

A CORPUS STUDY OF GREEK BARE SINGULARS: IMPLICATIONS FOR AN ANALYSIS

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RESUMO

Neste artigo apresentamos os resultados de um estudo de corpus sobre o singular nu no grego. Este estudo disponibiliza pela primeira vez dados de corpus que inclui todo o conjunto de verbos que têm sido apontados como permitindo o nominal singular contável nu (BSCNs) em grego. Primeiro, discutimos duas das classes de verbo que permitem o BSCNs, verbos de criação e construções existenciais. Em seguida, argumentamos que BSCNs não são neutros para número e que eles parecem ter um estatuto argumental, nos levando então a argumentar que uma análise de pseudoincorporação “estrita” à La Espinal & McNally (2011), por exemplo, não encontra apoio no grego. Nossos dados e análise parecem indicar que um tipo de pseudoincorporação “liberal” no sentido de Dayal (2011) poderia fornecer uma análise para o grego.

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ABSTRACT

In this paper we present results of a corpus study on Greek bare singulars. This study made corpus data for the first time available for the whole set of verbs that have been claimed to allow for bare singular count nouns (BSCNs) in Greek. First we discuss two of the classes of verbs that allow BSCNs, creation verbs and existential constructions. Then we argue that BSCNs are not number neutral and that they seem to have an argumental status, thus leading us to argue that a “strict” pseudoincorporation analysis à la Espinal & McNally (2011) for instance is not supported for Greek. Our data and analysis seem to indicate that a “liberal” kind of pseudoincorporation in the sense of Dayal (2011) could provide an analysis for Greek.

PALAVRAS-CHAVE

Estudo de corpus. Grego. Nome singular contável. Referencialidade.

KEY WORDS

Bare singular count nouns. Corpus study. Greek. Referentiality.

Introduction

Languages that allow for bare singular count nouns (BSCNs) in the object position have given rise to different proposals in the semantic literature (Borthen 2003; Farkas & de Swart 2003; Espinal & McNally 2011; Dayal 2011), the majority of which embrace semantic incorporation.² A first step towards an analysis has often been identifying the class(es) of

² There are at least two different ways to define incorporation. The first one corresponds to what could be called syntactic or Noun Incorporation, which is based on morphological and syntactic evidence, as exemplified for instance in Mohawk (Baker 1988) or in the example below in Inuit (van Geenhoven 1998):

i. arnajaraq eqalut-tur-p-u-q
 Arnajaraq.ABS salmon-eat-IND-[-tr]-3SG
 ‘Arnajaraq ate salmon.’

The second one involves what can be called semantic incorporation, which is identified indirectly on the basis of semantic characteristics. The second one is the one that interests us in this paper.

verbs that license bare nominals. These verbs seem to form a spectrum, from which each language slices its own portion. In this paper we offer data from corpora that inform the theoretical decisions to be made.

In particular, in Greek, the language under study here, the scarcity of “real” data has led us to conduct a corpus study in order to bring fresh data into the ongoing discussion. This is in line with a recent change in perspective (see e.g. the discussion in Gilquin & Gries 2009), that recognizes that informally collected linguistic acceptability judgments are not the only data that would qualify as linguistic data, because a multitude of factors might influence them (Schütze 1996). Thus, corpus data should be made available as well and be treated as equally important.

Greek is a language that has both definite and indefinite determiners. The definite article is present in a great variety of contexts, having one of the most expanded uses from a cross-linguistic point of view, appearing with demonstratives, possessives, generics and proper names among other contexts. As Alexiadou *et alii* (2007:64) claim, the ability of nominals to occur ‘bare’ as arguments (of verbs) is quite restricted.³

According to Chierchia’s (1998) Nominal Mapping Parameter, languages differ with respect to whether nominals are mapped directly as semantic arguments (type *e*), or semantic predicates (type $\langle e, t \rangle$). His Nominal Mapping Parameter is implemented in terms of the binary features [+/- arg] and [+/- pred] that differentiate languages: Greek has been claimed to be similar to Romance languages in exhibiting the features [-arg] [+pred] (Sioupi 2002; Lazaridou-Chatzigoga 2011). According to Chierchia, in this type of languages nouns are mapped onto predicates

³ It is important to note that the bare singular in Greek is not compatible with a kind-level predicate like *be extinct*:

#Dhinosavros ehi afanisti.

dinosaur is extinct

Generic kind-level statements are expressed with definite plurals, as below:

I dhinosavri ehun afanisti.

the dinosaurs are extinct

‘Dinosaurs are extinct.’

and since by definition predicates cannot appear in argument positions, this group of languages should disallow bare arguments. The data in Romance and Greek suggests that this prediction is not borne out and that in these languages we do find bare nominals in object position, as has been observed in the literature on Greek (Sioupi 2002, Alexopoulou & Folli 2010, Lazaridou-Chatzigoga 2011), and similarly, on Catalan and Spanish (Espinal & McNally 2011, henceforth E & M), Brazilian Portuguese (Schmitt & Munn 1999) and Romanian (Dobrovie-Sorin *et alii* 2006).

This paper presents the results of a corpus study we conducted on the Hellenic National Corpus (HNC) in order to obtain data. The study has had the following outcomes:

- a. It confirmed that Greek allows for bare nominals in the object position⁴.
- b. It made corpus data for the first time available for the whole set of verbs that allow for BSCNs in Greek.
- c. The research based on the results suggested a reconsideration of how a possible analysis of the Greek data should look like.

The structure of the paper is as follows: in section 1 we present the methodology and the results of the corpus study. Section 2 is devoted to the discussion of some of the results, focusing on a subset of the verbs found to license BSCNs. It also raises the issue of number neutrality.

⁴ Bare singulars in canonical subject position are not licit. Thus, the following is ungrammatical:

i. *Pedhi irthe.

child came

When items are stressed in contrastive focus and/or have undergone movement, as below, you can though find a bare noun in a subject position:

ii. ton exetase YATROS.

him-CL examined-3SG doctor-NOM

'A doctor examined him.'

(ex. from Kolliakou 2003)

We will show later on in this paper that in some non-canonical subject positions one can find bare nouns.

Furthermore, section 3 poses theoretical questions that arise from the discussion of the data focusing on the issue of whether Greek BSCNs are arguments and on their referential status. Finally, we present the conclusion.

1 Data collection from the Hellenic National Corpus and results

We will first discuss the methodology used in the study and then present the results, with examples of data for each verb type found to license bare singulars.

1.1 Methodology

The Hellenic National Corpus (1999, henceforth HNC) is a corpus that is tagged for parts of speech (POS-tagged). It contains data of written Modern Greek language (book, Internet, newspaper, magazine, miscellaneous) dating from 1990 onwards (47.013.924 words). It provides a query system, which helps one to make queries by selecting one to three successive words, lemmas or POS, adjusting the distance between every two of them. Additionally, it allows for selecting specific parts from the corpus and making queries in the resulting sub-corpora.

As this corpus enables making two-word/lemma/POS queries, the first parameter was set to the POS *Verb* and the second one to *Noun/common* as well as the distance between them to 0, so as to get all V+Ncommon combinations. This is the closest to the desirable V+BSCN combination that could be asked for. Due to HNC's limitation of only giving up to 2.000 hits for each query, its facility of making sub-corpora was exploited, creating as many sub-corpora as required in order to pick out every single V+ Ncommon combination. Importantly, the corpus lacks tags for Number and for the mass/count distinction. Consequently, the results contained too much pollution, such as

- (6) Kanun podhilato stin Oxford Street.
Do-3PL bicycle in.the Oxford Street
 ‘They cycle in Oxford Street.’
- (7) O alos dhyavazi efimeridha kathistos.
the other is.reading/reads-3SG newspaper seated
 ‘The other one is reading a newspaper while seating.’
- (8) Epita eghrapsa ghrama ston Ai Vasili.
then wrote-1SG letter to.the Santa Claus
 ‘Then I wrote a letter to Santa Claus.’
- (9) Ehi ghamo sto dhiplano horio.
has wedding in.the next village
 ‘There is a wedding in the next village.’

Although this set of verb classes has also been identified in Lazaridou-Chatzigoga (2011), this is the first time corpus data are available for them.⁶

2 Discussion of results

On the basis of the above results, we are going to focus on the following issues:

- a) Greek BSCNs are licit with creation verbs, as seen in example (8).
- b) Greek BSCNs are licit in existential constructions, as seen in example (9).

⁶ For the number of occurrences of one indicative verb from each verb class followed by a BSCN in the HNC, refer to Table 1 in the Appendix.

The first observation leads to a comparison of Greek with Norwegian (Borthen 2003), while the second one to a comparison with Catalan/Spanish (E & M 2011).

2.1 Creation verbs

Greek, like Norwegian (Borthen 2003), allows BSCNs with creation verbs. Borthen's examples (2003:154-155) are all in the progressive aspect, as can be seen in the English translations she provides. Here are some of them:

- (10) Hun baker kake.
she bakes cake
 'She is baking a cake.'
- (11) Kanarifuglen min bygger rede.
canary.bird-DEF mine builds nest
 'My canary bird is building a nest.'

Similarly, in the Greek sentence in (12) the verb can be translated in the progressive aspect too, although there is no aspectual marking in the verbal morphology.

- (12) Tus ftiahni dhromo.
them-CL is.constructing/constructs road
 'S/he is constructing a road for them.'

However, in Greek there is no restriction with respect to aspect when BSCNs appear with creation verbs. This is demonstrated by the following examples, where the aspect is perfective:

- (13) Ehtise erghostasio pu ihe sigekrimeni hrisi.
built-3SG-PRF factory that had-3SG specific use
 ‘S/he built a factory that had a specific use.’
- (14) Ke arghotera eghrapse vivlio me (dhithen) apokalipsis.
and later wrote-3SG-PRF book with alleged revelations
 ‘And later s/he wrote a book with some (alleged) revelations.’
- (15) To 1998 aneyira katikia.
the 1998 erected-1SG-PRF dwelling
 ‘In 1998 I erected a house.’

Judging from the aspect present in the Greek examples above, we argue that Greek BSCNs are licit with creation verbs regardless of the perfective/imperfective aspect of the verb. Initially we could argue that creation verbs take an incremental theme object, which means that the object of creation verbs does not exist when the activity of creation takes place (see also Borthen 2003; Le Bruyn 2012) and, thus the non-canonical nominal argument might be expected. Nevertheless, we see that in Greek creation verbs can also appear with BSCNs in an aspect that indicates the completion of the event the verb describes, that is, in perfective aspect. We hypothesize that creation verbs originally combined with BSCNs only in imperfective aspect, but over the time they got generalized to the perfective aspect too, starting to pattern like other V+BSCN combinations, in which the verb can freely appear in both aspects, e.g. *foresa/forusa fusta* ‘I put_(past) on/was wearing a skirt’.

Based on the small number of data that Borthen (2003) provides and the fact that her observations rely on the English translations, we can only preliminarily conclude that Greek seems to impose no restriction with respect to aspect in creation verbs and, thus, be different in this respect from Norwegian.

2.2 Existential constructions

In the corpus we find data that show that Greek existential constructions allow for BSCNs, an environment that receives special attention in the analysis of Catalan/Spanish data in E & M (2011). Specifically, in Greek we find BSCNs in two existential constructions. The first one is literally composed by the verb *ehi* ‘has’, as we saw in (9) above, repeated below as (16) for convenience:

- (16) Ehi ghamo sto dhiplano horio.
has wedding in.the next village
 ‘There is a wedding in the next village.’

Interestingly, as we see in the above example, no clitic like the Catalan *hi* (see a similar example in (17)) or expletive item like the English *there* (see translation of (17)) is present:

- (17) Avui **hi** ha casament.
today there has wedding
 ‘Today **there** is a wedding.’

(ex. from E & M 2011:121)

Moreover, these contexts provide a ground to test whether BSCNs in Greek are number neutral. Following E & M (2011) for a diagnostic of number neutrality in a language that is not like Hungarian (Farkas & de Swart 2003) - where we find predicates like the English *collect* to take BSCNs - we see that the continuation of the following discourse is unsuccessful:

- (18) Ehi ghamo sto dhiplano horio. #Enan stin eklisia ke
 enan sto dhimarhio.
has wedding in.the next village one in.the church and one in.the town.hall

‘There is a wedding in the next village. One is in the church and one in the town hall.’

It is worth noting that this is not a special feature of BSCNs in existential constructions, but a characteristic of BSCNs in Greek in general: they are not number neutral, but rather receive an atomic interpretation (cf. Alexopoulou & Folli 2010), as can also be seen in the infelicitous continuation of the discourse below:

- (19) psahno aftokinito; #ena mikro ya tin poli ki ena
 fortighaki ya ekdhromes
*am.looking.for/look.for.1SG car one small for the city and one
 van for trips*
 ‘I’m looking for a car. A small one to ride in the city and a
 big one for trips.’

(ex. from Alexopoulou & Folli 2010)

Respectively, Dayal (2011) argues that non-canonical bare singular complements in Hindi are not number neutral, which seems to be the first indication for considering a “liberal” pseudoincorporation treatment à la Dayal for BSCNs in Greek.

The second existential construction that was found to allow for BSCNs is the one formed with *iparhi* ‘exists’, as seen below (for a discussion of existentials in Greek see Koufaki 2012):

- (20) Kato apo tin skini iparh limni 400 tetraghonikon metron.
below from the stage exists lake 400 square meters
 ‘Below the stage there is a lake of 400 square meters.’

The two existential constructions in question differ as to the case the bare noun is assigned. When a bare noun appears with *ehi*, it appears

in the object position and, thus, it receives accusative case, while, when a bare noun appears with *iparhi*, it appears in the subject position and, thus, in the nominative case.⁷

To sum up, BSCNs in Greek appear in two existential constructions with different syntactic structures, that is, as objects of *ehi* ‘has’ and subjects of *iparhi* ‘exists’. Also, compared to the corresponding Catalan construction, the existential construction with the predicate *ehi* involves no clitic. Greek existential constructions seem to suggest a different syntactic analysis then, which would have implications for their semantics. Finally, BSCNs in Greek are not number neutral. All the above constitute the first piece of evidence that a “strict” pseudoincorporation like E & M’s semantic analysis of Catalan/Spanish BSCNs might not be suitable for Greek BSCNs.

2.3 Interim summary and conclusions

As the corpus study revealed, Greek displays a large set of verb classes that license BSCNs. Crucially, a considerable overlap between Greek and Catalan/Spanish verb classes is observed, including transfer, ownership, intensional, usage verbs as well as existential constructions, all subsumed by the so-called ‘HAVE’-predicate class (E & M 2011). Considering this overlap, BSCNs in Greek could be accommodated along the lines of E & M’s (2011) analysis of ‘HAVE’-predicates combining with BSCNs, and thus, be treated as an instance of pseudoincorporation (for a first discussion see Lazaridou-Chatzigoga 2011). We have already seen two barriers to this idea, i.e. that Greek existential constructions are syntactically different from Catalan/Spanish, and that BSCNs are not number neutral. In what follows we will be dealing with the argument and referential status of BSCNs in Greek in order to determine whether we could adopt a pseudoincorporation for Greek BSCNs.

⁷ For other differences that have to do with the type of existence they express, the interested reader can consult Delveroudhi (1992).

3 Argumental and referential status of Greek bare singulars

If bare singulars occupy the object position, then one would like to know whether they have argumental status or not. Pseudoincorporation analyses claim that bare nouns do not have an argumental status, but that they are rather incorporated nominals. Treating BSCNs in Greek as arguments seems to be suggested on the basis of differences between Catalan/Spanish and Greek that are observed on a wide range of contexts, that license Greek BSCNs, but not Catalan/Spanish. The contexts include the following: a) the subject position of passivized ‘HAVE’-predicates, as in (21), the controller of an implicit subject, as in (22), locative modifiers, as in (23), and the subject position of secondary predicates, as in (24). What is special about the contexts is that they allow for a bare singular, even though it seems to be in a subject position, a position, where BSCNs are in general not licit in Greek. We already saw that BSCN can appear in the subject position of the existential *iparhi*.

- (21) Htes to vradhi dhothike dheksiosi stin presvia tis
 Vulgharias.
*yesterday the evening was.given reception at.the embassy the-GEN
 Bulgaria*
 ‘Yesterday evening, there was a reception at the
 Bulgarian embassy.’
- (22) I sigenis tu Otsalan epsahnan ksenodhohio na tus
 dhehti.
*the relatives the-GEN Öcalan were.searching-3PL hotel to them
 CL accept-3SG*
 ‘Öcalan’s relatives were looking for a hotel to host them.’

- (23) To [...] aghalma [...] kratuse rodhi
the statue was.holding-3SG pomegranade sto beksi heri.
in.the right hand
 ‘The statue was holding a pomegranade on the right hand.’
- (24) Ehi mihani etimi ya olal
has motorbike ready for everything
 ‘S/he has a motorbike ready for everything!’

The above contexts show that bare singulars in Greek can function as subjects. Given that subjects are arguments, this leads us to conclude that BSCNs are to be treated as arguments.

Furthermore, we see that BSCNs can be modified by adjectives similar to the ones that can modify canonical arguments in object position, such as *anihtobromi* ‘light-colored’ in the following example (see also Alexopoulou & Folli 2010):

- (25) [...] foruse (mia, tin) anihtohromi kabardina [...]
was.wearing (a the) light-colored trench.coat
 ‘s/he was wearing a/the/a light-colored trench coat’

For a detailed discussion of what types of modifiers are acceptable with BSCNs in Greek, refer to Alexandropoulou, Schulpen & de Swart (in progress).

Incorporated nominals are claimed to be referentially weak. If we argue though for an argumental status of BSCNs in Greek, that would have the following consequence: the contents of subject positions are normally associated with a referent, so bare singulars in Greek would seem to be able to instantiate discourse referents - at least in some contexts. This is confirmed by the continuation of the discourse, as illustrated below:

- (26) Htes to vradhi dhothike dheksiosi_i stin presvia tis
 Vulgharias. Dhen tin_i efharistithike omos kanis, yati
 dhen ihan krasi.

*yesterday the evening was.given reception at.the embassy
 the-GEN Bulgaria-GEN notit-FEM-CL enjoyed-3SG though
 nobody because not had-3PL wine*

‘Yesterday evening, there was a reception at the
 Bulgarian embassy. Nobody enjoyed it though,
 because they didn’t have wine.’

If bare singulars in Greek are arguments, then we cannot adopt a pseudoincorporation analysis in the style of E & M (2011) or Farkas & de Swart (2003). It remains open though whether Dayal’s “liberal” kind of pseudoincorporation could provide a potential analysis for BSCNs in Greek.

Conclusion

We conclude that a) BSCNs with creation verbs are not limited to the progressive aspect as in Norwegian, b) existential constructions are different from Catalan/Spanish, so a different syntactic analysis might have implications for the semantics. Furthermore, c) BSCNs are not number neutral, and d) BSCNs in Greek can function as subjects and seem to have a referential status in this position that makes it easier to associate a discourse referent to them. They furthermore allow modification in a similar way to canonical arguments. All the above facts indicate that a “strict” pseudoincorporation analysis is not suitable for Greek.

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Appendix

TABLE 1: Number of occurrences of one verb from each verb class followed by a BSCN in the HNC.

Verb class	V(P)	Translation	# occ.
Consumption	<i>kapnizo</i>	‘to smoke’	9
creation	<i>gbrafo</i>	‘to write’	50
Transfer	<i>vrisko</i>	‘to find’	501
Ownership	<i>katebo</i>	‘to possess’	56
Intensional	<i>psahno</i>	‘to look for’	44
usage	<i>forao</i>	‘to wear’, ‘to put on’	161
Light	<i>kano podbilato</i>	‘to ride a bicycle’	14
Institutionalized activity	<i>d h y a v a z o</i> <i>efimeridha</i>	‘to read the newspaper’	22
Existential	<i>iparbi</i>	‘exists’	>266