assumption that they are base generated in the same position. Yet, as Anagnostopoulou (2003) observes, experiencer DPs / PPs of bi-clausal environments, such as raising constructions (ii), show a different pattern. In raising constructions both experiencer DPs and PPs block movement of the embedded subject to [Spec, TP]. Following Anagnostopoulou’s locality account, I assume that the experiencer PP / DP and the subject of the embedded IP are in different minimal domains, so raising of the embedded subject over the experiencer is blocked.

(i) a. *Afta ta vivlia aresoun tou (Anagnostopoulou 2003: 26)
      these.NOM the.NOM books.NOM please.3PL the.GEN
      Peter. GEN a lot
      “Peter likes these books a lot.”

   b. Afta ta vivlia aresoun s-ton Petro poli
      these.NOM the.NOM books.NOM please.3PL to-the.GEN Peter.GEN a lot
      “Peter likes these books a lot.”

      the.NOM children.NOM not seem.3PL the.GEN
stranding in Japanese ditransitive constructions: stranding is possible when an accusative object is short scrambled over a PP, but bad when short scrambling takes place over a dative goal. The facts in (24) indicate that in Greek too, genitive DP goals are interveners for A movement, but PP goals are not.

5 Conclusions

This paper has argued that SOS / A scrambling exists in ditransitive constructions in Greek. This supports the hypothesis that $se$-PP>$\text{DP}_{\text{ACC}}$ is the underlying order in Greek PCs. Based on facts from WCO and depictive stranding, it has been argued that $\text{DP}_{\text{ACC}}$->$se$-PP is derived by A movement of the theme over the PP, which, unlike genitive DPs, is not an intervener for Shortest Move / Relativized Minimality.

Marias na meletoun
Mary.GEN to study.3PL
“The children do not seem to Mary to study.”

b. ?*Ta pedhia dhen fenode s-ti Maria na meletoun
the.NOM children.NOM not seem.3PL to.the.ACC Mary.ACC to study.3PL
“The children do not seem to Mary to study.”
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