

#### **RESEARCH**

# The primitives of the lexicon: Insights from aspect in idioms

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This work discusses the primitives of the mental lexicon through exploring aspectual compositionality in VP idioms. A comparison between idiomatic VPs and their non-idiomatic counterparts is employed to show whether the determination of aspect in idioms is compositional in both the idiomatic and the non-idiomatic VPs. Aspectual mismatches across the two domains of interpretation are presented and a point in favor of aspectual compositionality in idioms is made. Bringing together insights from theoretical linguistics and neurolinguistic research, it is proposed that the existence of aspectual accomplishments in a particular type of idioms should lead to a re-evaluation of the frequently entertained idea of storing idioms (XPs) in the mental lexicon as elementary lexical units.

Keywords: idiomaticity; aspect; lexicon; compositionality

## 1 Introduction

The mental lexicon plays a central role in most linguistic frameworks. Yet this centrality does not change the fact that it has been described as one of the most poorly understood components of the faculty of language (Newmeyer 2004). Investigating the primitives of the lexicon and its role in human cognition is an investigation about the biology of the brain (Ullman 2007) and this explains why the lexicon, its components and its organization figure so prominently in recent mainstream handbooks about the neuroscience of language (e.g., Stemmer & Whitaker 2008). The vehicle through which the primitives of the lexicon will be approached in the present work is also very popular, especially within generative linguistics. Much ink has been shed on the topic of aspectual compositionality and aspectual shifts in idioms and other fixed expressions (e.g., McGinnis 2002; 2005; Glasbey 2003; 2007; Mateu & Espinal 2007; 2013; MacDonald 2008; Espinal & Mateu 2010; Farkas 2011; Bellavia 2012). The relevant literature deals with the aspectual behavior of idioms from different points of view and across theoretical frameworks, drawing data mainly from English, Catalan, Spanish, Italian, and Romanian.

The data presented in the present work are not part of the relevant literature so far. In this context, the first goal of this work is to enrich the database of idioms that are revealing in terms of aspectual mismatches across the idiomatic and the non-idiomatic domain of interpretation by presenting data from two varieties of Greek: Standard Modern Greek (henceforth, Standard Greek) and Cypriot Greek.¹ The latter is the variety of Greek that is used in the southern territory of Cyprus and is a largely understudied language in certain domains of grammar, due to the fact that it lacks the status of an official language. To the

<sup>&</sup>lt;sup>1</sup> "Aspectual mismatch" refers to the fact that the idiomatic and the non-idiomatic interpretation of a VP idiom may fall into two different aspectual categories.

best of my knowledge, the topic of aspectual behavior in Cypriot Greek idioms has never been addressed. Similarly, Standard Greek idioms of the sort discussed in the following sections (i.e.  $[v_P \ V \ DP]$ ) have not received attention in the literature in relation to their aspectual properties (but see Mateu & Espinal 2007 for discussion of a different type of Standard Greek idioms).

The second goal of this work is to offer theoretical insights into the topic of aspectual compositionality in idioms. In agreement with McGinnis (2002; 2005), it is proposed that mismatches are systematic and all types of aspectual shifts can be observed. The last claim of this work relates to the debate of lexical storing vs. syntactic derivation of idioms. The background assumption of this debate is that non-idiomatic, compositional phrases are syntactically derived, while idiomatic phrases are non-compositional and holistically stored instead of syntactically derived. The idea of associating idioms with stored units in the mental lexicon is frequently found in the literature (see, among others, Swinney & Cutler 1979; Di Sciullo & Williams 1987; Nunberg et al. 1994; van Gestel 1995; and the references in Snider & Arnon 2012). At times, this idea is also put forth in the literature that deals with aspect in idioms (Glasbey 2003; 2007). The data presented in this work support the idea of syntactic derivation of idioms; a conclusion independently reached in a variety of recent works outside the topic of aspect (e.g., Snider & Arnon 2012).

Following Vendler's (1957; 1967) classification of verbal time schemata into states, activities, achievements, and accomplishments, I present a specific type of idiomatic expressions, which are classified as accomplishments in terms of their aspectual class, based on a broad range of diagnostic tests (Dowty 1979; Van Valin 2006; MacDonald 2008). Using the syntactic analysis of accomplishments presented in MacDonald (2008), I suggest that the existence of such accomplishment idioms calls for a re-evaluation of the idea of storing idioms (XPs) in the mental lexicon as elementary lexical units that have their aspectual information attached (e.g., Di Sciullo & Williams 1987; Glasbey 2007 etc.). Data from neurolinguistic experiments on idiom processing seem to independently support this conclusion too.

The paper is structured as follows: Section 2 sets out the theoretical lay of the land in relation to aspect in idioms. The properties of the novel data from Standard Greek and Cypriot Greek are presented. This discussion aims to provide the basis upon which the discussion on the contents of the mental lexicon proceeds in Section 3. Section 4 offers some concluding remarks.

# 2 Materials and methods

Aspect is a cover term that can in principle refer to distinct domains (e.g., lexical, inner, grammatical), each encoding aspectual information, either lexically encoded or syntactically derived. Since Vendler's (1957; 1967) seminal work on the classification of predicates into states, activities, achievements, and accomplishments, much subsequent work aimed to scrutinize the various aspectual domains encoded in and corresponding to different syntactic projections.<sup>2</sup>

The original Vendlerian taxonomy, despite being highly influential and having triggered a series of subsequent accounts of event structure and aspectual behaviour of predicates (e.g., Kenny 1963; Comrie 1976; Taylor 1977; Dowty 1979), does not cover what is encoded in the lexicon, since it does not take into account finer aspect-related notions; as a result, some theories use lower level aspectual features that are derived from larger natural classes (Ramchand 2008: 20). This approach requires the existence of an item-inherent

<sup>&</sup>lt;sup>2</sup> The class of semelfactives should be added to this list. Semelfactives were not part of the original Vendlerian taxonomy; this class was proposed later by Comrie (1976).

aspectual domain, called lexical aspect (for a detailed discussion see Rothstein 2004). In the present work, the goal is to offer insights into aspect in idioms for as many aspectual domains as possible; therefore, a tripartition of aspect into lexical, inner, and grammatical aspect is sketched out. This tripartion encompasses the major aspectual divisions that have been suggested in the literature.

Lexical aspect refers to the way the verb itself is structured in relation to the time factor (i.e. presence or absence of an endpoint or boundary). States, activities, achievements, semelfactives and accomplishments refer to the inner aspect of the predicate. The terms "perfectivity/imperfectivity" refer to grammatical aspect; these are the values that grammatical aspect receives in Standard Greek and Cypriot Greek. In order to determine the inner aspect of a predicate, different diagnostic tests can be employed. For example, "telic" signals that the action denoted by the verb phrase has an endpoint. The distinction between telic and atelic predicates can be drawn by means of the compatibility of the predicate with the durative phrase (e.g., for NP) and/or the time-span adverbial (e.g., in NP). The standard assumption is that the durative phrase is compatible with atelic predicates (1), but not with telic predicates (2) — unless it gives rise to an iterative interpretation of telic events when one is pragmatically allowed (MacDonald 2009 and references cited therein).

- (1) Mary was a teacher \*in ten years/for ten years
- (2) Mary ate the cake in ten minutes/?for ten minutes

Regarding grammatical aspect, the difference between perfectivity and imperfectivity is morphologically marked in both varieties of Greek that are discussed in this paper (3)–(4).

- (3) Standard Greek
  - o Janis ipçe/epine ti bira tu the John drink.PAST.PERF/IMP.3SG the beer POSS 'John drank/was drinking his beer'
- (4) Cypriot Greek
  - o Janis ekopsen/ekofken xrisomila the John cut.PAST.PERF/IMP.3SG apricots 'John cut/was cutting apricots'

At first, a distinction between lexical and inner aspect does not seem necessary for the syntactic type of idioms (i.e. VPs) examined here, because the locus of idiomatic interpretation is the whole VP and lexical aspect is below this level. Nevertheless, I will make brief reference to this distinction and to the notion of lexical aspect, since it is useful to clearly define which aspectual domains exactly coincide in the two VPs (idiomatic and non-idiomatic) and which do not.

Much like aspect, idiomaticity is also a cover term, extensively used to refer to various expressions that differ across key semantic concepts. Introducing the distinction between idiomatic phrases (IPs) and idiomatically combining expressions (ICEs), these two categories of idioms differ according to Nunberg et al. (1994) along three key concepts: Conventionality, opacity, and compositionality. Conventionality refers to the discrepancy observed between the idiomatic meaning and the literal meaning of the phrase. Opacity refers to the extent that the motivation for the use of an idiomatic interpretation is recoverable. Compositionality refers to the degree to which the idiomatic meaning is analyzable in terms of individual contributions of the idiom subparts. In this context, IPs differ from ICEs in the following way (Table 1).

Table 1: Properties of IPs and ICEs.

Type of idiom	Conventionality	Opacity	Compositionality	
IPs	high	low	low	
ICEs	low	high	high	

The criteria used to distinguish between ICEs and IPs are well-documented in Nunberg et al. (1994), but so is the existence of categories of idioms that suggest that this distinction cannot be taken as absolute either (e.g., see Espinal & Mateu 2010 for issues arising when classifying the class of 'V one's head off' idioms as ICEs or IPs).

In this work, the focus will be on IPs and not on ICEs. The reason for this is that, as Glasbey (2007) points out, contrary to IPs, ICEs undergo aspectual compositionality, possibly including thematic relations (Krifka 1992). She claims that most aspectual class mismatches in ICEs can be explained "allowing for the fact that the thematic relations in question may differ between the idiomatic and the literal interpretations of a given expression, we can explain the mismatch between aspectual class in the idiomatic and literal interpretations [...]" (Glasbey 2007: 71). In this context, ICEs are not part of the present discussion either, since their ability to undergo aspectual compositionality is not disputed.

Idioms like 'V *one's head off'* are not part of this discussion either, because they have some ICE properties; their nature is well-captured in Espinal & Mateu (2010). Such ICEs are not discussed here for another reason: Greek data similar to that provided by Espinal & Mateu, although in frequent use, do not give rise to a non-idiomatic interpretation easily, and this makes syntactic modification with adverbs and comparison between domains of interpretation difficult to pursue. The category of idioms that is left is IPs; this is the type of idioms discussed in McGinnis (2002) and argued by her to be compositional, with Glasbey (2003) making a claim for the opposite.

With respect to their syntactic identity, all IPs discussed below are of the [ $_{VP}$  V DP] category, with DP being the internal argument of the verb in the non-idiomatic interpretation (as in (5)–(6)).<sup>3</sup>

## (5) Standard Greek

espase ton paγo break.PAST.PERF.3SG the ice

- i. idiomatic meaning: '(He/she) initiated social interchange' (cf. the English idiom 'break the ice')
- ii. literal meaning: '(He/she) broke the ice'

# (6) a. Cypriot Greek

eftisen jema spit.PAST.PERF.3SG blood

i. idiomatic meaning: '(He/she) worked hard'ii. literal meaning: '(He/she) spat blood'

#### b. Standard Greek

eftise ema spit.PAST.PERF.3SG blood

i. idiomatic meaning: '(He/she) worked hard'ii. literal meaning: '(He/she) spat blood'

<sup>&</sup>lt;sup>3</sup> Despite the designation [ $_{VP}$  V DP], there is no intention to pursue an argument about the mass nouns in (6) being DPs instead of NPs.

This selection of [ $_{VP}$  V DP] idioms happens for purely practical reasons: V+object idioms are much more frequent than subject+V idioms. Also, the few existent subject+V idioms, such as the frequently quoted 'a little bird told me XP', are not IPs, but ICEs, since there are identifiable equivalents across the two domains of interpretation. The idioms discussed here **are IPs**, and IPs usually do not allow systematic lexical alteration and do not involve any open slot (i.e. if they had an open slot, its semantic contribution would be identifiable, hence they would have high compositionality; cf. Table 1). The fact that no lexical alteration is possible boils down to their status as highly fixed, semantically non-transparent idioms. Semantic transparency of the idiomatic expression can account for the possibility of lexical alteration (Gibbs 1995) or syntactic flexibility (Wasow et al. 1983; Everaert et al. 1995).

Since T[ense] merges outside the  $\nu$ P and idioms "do not span a boundary approximately corresponding to Chomsky's  $\nu$ P" (Svenonius 2005a: 1), T is not part of the verbal idioms examined in this paper. The previous claim is phrased in a slightly different way in Svenonius (2005b: 239): "Just as there are no idioms including a main verb and a modal verb, there are no idioms consisting of a main verb plus a tense or (higher) aspect, or extremely few". Higher aspect here refers to what I have earlier called grammatical aspect. Svenonius (2005b) lists as one of these extremely few exceptions the idiom 'something's eating DP' since this always requires progressive (i.e. imperfective) aspect (7). However, this expression seems to be an ICE, not an IP: First, it involves an open position, hence it allows lexical alteration, second, it has identifiable equivalents across the two domains of interpretation, and, third, parts of it show co-reference relations with pronominal expressions. The last two points boil down to standard tests for distinguishing between ICEs and IPs, as suggested by Nunberg et al. (1994). An example of an IP that requires imperfective aspect is given in (8a).

- (7) *what*'s eating your friend lately? I don't know but whatever *it* is, *it* has started bothering his family too.
- (8) *Cypriot Greek* 
  - a. eθoren pul:uθca see.PAST.IMP.3SG little birds
    - i. idiomatic meaning: '(He/she) was dizzy'
    - ii. literal meaning: '(He/she) was seeing little birds'
  - b. iðen pul:uθca see.PAST.PERF.3SG little birds
    - i. idiomatic meaning: Not available (intended: ??'(He/she) was dizzy')
    - ii. literal meaning: '(He/she) saw little birds'

Having defined how "aspect" and "idioms" have to be understood in the context of the present discussion, the following subsections present and assess the main previous accounts on aspectual (non-)compositionality in idioms.

<sup>&</sup>lt;sup>4</sup> This phenomenon is not accidental, at least not within the Minimalist Program (Chomsky 1995). subject+V<sub>TRANS</sub> idioms that can take any semantically appropriate XP as internal argument do not correspond to a syntactic constituent. Idiomaticity and constituency are interrelated (see also Marantz 1984 and Svenonius 2005b). As Hornstein et al. (2005) observe, a very interesting property of idioms is that they appear to correspond to syntactic constituents. Crucially, this holds only for IPs and not for ICEs, which entail a looser sense of idiomaticity. Bruening (2010) shows that ICEs clearly allow the insertion of non-idiomatic material into the idiom (e.g., *pull* some/few/a couple of *strings*), breaking the "constituency-idiomaticity" symmetry.

# 2.1 McGinnis (2002; 2005)

McGinnis (2002) suggests systematicity as well as aspectual compositionality in idioms, working within the assumptions of Distributed Morphology (DM; Halle & Marantz 1994). Systematicity of aspect can easily be demonstrated if IPs of all aspectual classes are shown to exist. Compositionality of aspect in idioms is a more complicated issue, and there are arguments both for and against it. McGinnis follows Marantz (1997: 212) who correctly points out that if idioms are syntactically derived, this derivation should have semantic consequences and one such consequence is aspectual. They argue that 'kick the bucket' cannot mean 'die', because it "carries the semantic implications of a transitive VP with a definite direct object" (Marantz 1997: 212; McGinnis 2002: 667) and this explains the contrast in (9a–b):

- (9) McGinnis (2002) from Marantz (1997)
  - a. Hermione was dying for weeks
  - b. #Hermione was kicking the bucket for weeks

However, the fact that the semantics of 'kick the bucket' is not identical with the semantics of 'die' may also be due to the fact that an endpoint is inherent in the IP but not in the lexical verb, despite the fact that the two have similar meanings. McGinnis is right in making a claim for compositionality in the following sense: compositionality entails more than a mere sum of the meaning of the parts of a chunk, it also encompasses the way they are combined. If idiosyncratic meanings are added post-syntactically (i.e. by accessing entries in the Encyclopedia in a framework like DM), which is the claim that McGinnis follows, then the second part of the above definition of compositionality is relevant: Entries in the Encyclopedia are matched with the outcome of the syntactic derivation which in turn reflects the way elements are combined — '(X) kicked the bucket' gives rise to a particular idiomatic interpretation, but 'the kicked bucket' does not give rise to any idiomatic interpretation whatsoever, although the subparts are the same in the two cases. In other words, since compositionality is also about the way elements are combined, then the concept of compositionality is relevant in matching syntactic items with entries in the Encyclopedia and McGinnis' approach is on the right track.

# 2.2 Glasbey (2003; 2007)

Glasbey convincingly shows how compositionality can be derived in some types of ICEs. For IPs, she argues that they "do not show compositionality of aspect" (2003: 47) and that "certain idioms, however — those identified by Nunberg [et al.] as 'idiomatic phrases' — may best be regarded not as undergoing aspectual composition, but as being listed as phrases in the lexicon with their aspectual information attached" (Glasbey 2007: 71).

McGinnis (2002) contrasts DM with Jackendoff's (1997a) theory of Representational Modularity (RM), which treats idioms as involving an arbitrary mapping between conceptual structure and syntactic structure, and she follows DM in deriving idiomaticity rather than assuming a lexicocentric approach to it. On the other hand, Glasbey (2007) suggests that aspectual compositionality in ICEs may offer support for DM, but there are classes of idioms that are best regarded as exemplifying RM and those would be IPs. The question is whether IPs and compositionality are mutually exclusive; if not, the derivation of idiomaticity along the lines of DM seems a more economical solution than storing idioms in the mental lexicon. The notion of economy refers to the fact that under the derivation approach, the idiomatic VP is assembled in a way identical to that of the non-idiomatic VP, without overloading the lexicon with pre-constructed phrases and without adding unnecessary complexity in the syntactic derivation, as Jackendoff's (1997a) postulation of lexical licensing of units larger than X<sup>0</sup> does.

Admittedly, the argument about economy is a theoretical one and it would be useful to have independent, empirical evidence for not assuming an approach of storing IPs in the lexicon. Interestingly, such an argument can be developed when discussing inner aspect in idioms. I address this issue in Section 3.

# 2.3 Mateu and Espinal (2007) et seq.

Mateu & Espinal usefully establish from the beginning of their discussion the link between aspectuality, idiomaticity, and compositionality in clear terms. They focus on inner aspect and suggest that "the study of idioms is relevant to make a distinction between syntactically encoded meaning, which is compositional, and conceptually encoded meaning, which is non-compositional" (Mateu & Espinal 2007: 36). Their analysis is in line with Marantz (1996) and Mateu (2002) in drawing a distinction between "syntactically transparent compositional meanings, determined in the syntax, and syntactically non-transparent, non-compositional meanings, which are to be fixed in the encyclopedia" (Mateu & Espinal 2007: 53).

The claim about a metonymic/metaphorical conceptual process being activated for idiom interpretation (Mateu & Espinal 2007) provides an explanation as to which processes are involved in the derivation of the idiomatic meaning of the types of ICEs they discuss, but the extension of this argument to IPs is somewhat less clear. Since IPs do not (usually) involve lexical alteration — and in the rare cases they do so, this is to highly restricted degree — they usually do not form classes of idioms that allow for activation of the same metaphor across all members of a given class.

Although I agree with the arguments in Espinal & Mateu (2010) for particular metaphors providing an explanation for the interpretation of the 'V *one's head off* class of ICEs, I do not try to pursue a claim for the existence of a distinct metaphor for each one of the IPs presented in the next subsection. Metaphor schemata work for classes of ICEs, but not for IPs.<sup>5</sup> Since the phenomenon of metaphor activation does not directly pertain to the discussion of aspect in IPs, I leave this issue open, without assuming metaphoric activation of specific core concepts for each of the IPs below, but also without rejecting this possibility.

# 2.4 Data

To the best of my knowledge, a detailed discussion of aspect that spans the three aspectual domains (i.e. grammatical, lexical, and inner aspect) has not been put forth in any previous discussion of Greek [ $_{\rm VP}$  V DP] IPs, be it Standard Greek or Cypriot Greek. The general semantic properties of Greek multiword expressions, including idioms, have been addressed in Thomou (2006). She briefly refers to the lexical aspect of some verbs (Thomou 2006: 133); however, her discussion targets verbs in isolation and not the aspectual behaviour of the whole idiomatic expression.

<sup>&</sup>lt;sup>5</sup> The fact that cognitive schemata are on a par with ICEs boils down to the fact that ICEs allow lexical alteration and once a schema is active, this activation is combined with the low degree of lexical fixedness in ICEs and the result is the formation of classes of idioms with similar idiomatic interpretations, which essentially share the same underlying schema. In IPs, however, quite often there is just one output which does not allow for any systematically productive alterations and does not result to a class of similar interpretations.

<sup>&</sup>lt;sup>6</sup> Notice here that instead of the term "IP", the term "(multiword) expression" is used. This happens because Thomou (2006) follows a classification of multiword expressions that mixes idioms with collocations and eventually distinguishes between full phrasemes or idioms, semi-phrasemes or collocations, and quasi-phrasemes or quasi-idioms. To be more precise, she follows Mel'čuk (1998), whose theoretical framework is the Meaning-Text Theory. It is worth noting that this framework is not suitable for a discussion of aspectual compositionality in idioms such as the one pursued here, since it assumes a lexicon very different from the minimalist lexicon standardly put forth in minimalism.

Table 2 lists all the IPs to be discussed in the present work. These data were chosen for their aspectual properties out of a corpus of ca.1.200 idioms that is created by the author. Whenever an idiomatic meaning has an idiomatic equivalent in English, I use this in the column 'idiomatic meaning' and mark it with (id.).

The results presented in the next section are the outcome of searching the relevant literature for discussion that pertains to any of the idioms presented in Table 2. In addition, 20 native speakers of Standard Greek and 7 native speakers of Cypriot Greek were asked to provide their judgments with respect to the acceptability of these idioms when adapted<sup>8</sup> in order to test for grammatical and inner aspect.

# 3 Results and discussion

# 3.1 Grammatical aspect

Grammatical aspect in Greek is a functional category, morphologically expressed in a binary way that distinguishes between perfectivity and imperfectivity (Tsimpli & Papadopoulou 2009). Since grammatical aspect is  $\nu$ P external, the expectation is that IPs with fixed grammatical aspect should not exist, if indeed idioms do not span the  $\nu$ P domain. I have already mentioned the ICE 'something's eating DP' that Svenonius (2005b) lists as one of the few exceptions.

It is important to notice that, if IPs with fixed grammatical aspect exist, the claim for aspectual mismatches between idiomatic VPs and their non-idiomatic counterparts becomes relevant in a way different from the one pursued in Glasbey (2003; 2007), since her discussion focuses on inner aspect. Indeed, grammatical aspect mismatches can be observed in Greek idioms, when the non-idiomatic VP is compatible both with perfectivity and imperfectivity, whereas the idiomatic VP is compatible with only one of the two: imperfectivity in (8) and perfectivity (10)–(11). Put differently, the similarity between (8), (10) and (11) is that they show that some idioms can be specified for grammatical

<b>Table 2:</b> List of the discussed IPs	across varieties and examples.	,
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Idiom	Idiomatic Meaning	Literal Meaning	Variety	Examples
spao ton payo	'break the ice' (id).	'break the ice'	Standard Greek	(5)
ftino jema	'work hard'	'spit blood'	Cypriot Greek	(6a)
ftino ema	'work hard'	'spit blood'	Standard Greek	(6b)
θoro pul:uθca	'be dizzy'	'see little birds'	Cypriot Greek	(8)
skizo ti $\gamma$ ata	'impose myself'	'tear the cat apart'	Standard Greek	(10)–(11), (21)–(24)
klotso ti sikla	'kick the bucket' (id.)	'kick the bucket'	Cypriot Greek	(13), (14)
tinazo ta petala	'kick the bucket' (id.)	'toss the petals'	Standard Greek	(15)
kortono nuron	'kick the bucket' (id.)	'stretch tail'	Cypriot Greek	(16)
kovo ti xoli	'scare'	'cut the gallbladder'	Standard Greek	(17)
kofko ena kuri	'take a nap'	'cut one piece of wood'	Cypriot Greek	(18)
troo xilopita	'get the mitten' (id.) <sup>7</sup>	'eat mush-pie'	Standard Greek & Cypriot Greek	(19)
kofko ksila	'saw logs' (id.)	'saw logs'	Cypriot Greek	(20)
to skao	'escape/run away'	'burst it'	Standard Greek	(25)–(29)
vγazo γlosa	'talk back'	'pull my tongue out'	Standard Greek	(30)
ðagono ti lamarina	'fall in love'	'bite the tinplate'	Standard Greek	(31)

<sup>&</sup>lt;sup>7</sup> The meaning of this idiom is to be rejected as a lover.

<sup>&</sup>lt;sup>8</sup> Presented with a durative phrase and/or time-span adverbial (and other diagnostics) in order to test aspectual properties.

aspect, allowing only for perfective or imperfective, and their difference is that in this specification, the idiom in (8) patterns with imperfective and the idiom in (10)–(11) with perfective.

## (10) Standard Greek

- a. i Maria eskise ti γata se mia nixta the Mary tear.PAST.PERF.3SG the cat in one night
  i. idiomatic meaning: 'Mary imposed herself (in a night)'
  ii. literal meaning: 'Mary tore the cat apart (in a night)'
- b. i Maria θa skisi ti γata
  the Mary FUT tear.PAST.PERF.3SG the cat
  i. idiomatic meaning: 'Mary will impose herself'
  ii. literal meaning: 'Mary will tear the cat apart'

#### (11) Standard Greek

- a. i Maria eskize ti γata the Mary tear.PAST.IMP.3SG the cat
   i. idiomatic meaning: Not available (intended: ??'Mary was imposing herself')
  - ii. literal meaning: 'Mary was tearing the cat apart'
- b. i Maria  $\theta a$  skizi ti  $\gamma ata$  the Mary FUT tear.IMP.3SG the cat
  - i. idiomatic meaning: Not available (intended: ??'Mary will be imposing herself')
  - ii. literal meaning: 'Mary will be tearing the cat apart'

The literal interpretation of (10a–b) is (pragmatically) fine when the right context is assumed: Mary could be tearing a very big paper cat and it took her some time to finish. (10b) suggests that T is not fixed since its alterations (i.e. past versus future in (10a–b) respectively) do not eliminate idiomaticity. While T is not fixed, grammatical aspect is fixed for this IP and changing it eliminates the idiomatic interpretation (11a–b).

The existence of IPs fixed for grammatical aspect highlights two issues. The first is that aspectual mismatches make necessary a partition of aspect like the one I employ, because VPs in a pair may differ with respect to grammatical aspect, but fall under the same aspectual class as regards inner aspect. (10a) is such an example: In terms of inner aspect, no mismatch can be observed because both VPs are telic (accomplishments), as their compatibility with the time-span adverbial suggests. The second issue is that some IPs may span the  $\nu$ P domain. If grammatical aspect is fixed in an IP, then it is part of the idiom.

Both McGinnis (2002; 2005) and Glasbey (2003; 2007) use adverbial modification with the durative phrase and the time-span adverbial to test the (a)telicity of their idioms. It is interesting, however, that the aspectual contribution of the durative phrase does not always proceed in an identical fashion in the two domains of interpretation, the literal and the idiomatic. McGinnis (2002: 669) writes: "[M]oreover *kick the bucket* (an achievement)

#### (i) Standard Greek

ine apo tus an $\theta$ ropus pu skizun ti  $\gamma$ ata amesos be.PRES.3SG from the people that tear.IMP.3PL the cat immediately

<sup>&</sup>lt;sup>9</sup> The idiomatic readings of (11a–b) were not accepted by 15/20 native speakers of Standard Greek.

<sup>&</sup>lt;sup>10</sup> Since T is not fixed for this IP, present T also preserves the idiomatic interpretation. Therefore, the idiomatic interpretation is compatible with imperfectivity only when this is the only value of ASP that T permits, as in (i) under a habitual interpretation, but not when ASP can receive both values, perfective and imperfective:

i. idiomatic meaning: '(He/she) is from the people that impose themselves immediately'

ii. literal meaning: #'(He/she) is from the people that tear the cat apart immediately'

and *saw logs* (an activity), which cannot passivize, are aspectually identical to their non-idiomatic counterparts, except that an iterative reading of the idiomatic kick the bucket is pragmatically unavailable" and she provides the example of the legendary bird Phoenix that is repeatedly reborn from its ashes and therefore not subject to the same pragmatic limitations with humans.

# (12) McGinnis (2002: 671)

The Phoenix kicked the bucket every five hundred years for millennia

Cypriot Greek has this exact same idiom, but in Cypriot Greek, the idiom is not available with the combination of a durative phrase and perfectivity (13b), and this incompatibility does not seem to boil down to pragmatic limitations (14).

# (13) Cypriot Greek

a. o Petros eklotsisen ti sikla

the Peter kick.PAST.PERF.3SG the bucket

i. idiomatic meaning: 'Peter died'

ii. literal meaning: 'Peter kicked the bucket'

b. o Petros eklotsisen ti sikla \*ja ðeka lepta the Peter kick.PAST.PERF.3SG the bucket for ten minutes

i. idiomatic meaning: Not available (intended: 'Peter was dying for ten minutes')

ii. literal meaning: 'Peter kicked the bucket \*(for ten minutes)'

# (14) Cypriot Greek

o Finikas eklotsise ti sikla ja xilieties

the Phoenix kick.PAST.PERF.3SG the bucket for millennia

i. idiomatic meaning: Not available

ii. literal meaning: #'Phoenix kicked the bucket for millennia'

Similar is the behavior of other idioms in Standard Greek and Cypriot Greek that have the idiomatic interpretation of 'kick the bucket'.

# (15) Standard Greek

o Finikas tinakse ta petala ja xilieties

the Phoenix toss.PAST.PERF.3SG the petals for millennia

i. idiomatic meaning: Not available

ii. literal meaning: #'Phoenix tossed the petals for millennia'

# (16) Cypriot Greek

o Finikas ekortosen nuro ja xilieties

the Phoenix stretch.PAST.PERF.3SG tail for millennia

i. idiomatic meaning: Not available

ii. literal meaning: #'Phoenix stretched tail for millennia'

It is worth noting that grammatical aspect is expressed low in Greek (immediately above the VP according to Philippaki-Warburton 1990 as it also affects the verb morphology through internal stem modification), thus the data presented in this section do not challenge Marantz's (1997) theory of the syntactic "domain of special meaning" which refers to the domain of the idiomatic expression.

To sum up, grammatical aspect may or may not be a fixed part of an IP. Moreover, there are IPs that fall in the same aspectual class with their non-idiomatic counterparts in terms of inner aspect, but show aspectual restrictions or discrepancies across the two VPs when it comes to grammatical aspect. This suggests that any discussion that uses "aspect"

as a cover term or focuses only on inner aspect, may neglect a very important aspectual domain, that of grammatical aspect.

# 3.2 Inner aspect

Inner aspect has been the main focus of most discussions of aspectual compositionality in idioms so far. Glasbey (2003; 2007) makes an argument against aspectual compositionality in idioms by examining, among other things, the different aspectual properties of the non-idiomatic and the idiomatic interpretation 'paint the town red' in English. She uses the adjunction of the time-span adverbial to show that the former does, but the latter does not, allow modification with the *in*-adverbial. This difference is the result of the first being atelic (an activity) and the second telic (an accomplishment). Glasbey accounts for that by assuming that the idiomatic 'paint the town red' falls under the category of "fake (object) resultatives" (Jackendoff 1997b), meaning that it appears as a resultative but the resultative state is real only in the non-idiomatic VP.

Using the adjunction of the time-span adverbial as a test, I consider the idiomatic reading of (17) and (18) below to fall under the category of "fake (object) resultatives". The contrast between the incompatibility of the time-span adverbial with the idiomatic VP as opposed to its compatibility with non-idiomatic one suggests that when it comes to inner aspect, it is not always true that the same aspectual properties hold for the two, even in identical syntactic environments.

Although most native speakers of Standard Greek would say that the non-idiomatic reading of (17a) and (17b) seems weird, it is pragmatic restrictions that interfere with the acceptability of such data. Notice that the example can be acceptable in the right (yet gruesome) context. It is slightly modified in (17c), where the non-idiomatic meaning is available. In (17a), the non-idiomatic VP is an accomplishment (hence its compatibility with the time-span adverbial, as shown in (17b–c), while the idiomatic VP is an achievement (hence its incompatibility with the time-span adverbial in (17b)).

## (17) Standard Greek

a. mu kopses ti xoli

CL.GEN.1SG cut.PAST.PERF.2SG the gall bladder

i. idiomatic meaning: 'You scared me'

ii. literal meaning: #'You cut my gall bladder'

b. i Eleni tu ekopse ti xoli

the Helen CL.GEN.3SG cut.PAST.PERF.3SG the gall bladder

se misi ora

in half hour

i. idiomatic meaning: Not available (intended: \*'Helen scared him in half

an hour')

ii. literal meaning: 'Helen cut his gall bladder in half an hour'

. o xasapis ekopse ti xoli tu zou

the butcher cut.PAST.PERF.3SG the gall bladder the animal

se misi ora

in half hour

i. idiomatic meaning: Not available

ii. literal meaning: 'The butcher cut the animal's gall bladder in half

an hour'

With respect to aspectual mismatches of this kind, the case of the IP 'take a nap', given in (18), is similar. The non-idiomatic VP is an accomplishment; therefore it can receive modification by the time-span adverbial, while the idiomatic counterpart is an activity, so adjunction of the *in*-phrase makes the idiomatic reading unavailable.

# (18) Cypriot Greek

o Nikos ekopse ena kuri se misi ora the Nick cut.PAST.PERF.3SG a piece of wood in half hour

i. idiomatic meaning: Not available (intended: \*'Nick took a nap in half an hour')

ii. literal meaning: 'Nick cut a piece of wood in half an hour' 11

In (19), a different type of aspectual mismatch is shown. The fact that the non-idiomatic VP can be modified by the durative phrase, but the idiomatic one cannot, is the result of a mass noun being the object of the verb. Mass nouns (and bare plurals) have the aspectual effect of turning a telic predicate into atelic (Verkuyl 1972; Dowty 1979). The mass noun contributes towards the atelicity of the predicate only in the non-idiomatic reading.

# (19) Standard Greek

o Nikos efaje xilopita ja pede lepta the Nick eat.PAST.PERF.3SG mush-pie for five minutes

i. idiomatic meaning: Not available (intended: \*'Nick got the mitten for five minutes')

ii. literal meaning: 'Nick ate mush-pie for five minutes'

What becomes obvious from the above examples is that aspectual mismatches across the two interpretations are not a marginal phenomenon. These examples show that Greek IPs do not always fall in the same aspectual class with their non-idiomatic counterparts. As Glasbey (2007) notes, the opposite is also possible. It might be the case that the two VPs accidentally fall in the same aspectual class (e.g., activity in (20)).

# (20) Cypriot Greek

ekofken ksila ja tris ores cut.PAST.IMP.3SG woods for three hours

i. idiomatic meaning: '(He/she) sawed logs for three hours'

ii. literal meaning: '(He/she) cut woods for three hours'

Based on the examples that show aspectual mismatches, one may conclude that there is no (aspectual) compositionality in IPs. However, I suggest that McGinnis's (2002) claim for compositionality holds even in these cases. All these IPs reflect a particular mode of combination, which *is* compositional. In a framework like DM, the observed aspectual mismatches can be accounted for without resorting to an account of storing idiomatic structure in the lexicon, in the following way. Encyclopedia entries involve the idiomatic meaning (i.e. in the form of contextual specifications on the meanings inserted into individual roots — for example, assign 'kick' a special meaning in the appropriate local context of the DP 'the bucket') and, as happens with non-idiomatic language, part of this semantic content encodes aspectual information. In this context, every IP is syntactically assembled in a compositional way, identical to that of its non-idiomatic counterpart. Under these assumptions, we can minimally account for the derivation of the idiomatic and the non-idiomatic VP in the same way, since there is no *en bloc* insertion of the former from the lexicon (cf. van Gestel 1995 for the opposite claim).

<sup>&</sup>lt;sup>11</sup> This is not a phrase that the majority of Greek Cypriot speakers would produce because the word *kuri* 'piece of wood' is not in frequent use outside the IP anymore. Although this IP is among the most known and used ones, many speakers that use it are unable to give the meaning of *kuri* in isolation; therefore, they are unable to produce this example with a literal reading. However, many older people use it and thesauri also list it with this meaning (e.g., Papadopoulos 2005: 39).

# 3.3 Lexical Aspect

Addressing the properties of lexical aspect in IPs that syntactically correspond to VPs seems at first unmotivated. However, since a tripartition of aspect has been proposed for non-idiomatic predicates, there is no reason for not making reference to one in idiomatic ones, since I have argued that there is nothing idiosyncratic or non-compositional in the derivation of IPs that should differentiate them from other predicates.

For the IPs listed in Table 2, the locus of idiomatic interpretation is the entire VP and the verb alone does not give rise to any idiomatic reading. Even if lexical aspect is taken to be a domain distinct from inner aspect in non-idiomatic VPs, in IPs these two aspectual domains coincide (prior to any adjunction of modifiers that make an aspectual contribution): syntactically, they both correspond to the VP since the locus of the idiomatic interpretation is not the verb but the VP. The outcome is that lexical aspect cannot be attributed to the verb, but to the whole VP and this explains the aspectual mismatches observed in the previous subsection. In other words, what was compared in the previous section was the inner aspect of the non-idiomatic VPs with the lexical/inner aspect of their idiomatic counterparts.

# 3.4 Accomplishment IPs and the primitives of the lexicon

Different approaches relegate to the lexicon different primitives, but generally the conceptualization of a far from minimal mental lexicon is not novel. More often than not, idioms have been conceptualized as elementary units stored in the lexicon (e.g., Swinney & Cutler 1979; Di Sciullo & Williams 1987; van Gestel 1995; Glasbey 2003 etc.); in other words, as units lexically licensed instead of syntactically derived in a way similar to that of non-idiomatic language. The question about the primitives of the lexicon directly pertains to the present discussion because it is precisely the interaction of idiomaticity with aspectuality in IPs that has provided the basis for assuming the lexical storage account in Glasbey (2003; 2007).

A lexicon that has only roots would be a more economical alternative and it would also allow for syntactic derivation of IPs, which is a highly desired effect, since it offers a non-idiosyncratic way to capture idiomaticity. Of course, these arguments for economy are as valid as their theoretical status allows them to be within each framework. They should ideally be coupled with empirically driven arguments that show why idioms are not stored in the lexicon. It seems that IPs that are aspectually classified as accomplishments can be those data.

Recall that McGinnis (2002), besides making a claim for aspectual compositionality in idioms, has also proposed systematicity of aspect, meaning that there are idioms in all aspectual classes. However, MacDonald (2008: 114) suggests that, although IPs that are states, activities, or achievements may exist in the lexicon — assuming that one follows an account of lexical storage instead of syntactic derivation —, there are no accomplishments, since the accomplishment type of idioms would not be interpreted as such due to the conflation of the event features of the predicate. More specifically, following the syntactic analysis sketched in MacDonald (2008), the difference between an achievement interpretation and an accomplishment interpretation is the coexistence of an initial subevent feature < ie > and a final subevent feature < fe > on the same head (Asp); a configuration that achievements have but accomplishments lack. This entails that if accomplishment IPs existed in the lexicon, conflation would take place prior to transfer to the Conceptual-Intentional interface and the c-command relation between the two features would be lost, hence these idioms would be eventually interpreted as achievements and not as accomplishments.

I classify the idiom in (21) as an accomplishment based on a number of diagnostic tests, adapted in Greek. Before I turn to its aspectual properties, it would be useful to clarify its status as an idiom (i.e. IP or ICE). There is no issue of this idiom being an ICE and not an IP: applying the tests suggested by Nunberg et al. (1994), there is no distribution of the idiomatic meaning across the idiom's subparts, no identifiable equivalent across domains of interpretation, no possibility of lexical alteration or idiom-internal modification, and no quantification, focalization, or ellipsis can target its subparts.<sup>12</sup>

In what follows, I outline the adaptation into Greek of the tests summarized in Van Valin (2006) and MacDonald (2008) in order to (re)test the aspectuality of the IP in (10), repeated in (21) below:

## (21) Standard Greek

i Anna eskise ti γata the Ann tear.PAST.PERF.3SG the cat i. idiomatic meaning: 'Ann imposed herself' ii. literal meaning: 'Ann tore the cat apart'

(22) shows modification with the time-span adverbial as being compatible with the idiomatic interpretation, thus suggesting that this IP is telic. According to Van Valin (2006: 158), the time-span adverbial is compatible only with accomplishments.

# (22) Standard Greek

i Anna eskise ti γata se mia nixta the Ann tear.PAST.PERF.3SG the cat in one night (otan padreftike)

when get-married.PAST.PERF.3SG

i. idiomatic meaning: 'Ann imposed herself over a night (when she got married)'

ii. literal meaning: 'Ann tore the cat apart over a night (when she got married)'

MacDonald (2008: 118) uses *almost* to test whether its adjunction exclusively elicits a counterfactual interpretation of the predicate, as is the case with achievements, or whether it allows for both a counterfactual and an incompletive interpretation, as happens with accomplishments. The IP under discussion patterns with accomplishments and not with achievements. The Standard Greek equivalent of *almost* is *sxeðon* and (23) allows an incompletive reading under which Ann yesterday started taking some action so as to impose herself, but the process she initiated was interrupted and never completed. It should be noted that it is not simply the case that the incompletive interpretation is available; it also is the prevailing one and for some speakers the only one existing, since

## (i) Standard Greek

Quantification

i Anna eskise oles tis  $\gamma$ ates the Ann tear.PAST.PERF.3SG all the cats

i. idiomatic meaning: Not available

ii. literal meaning: 'Ann tore all the cats apart'

# (ii) Standard Greek

Focalization

ti γata eskise i Anna the cat tear.PAST.PERF.3SG the Ann i. idiomatic meaning: Not available

ii. literal meaning: 'It is the cat that Ann tore apart'

<sup>&</sup>lt;sup>12</sup> Consider for example the following examples that do not retain the idiomatic meaning:

it is hard to establish for (23) a counterfactual reading under which the process never started:

## (23) Standard Greek

i Anna sxeðon eskise ti γata xtes¹³ the Ann almost tear.PAST.PERF.3SG the cat yesterday idiomatic meaning: 'Ann almost imposed herself yesterday'

Van Valin (2006: 158) classifies only accomplishments and activities as compatible with adverbs like quickly, rapidly etc. (24) exemplifies the latter in combination with the IP in question. The compatibility with the time-span adverbial suggests that this predicate cannot be atelic (an activity).

#### (24) Standard Greek

i Anna padreftice ce eskise ti γata the Ann get-married.PAST.PERF.3SG and tear.PAST.PERF.3SG the cat poli γriγora very quickly idiomatic meaning: 'Ann got married and she imposed herself very quickly'

Finally, the test with the stop-control construction (MacDonald 2008: 120) cannot be applied because its adaptation in Standard Greek requires the idiom to appear inside an embedded clause introduced with the subjunctive particle na 'to'. When this particle is combined with stamato (which is the equivalent of 'stop') in the matrix clause, the matrix verb obligatorily licenses imperfective aspect to the embedded predicate, but recall that this is an idiom fixed for grammatical aspect (perfective). I have earlier made the distinction between unfixed T and fixed (grammatical) Asp for this IP (fn. 10): When Asp can be both perfective and imperfective, only the former preserves idiomaticity.

It seems that the results of the previous tests suffice to make a claim for this IP being an accomplishment. However, perhaps the fact that the stop-control construction is not available to confirm the result of the other tests may cast doubt on its status as a true accomplishment. MacDonald (2008: 123) discusses cases of IPs that appear to be accomplishment-like according to some of those tests, yet failing some others renders their classification as accomplishments unclear and does not enable us to "conclude unequivocally that these idioms are accomplishments". Ideally, an accomplishment IP should pass all the tests, hence the IP in (25) is employed to show two things: first, that there are IP accomplishments and second, that even in cases of IP accomplishments, not all tests can equally contribute to determining the aspectual class.

#### (25) Standard Greek

to eskasa mesa se ðeka lepta CL.ACC.NEUT.3SG burst.PAST.PERF.1SG inside in ten minutes i. idiomatic meaning: 'I escaped in ten minutes' ii. literal meaning: 'I burst it in ten minutes'

It is true that certain pragmatic contexts facilitate amelioration effects with respect to the unacceptability of certain combinations between types of predicates and PP modifiers, hence some complications arise when the relevant diagnostics are applied to determine predicate classes (see Van Valin 2006: 163). However, the purpose here is not to discuss

<sup>&</sup>lt;sup>13</sup> From this point onwards, I refrain from giving the literal meaning, not because one does not exist, but because the contexts below are created to best support the idiomatic interpretation, which is the one under examination

whether there is a context that facilitates such amelioration effects and/or gives rise to microdialectal variation with respect to acceptability judgments of a particular example in a particular context, but to see whether aspect is systematic in idioms, as McGinnis (2002) argued, and whether accomplishment IPs exist. (25) suggests they do. With respect to its status as an idiom, following the criteria of Nunberg et al. (1994), as outlined above for (21), (25) is an IP. (25) shows that this IP is telic — it is compatible with the time-span adverbial — and (26)–(28) suggest that it passes the above presented tests for determining a true accomplishment. (26) elicits both an incompletive and a counterfactual interpretation; under the former, the agent started taking action yesterday so as to escape, but the process was never completed. (27) shows the compatibility of this IP with the adverb 'quickly', which according is a characteristic of accomplishments, activities, and some achievements (Van Valin 2006). However, this IP is not an activity, because it also patterns with the time-span adverbial (25), which combines with accomplishments and achievements, but not with activities.

## (26) Standard Greek

i Anna sxeðon to eskase xtes the Ann almost CL.ACC.NEUT.3SG burst.PAST.PERF.3SG yesterday idiomatic meaning: 'Ann almost escaped yesterday'

# (27) Standard Greek

tin sinelavan ala yriyora to CL.ACC.FEM.3SG arrest.PAST.3PL but quickly CL.ACC.NEUT.3SG eskase burst.PAST.PERF.3SG idiomatic meaning: 'They arrested her but she escaped quickly'

It should be noted that this idiom does not elicit an iterative interpretation (28) — which MacDonald (2008) notes as indicative of achievements and not of accomplishments —, under which Ann repeatedly (i.e. iteratively) stopped escaping. One can imagine a situation where Ann has started planning or even executing her escape and then she stops before finishing. This single event interpretation is indicative of accomplishments and not achievements (MacDonald 2008: 121).

# (28) Standard Greek

i Anna stamatise na to skai ce the Ann stop.PAST.3SG SUBJ CL.ACC.NEUT.3SG burst.PRES.IMP.3SG and apofasise na ektisi tin pini tis decide.PAST.3SG SUBJ serve.3SG the sentence POSS.GEN idiomatic meaning: 'Ann stopped escaping and decided to serve her sentence'

Since the tests for aspect vary in the literature, I also apply Dowty's (1979: 60) diagnostics in relation to the IP in (25). First, the compatibility with the time-span adverbial in (25) is a characteristic of only accomplishments and achievements, according to Dowty (1979). Second, being the complement of 'stop' (28) and ambiguous with 'almost' (26) — two characteristics of accomplishments, but not of achievements (Dowty 1979) —, this IP seems to be an accomplishment. Third, this IP is compatible with agent-oriented adverbs such as 'attentively', 'studiously', and 'carefully' (as in (29)), which once more is a characteristic of accomplishments and not of achievements for Dowty (following Ryle 1949).

## (29) Standard Greek

to eskasa aθoriva CL.ACC.NEUT.3SG burst.PAST.PERF.1SG noiselessly i. idiomatic meaning: 'I escaped noiselessly' ii. literal meaning: 'I burst it noiselessly'

Fourth, this IP is compatible with the durative phrase (30); as accomplishments are, but achievements are not.

#### (30) Standard Greek

to eskase ja mia ora
CL.ACC.NEUT.3SG burst.PAST.PERF.3SG for one hour
i. idiomatic meaning: '(He/she) escaped for one hour'
ii. literal meaning: '(He/she) burst it \*for one hour' (incompatible with the durative phrase)

I have earlier claimed that not all tests can equally contribute to determining the aspectual class of the idiomatic predicate. More specifically, the stop-control test does not suffice to aspectually classify an IP in Greek, hence from all tests this is the least credible. In addition to accomplishments, the stop-control construction patterns with IPs that are classified as activities (31) and achievements (32), with an iterative reading being available in these cases also:

# (31) Standard Greek

i Maria stamatise na vyazi ylosa otan the Mary stop.PAST.PERF.3SG SUBJ pull out.IMP.3SG tongue when katalave oti  $\theta a$  tin apelian understand.PAST.3SG that FUT CL.ACC.FEM.3SG fire.IMP.3PL idiomatic meaning: 'Mary stopped talking back when she realized that they would fire her'

## (32) Standard Greek

i Lina stamatise na ðagoni ti lamarina the Lina stop.PAST.3SG SUBJ bite.PRES.PERF.3SG the tinplate toso efkola so easily 'Lina stopped falling in love so easily'

The conclusion to be drawn from these data is that accomplishment IPs exist, and following MacDonald's (2008) arguments about the syntactic nature of accomplishments, they are not stored in the lexicon. If IPs are not stored in the lexicon, it is a reasonable assumption that the semantic activation or identification involved in word recognition could potentially differ from that of IP recognition. Although there are studies suggesting that idioms are stored in the lexicon and retrieved in a way identical to words (Swinney & Cutler 1979), there are also neurolinguistic studies that generated evidence for the opposite. Tabossi & Zardon (1993; 1995) found that the onset of an idiomatic chunk does not initiate the activation of the idiomatic interpretation and their results suggested that the activation of IP meanings is slower and makes relevant factors other than the ones involved in word recognition.

Under the storage-based approach, idioms behave like words, therefore the idiomatic meaning should be activated at the onset of the idiom. More recent experiments suggest that this is not unequivocally the case and confirmed that other factors are also relevant in idiom recognition: Fanari et al. (2010) found that the idiomatic meaning is activated at the offset of long idioms when these are preceded by a neutral context (i.e. a context that does not bias the idiomatic reading), whereas the idiomatic meaning of short idioms is activated at the offset of the string, when these are preceded by an idiomatic (i.e. non-neutral) context. Regardless of what the exact nature of such factors may be, given that there is theoretical (namely, economy), empirical (such as accomplishment IPs), and experimental (e.g., different activation processes) evidence for it, syntactic derivation of IPs would be a safe claim to make as opposed to a claim for idioms being stored in the lexicon.

Neuropsychological studies in patients with Alzheimer's disease have shown that the literal interpretation may be activated when it corresponds to a real-world situation, even if the task asks for the idiomatic meaning (Papagno et al. 2003). This has led to the claim that it seems as if patients with Alzheimer's disease are unable to suppress the literal interpretation when there is an overt representation of it, even if they know the idiom and its non-literal interpretation (Papagno et al. 2003). This can be interpreted as an indication of the fact that the idiom is not activated as a whole at the onset of the idiom; if it was, the literal meaning would not need active suppression in brain-damaged patients who do know the idiomatic meaning of the chunk in question. As Papagno et al. (2003: 2424) conclude, "the activation of the literal interpretation is stronger or perhaps quicker than the activation of the idiomatic meaning". In a context where the idiomatic meaning is activated too, the activation of the literal meaning would not be stronger or quicker if the idiomatic reading was truly activated at the onset of the chunk. Put differently, the literal meaning has time to be activated precisely because the chunk is processed step by step, allowing for the literal meaning to be construed as well, and then supressed when the idiomatic meaning is activated post-syntactically. It is the last part (i.e. the suppression) of this multi-step process that is at times lost in patients with Alzheimer's disease.

Boulenger et al. (2009) examined whether words that refer to body actions activate the motor cortex when they appear inside idioms, as they do when they appear in literal language. Their findings are very interesting in the context of the present discussion: Semantic somatotopy in idioms was found and this result was interpreted by the authors as "support[ing] a compositional perspective on semantic processing postulating that idiom meaning is computed from the semantics of constituent words and from combinatorial information" (Boulenger et al. 2009: 1912).

More recent studies on the processing of non-compositional expressions such as phrasal verbs produced results in favor of the models that propose obligatory literal processing in idioms (Holsinger & Kaiser 2013). EEG studies confirm this conclusion. The findings of Canal et al. (2015) suggest that lexical retrieval processes occur in a similar way in literal and idiomatic contexts. Another study that helps decide whether idiomatic meaning is retrieved at one fell swoop or compositionally built is Titone & Libben (2014). The results of this study favor the scenario of gradual activation of the idiomatic interpretation through showing an important thing: different linguistic properties of idioms independently modulate figurative meaning activation *over time*. In other words, different types of idioms are not retrieved in a uniform way, as they should if they were all stored in the pre-syntactic lexicon.

All in all, recent neurolinguistic and psycholinguistic experiments seem to grant support to the scenario of syntactic derivation of idioms rather than the storage account, in line with the conclusion reached in the present work through the examination of linguistic data.

## 4 Conclusions

This discussion aimed to shed light on the aspectual behaviour of IPs and the implications that the interaction of aspectuality with idiomaticity carries for the primitives of the mental lexicon. Assuming a tripartition of aspectual domains that has been suggested for non-idiomatic predicates, I have argued that McGinnis' (2002) claim for systematicity and compositionality in idioms is correct, but so is Glasbey's (2003; 2007) observation of aspectual mismatches between idiomatic VPs and their non-idiomatic counterparts. However, I have suggested that these mismatches do not preclude the notion of compositionality; instead, it is due to compositionality reflecting a particular mode of combination that the mapping of an IP with an entry from the Encyclopedia is possible. I used the syntactic analysis of MacDonald (2008), to show the existence of accomplishment IPs. Such IPs offer an argument against the idea of idioms being stored as prefabricated units in the mental lexicon. This argument allows for the syntactic derivation of idioms, instead of *en bloc* insertion, allowing us to maintain a minimal lexicon and a non-idiosyncratic way to derive idiomaticity.

## **Abbreviations**

ACC = accusative, ASP = aspect, CL = clitic, DM = Distributed Morphology, DP = Determiner Phrase, FEM = feminine, FUT = Future, GEN = genitive, ICE = idiomatically combining expression, id. = idiomatic, IMP = imperfective, IP = idiomatic phrase, NEUT = neuter, NP = Noun Phrase, PERF = perfective, PL = plural, POSS = possessive, PRES = present, RM = Representational Modularity, SG = singular, SUBJ = subjunctive, T = tense, TRANS = transitive, V = verb, VP = Verb Phrase, vP = light Verb Phrase

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# Competing Interests

The author has no competing interests to declare.

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