LOOSE MULTI-WORD COMPOUNDS AND NOUN CONSTRUCTS

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Abstract

In this paper I deal with certain structures in Modern Greek, which are at the boundary between morphology and syntax. In particular, I examine the so-called *loose multi-word compounds* and *noun constructs* showing that they have a number of morphological and syntactic properties that differentiate them from both common noun phrases and typical one-word compounds. I argue that both constructions are kinds of phrasal compounds, and place them in a continuum, where there is no sharp distinction between morphology and syntax.

Key-words: one-word compounds, loose multi-word compounds, noun constructs, noun phrases

1. Structures between Morphology and Syntax

Modern Greek has a category of *multi-word constructions* that behave similarly to typical one-word compounds in certain respects, but also bear features that belong to syntactic formations (noun phrases). Structurally, they contain an adjective and a noun (1) or two nouns, the second being in genitive case (2):[1]

> (1)
>
> > [A N]
> > psixros polemos[2]
> > 'cold war'

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[1] The Greek data is based on a corpus of 226 structures, which has been built for the needs of my M.A. dissertation (Koliopoulou 2006). About half of the structures were found while studying the relative bibliography (Anastassiadi - Symeonidi 1986, Nakas & Gavriilidou 2005, Ralli 1991, 2005, 2007, Ralli & Stavrou 1998). The other half was collected from daily newspapers of the period January - March 2006.

[2] All examples are given in a broad phonological transcription. Stress is noted only if necessary for my argumentation.

tritos kosmos
'third world'
δimosios ipalilos
'civil servant'

(2)

[N N$_{GEN}$]
arma maxis
lit. chariot.NOM.SG battle.GEN.SG
'tank'
zoni asfalias
lit. belt.NOM.SG safety.GEN.SG
'safety belt'
ikos anoxis
lit. house.NOM.SG tolerance.GEN.SG
'brothel'

According to Anastasiadi-Symeonidi (1986), Ralli (1991, 1992, 2007), and Ralli & Stavrou (1998) these multi-word constructions are characterized by the following properties:

•   They consist of two independent words, and two phonological words (they have two stresses, see (3a) and (4a)). They differ from one-word compounds, which have one single stress; their first constituent is a stem, and they bear a compound marker[3] between their two constituents (3b, 4b):

(3)

a. [A N] multi-word construction
   eθnikí oδós
   'national road'
b. [A N] one-word compound
   mavr-o-pínakas[4]
   Stem-CM-Word
   'blackboard'

(4)

a. [N N$_{GEN}$] multi-word construction
   aγorá erγasías
   lit. market.NOM.SG job.GEN.SG
   'job market'

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[3] CM stands for 'compound marker' (known also as linking element). A compound marker has the form of the vowel /o/ (see Ralli 2008 for more details).

[4] Hyphens are noted in order to make clear the position of the compound marker. Hyphens also appear in order to separate derivation from inflectional suffixes.

b. [N N] one-word compound
   erɣasi-o-θerapía
   Stem-CM-Word
   lit. job-therapy
   'ergotherapy'

- [A N] formations contain two inflected words, which agree in gender, case and number (5a), as is the case with the corresponding noun phrases (5b). Case marking triggered by the head noun is also observed in [N N_{GEN}] structures, where the second (non-head) noun appears in genitive case (6a):

(5)
   a. [A N] multi-world construction   vs. b. [A N] noun phrase
      aɣripno vlema   xazo vlema
      sleepless.NOM.SG look.NOM.SG   stupid.NOM.SG look.NOM.SG

(6)
   a. [N N_{GEN}] multi-word construction   vs. b. [N N_{GEN}] noun phrase
      sxeδio δrasis   sxeδio ktiriu
      plan.NOM.SG action.GEN.SG   plan.NOM.SG building.GEN.SG
      'action plan'   'plan of (a) building'

- Similarly to typical one-word compounds (7b), [A N] multi-word constructions have their head at the right-hand side (7a). However, they differ from [N N_{GEN}] formations, which are left headed (8a), like their corresponding noun phrases (8b):

(7)
   a. [A N] multi-word construction vs. b. [A N] one-word compound
      mikri oθoni   mikr-o-politis
      lit. small screen   lit. small-seller
      'television'   'pedlar'

(8)
   a. [N N_{GEN}] multi-word construction vs. b. [N N] one-word compound
      krema imeras   frut-o-krema
      lit. cream.NOM.SG day.GEN.SG   'fruit cream'
      'day cream'

- Generally, multi-word constructions are characterized by a high degree of semantic opacity (7a), which sometimes exceeds the rate of semantic opacity of certain one-word compounds (7b). As stated by Ralli (2007: 223-224), the

idiosyncratic meaning supports views in favour of the morphological nature of these constructions.

- [A N] multi-word constructions can become bases for derivational suffixation. Ralli (1991: 153-154, 2007: 232-234) mentions the formation of adjectives, like those in (9a-c), and nouns, as in (9d-e). In these examples, multi-word constructions are first transformed into one-word compounds, where the stems of the two constituents, i.e. the words stripped from their inflectional endings, are combined together with the compound marker -*o*-. Then, the new structure becomes a derived word with the addition of a derivational and an inflectional suffix:

(9)

$[A_{WORD} \ N_{WORD}]$ → $[[[A_{STEM} \ N_{STEM}] \text{ -DER] -INFL}]_{WORD}$

a. psixros polemos → $[[[psixr\text{-}o\text{-}polem]_N–ik]_A–os]_A$
   'cold war'   'cold-war like'
b. tritos kosmos → $[[[trit\text{-}o\text{-}kosm]_N–ik]_A–os]_A$
   'third world'   'third-world like'
c. δimosios ipalilos → $[[[δimosi\text{-}o\text{-}ipalil]_N–ik]_A–os]_A$
   'civil servant'   'civil-servant like'
d. elefθero epagelma → $[[[elefθer\text{-}o\text{-}epagelmat]_N–ia]_N–s]_N$
   'free profession'   'free-lance'
e. mavri aγora → $[[[mavr\text{-}aγor]_N–iti]_N–s]_N$
   'black market'   'black-marketer'

Note that only [A N] multi-word formations can be subject to derivational suffixation, while the [N N$_{GEN}$] ones do not undergo this process. I believe that [N N$_{GEN}$] constructions cannot become bases to suffixation because they are left-headed, and in morphologically complex structures, suffixes are usually added to heads when the latter are at the right periphery of these structures.

2. Previous analyses

In order to determine the exact character of multi-word constructions, several authors, (see, among them, Anastasiadi-Symeonidi 1986, Ralli 1991, 1992, 2007, Ralli & Stavrou 1998) have applied a number of tests to their internal structure. These tests refer to (a) the impossibility of a non-head to be independently qualified (10a, 11a), (b) the non-insertion of an element between the constituents (10b, 11b), (c) the impossibility to reverse the order of the components (10c, 11c), and (d) the impossibility of doubling the definite article of the construction in [A N] formations (10d). [N N$_{GEN}$] structures are also tested with respect to the possibility of a co-reference relation between the non-head and another element (11d). Examples illustrating these tests are given below:

(10)

    [A N] multi-word construction   vs.   [A N] noun phrase

      eθniki oδos   eθniki iperifania
      'national road'   'national pride'
  a. *iδietera eθniki oδos   a. iδieteri eθniki iperifania
  'especially national road'   'special national pride'
  b. *eθniki ke kratiki oδos   b. eθniki ke politizmiki iperifania
  'national and state road'   'national and cultural pride'
  c. *oδos eθniki   c. iperifania eθniki
  'road national'   'pride national'
  d. *i eθniki i oδos   d. i eθniki i iperifania
  'the national the road'   'the national the pride'

(11)

    [N N$_{\text{GEN}}$] multi-word construction vs. [N N$_{\text{GEN}}$] noun phrase

  aγora erγasias   anazitisi erγasias
  market.NOM.SG job.GEN.SG   search.NOM.SG job.GEN.SG
  'job market'   'search of a job'
  a. *aγora monimis erγasias   a. anazitisi monimis erγasias
  lit. market permanent.GEN.SG job   search permanent.GEN.SG job
  'market of a permanent job'   'search of a permanent job'
  b. *aγora erγasias ke apasxolisis   b. anazitisi erγasias i apasxolisis
  lit. market job and occupation.GEN.SG search job or occupation.GEN.SG
  'market of a job or occupation'   'search of a job or occupation'
  c. *erγasias aγora   c. erγasias anazitisi
  lit. job.GEN.SG market.NOM.SG   job.GEN.SG search.NOM.SG
  'market of a job'   'search of a job'
  d. *aγora erγasias$_t$, tin opia$_t$ …   d. anazitisi erγasias$_t$, tin opia$_t$ …
  lit. market job$_t$ that$_t$ …   search job$_t$ that$_t$ …
 'market of a job that...'   'search of a job that...'

    All these tests support the view that multi-word constructions behave like morphological objects, and could be treated as compounds. However, they should be distinguished from typical one-word compounds because they also display certain syntactic properties, as seen in the previous section. In particular, Ralli (1991: 139-140, 2007: 231-240) has argued in favour of their compound status, but treats them as kinds of *loose multi-word compounds*, in the sense that they display compound-like properties, but their internal structure is not entirely invisible to syntactic operations. In order to explain their peculiar behaviour, which makes them different from both typical one-word compounds and ordinary noun phrases, Ralli (1991)

adopted Borer's (1988: 60-62) approach of morphology being parallel to syntax, according to which, Greek loose multi-word compounds are created at a lower level of morphology, which interacts with the surface structure of syntax, while one-word compounds are built at the upper level of morphology, which has no access to syntax. This proposal can be schematized as follows:

(12)

GRAMMAR

MORPHOLOGY	SYNTAX
one-word compounds	phrases
loose multi-word compounds ⇄	syntactic structures
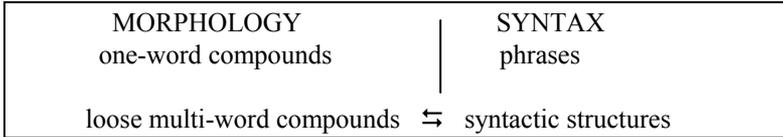
In addition, Ralli (1992, 2007) has proposed that the pattern which accounts for both the analysis and generation of these constructions is the following:

(13)

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          Word (psixros polemos, zoni asfalias)
           /        \
        Word       Word
          |           |
        psixros   polemos 'cold war'
        zoni        asfalias 'safety belt'
```
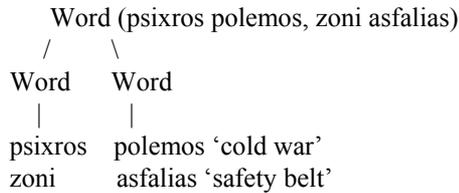
This pattern represents the fact that the constructions under examination contain two fully inflected words. It differs from the word-formation patterns generating one-word compounds, which combine a stem with a word (14a), or a stem with another stem (14b), as in the following examples:

(14)

a. elaf-o-kiniγós 'deer hunter'   b. mer-ó-nixto 'day-night'

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      Word                               Word
      /  \                               /  \
   Stem   Word                        Stem   Infl
    |     /  \                         /  \    o
  elaf  Stem  Infl                  Stem   Stem
          |    |                      |      |
        kiniγ  ós                    mer    nixt⁵
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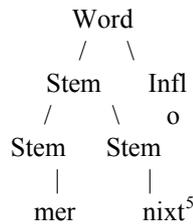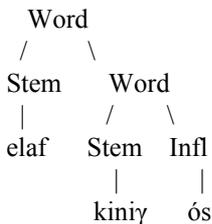
[5] The stem *nixt* 'night' appears as *nixta* when it is used as an autonomous word.

The difference between the two structures in (14) is justified by the position of the stress and the form of the inflectional ending. As proposed by Nespor and Ralli (1996), [stem word] structures preserve both the stress and the inflectional ending of the second component, i.e. the word, while [stem stem] ones may display a different ending and a different stress position from those of the second constituent, when occurring as autonomous words.

3. Word constructs

Beside the *loose multi-word compounds*, there is another type of noun formations consisting of two inflected nouns, usually of the same case that display a peculiar behavior compared to ordinary noun phrases, and at the same time share a number of features with one-word compounds. This type of formations involves *attributive* (15) and *appositive structures* (16). The latter are those which, in other European languages, are often considered as coordinative compounds (see, among others, Olsen 2001, Bisetto & Scalise 2005):

(15)
  [N N] attributive structures
  nomos plesio
  'law-frame'
  peδi thavma
  lit. child miracle
  'prodigy child'

(16)
  [N N] appositive structures
  metafrastis δiermineas
  'translator-interpreter'
  iθopios traγuδistis
  'actor-singer'

In the *attributive structures* of (15), the head appears at the left-hand side, as is the case for the [N N$_{GEN}$] *loose multi-word compounds*. In the *appositive structures* of (16), headedness is not a clear issue from a formal point of view, as is the case for coordinative one-word compounds, since both constituents share the same properties.

Although these formations combine two fully inflected nouns (and two phonological words), they display a certain degree of morphological autonomy, like *loose multi-word compounds*, which is verified by the application of a number of tests (Ralli 2007: 248-249). For instance, it is impossible for the non-head to appear

with a qualifier (17), or be a co-referential element (18). It is also impossible to insert an element between the two constituents (19):

(17)
a. anθropos fadasma   vs.   *<u>anθropos</u> meγalo <u>fadasma</u>
    lit. man ghost   lit. man big ghost
    'ghost man'
b. iθopios traγuδistis   vs.   *<u>iθopios</u> kalos <u>traγuδistis</u>
    'actor singer'   lit. <u>actor</u> good <u>singer</u>

(18)
a. anθropos araxni
    lit. man spider
    'spider man'
b. *δjavase to vivlio ja ton anθropo araxni$_t$ [i opia]$_t$ ton tromakse
    lit. (s)he read the book about the man.ACC.SG
    spider.ACC.SG$_t$,   which$_t$ scared him
c. iθopios traγuδistis
    'actor singer'
d. *sinandise ton iθopio traγuδisti$_t$ [o opios]$_t$ traγuδuse jazz
    lit. (s)he met the actor.ACC.SG   singer.ACC.SG$_t$, who$_t$ sang jazz

(19)
a. leksi kliδi
    lit. word key
    'key word'
b. *i leksi, opos fenete, kliδi tis ipoθesis ine...
    lit. the word.NOM.SG, as it seems, key.NOM.SG of the case is …
c. arxitektonas arxeoloγos
    'architect archaeologist'
d. *o arxitektonas, opos vlepete, arxeoloγos ine …
    lit. the architect.NOM.SG, as you see, archaeologist.NOM.SG is…

However, as Ralli has observed (2007: 249-251), they also differ from *loose multi-word compounds* (22) in that they display more syntactic properties than the latter. For instance, in certain *attributive structures* an inversion of the two constituents is possible (20), exactly like in the corresponding noun phrases (21):

(20)
a. eteria maimu   vs.   maimu eteria
    lit. company-monkey   vs.   lit. monkey company
b. xora fili   vs.   fili xora
    lit. country-friend   vs.   lit. friend country

(21)   (22)
a. [N N_{GEN}] noun phrase   a. [N N_{GEN}] loose multi-word compound

aroma γinekas   krema imeras
lit.smell.NOM.SGwoman.GEN.SG lit. cream.NOM.SG day.GEN.SG
'smell of woman'   'day cream'
                              vs.
b.   b.
γinekas aroma   *imeras krema
lit.woman.GEN.SG smell.NOM.SG lit. day.GEN.SG cream.NOM.SG

Moreover, the inflection of the non-head may display a certain degree of autonomy, in that it may vary, depending on the syntactic environment, as in (23), and may not agree with that of the head:

(23)
   a. θesi kliδi
      lit. position.NOM.SG key.NOM.SG
      'key-position'
   b. θesis kliδia
      lit. position.NOM.PL key.NOM.PL
   c. θesis kliδi
      lit. position.GEN.SG key.NOM.SG
   d. θeseon kliδi
      lit. position.GEN.PL key.NOM.SG
   e. θeseon kliδia
      lit. position.GEN.PL key.NOM.PL
            but
   f. *θesis kliδiou
      lit. position.GEN.SG key.GEN.SG
   g. *θeseon kliδion
      lit. position.GEN.PL key.GEN.PL

For all these reasons, Ralli (2007) distinguishes these formations from *loose multi-word compounds*, and treats them, as a special category of noun phrases, which, according to her analysis, belong to syntax. She calls them *word constructs*. In addition, she points out that nowadays, the frequency of their use in scientific terminology, due to an extensive borrowing from other European languages, has strengthened the degree of their internal cohesion, to such an extent that they look like *loose multi-word compounds*. She also suggests that they are under the process

of desyntacticization (Joseph 2003: 473), which in her terms means that they progressively pass from the status of noun phrases to that of morphological objects.[6]

In fact, this observation may be justified by a small number of this type of formations, which seem to have their constituents in a more tied relation than others. For instance, the example *nomos plesio* 'law frame' responds negatively to most of the tests that could motivate a syntactic structure. As illustrated with this particular example (24), (a) the non-head (second constituent) cannot be qualified independently, (b) no element can be inserted between the two constituents, (c) a reversed order is impossible, and (d) a change of the inflectional features of the non-head is not allowed.

(24)

      nomos plesio
      lit. law.NOM.SG frame.NOM.SG

  a. *nomos megalo plesio
     lit. law big frame
  b. *o nomos, opos gnorizete, plesio
     lit. the law, as (you) know, frame
  c. *plesio nomos
     lit. frame law
  d. ?nomi plesia
     lit. law.NOM.PL frame.NOM.PL
     nomu plesiu
     lit. law.GEN.SG frame.GEN.SG
    *nomon plesion
     lit. law.GEN.PL frame.GEN.PL

Thus, there are reasons to suggest that this particular example shows that noun constructs tend to lose their syntactic status as ordinary noun phrases.

A question that arises now with respect to *word constructs* is how they can be accounted for. They are neither *loose multi-word compounds* nor ordinary noun phrases, but structures situated in between. The adoption of a compound-formation pattern, like the one which has been proposed by Ralli (2007) for *loose multi-word compounds*, i.e. [Word Word]$_{Word}$, is not sufficient, since it cannot account for the differences between the two kinds of structures.

Crucially, both categories, that is, *loose multi-word compounds* and *word constructs*, are exempted from the Lexical Integrity principle (Anderson 1992, Booij 2009a), which does not allow syntax to have access to the internal structure of

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[6] These structures may confirm Dahl's (2004) hypothesis that compounds rise from phrasal structures.

words, since their internal constituents are inflected, and their structures are subject to agreement or case assignment, depending on the case. Thus, I would like to propose, following Booij (2009b), that they can be analyzed in a phrasal way, but in a different manner from that of ordinary noun phrases. According to this proposal, *loose multi-word compound*s may be considered as a type of phrasal compounds of the structure $[X^0 \ Z^0]_{X0/Z0}$, that is, a type of words built within syntax. As opposed to them, word constructs can be analyzed as specific syntactic constructions of the structure $[N^0 \ N^0]_{N'}$, which involve two words that cannot be maximally projected.[7]

Moreover, within a different spirit from that of parallel morphology and syntax (see section 2), and in accordance with Ralli (2007: 245-246), I would like to suggest that one-word compounds, *loose multi-word compounds* and *word constructs* may be considered to belong to a morphological continuum, in Bybee's (1985) terms, where morphology precedes syntax, but the two components are not sharply distinguished. In this continuum, not only the syntactic characteristics of *loose multi-word compounds* but also the morphological features of *noun constructs*, which are situated between *loose multi-word compounds* and ordinary noun phrases, may be accounted for. The following schema represents the idea of the existence of the particular continuum, where *loose multi-word compounds* are situated closer to morphology than any other phrasal structure, and *word constructs* are placed between *loose multi-word compounds* and ordinary noun phrases:

(25)

MORPHOLOGY
one-word compounds

SYNTAX
loose multi word compounds
noun constructs
noun phrases

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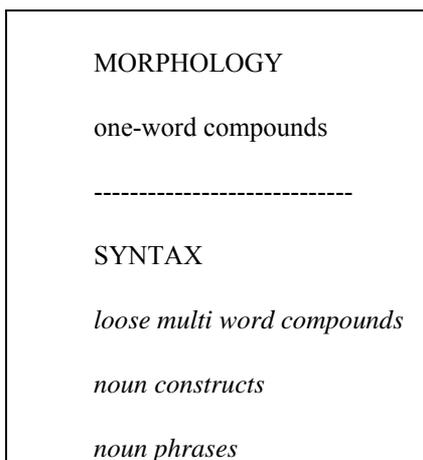
[7] Following also Booij (2005a,b, 2009a,b,c), both types of constructions could be analyzed within a Construction-Morphology framework, which is part of the general model of Construction Grammar, and can account for cases at the border of morphology and syntax (Koliopoulou 2006, 2008), like those examined in this paper.

4. Concluding remarks

In this paper, I have dealt with two kinds of special nominal constructions in Modern Greek, *loose multi-word compounds* and *word constructs*, which display a number of morphological properties that differentiate them from ordinary noun phrases. With the help of a number of tests, I showed the peculiar character of their structure, and demonstrated that *loose multi-word compounds* are closer to one-word compounds, while *noun constructs* are closer to noun phrases. I suggested that *loose multi-word compounds* are kinds of phrasal compounds, of the X^0 type, while *noun constructs* belong to the X´ one. Finally, I adopted the idea of the existence of a continuum between morphology and syntax, where *loose multi-word compounds* are closer to morphology than any other phrasal structure.

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Περίληψη

Σ' αυτό το άρθρο μελετώνται δομές της Νέας Ελληνικής, οι οποίες βρίσκονται στα όρια μεταξύ μορφολογίας και σύνταξης. Συγκεκριμένα εξετάζονται τα χαλαρά πολυλεκτικά σύνθετα και οι ονοματικές δομές και διαπιστώνεται ότι παρουσιάζουν μορφολογικές αλλά και συντακτικές ιδιότητες. Επομένως, διαφοροποιούνται τόσο από τις κοινές ονοματικές φράσεις, όσο και από τα μονολεκτικά σύνθετα. Υποστηρίζεται ότι οι υπό εξέταση δομές ανήκουν στα φραστικά σύνθετα και εντάσσονται σε ένα συνεχές, στο οποίο δεν ορίζεται σαφής διάκριση μεταξύ μορφολογίας και σύνταξης.

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