

# Between shifts and alternations: Ditransitive constructions

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## Abstract

In this paper I present two classes of double object constructions in Modern Greek, i.e., the genitive, as well as the double accusative, ditransitive constructions. I show that these two classes differ from one another in that not both of them permit derivational processes such as the formation of adjectival passives. I also look at the case properties associated with the verbs which head Modern Greek genitive and double accusative ditransitive constructions. Finally, the analysis I propose for these constructions in Modern Greek are formalized using the Minimal Recursion Semantics (MRS) framework of Copestake et al. (2001) and Copestake et al. (2003).

## 1 Introduction

In this paper, I propose a robust deep analysis of Modern Greek structures of the following form:

- (1) O Petros edose to vivlio s-tin Maria.  
the Peter.Nom give.3SG.PAST the book.Acc to-the Maria.Acc  
“Peter gave the book to Mary”.
- (2) O Petros edose tis Marias to vivlio.  
the Peter.Nom give.3SG.PAST the Maria.Gen the book.Acc  
“Peter gave Mary the book”.

The rest of this paper is organised as follows. In the next section (Section (2)) I give an overview of the relevant data in Modern Greek. In Section (3) I deal with the case properties of Modern Greek genitive and double accusative ditransitive constructions. In Section (4) I present the robust deep analysis of ditransitives that I argue for in this paper, and I discuss this analysis in comparison to relevant influential crosslinguistic studies of similar phenomena. Finally, in Section (5) I am highlighting some of the advantages that the analysis presented in Section (4) brings to the task of development of broad coverage grammars of natural language.

## 2 The Data

Modern Greek distinguishes two types of ditransitive constructions, the genitive ditransitive construction (see Section (2.1)) and the double accusative ditransitive construction (see Section (2.2)).

### 2.1 The Genitive Ditransitive Construction

In Modern Greek the goal in most ditransitives surfaces as a PP (see example (3)), or as an NP with morphological genitive case (see example (4)):

- (3) O Petros estile ta hrimata s-tin Maria.  
the Peter.Nom send.3SG.PAST the money.Acc.PL to-the Maria.Acc  
“Peter sent the money to Mary”.
- (4) O Petros estile tis Marias ta hrimata.  
the Peter.Nom send.3SG.PAST the Maria.Gen the money.Acc.PL  
“Peter sent Mary the money”.

Anagnostopoulou (1999) argues that the Modern Greek genitive ditransitive construction is a double object construction.

## 2.2 The Double Accusative Ditransitive Construction

With a limited set of verbs both the indirect object and the direct object may surface with morphological *accusative* case used without a preposition.<sup>1</sup> These verbs include the predicates *serviro* (serve), *plirano* (pay), *didasko* (teach):

- (5) O servitoros servire ton pelati enan kafe.  
the waiter.Nom serve.3SG.PAST the customer.Acc a coffee.Acc  
“The waiter served the customer a coffee”.
- (6) O servitoros servire enan kafe s-ton pelati.  
the waiter.Nom serve.3SG.PAST a coffee.Acc to-the customer.Acc  
“The waiter served a coffee to the customer”.
- (7) Plirosa ton spitonikokiri ta nikia pu tu  
pay.1SG.PAST the landlord.Acc the rent.Acc.PL that him.CI.Gen  
ofila.  
owe.1SG.PAST  
“I paid the landlord the rents that I owed him”.
- (8) Plirosa s-ton spitonikokiri ta nikia pu tu  
pay.1SG.PAST to-the landlord.Acc the rent.Acc.PL that him.CI.Gen  
ofila.  
owe.1SG.PAST  
“I paid to the landlord the rents that I owed him”.
- (9) O kathigitis didakse tus fitites tin  
the professor.Nom teach.3SG.PAST the student.Acc.PL the  
ili ton mathimatikon profata.  
course-material.Acc the maths.Gen.PL recently  
“The professor taught the students the course material for the maths recently”.

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<sup>1</sup>These verbs may also form a double object construction in which the goal bears genitive case morphology. In this case, they behave syntactically similarly to verbs forming the genitive ditransitive construction presented in Section (2.1).

- (10) O kathigitis didakse tin ili ton  
 the professor.Nom teach.3SG.PAST the course-material.Acc the  
 mathimatikon s-tus fitites profata.  
 maths.Gen.PL to-the student.Acc.PL recently  
 “The professor taught the course material for the maths to the students  
 recently”.

### 2.3 Evidence for two structures

Adjectival passives with goal externalization are not possible with the verbs forming the genitive ditransitive construction (see Section (2.1)):

- (11) O Petros estile to paketo s-tin mitera  
 the Peter.Nom send.3SG.PAST the packet.Acc to-the mother.Acc  
 tu polu profata.  
 his.Cl.Gen very recently  
 “Peter sent the packet to his mother very recently”.
- (12) O Petros estile tis miteras tu to paketo  
 the Peter.Nom send.3SG.PAST the mother.Gen his.Cl.Gen the packet.Acc  
 polu profata.  
 very recently  
 “Peter sent his mother the packet very recently”.
- (13) Ena profata stalmeno paketo. /\* Mia profata stalmeni mitera.  
 a recently sent packet /\* a recently sent mother  
 “A recently sent packet”. /\* “A recently sent mother”.

We take it that the ban on goal externalization could/should be reduced to the genitive case morphology of the goal (see Kratzer (1993)).

In contrast, adjectival passives with goal externalization are possible with the verbs forming the double accusative ditransitive construction (the following example reads in relation to examples (9) and (10) of Section (2.2)):

- (14) I profata didagmeni ili ton mathimatikon./I profata  
 the recently taught course-material the maths.Gen.PL/the recently  
 didagmeni fitites.  
 taught students  
 “The recently taught course material for the maths”./ “The recently taught  
 students”.

Moreover, in Modern Greek the two verb classes differ with respect to nominalization. Nominalizations where the goal surfaces as the non-prepositional complement of the noun are not possible with the verbal predicates participating in the genitive ditransitive construction (examples (15)-(17)), while they are possible

with the verbal predicates participating in the double accusative ditransitive construction (example (18) in relation to examples (9) and (10) of Section (2.2)):

- (15) O Petros nikiase to spiti s-ton fititi.  
 the Peter.Nom rent.3SG.PAST the house.Acc to-the student.Acc  
 “Peter rent the house to the student”.
- (16) O Petros nikiase tu fititi to spiti.  
 the Peter.Nom rent.3SG.PAST the student.Gen the house.Acc  
 “Peter rent the student the house”.
- (17) To nikiasma tu spitiu. /\* To nikiasma tu fititi.  
 the rental the house.Gen /\* the rental the student.Gen  
 “The rental of the house”. /\* “The rental of the student”.
- (18) I didaskalia tis ilis ton mathimatikon. / I  
 the teaching the course-material.Gen.SG the maths.Gen.PL / the  
 didaskalia ton fititon.  
 teaching the students.Gen.PL  
 “The teaching of the course material for the maths”. / “The teaching of the students”.

### 3 Case Assignment in Modern Greek Genitive and Double Accusative Ditransitive Constructions

In genitive ditransitive construction in Modern Greek, like the ones presented in Section (2.1) in the previous (see example (4)), we observe that clitic doubling is possible with both the genitive goal, as well as the accusative theme:

- (19) (Tis) (ta) estile o Petros tis  
 cl.Gen.Fem.SG cl.Acc.Neut.PL send.3SG.PAST the Peter.Nom.SG the  
 Marias ta hrimata.  
 Maria.Gen.Fem.SG the money.Acc.Neut.PL  
 “Peter sent Mary the money”.

Clitic doubling in (19) above shows that both the genitive goal and the accusative theme bear structural case.

Moreover, passivization of the theme argument of Modern Greek genitive ditransitive constructions is also possible, provided that the goal argument of these constructions is clitic doubled:

- (20) Ta hrimata \*(tis) stalthikan tis  
 the money.Nom.PL cl.Gen.Fem.SG send.3PL.PAST.PASS the  
 Marias apo ton Petro.  
 Maria.Gen.Fem.SG by the Petro  
 “The money was sent to Mary by Peter”.

The fact that the theme argument of the genitive ditransitive constructions in Modern Greek may undergo passivization when the goal argument is clitic doubled shows that it bears structural accusative case.

Turning to double accusative ditransitive constructions in Modern Greek, like the ones described in Section (2.2) above, Anagnostopoulou (1999) has observed that the goal exhibits all the properties of a structural object. That is, it bears a morphological accusative case, it can be doubled by a clitic (see example (21) below) and it may undergo passivization (see example (22) below):

- (21) (Tus)        didakse                tus fitites                ta mathimatika.  
 cl.Acc.PL teach.3SG.PAST the students.Acc.PL the maths.Acc.PL  
 “He taught the students the maths”.
- (22) I        fitites                didahthikan                ta mathimatika.  
 the students.Nom.PL. teach.3PL.PAST.PASS the maths.Acc.PL  
 “The students were taught the maths”.

On the contrary, as Anagnostopoulou (1999) underlines, the same does not hold for the theme argument of these constructions. That is, clitic doubling of the theme argument renders the Modern Greek double accusative ditransitive constructions ungrammatical:

- (23) \*Ta                didakse                tus fitites                ta  
 cl.Acc.Neuter.PL teach.3SG.PAST the students.Acc.Masc.PL the  
 mathimatika.  
 maths.Acc.Neuter.PL  
 “He taught the students the maths”.

Moreover, Anagnostopoulou (1999) also points out that passivization of the theme across a goal in the double accusative ditransitive constructions in Modern Greek is not possible, even when the goal is clitic doubled:

- (24) \*Ta mathimatika                tus                didahthikan                tus  
 the maths.Acc.Neuter.PL cl.Acc.Masc.PL teach.3PL.PAST.PASS the  
 fitites.  
 students.Acc.Masc.PL  
 “The maths were taught to the students”.
- (25) \*Ta mathimatika                tus                didahthikan.  
 the maths.Acc.Neuter.PL cl.Acc.Masc.PL teach.3PL.PAST.PASS  
 “The maths were taught to them”.

It would have been, indeed, very simple to attribute the exceptional behaviour of the theme argument of the Modern Greek double accusative ditransitive constructions to the fact that it might bear an inherent accusative case. We are afraid,

though, that this would have been too simplistic an analysis, since the theme argument of these constructions in Modern Greek exhibits all the properties of a structural object, when the accusative goal undergoes passivization, for instance:

- (26) I fitites ta didahthikan ta mathimatika  
the students.Nom.PL cl.Acc.PL teach.3PL.PAST.PASS the maths.Acc.PL  
apo ton kathigiti.  
by the professor

“The students were taught the maths by the professor”.

That is, as is shown in example (26) above and as Anagnostopoulou (1999) also notes, the theme argument can be clitic doubled in the passive form of Modern Greek double accusative ditransitive constructions. This implies that this argument does not bear the same kind of case in active and passive sentences. This in turn argues against the assumption that the theme has inherent case, since a defining property of inherent case is that it never enters into case alternations.

Passivization of the theme argument across the goal in Modern Greek double accusative ditransitive constructions leads to very strong ungrammaticality (see examples (24) and (25) above), unlike passivization of the theme argument in the presence of an undoubled genitive goal (see example (20) above), which only gives rise to mildly ungrammatical sentences.

Thus, Anagnostopoulou (1999) concludes that while passivization of themes across goals (direct passives) is not possible either in Modern Greek genitive, or in Modern Greek double accusative ditransitive constructions, the cause of the violation is different. She claims that in Modern Greek genitive ditransitive constructions the problem is posed by Locality, while in Modern Greek double accusative ditransitive constructions the problem seems to be posed by the fact that the theme argument bears an inherent accusative case.

Anagnostopoulou (1999) mentions that a similar behaviour is also found in English. That is, sentences involving passivization of themes in the presence of goals are judged as “quite marginal” (cf., Larson (1988)):

- (27) ?\*A letter was sent Mary.

According to Larson (1988), passive sentences like the one in (27) are often judged to be better if the goal is an unstressed pronoun:

- (28) A letter was given'im/\*HIM by Mary.

Thus, indirect object weak pronouns in English passives have an effect comparable to the effect of “dative” clitics in Greek passives.

### 3.1 Theme incorporation

In double accusative ditransitive constructions in Modern Greek the goal argument may surface as a sole complement:

- (29) Didasko tus fitites.  
teach.1SG the students.Acc.PL  
“I teach the students.”
- (30) Serviro ton pelati.  
serve.1SG the customer.Acc.SG  
“I serve the customer”.
- (31) Plirono ton ipalilo.  
pay.1SG the employee.Acc.SG  
“I pay the employee”.

Moreover, as also shown by Anagnostopoulou (1999), there are cases of overt noun incorporation of the theme in Modern Greek where the goal surfaces as an accusative object, and not as a PP (see example (33)), or a genitive NP (see example (35); the examples are from Anagnostopoulou (1999)):

- (32) Dino trofima stus aporus.  
give.1SG food.Acc.PL to-the poor  
“I give food to the poor”.
- (33) Trofodoto tus aporus / \*stus aporus.  
food-give.1SG the poor.Acc.PL / \*to-the poor  
“I give food to the poor.”
- (34) Dino tis Marias hrimata.  
give.1SG the Maria.Gen.SG money.Acc.PL  
“I give Mary money”.
- (35) Hrimatodoto tin Maria / \*tis Marias.  
moeny-give.1SG the Maria.Acc.SG / \*the Maria.Gen.SG  
“I give money to Mary”.

Anagnostopoulou (1999) concludes that such examples constitute evidence that theme incorporation takes place in the double accusative ditransitive constructions, but not in the PP, or the genitive, ditransitive constructions in Modern Greek.

## 4 Between shifts and alternations

### 4.1 Overview

As Levin and Rappaport Hovav (2001) have pointed out, the terms *dative shift* and *dative alternation* reflect two major classes of analyses of the variable expression of arguments characteristic of the verb *give* (in English) and semantically related verbs.

The *dative shift* approach, as Levin and Rappaport Hovav (2001) have shown, is a derivational analysis that assumes that these verbs have a single meaning, giving rise to two derivationally related syntactic structures. The two variants never



involve any difference in truth-conditional meaning. This analysis tends to be syntactically rather than semantically motivated.

There are *dative shift* analyses in the literature, like, for instance, the ones proposed by Baker (1988), den Dikken (1995), Larson (1988), among others, according to which the *to*-variant is considered to be the basic. Other *dative shift* approaches prefer the double object variant as the basic one (see, for instance, Dryer (1986)).

The *dative alternation* approach, as Levin and Rappaport Hovav (2001) have pointed out, is a non-derivational analysis that assumes that *give* and verbs semantically related to it have two distinct meanings, each giving rise to its own syntactic realization of arguments (cf., among others, Arad (1998), Green (1974), Hale and Keyser (1996), Harley (1997), Krifka (1999), Oehrle (1975), Pinker (1989)).

The alternate argument realizations arise because distinct arguments satisfy the semantic conditions for mapping to *direct object* in each alternant. This analysis tends to be motivated by lexical semantic considerations (see, for instance, (37) in Section (4.2) below):

- (36) a. ‘x cause y to have z’, giving rise to the double object alternant *give Peter a book*  
b. ‘x cause z to be at y’, giving rise to the *to*-variant *give a book to Peter*

Recently, a constructional version of this approach has also emerged (e.g., Goldberg (1995)). According to this constructional analysis, the verb *give* and its semantically related verbs are monosemous, but their core meaning is compatible with two syntactico-semantic constructions. Since constructions are defined as form and meaning pairs, each verb-syntactic frame is associated with a distinct meaning. Thus, this can also be viewed as a two-meaning approach.

## 4.2 The Analysis

For Modern Greek genitive ditransitive constructions (see Section (2.1)) I argue for an account which shares with the “dative shift” approaches the idea that there is a single verb meaning involved, and with the “dative alternation” approaches the idea that variants are nonderivationally related (see Butt et al. (1997), Wechsler (1995), among others, for similar approaches in LFG and HPSG, respectively, to English ditransitives).

The starting point of the analysis for predicates heading Modern Greek genitive ditransitive constructions is that they are not polysemous and, more generally, the genitive ditransitive alternation does not involve two distinct meanings for each individual ditransitive predicate.

In the spirit of Levin and Rappaport Hovav (2001), I propose that the key idea is that the genitive ditransitive alternation in Modern Greek is not about alternate objects, like for instance, the locative alternation in Modern Greek, but about alternate expressions of recipients (i.e., animate goals).

That is, recipients in Modern Greek genitive ditransitive constructions may be realized in two ways as they are open to two semantic characterizations (see also Goldsmith (1980) for English): (i) a type of possessor, (ii) a type of goal, as the Localist Hypothesis predicts (cf., also Gruber (1965), Jackendoff (1972)).<sup>2</sup>

The consequence of the availability of two semantic characterizations for recipients in the case of Modern Greek genitive ditransitive constructions (i.e., possessors and goals) is that recipients have also two potential modes of syntactic instantiation: (i) a genitive case-marked NP (see example (4) in Section (2.1) and example (12) in Section (2.3)), (ii) a PP (*s-tin* (to)-phrase in example (3) in Section (2.1) and example (11) in Section (2.3)).

For Modern Greek double accusative ditransitive constructions (see Section (2.2)) I propose an analysis which shares with the “dative alternation” approaches the idea that variants are nonderivationally related.

I also propose, though, that unlike the genitive ditransitive constructions in Modern Greek as shown in Section (2.1) the double accusative ditransitive construction is about alternate objects, like for instance, the locative alternation in Modern Greek. This proposal is strongly supported by the evidence from adjectival passives and nominalizations presented in Section (2.3) in relation to Modern Greek double accusative ditransitive constructions, which shows that with predicates heading double accusative ditransitives either the *theme* or the *recipient* argument exhibits “object” properties, depending on which is (the primary) object. Such an analysis tends to be accompanied by different lexical semantic entailments in relation to the two variants:<sup>3</sup>

- (37) From Arad (1998)
- a. *to*-VARIANT: x cause [y to come to be at (possession) z]
  - b. DOUBLE OBJECT VARIANT: x cause [z to come to be in STATE (of possession)] by means of [x cause [y to come to be at (poss) z]]

### 4.3 The Formalization

The analyses sketched above for the genitive and the double accusative ditransitive constructions in Modern Greek are formalized here using the Minimal Recursion Semantics (MRS) framework of Copestake et al. (2001) and Copestake et al. (2003).

In brief, Minimal Recursion Semantics is a framework for computational semantics, in which the meaning of expressions is represented as a flat bag of Elementary Predications (or EPs) encoded as values of a RELS attribute. The denotation of this bag is equivalent to the logical conjunction of its members. Scope

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<sup>2</sup>In support of point (ii), and as far as English is concerned, Pesetsky (1995, p. 141) points out that “the semantics of *to*-objects seems to be a superset of the semantics of directly selected goals (i.e., recipients)”.

<sup>3</sup>As we have also mentioned in (4.1) above, recently a constructional version of such an approach has also emerged (see Goldberg (1995)).

relations between EPs are represented as explicit relations among EPs. Such scope relations can also be underspecified. The assumption of current MRS is that each lexical item (other than those with empty EP bags) has a single distinguished main EP, which is referred to as the *KEY* EP. All other EPs either share a label with the *KEY* EP or are equal to some scopal argument of the *KEY* EP.

For situation-denoting EPs, which are also most interesting for our purposes here, the following generalizations hold: (i) EPs do not encode recursively embedded state-of-affairs (SOAs); (ii) EPs can have one, two, or three arguments. Finally, as far as direct arguments are concerned, these are predicted to link off the value of the *KEY* attribute.

### 4.3.1 Modern Greek Genitive Ditransitive Constructions: at the Syntax-Semantics Interface

- (38) CONTENT of Modern Greek Genitive Ditransitive Constructions (example (4))

$$\left[ \begin{array}{l} \text{KEY } \boxed{5} \left[ \begin{array}{l} \textit{stelno-change-of-possession-rel} \\ \text{ACT } \boxed{1} (o \textit{ Petros}) \\ \text{POSSESSOR/RECIPIENT } \boxed{4} (\textit{tis Marias}) \\ \text{UND/THEME } \boxed{3} (\textit{ta hrimata}) \end{array} \right] \\ \text{RELS } \langle \boxed{5}, \left[ \begin{array}{l} \textit{stelno-change-of-location-rel} \\ \text{ACT } \boxed{1} (o \textit{ Petros}) \\ \text{FIGURE } \boxed{3} (\textit{ta hrimata}) \\ \text{GROUND } \boxed{4} (\textit{Marias}) \end{array} \right] \rangle \end{array} \right]$$

- (39) CONTENT of Modern Greek PP Ditransitive Constructions (example (3))<sup>4</sup>

$$\left[ \begin{array}{l} \text{KEY } \boxed{5} \left[ \begin{array}{l} \textit{stelno-change-of-location-rel} \\ \text{ACT } \boxed{1} (o \textit{ Petros}) \\ \text{UND/FIGURE } \boxed{3} (\textit{ta hrimata}) \\ \text{GOAL/RECIPIENT (GROUND) } \boxed{4} (\textit{stin Maria}) \end{array} \right] \\ \text{RELS } \langle \boxed{5} \rangle \end{array} \right]$$

<sup>4</sup>UND/FIGURE is used in order to denote an argument which is an UND(ergoer) and at the same time a moving entity (FIG(ure)); see also Davis (1996).

### 4.3.2 Modern Greek Double Accusative Ditransitive Constructions: at the Syntax-Semantics Interface

- (40) CONTENT of Modern Greek Double Accusative Ditransitive Constructions (example (9); close to the entailments shown in (37))

$$\left[ \begin{array}{l} \text{KEY } \boxed{3} \left[ \begin{array}{l} \textit{didasko-change-of-possession-rel} \\ \text{ACT } \boxed{1} (o \textit{kathigitis}) \\ \text{UND/POSSESSOR/RECIPIENT } \boxed{2} (\textit{tus fitites}) \\ \text{FIGURE/THEME } \boxed{4} (\textit{tin ili}) \end{array} \right] \\ \text{RELS } \langle \boxed{3}, \left[ \begin{array}{l} \textit{didasko-change-of-location-rel} \\ \text{ACT } \boxed{1} (o \textit{kathigitis}) \\ \text{FIGURE } \boxed{4} (\textit{ili}) \\ \text{GROUND } \boxed{2} (\textit{fitites}) \end{array} \right] \rangle \end{array} \right]$$

- (41) CONTENT of Modern Greek PP Ditransitive Constructions (example (10); close to the entailments shown in (37))

$$\left[ \begin{array}{l} \text{KEY } \boxed{3} \left[ \begin{array}{l} \textit{didasko-change-of-location-rel} \\ \text{ACT } \boxed{1} (o \textit{kathigitis}) \\ \text{UND/FIGURE } \boxed{2} (\textit{tin ili}) \\ \text{GOAL/RECIPIENT (GROUND) } \boxed{4} (\textit{stus fitites}) \end{array} \right] \\ \text{RELS } \langle \boxed{3} \rangle \end{array} \right]$$

### 4.3.3 Discussion: Evidence for the first object as possessor

As is also clearly shown in the HPSG formalization of Modern Greek genitive and double accusative ditransitive constructions presented in (38)-(41) in Sections (4.3.1) and (4.3.2) above, recipients are open to two syntactico-semantic characterizations, i.e., that of the possessor and that of the goal.

Consequently, recipients have two expressions:

- they may be realized as goals are encoded (i.e., the object of *ston* in the PP variant; see (39) and (41) above), or
- they may be realized as possessors are encoded (i.e., the first object in the ditransitive constructions in Modern Greek; see (38) and (40) above).

From a crosslinguistic point of view, according to Levin and Rappaport Hovav (2001), many languages which lack double objects still have a core (i.e., non-adjunct) grammatical relation, distinct from subject and object, used to express

possessors. Specifically, as Levin and Rappaport Hovav (2001) mention, many languages have a dative case and use the dative (case marked) NP as the basic expression of possessors, including recipients of ditransitive constructions.

There are, then, according to Levin and Rappaport Hovav (2001), two dedicated modes of expressing possessors:

- the first object in a double object frame, and
- a dative NP.

This is exactly what we have observed in the behaviour of Modern Greek genitive and double accusative ditransitive constructions (see, for instance, (38)-(41) in Sections (4.3.1) and (4.3.2) above). Only instead of a dative NP, in Modern Greek we observe a genitive NP.

Siewierska (1998) finds that no language which has a “true” dative case (i.e., use of a marker which is distinct from allative or locative markers) has a double object construction or a construction in which the recipient and patient receive the same encoding.

This observation suggests that crosslinguistically dative NPs and first objects, and thus the dative frame and double object frame, are in complementary distribution. Given this, they might be considered two sides of the same coin.

This also holds for Modern Greek, as we have already seen in the previous (see (38) and (40) in the previous). One has to keep in mind, though, that in the case of the Modern Greek double accusative ditransitive verbs *didasko* (teach), *serviro* (serve), and *plirono* (pay) the recipient/possessor and the patient/undergoer bear the same morphological case.

In the light, then, of Modern Greek double accusative ditransitive constructions the generalization of Siewierska (1998) might seem to be rather unexpected, since the “dative”/ditransitive alternation is also shown to be about the semantic determinants of “objecthood”.

Crosslinguistically, thus, and in the light of the Modern Greek data presented in the previous, four frames are associated with the expression of recipients:

- Allative frame (recipient as goal): in this frame the theme is syntactically realized as object, the recipient (allative) as locative NP/PP.
- Double object frame (recipient as possessor): in this frame the theme is syntactically realized as secondary object, while the recipient is syntactically realized as first object.
- Dative frame (recipient as possessor): in this frame the theme is syntactically realized as object, while the recipient is syntactically realized as a dative NP.
- Genitive frame (recipient as possessor): in this frame the theme is syntactically realized as object, while the recipient is syntactically realized as a genitive NP.

The consequence of all this, as Levin and Rappaport Hovav (2001) underline, is that in English, for instance, *to* is not a dative preposition, as some suggest, but an allative preposition, and the *to*-variant is, thus, an instance of the allative frame. As Siewierska (1998, p. 180) points out “It appears that the term dative-shift is truly a misnomer”.

The crosslinguistic implications can be summarized, according to Levin and Rappaport Hovav (2001), in the following:

- A language with an expression specific to possessors might not be expected to allow the encoding of recipients of ditransitives as allatives (the general encoding for goals), since the semantic expression as possessors is the semantically more specific.
- English does allow recipients of verbs like *give* to be expressed as allatives because given its strict word order there is no other way to focus a recipient.
- But in languages with free word order, like, for instance, Modern Greek or Russian, recipients of verbs like *give* may also be expressed as genitive NPs, as is the case in Modern Greek, or always as dative NPs and never as allatives, as is the case in Russian:

(42) Ja      dal            Ivanu   knigu.  
 I.Nom give.PAST Ivan.Dat book.Acc  
 “I gave Ivan the book”.

(43) \*Ja      dal            knigu   k Ivanu.  
 I.Nom give.PAST book.Acc to Ivan.Dat  
 “I gave the book to Ivan”.

In fact, there are many languages with only the dative frame or only the double object frame (see, among others, Baker (1997), Dryer (1986)).

## 5 Conclusion

In conclusion, I have shown that the Modern Greek “genitive” ditransitive alternation is about alternate realizations of recipients, while the Modern Greek double accusative ditransitive alternation is about alternate objects.

Moreover, I have shown that HPSG (Pollard and Sag (1994)) enriched with semantic representations in MRS (Copestake et al. (1999)) constitutes the appropriate theoretical basis for a robust, linguistically-motivated account of ditransitives in Modern Greek, which provides the necessary formal generalizations for the analysis of such arguments in a multilingual context, since MRS structures are easily comparable across languages.

To show this I have considered comparatively both genitive and double accusative ditransitive constructions in Modern Greek (Section (2)), concluding that

while the latter might be considered to conform to the locative alternation in Modern Greek and English, the former are beyond both “(dative) shifts”, as well as “(dative) alternations”.

As a final general comment I need to underline that the MRS-based analysis presented in Section (4) above allows for a linguistically-motivated account of the syntactico-semantic properties of doublets, which avoids the processing load problems that are inseparable from (directional or even bi-directional à la Flickinger (1987)) lexical rule approaches to parsing ditransitive constructions in particular and to development of (the lexicon of) large-scale (computational) grammars of natural language based on HPSG in general.

Consequently, (the lexicon of) large-scale computational grammars may become more efficient, since it needs to depend on fewer or even no lexical rules at all, and thus less complicated for the grammar writer to maintain, as well as to develop further. Here I focused on (some of) the theoretical assumptions upon which the achievement of such a goal can be based realistically.

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