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MWEs: Support/light Verb Constructions vs Fixed Expressions in Modern Greek and French

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Abstract

The paper reports on a study aimed at defining the limits between fixed expressions and Support Verb Constructions. To this end, a set of formal criteria that are applicable for the efficient classification of verbal MWEs were checked consistently against data in Greek and French. Ultimately, the delineation of the two types of constructions and their intermediate class is crucial not only for linguistic and lexicographic purposes, but also for Natural Language Processing tasks.

1 Introduction

Generally, verbal multi-word expressions (MWEs) fall into two general classes, namely idiomatic expressions and Support Verb Constructions (SVCs). Idioms or frozen/fixed expressions are defined as having a non-compositional meaning that cannot be deduced from the meaning of their parts (Bobrow & Bell, 1973; Chomsky, 1980; Fraser, 1970; Swinney & Cutler, 1979; M. Gross, 1982, 1988; Van der Linden, 1992). On the contrary, SVCs (also referred to in the literature as Light Verb Constructions, LVCs) consist of a support verb and a *predicative noun*. In between those two categories, however, a number of MWEs are proved to exhibit properties that are characteristic of both classes.

In this paper, we will try to discern the limits between fixed expressions and SVCs focusing on MWEs which fall in-between, comprising, thus,

a grey-zone. The comparative study of MWEs in two languages, namely, Greek (EL) and French (FR), has a two-fold purpose: (a) to test the validity of the criteria set on the basis of cross-lingual similarities; and (b) to draw conclusions that might be useful for a range of NLP applications, either in single- or multi-lingual settings.

The paper is outlined as follows: section 2 briefly outlines the observations that motivated the present study; initial definitions and the criteria for disambiguation are presented in section 3. EL and FR data and the tests applied on them are presented in section 4; conclusions are discussed in section 5, whereas final conclusion and future research are outlined in section 6.

2 Motivation and Scope

The present study was triggered by two observations. On the one hand, the distinction between SVCs and fixed expressions is not always easy or straightforward and the limits between the two are often fuzzy. One could even maintain that there is a visible *scalar passage* between the two types of structures. In other words, a number of expressions seem to bear properties normally inherent to SVCs despite of their primarily being classified as fixed expressions and vice-versa. This is better illustrated in sentence (1) below taken from M. Gross (1981):

(1) il y a de l'eau dans le gaz

lit. it has of the water in the gaz

things are not running smoothly

The constituents of the expression in (1) cannot be modified if the meaning of the

sentence is to be preserved; nevertheless, they allow for a paraphrase with the operator verb *mettre* (=put), that is a structure typical of SVCs:

(2) la venue de Max a mis de l'eau dans le gaz
lit. the arrival of Max has put of the water in the gaz

Max's arrival has caused irritation

On the contrary, a paraphrase with the verb *être* (=to be) is ungrammatical:

(3) *de l'eau est dans le gaz
lit. of the water is in the gaz

One step further, evidence from FR and EL data shows that the phenomenon is not language-specific. So the current study might prove to be useful for the analysis and representation of a phenomenon which is quite important for Greek - and not at all negligible for French and other languages alike. Based on these observations above, further *criteria* for the distinction between the two classes need to be elaborated, complementing, thus, the existing ones. These criteria are formal, depicting, thus, syntactic properties of MWEs.

3 Fixed Expressions and SVCs

Although there is nothing exceptional in their syntactic behavior or in their lexical content, fixed expressions are considered to be exceptions to the normal rules of the language. In an attempt to identify fixed expressions, linguistic tests are employed. The primary one is intuitive yet sufficiently operational: the meaning of fixed expressions is *non-compositional*, i.e. it cannot be computed from the meaning of its parts. The second test checks whether the constituents of the expression can be modified. At least two elements of a fixed expression do not allow for modification (*non-modifiability*); usually, one of the two is the verb. These criteria constitute a mechanism for distinguishing between a *fixed* expression and a *free* one.

SVCs, on the other hand, are defined as expressions comprising a *support verb* (*Vsup*) (*έχω*/avoir (=have), *πάρνω*/prendre (=take), *χάνω*/perdre (=miss) in EL and FR respectively) or the *operator verb* *δίνω*/donner (=give) and a *predicative noun* (*Npred*) in *object*, *subject* or *PP complement* position. SVCs are defined as “semi-phrasal expressions formed by two lexical items l_1 and l_2 in which l_2 is taken in an arbitrary way to express a given sense and/or syntactic role in function of l_1 's choice” (Alonso Ramos, 2004). In this respect, their semantics is more or

less transparent and their meaning is *semi-compositional*.

A systematic treatment of SVCs can be found in Gross (1981) and Danlos (1986), Vives (1993) in French. According to these studies, although highly idiosyncratic, SVCs exhibit regularities. For example, a nominal predicate forming a SVC with the *Vsup* *avoir* (=have) can also form aspectual variants when combined with other support verbs, i.e., *prendre* (=take), *perdre* (=lose), etc. or operator and causative verbs. An example of this type of expressions is shown in Table 1 below.

EL	FR	EN
έχω κουράγιο echo kurajio to-have _{1,SING} courage	avoir de courage	(=have courage)
πάρνω κουράγιο perno kurajio to-take _{1,SING} courage	prendre du courage	(=take courage)
χάνω το κουράγιο μου chano to kurajio mu to-lose _{1,SING} the courage my _{poss.1.SING.GE} to-lose _{1,SING} my courage _{SING.ACC}	perdre son courage	(=lose my courage)
δίνω κουράγιο σε dino kurajio se give _{1,SING} courage to	donner du courage à	(=give courage to)

Table 1. Examples of SVCs

Finally, the SVC is semantically equivalent to a full verb and can, thus, be paraphrased as an elementary sentence; in this context, the *Vsup* licenses *nominalisation*, a term which, in this context, refers to the relation between two sentences, one of which is a verbal construction (as shown in (4) below) and the second one is a SVC (depicted in (4a):

(4) Marie respecte son père
 Marie respects her father

(4a) Marie a du respect pour son père
 (Marie has respect for her father)

The relation that holds between the two elementary sentencesⁱ (4) and (4a) is of the form:

$$NO V NI = NO Vsup Det Npred Prep N2^{ii}$$

The implication is two-fold: (a) in terms of semantics, the *Vsup* does contribute to the meaning of the expression, *maintaining*, thus, some sort of lexical meaning; and (b) even though there is a great deal of idiosyncrasy in the formation of SVCs, regularities with respect to the alternations are attested.

However, as we will show below (examples 8a- 8c) grey zones arise when these regularities –

alternations are attested in expressions initially classified as idiomatic and vice versa. In this context, the intuitive criterion of compositionality seems to be insufficient for the robust classification of MWEs; to this end, we test a set of formal criteria that complement the semantic criterion.

3.1 Criteria for disambiguation

In the following, we will present the *structural properties* of SVCs; these may be further employed as formal criteria for disambiguation when classification seems to be problematic. More precisely:

- (i) an elementary sentence of the form *N0 V N1* or *N0 V Prep N1* may be classified as *SVC* if it can be paraphrased as a *Vsup* sentence, that is, one that comprises one of the most common *Vsup*, namely *έχω/avoir* (=have) and *είμαι/être* and a predicative noun (Npred):

$N0\ V\ N1 = N0\ (\acute{\epsilon}\chi\omega/avoir+είμαι/être)\ Npred$

Our hypothesis can then be formulated as follows: a MWE (which is otherwise difficult to be classified due to its exhibiting also properties of fixed expressions) falls into the class *SVC*, given that it can be associated with a simple *Vsup* construction and a *Prep* besides the predicative Noun (N). If a typical *SVC* can replace the original sentence, then the expression in question is considered to be an *aspectual* or *lexical* variant of a *SVC*. Otherwise, if the *Vsup* sentence is ungrammatical, the construction is considered to be a proper fixed expression instead.

- (ii) An elementary sentence of the form *N0 V N* (or *N0 V Prep N*) is classified as *SVC* if an equivalence relation is proved to hold between this sentence and a structure of the form *Npred de N0* for French and *Npred N0_{GEN}* for Greek; the latter structures are the result of a nominalization transformation. According to this requirement, therefore, if the *so derived nominal group* is *acceptable*, then the candidate expression is classified as *SVC* otherwise, it is a fixed expression.

4 The Data

The afore-mentioned tests were applied on EL and FR datasets developed within the Lexicon-Grammar framework (Gross, 1982), (Fotopoulou, 1993). The dataset comprises c.

1020 MWEs in EL c. 3700 expressions in FR. Iterative checks were performed over the EL and FR data to accurately perform MWE classification. In this regard, a number of structures were observed as displaying the characteristics of both MWE classes. Disambiguation, of grey expressions was guided by the application of the formal tests proposed in section (3.1) above.

In the remaining, we will present the cases of disambiguating MWEs based on the criteria proposed, i.e., capitalizing on the properties of two types of MWEs: (a) those with the *Vsup* *έχω/avoir* (=have) and (b) verbal MWEs with *είμαι/être* (=to be) and their variants.

4.1 Classification: *έχω/avoir* (=to have) test

Standard (lexical) tests employed for the identification of *SVCs* show that a number of verbs function as support verbs. This property, however, can be blocked when these verbs are used with specific nouns. For example, the verb *χαίρω* (=to enjoy) is used in *SVCs* of the form:

- (5) Ο Νίκος χαίρει σεβασμού
 o Nikos cheri sevasmu
 the_{SING.Nom} Nikos_{SING.Nom} enjoys_{3.SG}
 respect_{SING.Gen}
 Nikos is respected.

However, the expression *χαίρω άκρας υγείας* (=to be healthy) was identified as a fixed expression on the basis of the criteria defined above. The test employed was of the form *Vsup C = (έχω/avoir) C*. As a matter of fact, the noun *υγεία* (=health) along with its modifier *άκρα* (=extreme) form together a unique combination that allows for no modification; the formation of a *Vsup* construction with the verb *έχω* (=have) results in an unacceptable construction. The *Vsup* paraphrase depicted in (5b) is unacceptable:

- (5a) ο Νίκος χαίρει άκρας υγείας
 o Nikos cheri akras igias
 the_{SING.Nom} Nikos_{SING.Nom} enjoys_{3.SG}
 [extreme health]_{SING.Gen}
 Nikos is healthy
- (5b) *ο Νίκος έχει άκρα υγεία
 o Nikos echi akra igia
 lit.the_{SG.Nom} Nikos_{SG.Nom} has_{3.SG} extreme
 health
 Nikos has extreme health

The application of the first test, i.e. the substitution of the verb by *έχω* (=have) has proven the sentence to be fixed. Along the same lines, the operation implied by the second criterion above is applied, i.e., elimination of the

Vsup and formation of a nominal group; the resulting structure is also unacceptable:

- (5c) * η άκρα υγεία του Νίκου
 i akra igia tu Niku
 the_{SG.Nom} extreme health_{SG.Nom} of-the_{SG.Gen}
 Nikos_{SG.Gen}
 Niko's extreme health

However, when the modifier *άκρα* (=extreme) is replaced with another synonym, e.g. *εξαιρετική* (=excellent), paraphrasing the sentence with the use of *έχω* (=have) is permitted:

- (5d) ο Νίκος χαίρει εξαιρετικής υγείας
 o Nikos cheri ekseretikis igias
 the_{SG.Nom} Nikos_{SG.Nom} enjoys_{3.SG} excellent
 health
 Nikos enjoys excellent health
- (5e) ο Νίκος έχει εξαιρετική υγεία
 o Nikos echi ekseretiki igia
 the_{SG.Nom} Nikos_{SG.Nom} has_{3.SG} excellent
 health
 Nikos has excellent health

Now, when the modifier is replaced, the formation of the nominal group is allowed:

- (5f) η εξαιρετική υγεία του Νίκου
 i ekseretiki igia tu Nikou
 the_{SG.Nom} [excellent health]_{SG.Nom} of-
 the_{SG.Gen} Nikos_{SG.Gen}
 Nikos' good health

We therefore conclude that on grounds of formal criteria, the expression in sentence (5a) is a fixed one. On the contrary, based on the criteria proposed, the expression *τρέφω ελπίδες* (=nourish hopes) was proved to be a pseudo-fixed expression since properties of SVCs were identified:

- (6) Ο Γιάννης τρέφει ελπίδες ...
 O Jianis trefi elpidēs
lit. the John feeds_{3.SG} hopes for
 John hopes...
- (6a) Ο Γιάννης έχει ελπίδες ...
 O Jianis echi elpidēs
lit. the John has_{3.SG} hopes
 John hopes...
- (6b) οι ελπίδες του Γιάννη
 i elpidēs tu Jiani
lit. the hopes of-the_{SG.Gen} John_{SG.Gen}
 John's hopes

Evidence from French follows:

- (7) Max voue une admiration à
lit. Max pays admiration for
 Max admires
- (7a) Max a de l' admiration pour
lit. Max has admiration for
 Max admires
- (7b) l'admiration de Max

lit. the admiration of Max

Max's admiration

Nevertheless, the expression *παίρνω σάρκα και οστά* (=become true) which includes the *Vsup* *παίρνω* (=take), doesn't meet the formal criteria. As a matter of fact, neither the formation of the nominal group is acceptable, nor can the verb *παίρνω* (=take) be substituted by *έχω* (=have):

- (8) το έργο παίρνει σάρκα και οστά
 to erjo perni sarka ke osta
 the_{SG.Nom} project_{SG.Nom} takes_{3.SG} flesh and
 bones
 the project starts

- (8a) *σάρκα και οστά του έργου
 sarka ke osta tu ergu
 flesh and bones of-the_{SG.Gen} project_{SG.Gen}
 flesh bones of the project

- (8b) *το έργο έχει σάρκα και οστά
 to ergo echi sarka ke osta
 the project has flesh and bones

However, a semantically similar expression that includes the causative operator *δίνω* (=give) is also possible:

- (8c) η κυβέρνηση δίνει σάρκα και οστά στο
 έργο
 i kavernisi dini sarka ke osta sto ergo
lit. the government gives_{3.SG} flesh and
 bones to the project
 the government puts flesh on the project

The same is attested in French expressions with lexical variations. The application of the two tests on the French expression *donner corps* results in a grammatical sentence when paraphrased with a simple *Vsup* (9a) and an ungrammatical nominal group (9b):

- (9) Je donne corps à un projet
lit. I give body to a project
 I give flesh to a project
- (9a) le projet prend corps
lit. the project takes body
 the project comes into being
- (9b) * le corps du projet
lit. the body of-the project

4.2 Classification: είμαι/être (=to be) test

A number of expressions in our dataset seem to be paraphrases of structures displaying the form *είμαι/être* (=to be) *Prep Cl*. Their aspectual variants contain either a verb that is prototypically defined as denoting movement (*Vmt*) or movement causative verb (*Vcmt*). To better account for properties these expressions have, a reference to the properties of *Vmts* and *Vcmts* is in order. These are depicted in examples (10)-(12) below.

- NOVmt Prep N1*
- (10) ο Νίκος πήγε στην εξοχή
ο Nikos pige stin eksochi
the Nikos went to-the countryside
Nikos went to the countryside
- (10a) Nikos est allé à la campagne
Nikos went to the countryside

- NO Vcmt N1Prep N2*
- (11) η Μαρία έστειλε τον Νίκο στην εξοχή
i Maria estile ton Niko stin eksochi
lit. the Maria sent Nikos to-the
countryside
Mar;ia sent Nikos to the countryside
- (11a) Maria a envoyé Nikos à la campagne
Maria sent Nikos to the countryside

- NIείμαι (=to be)PrepN2*
- (12) ο Νίκος είναι στην εξοχή
ο Nikos ine stin eksochi
lit. the Nikos is at-the countryside
Nikos is at the countryside
- (12a) Nikos est à la campagne
Nikos is at the countryside

The relation that holds between simple structures with *Vmt* predicates of the type (10), (10a) and *Vcmt* structures (11), (11a) involves a semantic alternation. Sentences with a *Vmt* or a *Vcmt* have a *dynamic aspect*, whereas sentences of the form *είμαι (=be) Prep* have a *static* one. The dynamic aspect of the former can also be ascribed, in case of (11), (11a), to the causative operator that introduces the subject of the sentence. The same phenomenon is also attested in MWEs of the form *be Prep X* and their *variants comprising* verbs that are prototypically *Vmt* or *Vcmt* predicates, as illustrated in examples (13)-(18a) below:

- NO Vcmt N1Prep C2*
- (13) η Μαρία φέρνει τον Νίκο σε δύσκολη θέση
i Maria ferni_{3.SG} ton Niko se diskoli thesi
lit. the Maria brings Nikos to difficult
position
- (13a) Marie a mis Nikos dans une situation
difficile
lit. Maria put Nikos in situation difficult
=Maria made Nikos feel uncomfortable

- NIVmt Prep C2*
- (14) ο Νίκος ήρθε σε δύσκολη θέση
ο Nikos irthe se diskoli thesi
lit. the Nikos came to difficult position
Nikos was uncomfortable
- (14a) Nikos sort d'une situation difficile
Nikos fate of a difficult situation

- NI είμαι (=be) PrepC2*
- (15) Ο Νίκος είναι σε δύσκολη θέση
Ο Nikos ine se diskoli thesi
lit. the Nikos is in difficult position
- (15a) Nikos est dans une situation difficile
lit. Nikos is in a situation difficult
Nikos is in a difficult position

- NO Vcmt N1Prep C2*
- (16) η ένταση οδήγησε τις διαπραγματεύσεις
σε αδιέξοδο
i entasi odijise tis diapragmatefisis se adieksoδο
the conflict led the negotiations to an
impasse

- NIVmt Prep C2*
- (17) οι διαπραγματεύσεις κατέληξαν/έφτασαν
σε αδιέξοδο
i diaprajmatefisis kateliksan/eftasan se adieksoδο
the negotiations reached/arrived at an
impasse

- NIείμαι Prep C2*
- (18) οι διαπραγματεύσεις είναι σε αδιέξοδο
i diapragmatefisis ine se adieksoδο
lit. the negotiations are at impasse
the negotiations are at an impasse
- (18a) les négociations sont dans l'impasse
the negotiations are at an impasse

The same regularity is also manifested in the following examples:

- NO Vcmt N1Prep C2*
- (19) Ο Νίκος έβγαλε τη Μαρία από τη μέση
Ο Nikos evjale ti Maria apo ti mesi
lit. The Nikos took the Maria from the
middle
Nikos took Maria out of the way

- NIVmt Prep C2*
- (20) Η Μαρία βγήκε από τη μέση
i Maria vjike apo ti mesi
lit. the Maria was taken from the middle
Maria was taken out of the way

The expressions in (19) and (20) are MWEs bound with the alternation implied by their *Vmt* and *Vcmt* predicates, even though the *be Prep X* structure has a compositional meaning:

- NO be Prep X*
- (21) Η Μαρία είναι στην μέση
i Maria ine sti mesi
lit. the Maria is in-the middle

5 Discussion

Summing up the presentation of the different cases, we observe two main classes of MWEs: (i) fixed expressions, which allow for regular syntactic alternations, and which do not correspond to a simple SVC; and (ii) fixed expressions that follow the *be Prep X* paradigm,

in that they have aspectual variants or causative operations, yet they lack the basic *be Prep X* form. In our view, an efficient computational treatment of MWEs within NLP applications requires a detailed analysis of each expression and the definition of their so-called *fixed zone* (zone fixe) - a term coined to denote a fixed set of words or tokens within an MWE that would be optionally amenable to *morphological* variation. In this sense, the support verb within a support verb construction (SVC) is not considered to be part of the SVC *fixed zone* (Laporte, 1998). However, variation within the SVC can also be lexical/aspectual. It is, therefore, crucial to redefine and delineate the notion of fixed zone and to define more elaborate linguistic features that apply to MWEs regardless their initial classification. This will have an impact on their treatment in NLP. For example, expressions that do not correspond to the SVC paradigm, but, nevertheless, allow for certain operations should be encoded as appropriate.

6 Conclusion

This study is aimed at delineating the boundaries between fixed expressions and SVCs constructions (or collocations) in two languages, namely French and Greek. A set of formal tests suitable for the classification of verbal MWEs have been checked. The focus is primarily on expressions that seem to exhibit features inherent to both fixed expressions and SVCs. Future work involves the application of these tests to ultimately all MWEs in the Lexicon-Grammar tables and beyond, aiming at the elaboration of an accurate and consistent classification thereof. The latter is particularly important in view of processing MWEs in a number of applications including alignment and paraphrasing, translation, etc.

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- ⁱ The term *elementary sentence* is defined as the linguistic unit of meaning in accordance with Z. Harris' Transformational Grammar and the Lexicon-Grammar framework (Gross 1975)
- ⁱⁱ The notation employed here is the one adopted by Lexicon-Grammar (Gross 1975).