TWO CLASSES OF DOUBLE OBJECT VERBS:
THE ROLE OF ZERO MORPHOLOGY

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0. Introduction[1]

In this paper, I argue that there are two classes of double object verbs (*Class I, Class II*), which are realized in two different syntactic structures. Specifically, I demonstrate that double object verbs split into two classes with respect to whether they permit derivational processes such as formation of adjectival passives or not. This difference correlates with a number of further morpho-syntactic differences. On the basis of the proposal that zero-derived forms do not permit further derivation (Myers 1984, Pesetsky 1995, Marantz 1993), I account for the facts in terms of the presence/absence of a zero-morpheme in the structure. I propose that *Class I* verbs include a zero applicative head introducing the goal argument while *Class II* verbs do not include such a zero head. The differences between the two verb classes are attributed to the presence vs. absence of this head.

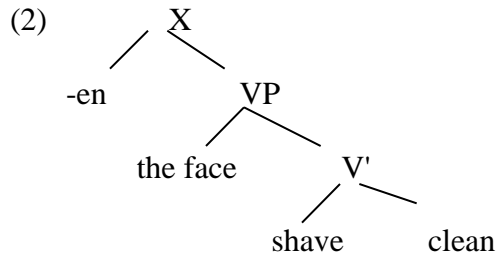## 1. Class I: Double Object Constructions with a Light Verb

1.1. Adjectival Passives and Zero Heads

It has been noted that predicates with two internal arguments form adjectival passives involving synthetic compounding (Lieber 1983, Sproat 1985, Marantz 1989, 1993):

(1)   a.   hand-made cookies   *incorporated instrument*
       b.   spoon-fed children   *incorporated instrument*
       c.   home-made cookies   *incorporated locative*
       d.   paint-sprayed cart   *incorporated theme*
       e.   clean-shaven face   *incorporated result*
       f.   well-hit ball   *incorporated result*

Marantz (1989, 1993) proposes that synthetic compounds are syntactically derived. In (1) the suffix -en takes as its complement a constituent including the verb and the most deeply embedded argument. The externalized argument is the highest constituent within the VP shell:

(2)
```
            X
          /   \
      -en       VP
              /    \
       the face      V'
                    /   \
                shave    clean
```
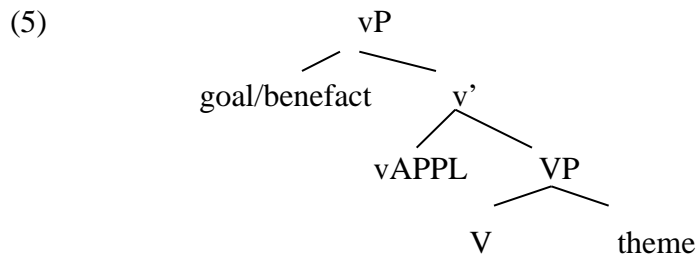
Double Object verbs do not permit this kind of adjectival passive formation (Marantz 1989). It is not possible for the benefactive or goal argument to incorporate into the verb:

(3) a.   *children-baked cookies   benefactive
     b.   *boss-given flowers   goal

It is also not possible for the theme argument to incorporate into the verb:

(4) a.   *cookie-baked children   theme
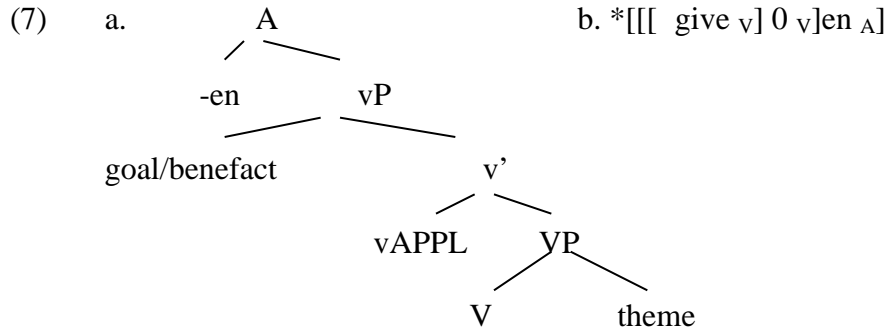   b.   *flower-given boss   theme

Marantz (1993) argues that the facts in (3) and (4) follow from a structure of double object constructions in which the indirect object is introduced by a zero applicative head (Marantz 1993, Collins 1997, McGinnis 1998, Anagnostopoulou 1999a, 1999b):

(5)
```
                        vP
                      /    \
           goal/benefact     v'
                           /    \
                      vAPPL      VP
                                /   \
                              V      theme
```

In a syntactic analysis of adjectival passives involving compounding, the ill-formed examples with goal/benefactive incorporation in (3) violate compositionality: The goal and the verb form a constituent excluding the theme. On the other hand, the ill-formed examples with theme incorporation and goal externalization in (4), which respect compositionality, violate *Myers' Generalization* (Myers 1984, Pesetsky 1995):

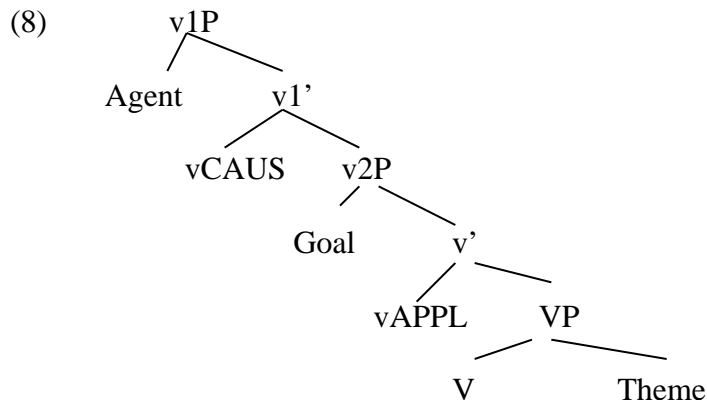(6)   Zero-derived words do not permit affixation of further derivational morphemes

In order for the goal/benefactor to be included in the structure, a zero applicative head must be present (7a). But this will yield the form in (7b), with –en attaching to the zero-derived word [[give $_v$] 0 $_v$], violating (6).

(7)　a.　　　　　　A　　　　　　　　　b. *[[[give $_V$] 0 $_V$]en $_A$]

```
        A
       / \
     -en   vP
          /  \
  goal/benefact   v'
                 /  \
             vAPPL    VP
                     /  \
                    V    theme
```

Thus, if derivational processes are diagnostics for zero morphemes (Pesetsky 1995), then the unavailability of adjectival passives with goal externalization is an argument that in double object constructions the goal is introduced by a zero V$_{APPL}$.[2]

1.2. Two sources for Case in Double Object Constructions

In double object constructions, the indirect object is introduced by an applicative head (Marantz 1993, Collins 1997, McGinnis 1998, Anagnostopoulou 1999a, 1999b) while   the external argument is introduced by a higher causative v (Kratzer 1993, Chomsky 1995 building on Hale & Keyser 1993, Harley 1995), as illustrated in (8):

(8)

```
        v1P
       /   \
   Agent    v1'
           /  \
       vCAUS   v2P
              /   \
           Goal    v'
                  /  \
              vAPPL   VP
                     /  \
                    V    Theme
```

Collins (1997), McGinnis (1998) and Anagnostopoulou (1999a, 1999b) have further proposed that in (8) there are two sources for objective Case for the two DP objects: vAPPL and vCAUS. In languages in which the direct and indirect object have structural (accusative) Case, the direct object checks Case on vAPPL, and the indirect object checks Case on vCAUS (English, Chichewa, Tzotzil, Norwegian, Danish and other languages of this type).[3]   In such a view, vCAUS and vAPPL have identical

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[2] There is an alternative explanation for the ungrammaticality of (4) implemented within the framework of Distributed Morphology (Halle & Marantz 1993). This explanation also crucially relies on the presence of vAPPL but treats the ungrammaticality of (4) as a syntactic rather than morphological effect; see Marantz (1999), Embick (2000), Alexiadou, Anagnostopoulou & Stavrou (2000) and Anagnostopoulou (2001). Note that an analysis in terms of Embick (2000), Alexiadou, Anagnostopoulou & Stavrou (2000) and Anagnostopoulou (2001) (though not Marantz 1999) makes further refinements necessary. While it is clear that vAPPL is excluded from what Kratzer (1993) calls "lexical adjectival passives" (they cannot include any functional structure), it is less clear what excludes vAPPL from Kratzer's "phrasal adjectival passives". For the purposes of the present paper, I stick to Marantz' original proposal based on Pesetsky (1995).

[3] As can be seen from the languages I refer to, I assume that both symmetric and asymmetric double

properties. Both introduce one argument and check the Case of another lower argument. In other words, in English type languages the theme has structural Case, contrary to what is often assumed in the literature (compare this proposal to Larson 1988, Baker 1988, 1996, Pesetsky 1995 among others):

(9)   John gave Mary a book   *Mary*: Structural Case
                                                   a book: Structural Case

As is well-known, there are numerous languages in which the goal of a double object construction bears morphological dative (or genitive) Case. Some cases discussed in the literature include Albanian (Massey 1992, Marantz 1993, McGinnis 1998), Icelandic (Falk 1990, Holmberg & Platzack 1995, Collins & Thráinsson 1993, 1996, Ottósson 1991 and others), Spanish (Stowell 1981, Demonte 1995, Ormazabal & Romero 1998 and others), Basque (Ormazabal & Romero 1998, Romero & Ormazabal 1999), Greek (Anagnostopoulou 1999a, 1999b). An example of such a language, namely Icelandic, is given in (10):

(10)   Hann gaf konunginum ambáttina   *Icelandic*
        He(Nom) gave the king(Dat) the maidservant(Acc)
        "He gave the king the maidservant"

Marantz (1993), McGinnis (1998) and Anagnostopoulou (1999a, 1999b) have proposed that in these languages vAPPL assigns morphological dative or genitive case to the argument it introduces, and therefore the indirect object surfaces with dative case morphology. Nevertheless, the indirect object is active syntactically, i.e. it can participate in checking operations which take place in the functional domain. It is well known, for example, that in Icelandic passives dative goals undergo EPP-driven movement (quirky subjects, see Zaenen, Maling & Thráinsson 1985 among many others). There are two approaches concerning the formal properties of indirect and direct objects in such constructions which, for present purposes, lead to identical results:
    (i) According to one view, the indirect object checks checks abstract case on vCAUS and the direct object checks abstract Case on vAPPL (McGinnis 1998). In this approach, double object constructions of the Icelandic type are identical to double object constructions of the English type with respect to Abstract Case, except that the indirect object has, in addition, morphological Case. The assumption behind this analysis is that there are three kinds of Case features: (i) Structural, (ii) Morphological & (iii) Quirky (Chomsky 1998).
    (ii) Another view holds that the indirect object with morphological case checks only EPP-features (on T or vCAUS), while the direct object checks abstract Case on vCAUS (Anagnostopoulou 1999a, 1999b building on Alexiadou & Anagnostopoulou 1998, 2001). In this approach, double object constructions of the Icelandic type differ from double object constructions of the English type in that in Icelandic, the indirect object doesn't check Case features, it only checks EPP features. As a result, there are configurations in which the two arguments (the indirect object and the direct object) enter into a multiple checking relationship against the same head, v or T (see Anagnostopoulou 1999b).[4] On this view, there are only two kinds of Case: (i) Structural

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Case checking heads. The difference between them has to do with Locality and not with Case (contra Baker 1988; see McGinnis 1998, Anagnostopoulou 1999b for details).
[4] Anagnostopoulou (1999b) argues extensively that this multiple checking relationship is responsible for

and (ii) morphological. This analysis stays closer to the view that quirky arguments perform EPP-driven and not Case-driven movement (Marantz 1991, Schütze 1997, Ura 1996).[5]

Thus, there are two types of double object languages depending on the presence or absence of a morphological case feature associated with vAPPL. Languages with vAPPL without morphological case and languages with vAPPL with morphological case. This is illustrated in the table below:

Table 1

VAPPL without morphological case	English, Norwegian, Danish, Swedish
VAPPL with morphological case	Icelandic, Albanian, Spanish

2. Class II: Double Object Constructions without a Light Verb

2.1. Adjectival Passives with Goal Externalisation

It has been noted that some double object verbs in English form adjectival passives with goal externalization (Wasow 1977, Bresnan 1982, Levin & Rappaport 1986). These verbs are (from Levin & Rappaport 1986):

teach
(11) a. John taught manual skills to children
     b. John taught children manual skills
(12) a. untaught skills   *theme externalization*
     b. untaught children   *goal externalization*
serve
(13) a. Bill served food to the customer
     b. Bill served the customer food
(14) a. sloppily served food   *theme externalization*
     b. unserved customers   *goal externalization*
pay
(15) a. Max paid the money to the agent
     b. Max paid the agent the money
(16) a. unpaid money   *theme externalization*
     b. a badly paid agent   *goal externalization*
feed
(17) a. feed some cereal to the baby
     b. feed the baby some cereal
(18) a. *unfed cereal   *theme externalization*
     b. unfed baby   *goal externalization*

These verbs differ from most other double object verbs, which do not permit goal externalization (see also previous section):[6]
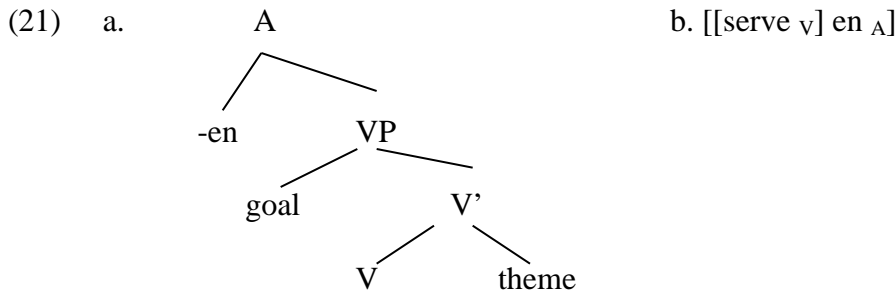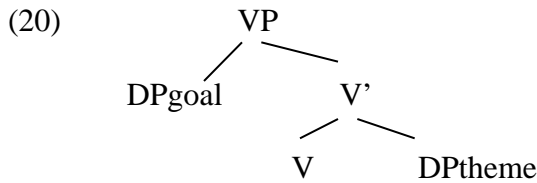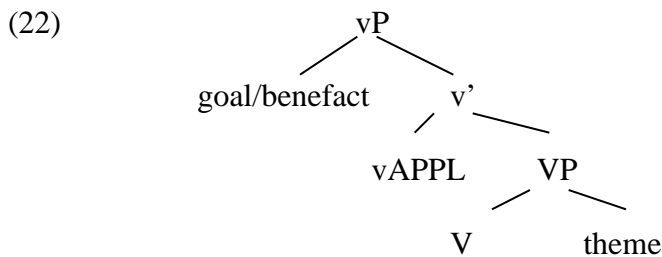
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(19) a. a recently offered deal; *a recently offered customer
      b. a recently rented apartment; *a recently rented tenant
      c. a recently given medal; *a recently given winner

2.2. *Implications for the structure*

The grammaticality of the goal externalization examples in (11)-(18) suggests that the goal is not introduced by vAPPL, as in (20). The structure in (20) can be embedded under -*en* yielding a form that respects Myers'Generalization, as illustrated in (21a) and (21b):

(20)
```
              VP
            /    \
        DPgoal    V'
                /    \
              V      DPtheme
```

(21) a.
```
              A                          b. [[serve ᵥ] en ₐ]
            /    \
         -en      VP
                /    \
             goal     V'
                    /    \
                  V      theme
```
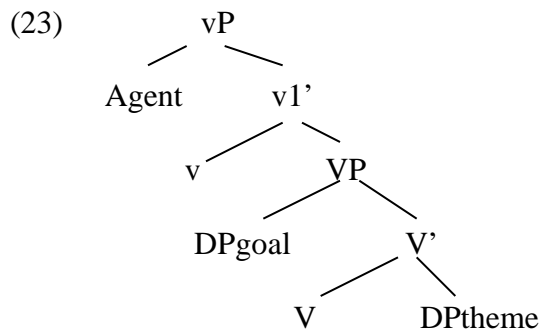
It is worth pointing out that Holmberg & Platzack (1995) assume that double object constructions have the structure in (20) while Marantz (1993) argues that they have the structure in (5), repeated in (22):

(22)
```
                   vP
                 /    \
        goal/benefact  v'
                     /    \
                 vAPPL     VP
                         /    \
                       V      theme
```

I claim that both structures are attested. Adjectival passives can be used as a diagnostic for (20) as opposed to (5)/(22).

What are the predictions the structure in (20) makes for the Case/case properties of the two objects? To see them, we need to consider the full structure of ditransitive verbs. In double object constructions of this type, the external argument is introduced by vCAUS. Thus, the complete structure is as in (23):

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ungrammaticality of (4) can be treated on a par. In a syntactic approach along the lines of Marantz (1999), Embick (2000), Alexiadou, Anagnostopoulou & Stavrou (2000) and Anagnostopoulou (2001) this is not clear. One would have to take into account the lexical vs. phrasal adjectival passive distinction argued for in Kratzer (1993), and ask the question of whether synthetic compounds and participial constructions of

(23)

```
                vP
              /    \
         Agent      v1'
                   /    \
                  v      VP
                        /  \
                  DPgoal     V'
                            /  \
                           V    DPtheme
```

In (23) there is only one source for objective Case for the two DP objects, namely vCAUS.[7] This makes two predictions, one concerning the morphological case of the goal argument and one concerning the structural Case of the goal and the theme argument:

(i) If vAPPL is the source of morphological dative case (see section 1.2) for the goal, then the goal in these constructions will not have morphological dative or genitive case.

(ii) Only one object will be Case licensed since there is only one Case-checking head in the structure. The other object will have to be licensed by some other means.

Baker (1996) argues on the basis of polysynthetic languages like Mohawk that when only one objective Case is available, this is checked by the goal argument. The theme is either overt (24a, compare to 24b, Baker 1996: 293) or null (25, Baker 1996: 204), and it is licensed by incorporation.

(24) a.   Se- `wáhr-a-nut   ne érhar   *Mohawk*
           2sS-meat-0-feed   NE dog
           "Feed the dog some meat!"
     b.   *O-`wáhr-u   se-náhskw
           NsO-meat-NSF   2sS-pet-0-feed
           "Feed the pet some meat!"
(25)   T-a-híy-u-'
           CIS-FACT-1SA/MsO-give-PUNC

I propose to adopt this analysis for *Class II* double object constructions. Specifically, I propose that in these constructions the Case of vCAUS is checked by the goal, while the theme is either null or overt, licensed by incorporation. The idea that there is null theme incorporation into the verb in double object constructions with *teach, serve, pay, feed* captures the fact that the theme may systematically remain implicit with these verbs. This observation goes back to Levin & Rappaport (1986: 630-1) who argue extensively that double object verbs forming adjectival passives with goal externalization are systematically those that permit the goal argument to stand as their sole complement (*"the sole complement generalization"*):[8]

[7] Recall that the view that there is only one Case available for the two objects in double object constructions is a widely held one. I argue that this view is correct, but only for a subclass of double object verbs.

[8] Levin and Rappaport argue that there is a direct relation between the sole complement generalization and adjectival passive formation. In the present proposal this relation is indirect. Adjectival passives with

(26)   a.   teach the children
       b.   pay the agent
       c.   serve the customers

An alternative would be to think of the theme as incorporating into the root by *conflation* (Hale & Keyser 1993, 1998). The conflation analysis directly captures the fact that *teach, serve, pay, feed* incorporate the theme as part of their meaning (*teach: provide someone with a lesson CAUSE someone to HAVE a lesson, serve: provide someone with food/drinks, pay: provide someone with money, feed: provide someone with food*).

Note that under either the null theme incorporation analysis or the conflation analysis, the theme-verb complex isn't a form that leads to a violation of Myers' Generalization. This is straightforward for the null-theme incorporation analysis where the most external element is the V and not the null theme, on the assumption that the theme left-adjoins to the verb (27). The complex further moves to –en (28a) yielding (28b), which does not violate Myers' Generalization:

(27)

$$V^0$$
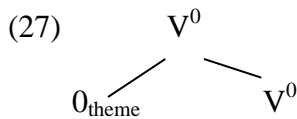
0_{theme} V^0

(28)   a.   A   b. $[[0_{theme}\text{-serve }_V]$ en $_A]$

-en   VP

goal   V'

V   t

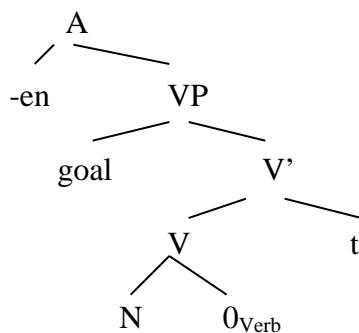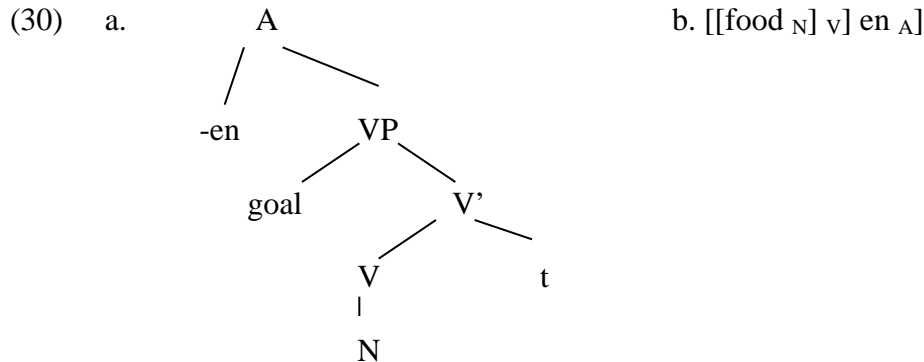0_{theme} V
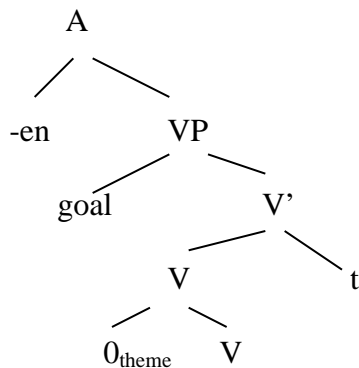
At first sight, the conflation analysis could be taken to lead to a violation of Myers Generalization if conflation is interpreted as left adjunction of an overt theme to a null verb:

(29)   a.   A   b. $[[\text{food }_N] 0 _V]$ en $_A]$

-en   VP

goal   V'
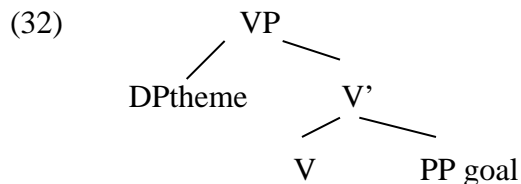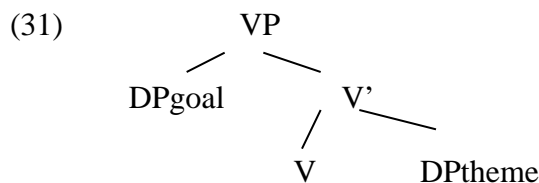
V   t

N 0_{Verb}

However, if conflation is viewed as a case of substitution rather than adjunction (see Rizzi & Roberts 1989 that head movement can be substitution), then the form obtained does not involve a zero morpheme:

(30) a.

```
              A
            /   \
         -en     VP
               /    \
            goal      V'
                    /    \
                   V       t
                   |
                   N
```

b. [[food $_N$] $_V$] en $_A$]

Thus far, I have restricted my attention to constructions like (26) where the theme is covert. What about configurations in which the theme is overt? For these cases I will assume that either the overt theme is licensed by covert incorporation (*Noun Reanalysis*, Baker 1988) or it has the status of an adjunct modifying the null theme that, in such a view, is present. In section 3.5 I will present some evidence from Greek that in fact both options seem to be instantiated.[9]

Let us now consider some more predictions the incorporation analysis of implicit themes makes. It has been argued that incorporation is possible only when there is a head-complement relation between the incorporating element and the element it incorporates into (Baker 1988, Hale & Keyser 1993, 1998). We expect then that the theme may remain implicit only when the goal is a DP (31), not when it is a PP because in the PP construction the theme is a specifier in the VP-shell (32, Larson 1988):

(31)

```
              VP
            /    \
       DPgoal     V'
                /    \
               V       DPtheme
```

(32)

```
              VP
            /    \
       DPtheme     V'
                 /    \
                V       PP goal
```

This is indeed the case (Larson 1988: 358, fn 24):

(33) a.   Fred paid the ransom to the agent
      b.   Fred paid the agent the ransom
      c.   Fred paid the agent
      d.   *Fred paid to the agent

---

[9]In a conflation analysis *teach someone a lesson* (with an overt theme) is structurally similar to *dance a tango* with an overt object (see the discussion in Hale & Keyser 1997).

(34) a.   Patty served two desserts to the man
      b.   Patty served the man two desserts
      c.   Patty served the man
      d.   *Patty served to the man

Note that with double object verbs of *Class I* the theme is not allowed to remain implicit:

(35) a.   *offer a customer
      b.   *rent a tenant
      c.   *give the winner
      d.   *sell the customer

This correlates with the fact that the theme is not part of the meaning of the verb in such examples. Some verbs of *Class I* have the specific property of allowing their theme argument to remain implicit. Crucially, this is possible with both a DP-goal and a PP goal (Larson 1988: 358), i.e. the conditions under which themes may remain implicit with *Class I* verbs are quite different from the conditions in which themes may remain implicit with *Class II* verbs (with verbs of *Class I* there seem to be no structural conditions on implicit themes, unlike verbs of *Class II*):

(36) a.   Bill wrote a long letter to his mother
      b.   Bill wrote his mother a long letter
      c.   Bill wrote to his mother
      d.   Bill wrote his mother

I propose that the type of "theme deletion" illustrated in (36c), (36d) is not the result of incorporation and therefore the theme can always remain unexpressed, regardless of the structural configuration in which it occurs. [10]
    I conclude that there are two types of double object constructions depending on whether a zero head is included in the structure or not. Their properties are summarised in table 2:

Table 2

with vAPPL: give, sell, offer, rent....	no adjectival passives with goal externalization, two Case checking heads, theme obligatory modulo lexical properties
without vAPPL: teach, serve, pay	adjectival passives with goal externalization, one Case checking head, theme may always remain implicit when the goal is a DP

3. The Two Classes in Greek

Greek provides strong evidence for the analysis of double object constructions proposed in the preceding sections. Specifically, in Greek the goal has genitive case

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[10] At this stage, I have an explanation for why theme incorporation is not necessary but I do not have an explanation for why incorporation is not possible with verbs of *Class II*. As far as I can see, incorporation of the theme into the root should be possible in principle. One would have to explore whether "instrument of communication" verbs such as *fax, e-mail, telegraph* etc., which seem to include the theme as part of their lexical meaning, permit theme-incorporation, i.e. whether the theme can be omitted when the goal surfaces as a DP but not when it surfaces as a PP. If it turns out that with verbs of *Class II* theme

morphology with *Class I* while it has accusative case morphology *Class II*. This is morphological evidence for the presence vs. absence of vAPPL. Furthermore, Greek provides syntactic evidence that in double object constructions with *Class II* the goal has structural Case while the theme does not have structural Case. This evidence is based on the (un)availability of clitic doubling and passivization. Finally, there is also evidence for the incorporation analysis of themes suggested in section 2.

3.1. The Genitive Construction

In Greek the goal surfaces as a PP (37a) or as a DP with morphological genitive case (37b) with most double object verbs (Catsimali 1990, Markantonatou 1994, Dimitriadis 1999, Anagnostopoulou 1999a, 1999b and others):

(37)   a.   O Jannis estile to gramma s-tin Maria
                 The Jannis(Nom) sent-3sg the letter(Acc) to-the Mary(Acc)
                 "John sent the letter to Mary"
        b.   O Jannis estile tis Marias to gramma
                 The Jannis(Nom) sent-3sg the Mary(Gen) the letter(Acc)
                 "John sent Mary the letter"

Anagnostopoulou (1999b) extensively argues that the Genitive construction is a double object construction.

3.2. The Double Accusative Construction

With a limited set of verbs both the indirect object and the direct object may surface with morphological *accusative* case when used without a preposition.[11] These verbs include *didasko* `teach', *plirono* `pay', *serviro* `serve', i.e. exactly the ones identified in section 2 as *Class II* verbs for English.

(38)   a.   Didaksa [$_{NP}$tin grammatiki ton Arxeon] [$_{PP}$sta pedhia]   *teach*
                 Taught-1sg [the grammar(Acc) the Ancient] [to-the children]
                 "I taught the grammar of Ancient Greek to the children"
        b.   Didaksa [$_{NP}$ ta pedhia] [$_{NP}$ tin grammatiki ton Arxeon]   *Accusative Goal*
                 Taught-1sg [the children(Acc)] [the grammar(Acc) the Ancient]
                 "I taught the children the grammar of Ancient Greek"
(39)   a.   Plirosa ton ipallilo ta xrimata pu tu ofila   *pay*
                 Paid-1sg the employee (Acc) the money(Acc) that him (Gen) owed-1sg
                 "I paid the employee the money I owed him"
        b.   Servira ton pelati enan kafe   *serve*
                 Served-1sg the customer(Acc) a coffee(Acc)
                 "I paid the customer a coffee"

---

[11] These verbs can also form a double object construction in which the goal has Genitive case morphology. In this case, they behave syntactically similarly to verbs forming the Genitive construction. The fact that these verbs also form the Genitive construction suggests that they are compatible with two

3.3. Evidence for two different structures

Adjectival passives with goal externalization are not possible with the verbs forming the Genitive Construction, as is illustrated in (40):

(40)   a.   Ena prosfata xarismeno vivlio /*ena prosfata xarismeno pedhi
               A recently given book / *a recently given child
       b.   Ena prosfata nikiasmeno aftokinito /*enas prosfata nikiasmenos pelatis
               A recently rented car/ *a recently rented customer
       c.   Ena prosfata stalmeno gramma/ *enas prosfata stalmenos paraliptis
               A recently sent letter /*a recently sent addressee
       d.   To apulito spiti / o apulitos pelatis
               The unsold house/ *the unsold customer

On the other hand, adjectival passives with goal externalization are possible with the verbs forming the Double Accusative Construction:
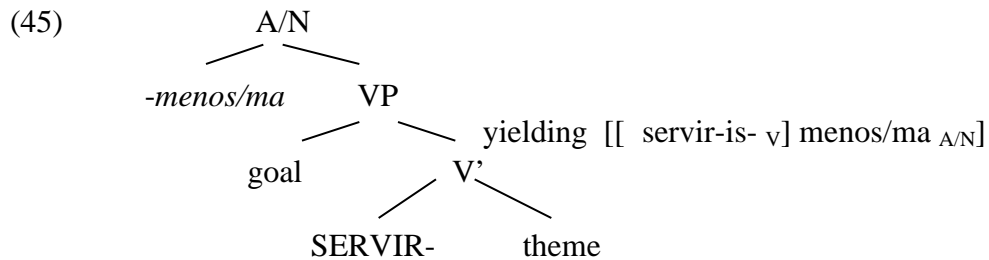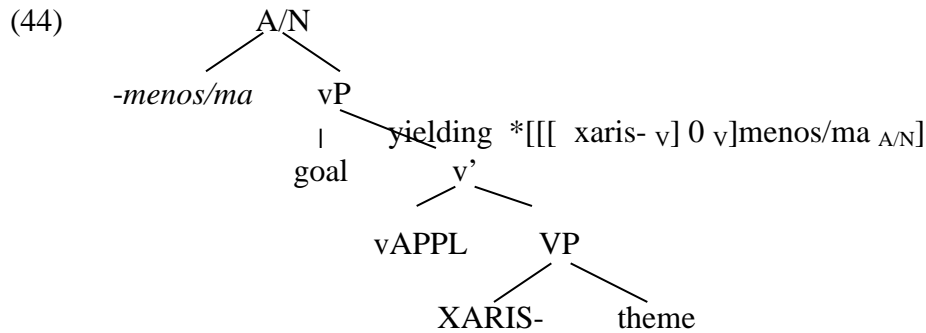
(41)   a.   I prosfata diadagmeni ili / ?mia prosfata didagmeni taksi
               The recently taught course material/ a recently taught class
       b.   O prosfata servirismenos kafes/ o prosfata servirismenos pelatis
               The recently served coffee/ the recently served customer
       c.   O aplirotos logarisamos/ o aplirotos ipalilos
               The unpaid bill / the unpaid employee
       d.   *I ataisti krema/ to ataisto moro
               *The unfed creme/ the unfed baby

In addition, in Greek the two verb classes differ with respect to nominalizations.[12] Nominalizations in which the goal surfaces as the non-prepositional complement of the noun are not possible with the verbs forming the Genitive Construction (42) while they are possible with the verbs forming the Double Accusative Construction (43):

(42)   a.   To xarisma enos vivliu/ *to xarisma enos pedhiou
               The gift of a book/ *the gift of a child (i.e. to a child)
       b.   To nikiasma tu spitiu/ *to nikiasma tu fititi
               The rental of the house/ *the rental of a student (i.e. to a student)
       c.   I anathesi mias ergasias/ *i anathesi enos fititi
               The assignment of a term paper/ *the assignment of a student (i.e. to a student)
(43)   a.   I didiaskalia ton mathimatikon / i didaskalia ton pedhion
               The teaching of math/ the teaching of the children (i.e. to the children)
       b.   I taktiki pliromi ton logarisamon/ i taktiki pliromi ton ipallilon
               The regular payment of the bills/ the regular payment of the employees (i.e. to the employees)
       c.   To grigoro servirisma tu fagitu/ to grigoro servirisma tu pelati
               The fast serving of the food/ the fast serving of the customer (i.e. to the customer)

---

[12] In English, nominalizations based on the double object construction are excluded for both *Class I* and *Class II* verbs (Pesetsky 1995, David Pesetsky (personal communication) for *Class II*), unlike adjectival
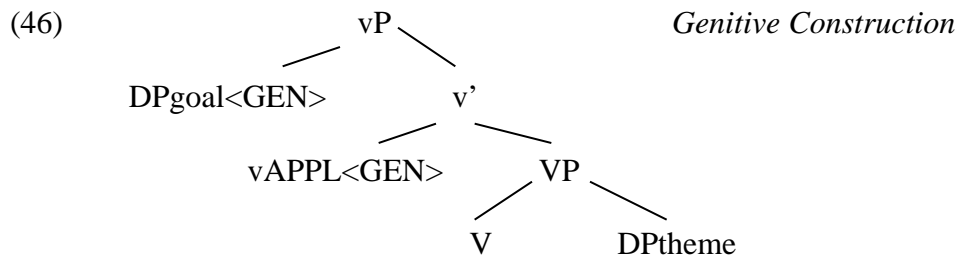
The above facts suggest that the Genitive construction includes vAPPL while the Double Accusative construction does not include vAPPL.[13] The presence of a zero vAPPL in the former leads to a violation of Myers' Generalization (44). The absence of a zero vAPPL in the latter yields a form that does not violate Myers' Generalization (45):

(44)

```
                    A/N
                  /     \
          -menos/ma      vP
                        |    \      yielding  *[[[  xaris- v] 0 v]menos/ma A/N]
                      goal     v'
                             /    \
                        vAPPL      VP
                                 /    \
                             XARIS-    theme
```

(45)

```
                  A/N
                /     \
        -menos/ma      VP
                     /    \      yielding  [[  servir-is- v] menos/ma A/N]
                 goal      V'
                         /    \
                    SERVIR-    theme
```

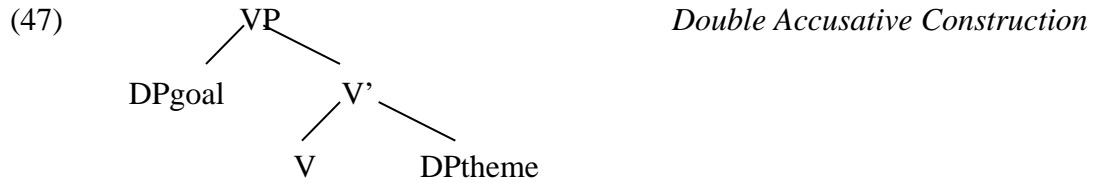### 3.4. Case Properties of the Two Classes.

Let us now see how the case/Case properties of the two classes relate to the structures proposed.

Starting from the morphological case of the goal argument, Greek belongs to the languages where vAPPL is associated with morphological genitive case. When vAPPL is present, the goal bears genitive case morphology:

(46)

```
                    vP                          Genitive Construction
                  /    \
        DPgoal<GEN>     v'
                      /    \
          vAPPL<GEN>       VP
                         /    \
                       V       DPtheme
```
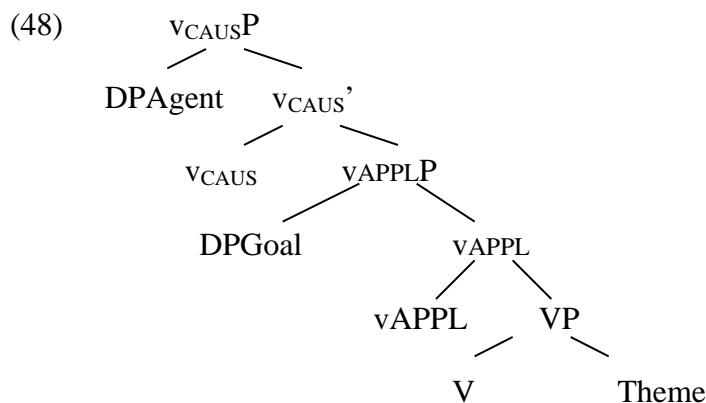
When vAPPL is absent, there is no source for genitive case on the goal:

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[13] Note that for Greek the evidence based on nominalizations is more crucial, since the ban on goal externalization could be reduced to the genitive case morphology of the goal (see Kratzer 1993 for German).

(47)   VP   *Double Accusative Construction*

```
           VP
          /  \
     DPgoal   V'
             /  \
            V    DPtheme
```

This explains why the goal surfaces with genitive only in the former construction.

   Let us now proceed to the formal properties of the two objects in the Genitive and the Double Accusative construction respectively. As in the case of *Class I* verbs in English, there are two light verbs for the two objects in the Genitive Construction, namely vAPPL & vCAUS:

(48)   v_CAUSP

```
            v_CAUSP
           /     \
     DPAgent    v_CAUS'
               /     \
          v_CAUS    vAPPLP
                   /      \
              DPGoal      vAPPL
                         /     \
                     vAPPL      VP
                    /    \     /   \
                   V     Theme
```

Recall from section 1.2. that in double object constructions in which vAPPL is associated with dative case morphology either (i) the indirect object checks checks abstract case on vCAUS and the direct object checks abstract Case on vAPPL (McGinnis 1998) or (ii) the indirect object with morphological case checks EPP-features (on T or vCAUS) and the direct object checks abstract Case on vCAUS (Anagnostopoulou 1999a, 1999b). We expect both objects to provide evidence that they participate to argument externalization phenomena related to Case/EPP. There are two reasons to think that this is indeed correct:

   (i) Clitic doubling, which is always possible with definite DPs that check features against functional heads in Greek (see Anagnostopoulou 1994; Anagnostopoulou 1999a, 1999b argues that clitic doubling in Greek is formal feature raising without phrasal pied-piping), is possible with both the Genitive goal and the Accusative theme:

(49)   (Tu) (to) edosa tu Petru to vivlio
       Cl-Gen Cl-Acc gave-I the Peter(Gen) the book(Acc)
   "I gave Peter the book"

The availability of doubling suggests that both arguments have formal features to check.

   (ii) Passivization of the theme in the presence of a genitive DP goal in Greek is possible, provided that the goal undergoes cliticization/clitic doubling (Anagnostopoulou 1999a, 1999b):

(50)   To vivlio *?(tu) dothike tu Petru apo tin Maria
       The book-Nom Cl-Gen give-NAct the Peter-Gen by the Mary

"The book was given to John by Mary"

Anagnostopóulou (1999a, 1999b) argues that the obligatoriness of doubling in (50) must be explained as follows. In passive constructions without Clitic Doubling of the goal the lower theme cannot undergo NP-movement to T because the Goal is an intervener (*Closest Attract*):[14]
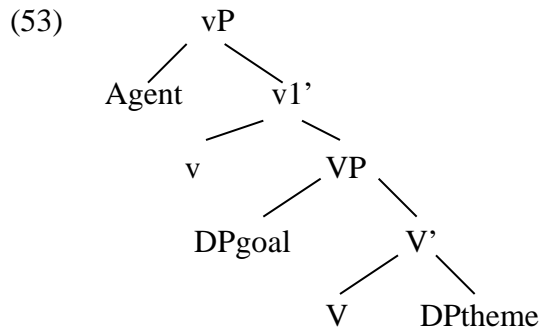
(51)
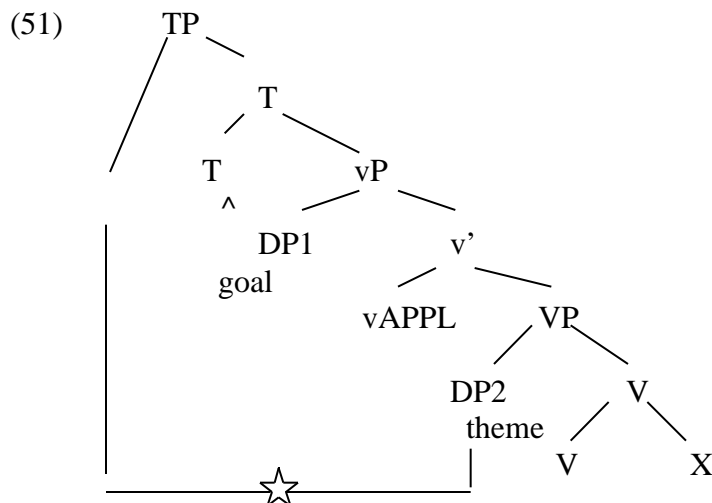
In passive constructions with clitic doubling, the formal features of the genitive DP goal (spelled out as a clitic) move to T before the nominative moves. Thus, *Attract Closest* is respected:

(52)
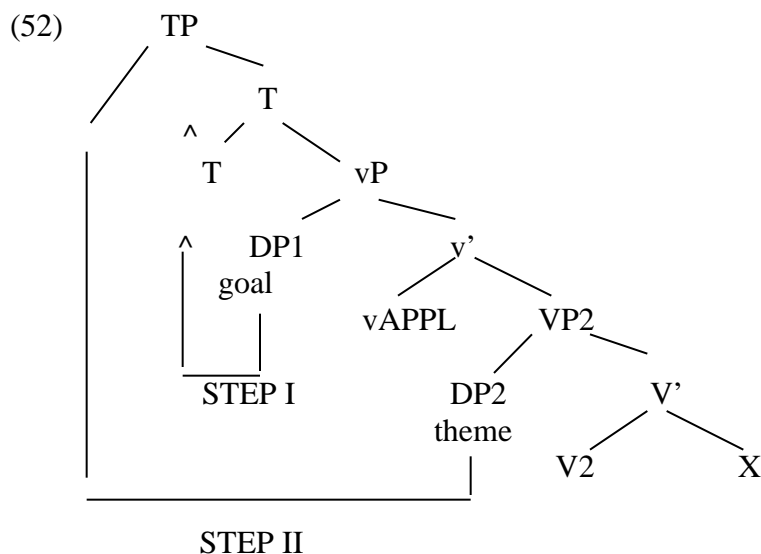
The fact that the theme may undergo passivization when the goal is doubled is evidence that it has a structural Case feature. The fact that the undoubled goal blocks NP movement of the theme is evidence that it has features that make it visible for *Attract.*

Coming now to the Double Accusative Construction, recall that in this case only one EPP/Case-checking head is present for the two objects, namely vCAUS:

---

[14] In the present paper everything is stated in terms of Movement/Attraction (Chomsky 1995) rather than Agree (Chomsky 1998, 1999), following Anagnostopoulou (1999a, 1999b). A reformulation in terms of

(53)

```
              vP
            /    \
       Agent     v1'
               /    \
              v      VP
                   /    \
              DPgoal     V'
                       /    \
                      V     DPtheme
```

Recall from section 2.2. that in constructions of this type, the indirect object checks Case on vCAUS, while the direct object is licensed by incorporation/conflation. We expect only the goal argument to participate to argument externalization phenomena related to Case/EPP. This is indeed correct, as we will see immediately.

(i) In Double Accusative constructions, the goal has all the properties canonically associated with structural objects. It has accusative case, it can be doubled by an accusative clitic (54a) and it can undergo passivization (54b):

(54)　　a.　　(Ta-)didaksa ta pedhia ena mathima
　　　　　　　Cl(Acc) taught-I the children(Acc) a lesson
　　　　　　　"I taught the children a lesson"
　　　　b.　　Ta pedhia didaxthikan tin grammatiki
　　　　　　　The children(Nom) were taught the grammar(Acc)
　　　　　　　"The children were taught the grammar"

(ii) On the other hand, the theme argument does not provide any evidence that it participates in feature-checking operations. First of all, clitic doubling, which can always take place with definite direct objects in Greek (Anagnostopoulou 1994), is strictly ungrammatical with accusative definite themes (Catsimali 1990, Anagnostopoulou 1999b):

(55)　　*Tin didaksa ta pedhia tin grammatiki ton arxeon ellinikon
　　　　Cl(Acc,sg) taught-I(Nom) the children(Acc,pl) the grammar(Acc,sg) the ancient
　　　　Greek(Gen)
　　　　"I taught-it the children the grammar of ancient greek"

Moreover, passivization of the theme across a goal in the double accusative construction is impossible even when the goal undergoes clitic doubling/ cliticization, unlike themes in the genitive construction (compare 56 to 50 above):

(56)　　a.　　*To mathima ta didaxthike ta pedhia
　　　　　　　The lesson(Nom) Cl(Acc,pl) was taught the children(Acc,pl)
　　　　　　　"The lesson was taught the children"
　　　　b.　　*To mathima ta didaxthike
　　　　　　　The lesson(Nom) Cl(Acc,pl) was taught
　　　　　　　"The lesson was taught them"

The fact that the theme may not undergo clitic doubling and passivization (even when the goal is doubled) provides evidence that it does not enter into EPP/Case checking relations.[15]

Note that the property responsible for the exceptional properties of the theme in the Double Accusative construction is not that it has inherent accusative case. When the accusative goal undergoes passivization, the accusative theme shows all the properties canonically associated with structural objects. For example, the theme can freely undergo clitic doubling:

(57)   Ta pedhia tin-didaxthikan tin grammatiki apo ton dhaskalo
         The children(Nom) Cl(Acc) were taught the grammar(Acc) by the teacher
         "The children were taught the grammar by the teacher"

(57) shows that accusative themes are not assigned the same kind of Case in active and passive sentences.[16] This 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. Greek-internal evidence for this comes from the observation that the inherent accusative found with *spray-load/smear* verbs in Greek (Anagnostopoulou 1999b for discussion) retains its exceptional properties when the other argument undergoes passivization, as shown in (58):

(58)   *I brizola to aliftike to ladhi apo ton magira
         The steak Cl(Acc) was smeared the oil(Acc) by the cook
         "The steak was smeared the oil by the cook"

Note, furthermore, that passivization of the theme across the goal in the double accusative construction (as in 56) leads to very strong ungrammaticality, unlike passivization of the theme in the presence of an undoubled genitive goal (as in 50) which only gives rise to a mildly ungrammatical sentence. Thus, while passivization of themes across goals (direct passives) is impossible in both the Genitive construction and the Double Accusative construction the cause of the violation is different. I claim that in the Genitive construction the problem is posed by Locality while in the Double Accusative construction the problem is posed by the fact that the theme does not have

---

[15] This correlates with the fact that there is no vAPPL introducing the goal in this construction. It is not evident how the correlation should be stated in a checking framework. What needs to be ensured is that in constructions with three arguments and two checking heads the lowest argument cannot have active formal features because these cannot be checked leading to a crashing derivation. In a traditional GB-like framework where arguments are assigned Case, it follows straightforwardly that in such a configuration one argument will not be assigned Case. Baker (1988, 1996) argues that this must be the theme argument, since the theme is the only argument that may undergo incorporation.

[16] Working in a framework that assumes that case realization takes place at the PF branch of the syntax, Marantz (1991) argues that structural Accusative Case is a *dependent case "downwards"*. It is realized on an NP when a distinct NP not having lexically determined case is present higher in the structure. In this system, accusative case is not assigned in passives and unaccusatives because usually there are no two distinct arguments allowing for dependent case assignment. However, accusative case can be realized if there is a distinct higher argument not having lexical case. The behavior of themes in double accusative constructions can be easily accommodated in such an approach. In the active construction, the goal is assigned dependent case in opposition with the subject. The theme, not having inherent case, surfaces with a secondary dependent accusative (Alec Marantz, personal communication). Once the goal undergoes passivization, the theme can be assigned primary dependent accusative since there is a *distinct higher NP* not having lexical case (namely the passivized goal). It is less clear how these facts can be accommodated in a framework like the one assumed here where Case drives and does not merely interpret syntax.

appropriate features to enter into a checking relation with T (Case). This is summarized in the table below.

Table 3: Two different kinds of violations in Greek direct passives

	Sharp Ungrammaticality	**Clitics as Escape Hatches**
Genitive Construction	No	Yes
Double Accusatives	Yes	No

A similar bifurcation is found in English. Sentences involving passivization of the theme in the presence of a goal are judged as "quite marginal" rather than being sharply ungrammatical (Larson 1988) in English, like Greek:

(59)   ?*A letter was sent Mary

According to Larson, passive sentences like (59) are often judged to be better if the goal is an unstressed pronoun:

(60)   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.
    Interestingly, with the verbs of *Class II* (teach, pay, serve) theme passivization across a shifted goal is worse than, for example, with *give* and, moreover, such sentences do not improve when the goal is an unstressed pronoun (Chris Wilder, Alan Munn, Norvin Richards, Henry Davis personal communication):

(61)   a.   *The lesson was taught the children
        b.   *The lesson was taught'im

This leads to the conclusion that English also has two kinds of violations in direct passives, exactly like Greek:

Table 4: Two different kinds of violations in English direct passives

	Degree of ungrammaticality	**Improvement with weak pronouns**
Class I	?*	Yes
Class II	*	No

The fact that in English the goal and the theme have the same case morphology in both kinds of double object constructions has obscured the existence of a structural difference between the two classes. Nevertheless this structural difference exists and it has consequences for the status of theme NP-movement, exactly as in Greek.

3.5. Evidence for theme-incorporation.

In the preceding section, I have argued that in the Double Accusative construction the theme is inactive syntactically in the sense that it does not enter into feature checking operations and I have offered some evidence that it doesn't have inherent Case. In this section, I will present evidence for an analysis in terms of theme incorporation.

The first piece of evidence comes from the fact that the goal may surface as a sole complement with verbs forming the Double Accusative construction, a property that has been treated in terms of theme-incorporation in section 2.2:

(62)   didhasko ta pedhia, serviro ton pelati, plirono ton ipallilo
        I teach the children, I serve the client, I pay the employee

Moreover, there are cases of overt noun-incorporation of the theme in Greek in which the goal surfaces as an accusative object and not as a PP (63b) or as a genitive DP (64b) (Rivero 1992):

(63)   a.   Dino trofima s-tus ftoxous
              Give-I food(Acc) to-the poor
              "I give food to the poor"
        b.   Trof-o-doto tus ftoxus/*stus ftoxous
              Food-give-I the poor(Acc)/to-the poor
              "I give food to the poor"
(64)   a.   Dino tis Marias xrimata
              Give-I the Mary(Gen) money(Acc)
              "I give Mary money"
        b.   Xrimat-o-doto tin Maria/*tis Marias
              Food-give-I the Mary(Gen)/to-the Mary
              "I give food to Mary"

These examples constitute evidence that theme-incorporation takes place in the Double Accusative construction and not in the PP- or the Genitive-construction.

Finally, there are certain restrictions in the form of theme arguments in the Double Accusative construction that can be taken to support the view that they are either licensed via *Noun Reanalysis* (Baker 1988) or as adjuncts to a null incorporating theme (see the discussion in section 2.2). As pointed out by Anagnostopoulou (1999b), in the Double Accusative construction, the theme tends to be bare or indefinite. Definite themes are only marginally acceptable and they seem to improve when they are heavy. The definiteness restriction on themes is illustrated in (65) and the heaviness restriction in (66):

(65)   a.   Didaksa ta pedhia ena mathima/mathimatika/??to mathima
              Taught-I the children(Acc) a lesson(Acc)/ mathematics(Acc)/ the
              lesson(Acc)
              "I taught the children a lesson /mathematics /the lesson"
        b.   Servira ton pelati kafe/enan kafe/??ton kafe
              Served-I the customer(Acc) coffee(Acc)/ a coffee (Acc) /??the coffee(Acc)
              "I served the customer coffee/ a coffee/ the coffee/"
(66)   a.   Didaksa ta pedhia ??to mathima/to mathima ton mathimatikon
              Taught-I the children the lesson(Acc)/the lesson of mathematics(Acc)
              "I taught the children the lesson/the lesson of mathematics"
        b.   Servira ton pelati ??ton kafe/ton kafe pu zitise
              Served-I the customer(Acc) the coffee(Acc)/the coffee (acc) he asked for
              "I served the customer the coffee/the coffee he asked for"

Assuming that only defective objects may undergo Noun Incorporation (Safir 1995, Delfitto and D'Hulst 1995, Anagnostopoulou & Everaert 1999) and that indefinite/bare DPs qualify as being defective in the relevant sense, the definiteness restriction in (65) can be viewed as evidence that in these constructions the theme is overt and is licensed by covert Noun Incorporation (what Baker 1988 calls "Noun Reanalysis").[17] As for the heaviness restriction in (66), this can be accounted for if it is assumed that the definite DP themes in these examples are adjuncts modifying a null theme and must therefore have rich descriptive content.

4. Summary

Summarizing the claims and the proposals made in this paper, the claims were that there are two classes of double object verbs (*Class I, Class II*) realized in two different syntactic structures. The similarities and differences between the two classes are summarized in the table below:

Table 5: Properties of the two Classes

| Similarities:	CLASS I	CLASS II
1. Theta roles: Goal/ Theme	Yes	Yes
2. Dative alternation	Yes	Yes
3. Goal higher than Theme	Yes	Yes
Differences:		
1. Derivational Processes (adjectival passives, nominalizations)	No	Yes
2. Morphological dative for Goal possible (depends on language)	Yes	No
3. Goal and Theme can be attracted (Case, EPP)	Yes	no (only Goal)
4. Theme can be implicit	no (*modulo lexical properties: write*)	Yes
5. Theme can be implicit only when Goal is a DP	No	Yes
6. Class Membership	Many verbs	A few verbs

The differences 1-5 listed in the table have been directly or indirectly linked to the presence of a zero light verb introducing the Goal argument in *Class I* but not in *Class II*. Specifically, it has been proposed that the presence of a zero head blocks further derivation in *Class I*. No zero head is present in *Class II* and therefore, further derivation is possible. This accounts for the first difference between the two constructions. The second difference is also directly linked to the presence or absence of vAPPL. It has been proposed that vAPPL may have morphological dative or genitive case, a property that is open to parametric variation. In languages with a dative vAPPL, the goal has dative/genitive case when vAPPL is present. This happens with verbs of *Class I*. When vAPPL is absent, there is no source for dative case and, therefore, the

---

[17] Note that the definiteness restriction on themes in the Double Accusative construction cannot be attributed to inherent case as proposed by Belletti (1988), de Hoop (1992) and Lasnik (1995), for the reason discussed in the previous section.

goal surfaces with accusative. Turning to the third difference, again this has been linked to the presence of vAPPL which adds a functional head in the structure. When vAPPL is present (*Class I*), each one of the three arguments (subject, goal, theme) is checked against each one of the three heads (T, vCAUS, vAPPL). When vAPPL is absent (*Class II*) only two of the three arguments (subject, goal) are checked against the two heads (T, vCAUS) present in the structure. The fourth difference is directly linked to the third one and has to do with the way in which the theme is licensed when vAPPL is absent. Following Baker (1988, 1996), I have proposed that when only two checking heads are available, the theme must be licensed by incorporation, leading to constructions in which the theme systematically remains implicit with *Class II* verbs. The theme may also remain implicit with certain *Class I* verbs (e.g. "write"), but this property is not systematic. The fifth difference relates to the configuration in which theme incorporation/conflation may take place which following Baker (1988) and Hale & Keyser (1993) I take to be the head-complement relation. This predicts that with verbs of *Class II,* the theme cannot remain implicit when the goal is a PP because it is a specifier and not a complement of V. The fact that with the *Class I* verbs that permit implicit themes (e.g. "write") there is no comparable sensitivity to the realization of goals (the theme may remain implicit when the goal is a DP or a PP) points to the conclusion that this kind of "theme-deletion" is not a case on theme-incorporation. The sixth difference between the two classes remains to be addressed. Some remarks concerning this difference will be included in the next section.

5. Some Speculations

In the previous sections, I argued that there are two underlying structures for double object constructions attested within the same language, as shown by English and Greek:

(67)   a.   vP   b.   VP

   Goal   X'   **Goal**   V'

        vAPPL   VP   V   **Theme**
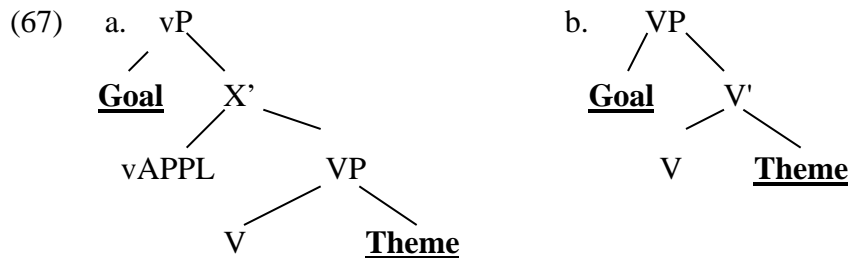
              V   **Theme**

Informally speaking, the meaning attached to the two structures can be described as follows:

Structure (67a) embedded under vCAUS means *Cause x (the goal) to be affected by an event (described by the main verb) affecting y (the theme)* (Marantz 1993).

On the other hand, we can assume following Hale & Keyser (1993) that (67b) embedded under vCAUS means *Provide the goal with the theme* or *Cause x (the goal) to have y (the theme).*

It seems to me that under these interpretations both representations may capture a well-known semantic property of double object constructions, as opposed to their corresponding PP-constructions, first observed in Green (1974) and Oehrle (1976):

Class I verbs

(68)   a.   Ann threw the ball to Beth   *does not entail that Beth got the ball*
        b.   Ann threw Beth the ball   *entails that Beth got the ball*

(*Indirectly:* If Beth is affected by an event of ball-throwing, then Beth got the ball)

Class II verbs

(69)   a.   Beth taught French to the students *does not entail that the students learned French*
        b.   Beth taught the students French   *entails that the students learned French*

(*Directly:* There is a *WITH* or *HAVE* in the representation, i.e. Beth caused the children to acquire French).

    The empirical question that arises is whether we can find evidence in favor of (67a) or (67b) for a double object construction formed with a particular verb. I suggested some criteria in favor of the one or the other structure including formation of adjectival passives, nominalizations, type of (morphological) case and (Abstract) Case on the two arguments etc. The presence of an overt applicative morpheme would be another criterion, in particular it would be evidence for (67a).

    The more general and more interesting question that arises is what determines the choice of structure (67a) over (67b). Here are some possibilities one might consider:
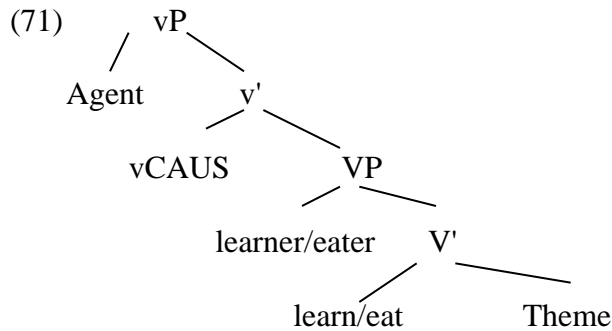
    a) The two structures relate goal arguments to theme arguments in particular ways and both are legitimate from the point of view of linking Principles of UG. It is conceivable that a language has (67a) only or (67b) only, as a lexical Parameter. For instance, it could be proposed that a language x does not have vAPPL in its Lexicon. If such a language has a double object construction, then this must be of type (67b). For instance, Baker (1996) argues that in Mohawk the goal behaves syntactically as a direct object always while the theme is always licensed by Noun Incorporation. If he is right (but see Romero & Ormazabal 1999 for an alternative), then Mohawk is presumably a language with (67b) only. Bantu languages, on the other hand, are said to always have an applicative head introducing the goal, benefactor etc. Such languages then always go for (67a).

    b) As has been extensively argued for, Greek and English have (67a) for most verbs. Only a few verbs permit (67b) and, strikingly, the verbs falling under *Class II* are identical in both languages.[18] What is the property that distinguishes these verbs from all other double object verbs? If we limit ourselves to *teach* and *feed*, we see that they relate to *learn* and *eat* by being their causative variants:

(70)   *teach (goal theme)*   *cause x(goal) to learn y (theme)*
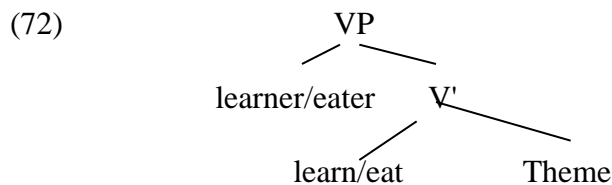   *feed (goal theme)*   *cause x(goal) to eat y(theme)*

---

[18] As has been pointed out in fn 11, in Greek these verbs also form the Genitive Construction, i.e. they are lexically ambiguous (see Anagnostopoulou 1999b for the data). Only *taizo* "feed" is unambiguously a double accusative verb, and "feed" can be said to be the prototypical causative verb of ingesting (see below). Interestingly, in English as well "feed" does not form an adjectival passive with theme-externalization (Levin & Rappaport 1986) which I assume is based on the PP-construction (see

Learn and *eat* are grouped together in Levin (1993: 213) as falling under the class of *verbs of Ingesting: learn* describes *acquisition of information,* which may be viewed as a type of ingesting. *Teach* and *feed* are plausibly their causative variants. So (67b) could be understood as in (71):[19]

(71)

```
            vP
          /    \
     Agent      v'
              /    \
          vCAUS     VP
                   /    \
          learner/eater   V'
                         /    \
                   learn/eat    Theme
```

By extension, *serve* and *pay* could be viewed as the causative variants of verbs of ingesting broadly viewed as acquisition of food/drinks or money. Languages might differ in the precise number of verbs that they treat as "verbs of ingesting".

   Note that in a representation like (71) "learn" and "eat" have the underlying structure of an unaccusative verb and not an unergative verb, i.e. when an external agent is missing what remains is (72):

(72)

```
                    VP
                  /    \
         learner/eater   V'
                        /    \
                  learn/eat    Theme
```

This might explain why in some languages (e.g. Greek (73) or Hebrew (Arad 1998)) these verbs form adjectival passives with "agent" externalization:

(73) a.   O Petros ine fagomenos
            The Peter is eaten
            "Peter has eaten (completely)"
      b.   O Petros ine diavasmenos/ meletimenos
            The Peter is read/ studied
            "Peter has read/ studied (completely)"

In such an analysis, the person that learns or eats is interpreted as an agent when an external causer is absent (72) and as a goal when an external causer is present (71). In other words, the interpretation of an argument as a goal or an agent depends on the presence or the absence of a higher agent. Borrowing the term from Marantz (1991), I will characterize the goal role in these examples as a "dependent role downwards", i.e. an argument is interpreted as a goal when there is a higher agent present; otherwise it is interpreted as an agent. In terms of the notions of "internal causation" and "external causation" (Levin & Rappaport 1995), when an external causer is present, the argument that eats and learns (that could be construed as an internal causer) is interpreted as a

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[19]Note that "learn" and "eat" have the property of permitting the "unspecified object alternation" (i.e. the

goal, while when an external causer is absent, the same argument is interpreted as an internal causer.

Before concluding, I would like to point out that this conception of goals as "dependent roles downwards" is not limited to these verbs. As has been pointed out by Everaert (1990) and Baker (1993), in a number of languages the double object construction is possible in passives but not in unaccusatives. English is such a language (Levin 1993):

(74)   a.   Mary was given the book   *indirect passive: grammatical*
          b.   ?*The book was given Mary *direct passive: mildly ungrammatical*
          c.   The book was given to Mary *passive with PP goal: grammatical*
(75)   a.   Mary passed the ring   *"Mary" can't be goal only agent*
          b.   **The ring passed Mary   *strongly ungrammatical*
          c.   The ring passed to Mary   *unaccusative with PP goal: grammatical*

While passives based on the double object construction are either completely wellformed (74a) or mildly ungrammatical (74b), unaccusatives based on the double object construction are absolutely impossible. When the theme undergoes NP-movement in the presence of a DP goal, the result is a strongly ungrammatical sentence as in (75b). An attempted NP-movement of a goal as in (75a) fails as well: *Mary* is interpreted as an agent, not as a goal. The difference between passives and unaccusatives is that in the former, an implicit agent is present while in the latter an agent is truly absent. As in (71) and (72), the contrast between (74) and (75) shows that a DP can be interpreted as a goal, only when an agent is present.[20]

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[20] The restriction found in English unaccusatives is not universal. As extensively discussed in Anagnostopoulou (1999b), unaccusatives based on the double object construction in Greek are well-formed, provided that the goal undergoes clitic doubling for reasons having to do with Locality (see the discussion of (51) and (52) above). The property that differentiates Greek from English is that in Greek vAPPL is associated with morphological genitive case, while this is not the case in English. Romero & Ormazabal (1999) have made the more general point that languages with a two-way case/agreement system have unaccusatives that do not license the double object construction while languages with a three-way case/agreement system have unaccusatives that license the double object construction. In the former group of languages, unaccusatives differ from passives in permitting neither NP-movement of the goal nor NP-movement of the theme, thus being necessarily related to the PP construction. In the latter group of languages, unaccusatives behave syntactically like passives. English is a language with a two-way case/agreement system, and unaccusatives do not pattern with passives. On the other hand, Greek is a language with a three-way case/agreement system and unaccusatives behave syntactically exactly like passives. It appears that in languages where vCAUS and vAPPL are identical, when vCAUS is truly without an external argument as in unaccusatives, vAPPL cannot be merged at all, presumably because it cannot have an external argument either. In other words, it looks as if vAPPL can be licensed only when vCAUS has an external argument, i.e. that the goal/experiencer roles are "dependent roles downwards" in these constructions as well. Apparently, in languages like Greek where goals have morphological case the presence of morphological theta-related case is sufficient to license the goal role, irrespective of whether there is an agent or not.

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