

# PP LICENSING AND COMPOUNDING: EVIDENCE FOR PREPOSITIONS AS PROBES<sup>1</sup>

Dimitris Michelioudakis  
*University of York*

Nikos Angelopoulos  
*University of California, Los Angeles*

**Abstract:** *This paper investigates non-core arguments commonly realised as PPs and establishes a generalisation concerning their ability to show up as non-head constituents of synthetic compounds. More concretely, we argue that an argument can be compounded if and only if the expected governing P cannot be merged. The pattern discovered suggests that the event-related functional structure commonly diagnosed through these PPs only licenses the respective prepositions, not the thematic relationships encoded. It is argued that the latter can be dissociated from the former if we adopt Kayne's (2005) analysis of prepositions as probes, which do not select the DP bearing the relevant theta-role, but simply attract it from within a verbal projection.*

**Keywords:** *deverbal compounds, argument structure, prepositions*

## 1. Introduction

In much recent work, the licensing of arguments is linked to the functional structure projected on top of the predicate, especially event structure-related projections, in verbal and nominal constituents alike. Thus, in so-called A(rgument) S(tructure)-nominals, following Grimshaw's (1990) original distinctions and terminology, the licit/obligatory presence of overt arguments is treated as the consequence of the presence of verbal projections responsible for the eventive or agentive reading of the nominal (cf. Marantz 2000, Alexiadou 2001, 2009). Such correlations, and the corresponding technical formalisations, appear to speak in favour of constructivist/exo-skeletal approaches to argument structure, whereby arguments are selected and licensed outside the narrow limits of a domain defined by the root and associated lexical information. Then synthetic compounds, i.e. compounds in which the non-head appears to fulfill a thematic role and thus constitute an argument of the head, form an apparent exception, given the absence of event structure in compounds in general (see Borer 2012).

If the part of functional structure needed for the licensing of arguments in synthetic compounds indeed coincides or overlaps with the functional structure responsible for the licensing of the event argument, i.e. the part that we need to abandon in the light of Borer's observation, then one conceivable solution is the one Borer herself proposes, namely that:

---

<sup>1</sup> We are grateful to two anonymous reviewers for comments and suggestions. All errors are our own.

[synthetic compounds] do not differ from any other root compound, and that the argument construal is but an implicature. (Borer 2012:131)

This arguably means that both the fact that the non-head is interpreted as an argument of the head and the kind of argument interpretation it receives (i.e. its theta-role) are contextually determined. In this paper we present a very systematic correlation between the availability of certain theta-roles (in certain types of synthetic compounds) and their unavailability in the corresponding non-compound nominals, and vice-versa, i.e. cases in which certain thematic interpretations are contextually relevant and plausible and yet unavailable, in a fully predictable way. Having established such a pattern, we argue that event related projections are indeed part of the necessary conditions for the formal licensing of referential arguments but are not responsible for their selection and thematic interpretation in the first place and thus the two notions, selection and licensing, need to be kept separate.

In what follows we are concerned with theta-roles which are normally realised as PPs in clauses and event nominals, such as instruments, causers, (demoted) agents etc. What is puzzling is that certain synthetic compounds can feature nominal stems saturating such theta-roles, while the corresponding non-compounds nominals and participles, i.e. nouns and participles formed with the same derivational suffixes, cannot contain PPs satisfying these same theta-roles. In (1), for instance, it is shown that agent nominals in Greek may feature a non-head nominal stem that satisfies an ‘instrument’ theta-role, while instruments realised as PPs are not possible with such nominals. And conversely, as will be shown below, in all cases where a nominalization or a participle can be accompanied by (optional) PPs satisfying these theta-roles, compounds with such argument interpretations are illicit:

- (1) **aktin-** o- therap- ef- ti- s (Greek)  
 ray LNK treat VBZ *er* M.S.NOM  
 ‘X-ray therapist’
- (2) therap- ef- ti- s (\***me aktines**)  
 treat VBZ *er* M.S.NOM with rays  
 ‘therapist with X-rays’ (examples from Angelopoulos 2012)

We conclude that the licensing of the theta-roles in question is independent from the licensing of the respective prepositions, and consequently that whatever is responsible for the licensing of the PP should not be mistaken for the licensor of the theta-role. We then explore ways of divorcing the two notions, by discussing what implications this observation has for the licensing of non-locative prepositions in general. The overall picture seems to lend support to Kayne’s (2005) treatment of (certain) prepositions as probes, which attract rather than select their surface complement.

## 2. Constituency in deverbal compounds

The discussion that follows implies a complete parallelism between the derivations of a verbal and a nominal construction up to the point where the two derivations diverge with the merger of a head which unambiguously marks the construction as verbal or nominal (T or *n*, respectively). For this parallelism to be true, it must be shown that the constituency of

a deverbal compound such as *truck driver* or *kardio-katakti-tis* ‘heart-conquer-or’ is indeed [[N-stem]-*n*] rather than [N-[stem-*n*]], as has often been proposed (Di Sciullo & Ralli 1999 a.o.). Some arguments commonly found in the relevant literature often make reference to: (i) whether [N $\checkmark$ ] or [ $\checkmark$ -nominaliser] sequences taken off deverbal compounds are independently attested as morphological units; (ii) whether the idiomatic meaning of certain V-O idioms can be preserved in deverbal compounds or deverbal nouns with phrasal complements (e.g. *make trouble*, *troublemaker*, *\*maker of trouble*).

The former type of argument often appears to favour [N [ $\checkmark$ -*n*]] representations, since [N $\checkmark$ ] sequences in deverbal nominalisations are usually not to be found outside these nouns; however, it is also clear that certain [ $\checkmark$ -*n*] sequences in deverbal compounds do not exist as independent deverbal nouns either, cf. *oksiyonokolitis* ‘oxy welder’ < *\*kolitis* ‘welder’. The latter type of argument probably corroborates the assumption that there is a constituent consisting of  $\checkmark$  and the internal argument both in VPs and compounds, which is the constituent/point of the derivation where idiosyncratic meanings may arise – cf. also the idea of ‘inner morphology’ within Distributed Morphology (Marantz 2007). Besides, if the [N [ $\checkmark$ -*n*]] representation were correct, then whenever N corresponds to a non-core argument, e.g. an instrument as in (1), it would have to be an instrument modifier of the deverbal noun, rather than a modifier of the stem. Thus, in principle, if the noun is semantically compatible with this sort of modification, instrument modifiers should be possible even when not compounded. However, as we have already seen in (2) this is not the case. Instead, phrasal modifiers can always successfully occur within a *verb* phrase with the same predicate (2’):

(2’)	therap-	ev-	o	me	aktines
	$\checkmark$ therapy	VBZ	Infl.Suffix.1.SG	with	rays
	‘I cure with X-rays’				

If we attribute this pattern to the incompatibility of PP modifiers with some nominalizing suffixes but not others (assuming that the deverbal noun is a projection of the nominalizer), we have no principled way to predict and explain which nominalisers are compatible with non-core argument PPs (and which ones). Instead, we propose that the corresponding thematic relationships only depend on the semantic content of the root. We will therefore be assuming a [[N $\checkmark$ ] ... *n*] representation for deverbal compounds. PP realization, on the other hand, correlates with event structure, in nominals and VPs alike, and, consequently, PPs are licit when appropriate event-structure-related projections are licensed. The variation observed stems exactly from variation with respect to which nominalisers select which type/size of verbal structure.

Regarding the fact that nominal stems with an interpretation corresponding to a thematic role are possible as non-head constituents of deverbal compounds, despite the absence of event structure, Borer (2012) proposes that:

the non-head cannot, in actuality, be an argument (*ibid.*, 148).

For Borer, synthetic compounding is just a case of root compounding (with the two roots forming a constituent selected by the nominaliser, in accordance with the constituency we also argued for), and the apparent thematic relationship between the non-head and the head is an implicature, freely derived given the content of the head. Nevertheless, this would predict that compounding should be free as long as a thematic-like interpretation is

pragmatically available. For instance, if a nominal stem/root can be interpreted as an instrument employed to perform/achieve what another root means, compounding of those two roots should be possible regardless of the nominaliser selecting the root-root constituent. Crucially, as shown below in detail, such a prediction is not borne out.

### 3. *The Licensing of Instruments and Instrument PPs*

Starting with the contrast between (1) and (2), and particularly the ungrammaticality of the PP in (2), it is generally acknowledged that instrument PPs are only licensed when a process reading is available. Thus, process nominals (4) allow such PPs just like their clausal counterparts (3), while e.g. result nominals minimally contrast with them for that property (5).

- (3) Eksetazo ton astheni me aktines  
 I-examine the patient with rays  
 ‘I examine the patient with X-rays’
- (4) I eksetasi tu asthenus me aktines (process nominal)  
 the examination the.GEN patient.GEN with rays  
 ‘the examination of the patient with X-rays’
- (5) O asthenis parelave [tin eksetasi (\*me aktines)] (result nominal)  
 The patient received the examination with rays  
 ‘the patient received the examination with X-rays’

So, unsurprisingly, instrument PPs are not licit with agent nominals either, as the latter are known to have a ‘diminished verbal character’ (Alexiadou 2001) and to resist aspectual modification (7) unlike process nominals (6)<sup>2</sup>:

- (6) Therap- e- ia- Ø tu karkinu  
 treat VBZ ment F.S.NOM the.GEN cancer.GEN  
 me aktines epi tris mines  
 with rays for three months  
 ‘treatment of cancer with X-rays for three months’

---

<sup>2</sup> In fact, in Greek, agent nominals also consistently lack any event entailments, unlike certain *-er* nouns in English (cf. (i)), therefore arguably even less verbal structure is to be assigned to them, as an event argument is missing (ii) (Michelioudakis & Angelopoulos 2012).

(i) The mower of the lawn just walked in => a mowing event is entailed

(from van Hout & Roeper 1998)

(ii) O Janis ine ekped-ef-tis skilon ke avrio tha ekpedefsi skilo ja proti fora  
 The John is train v -er of-dogs and tomorrow will train dog for first time  
 ‘John is a trainer of dogs/dog trainer [licensed to train dogs] and tomorrow will train a dog for the first time’

- (7) Therap- ef- ti- s (\*me aktines)  
 treat VBZ er M.S.NOM with rays  
 (\*epi tris mines)  
 for three months  
 ‘therapist (with X-rays) (for three months)’

Given the availability of compounds such as (1), we suggest that incorporation of instrument theta-roles in compounds is licit if instrument PPs are not licensed, and in fact we will show that the reverse also holds, i.e. instrument compounding is allowed if *and only if* instrument PPs are not licensed<sup>3</sup>. The fact that compounds such as (8) are attested alongside process nominalisations such as (6) only apparently challenges our generalisation, as (8) cannot be an Argument Structure nominal and cannot be interpreted aspectually (recall again Borer’s claim about the absence of event structure in synthetic compounds); it is more likely that (8) shares most of its structure with the R-nominal *therapeia* ‘therapy’ (as in e.g. ‘the therapy prescribed’)<sup>4</sup>.

- (8) I aktin- o- therap- e- ia- Ø (\*tu karkinu)  
 The ray LNK treat VBZ ment F.S.NOM of-the cancer  
 (\*epi/ \*mesa-se tris mines)  
 for/ in three months  
 ‘The X-ray treatment (of cancer) (for/in three months)’

Generalising even more, we will establish and attempt to account for the biconditional in (9):

- (9) If and only if merger of P is blocked, then compounding of the surface complement of P with the verbal root of the nominal is possible.

Focusing on instruments for now, following Alexiadou & Schaefer (2007), what differentiates (6), which allows instrument PPs, from (7) and *-er* nominals in general, which do not, must be the presence of a functional projection responsible for the aspectual interpretation discussed above, which they call  $Asp_{EPISODIC}P$  and place above VoiceP. As to the way in which this relationship between the instrument PP and  $Asp_{EPISODIC}$  is to be formalised, we reject the idea that PPs satisfying certain thematic relationships are

<sup>3</sup> The generalisation seems to have no exceptions in all cases of compounds with instruments, see e.g. *-er* nominals denoting instruments/tools such as (i) below:

- (i) anem- o- geni- tri- a vs. geni- tri- a (\*me anemo)  
 wind LNK generate NMZ F.S.NOM generate NMZ F.S.NOM with wind  
 ‘wind turbine’

This generalisation does not seem to straightforwardly extend to nominals and compounds with object theta-roles, where one realisation does not seem to block the other (NB. both of the following lack any event entailments):

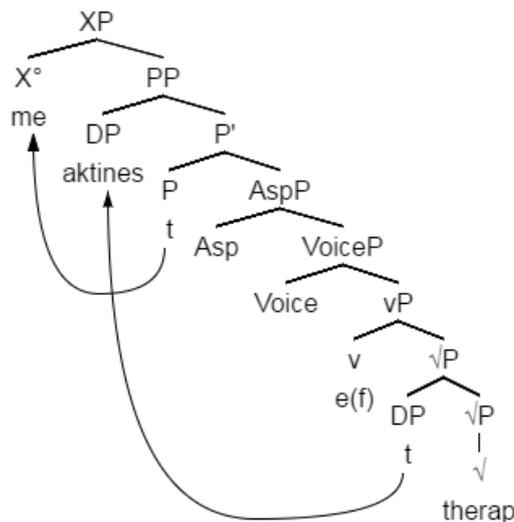
- (ii) elektr- o- geni- tri- a vs. geni- tri- a revmatos  
 electricity LNK generate NMZ F.S.NOM generate NMZ F.S.NOM electricity

<sup>4</sup> *-Ia* (as opposed to *-tis*) may combine with either fully fledged argument-supporting verbal structures (yielding AS-nominals) or with smaller non-eventive constituents which only derive R-nominals (cf. Alexiadou 2009).

introduced/selected, though not obligatorily, by projections outside VoiceP. Instead, we propose that it is non-locative Ps that select the relevant projections, which are shared by both nominal and verbal constructions, and function as probes, in the spirit of Kayne (2005). In our case, P selects  $Asp_{EPISODIC}P$  and it is therefore possible in e.g. (6), where this projection is present but not in *-er* nominals which lack Asp (and, in Greek, possibly even Voice). The merger of P creates the right licensing conditions for the Case requirements of whatever satisfies the instrument role, which is then attracted to Spec-P from within AspP.

P further moves to a higher functional head X (an Agr-like head in Kayne's terms), followed by remnant movement of AspP to Spec-XP, i.e. to the left of the preposition (which is now in  $X^0$ ) and its surface complement (now in Spec-P). The derivation is illustrated in (10) below. XP can be the complement either of T or of a nominalising head, e.g. *-ia* in (6).

(10)



#### 4. Compounding

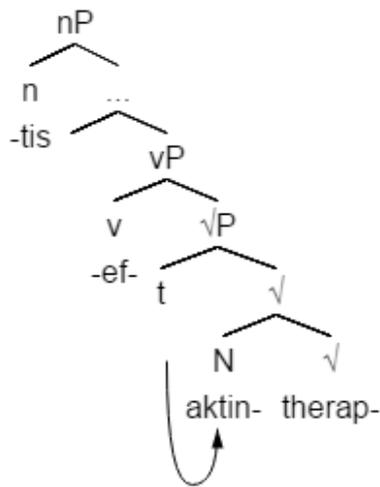
The proposal in (10)<sup>5</sup> has the advantage of divorcing the licensing of P from the encoding of the instrument role. We tentatively represent the base position of the

<sup>5</sup> An anonymous reviewer suggests that "the different availability of arguments in synthetic compounds as opposed to non-compound nominals is only unexpected if one shares the (current) view that compounding is done in the narrow syntax" and that "[i]f one assumes the traditional view in generative linguistics that derivational morphology is a different module from syntax proper, a different distribution is the null hypothesis". Indeed, this view is not incompatible with our own claim "of a last resort nature of argument-incorporation". The reviewer then proposes that "the picture would be one of relative markedness of different linguistic strategies (morphological vs syntactic) at a more general level, rather than an economy principle active in the narrow syntax." This interdependence of syntax and morphology, however, already undermines the idea of an autonomous morphological component.

instrument as an adjunct within the maximal projection of the root, even though it is not clear that *v* (which is just a verbalising morpheme in our case, not a head that necessarily renders the projection eventive) does not play a role in the introduction of this or other arguments. In nominals of the *-er* type, even though an instrument argument is in principle not excluded, the merger of P is impossible due to the absence of an AspP layer.

Our proposal is that in such configurations (and, crucially, only in such configurations) compounding is possible and a noun that satisfies the instrument role can become a non-head constituent of a synthetic compound. We argue that this happens in the absence of a Case licensing environment, but also in the absence of any Case requirements, as the interpretation is such that no real individuals need to be involved in an event/referred to, hence no D is required (following Longobardi's (2008) idea that D is needed for individuation), and consequently no Case is required either. In cases like this, such nouns may undergo some last-resort, post-syntactic operation that combines N and Root as two morphemes of one word and result in the linearisation seen in this kind of compound (11), a process probably corresponding to Matushansky's (2006) m-merger, if N immediately c-commands Root(P)<sup>6</sup>. The compound is ultimately formed through successive cyclic head movement/incorporation of the Root up to  $n^0$ , as in Harley's (2009) DM account of compounding.

(11)



<sup>6</sup> In Bare Phrase Structure-theoretic terms, the noun in that position is indistinguishable from a specifier of Root. Even though it is not clear if m-merger occurs without head-movement (seen as attraction of a head to the Spec of the attracting head, in Matushansky's system), it may even be the case that m-merger applies to a derived position of N, since the relationship of N and Root in Bare Phrase Structure-theoretic terms is again such that we cannot exclude head-adjunction of the former to the latter. Whatever the precise technical implementation, similar considerations apply to Borer's (2012) (syntactic) representation of root compounds.

## 5. Agent Phrases and Participles

Further evidence supporting the generalisation in (9) comes from the realisation of agent arguments of nominals and participles. It is clear that in this case too prepositional realisation and compounding are mutually blocked. For instance, event nominals formed with the nominalizer *-m(a)* license agent PPs (12) and, as expected, exclude agent-compounding (13a). On the other hand, adjectival participles in *-t(os)* only license agent-compounding (15) and exclude agent PPs (14).

- (12) To stol- iz- m- a tis eklisias  
 the decoration VBZ NMZ N.S.NOM of-the church  
 apo ta koritsia me prosoxi  
 by the girls with care  
 ‘the decoration of the church by the girls carefully’

- (13) a. \* korits- o- stol- iz- m- a  
 girl LNK decorate VBZ NMZ N.S.NOM  
 ‘girl decoration (intended meaning: by a girl/girls)’  
 b. nif- o- stol- iz- m- a  
 bride LNK decorate VBZ NMZ N.S.NOM  
 ‘bride decoration’

- (14) Stol- is- t- os (\*apo agelo) (\*me prosoxi)  
 decorate VBZ PTCP M.S.NOM by angel with care  
 ‘decorated (by angel) (carefully)’

- (15) Agel- o- stol- is- t- os  
 angel LNK decorate VBZ PTCP M.S.NOM  
 ‘angel decorated (intended meaning: by an angel/angels)’

Nominalisations in *-m(a)* and *-t(os)* adjectival participles crucially differ in the licensing of agent-oriented modification, as illustrated by the fact that manner PPs can be licensed only with *-m(a)* nominals (cf. 12 vs. 14) (see also Alexiadou 2009). Following Alexiadou (2009), who associates agent-oriented modification with Voice, it makes sense to assume, in our terms, that the P introducing agent-phrases in Greek (*apo* ‘by’) selects XPs at least as big as VoicePs. Merger of *apo* ‘by’ is not blocked in (11), as *-m(a)* nominals contain a VoiceP, and as a consequence compounding of agents (i.e. the interpretation of non-heads as agents) is not available as a last resort mechanism. Note that compounds in *-m(a)* with non-heads interpreted as internal arguments are quite productive in Greek (13b). On the contrary, *-t(os)* participles, which lack Voice, do not allow P to merge, and therefore agent compounding is possible.

Note also that *-m(a)* nominals might also contain higher projections such as Asp, given the contrasts below between instrument-PPs and compounding (16)<sup>7</sup>. Adjectival participles in *-tos* unsurprisingly do not allow instrument PPs (and therefore do allow instrument non-heads in compounds), as they have no VoiceP and, a fortiori, no AspP (17). What is particularly interesting about these examples is that the ‘instrument’ interpretation is readily

<sup>7</sup> In (16), *-sim(o)* is the allomorph of *-m(a)* that shows up with monosyllabic roots.

available pragmatically. Even if we were to extend to *-m(a)/-sim(o)* Borer's (2012) idea that *-ing* "incorporates a grammatical Originator" in *-ing* compounds, then all other thematic interpretations should be grammatical when contextually plausible. The ungrammaticality of instruments incorporating in *-m(a)* and *-ti(s)* is not accounted for, unless we further stipulate that information about incorporated (in Borer's sense) optional arguments can be included in certain derivational suffixes and not others:

- (16) a. \* petr- o- xti(s)- sim- o  
           stone LNK build NMZ N.S.NOM  
       b. xti(s)- sim- o me petra  
           build NMZ N.S.NOM with stone  
           ‘(the act of) building with stones’
- (17) a. petr- o- xtis- t- o  
           stone LNK build PTCP N.S.NOM  
       b. xtis- t- o (\*me petra)  
           build PTCP N.S.NOM with stone  
           ‘built with stones’

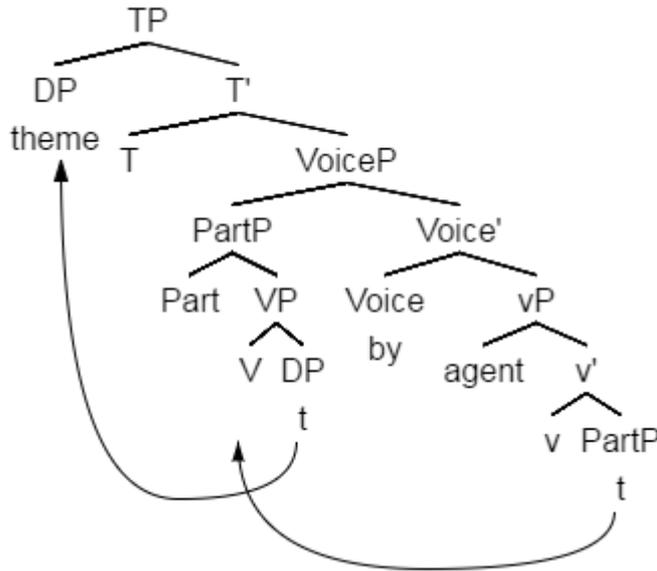
Besides *-t(os)*, Greek also forms adjectival participles with the suffix *-men(os)* (18). Interestingly, unlike *-tos*, *-menos* resultant state participles license agent modification (hence a VoiceP, see Alexiadou, Gehrke & Schaefer 2014; Anagnostopoulou & Samioti 2013), thus accepting agent PPs (18a) but no compounding (18b, which minimally contrasts with *theosdotos* ‘God-given’):

- (18) a. Dos- men- os apo ton theo  
           give PTCP M.S.NOM by the god  
           ‘given by God’  
       b. \* the- o- dos- men- os  
           god LNK give PTCP M.S.NOM  
           ‘God-given’

Apparent counterexamples to this pattern, as far as participles are concerned, come from languages like English, where both *given by God* and *God-given* are possible. Nevertheless, this arguably reflects a deeper difference in the syntax of passives across languages. Following Collins's (2005) smuggling analysis of English-type passives, *by* is not really a preposition, but rather a spellout of Voice<sup>0</sup>, more specifically its overt exponent when the external argument is an overt DP.

The external argument is in Spec-*v*\*P (like in the active), according to Collins, but still in the rightmost position, since ParticipleP, the complement of *v*, is ‘smuggled’ to Spec-Voice, allowing the internal argument to further move to T, unaffected by any minimality effects caused by the external argument (19):

(19) [<sub>Voice'</sub> [<sub>Voice</sub> by] [<sub>vP</sub> agent [<sub>v'</sub> v [<sub>PartP</sub> ... → followed by smuggling of PartP to Spec-Voice



This sort of analysis is motivated by a number of syntactic effects of agents (both explicit and implicit) in passives, none of which is to be found in Greek. For instance, neither explicit nor implicit agents can be the antecedent of controlled subjects in non-finite (gerundival) adverbial clauses in Greek, which otherwise admit antecedents in all sorts of syntactic positions (see Michelioudakis 2012, 2014). Therefore, implicit agents are not syntactically represented at all, while overt DPs in PPs headed by *apo* are clearly not in Spec-*v*. *Apo*, then, is not an exponent of Voice<sup>0</sup>, but rather a P selecting a VoiceP, with the rest of the derivation proceeding as above (and, unsurprisingly, blocking compounding).

On the other hand, in English, in the absence of the blocking effect caused by the availability of a competing derivation, in compounds such as ‘God-given’, the external argument which resides in Spec-*vP* is free to undergo the post-syntactic movement operation discussed above and illustrated in (11):

(20) [<sub>Voice'</sub> [<sub>Voice</sub> ∅] [<sub>vP</sub> N [<sub>v'</sub> v [<sub>PartP</sub> Part... → compounding of N with Part-*v*<sup>0</sup>

As for the assumption that the first-merged position of the agent is Spec-*v* rather than Spec-Voice, it is worth noting that compounding of agents/causers in *-t(os)* adjectival participles is only possible when a (prior) event entailment arises (21b), while the corresponding non-compounds may not have such entailments (21a). As already said, *-t(os)* participles always resist agent-oriented modification, i.e. they lack a VoiceP layer, so we take the contrast in (21) to imply that a *v*<sub>Event</sub> projection is added to the structure selected by *-t(os)*, just in case an agents need to be introduced in the compound (21b). This ultimately

supports the idea that agents and causers merge in Spec-vP, rather than Spec-VoiceP. The non-compound *-t-* participle obviously lacks this projection (21a).

- (21) a. i areti ine didak- t- i,  
 the virtue is teach- PTCP F.S.NOM  
 borun na su tin didaksun  
 they-can Subj. you.DAT it.ACC teach-3PL  
 ‘Virtue is (=can be) taught, they can teach it to you’
- b. i glosa tus ine mitro- didak- t- i,  
 the language their is mother teach PTCP F.S.NOM  
 (\*bori na tus ti didaksi i mana tus)  
 can Subj. them.DAT it.ACC teach the mother their  
 ‘Their language is mother-taught (=taught by their mothers)  
 (\*their mother can teach it to them)’

## 6. Causers

To conclude the discussion of arguments realised as PPs in clauses and nominalisations, in this section we consider causers. Causers in Greek appear in PPs headed by *apo*, which must however be treated as a preposition homophonous to the one introducing agents, carrying different selectional properties. When introducing causers, *apo* is in fact only compatible with intransitive structures lacking Voice, such as anti-causatives or, in our case, target state participles (22a), which can be argued to lack Voice (cf. Parsons 1990, Kratzer 2001), but never with resultant state participles containing Voice (23a). The pattern of incorporation/compounding is the reverse (22b/23b), as expected.

- (22) a. akoma fusk- o- men- os apo ton aera  
 still pump LNK PTCP M.S.NOM by the air  
 ‘still pumped/swollen by the air/wind’
- b. \* aer- o- fusk- o- men- os  
 air LNK pump VBZ PTCP M.S.NOM  
 ‘air pumped’
- (23) a. \* dar- men- os apo ti thalasa  
 torture PTCP M.S.NOM by the sea  
 ‘tortured by the sea (unless the sea is personified and hence interpreted  
 as volitional, i.e. as an agent)’
- b. (\*akoma) thalas- o- dar- men- os  
 still sea LNK torture PTCP M.S.NOM  
 ‘(still) sea-tossed’

## 7. Conclusion

The empirical aim of this paper was to establish the systematic complementarity of compounding and PP realisation of certain theta-roles, ignoring potential non-syntactic

restrictions on compounding. All other things being equal, when one is possible, the other is not. We proposed that this complementarity is best accounted for if we assume that Ps do not select their surface complement, but instead verbal/event structure-related projections containing it, along the lines of Kayne's (2005) analysis of prepositions as probes. This clearly bears on the question whether functional structure alone (in the extended projection of the predicate), excluding any lexical information provided by the root, suffices to license or block all sorts of arguments. The answer seems to be negative, at least as far as event structure-related projections are concerned and the thematic roles discussed here.

### References

- Alexiadou, Artemis. 2001. *Functional structure in nominals: nominalization and ergativity*. Amsterdam/Philadelphia: John Benjamins Publishing.
- Alexiadou, Artemis. 2009. "On the role of syntactic locality in morphological processes: the case of (Greek) derived nominals". In *Quantification, Definiteness, and Nominalization*, ed. by Giannakidou & Rathert, 253-280. Oxford: Oxford University Press.
- Alexiadou, Artemis, Berit, Gehrke and Florian, Schäfer. 2014. The argument structure of adjectival participles revisited. *Lingua* 149: 118-138.
- Alexiadou, Artemis, and Florian Schäfer. 2007. "Decomposing -er nominalizations," talk presented at the workshop *Nominalizations across languages*, University of Stuttgart.
- Anagnostopoulou, Elena, and Yota Samioti. 2013. "Allosemy, Idioms, and their Domains: Evidence from Adjectival Participles". In *Syntax and its Limits*, ed. by Raffaella Folli, Christina Sevdali & Robert Truswell, 218-250. Oxford: Oxford University Press.
- Angelopoulos, Nikos. 2012. *The Morphosyntax of Deverbal Compounds in Greek*. MPhil Thesis, Cambridge.
- Borer, Hagit. 2012. "In the Event of a Nominal". In *The Theta System. Argument Structure at the Interface*, ed. by Martin Everaert, Marijana Marelj and Tal Siloni, 103-149. Oxford: Oxford University Press.
- Collins, Chris. 2005. A smuggling approach to raising in English. *Linguistic Inquiry* 36(2): 289-298.
- Di Sciullo, Anna Maria, and Angela Ralli. 1999. Theta-role saturation in Greek compounds. In *Studies in Greek Syntax*, 185-199. Springer Netherlands.
- Grimshaw, Jane. 1990. *Argument structure*. Cambridge, MA: MIT Press.
- Harley, H. 2009. "Compounding in Distributed Morphology." In *The Oxford Handbook of Compounding*, ed. by Rochelle Lieber and Pavel Stekauer, 129-144. Oxford: Oxford University Press.
- Kayne, Richard S. 2005. *Movement and silence*. Oxford: Oxford University Press.
- Kratzer, Angelika. 2001. "Building Statives." *Proceedings of the Berkeley Linguistics Society* 26: 386-389.
- Longobardi, Giuseppe. 2008. "Reference to individuals, person, and the variety of mapping parameters". In *Essays on Nominal Determination: From morphology to discourse management*, ed. by Henrik Høeg Müller and Alex Klinge, 189-211. Amsterdam/Philadelphia: John Benjamins.
- Marantz, Alec 2000. "Words". Paper presented at the *West Coast Conference on Formal Linguistics (WCCFL) 20*, University of Southern California, February 23-25.

- Matushansky, Ora. 2006. Head movement in linguistic theory. *Linguistic inquiry* 37(1): 69-109.
- Michelioudakis, Dimitris. 2012. "Dative arguments and abstract Case in Greek". PhD thesis, University of Cambridge.
- Michelioudakis, Dimitris, and Nikos Angelopoulos. 2012. "The Syntactic status of N-incorporation in Deverbal Compounds". *Studies in Greek Linguistics* 33: 209-227.
- Michelioudakis, Dimitris. 2014. "Diagnosing Implicit Arguments: Verbal and Nominal Passives in Greek". Paper presented at the: *Linguistics Association of Great Britain Annual Meeting*, University of Oxford, September 2014.
- Parsons, Terence. 1990. *Events in the Semantics of English* (Vol. 5). Cambridge, MA: MIT Press.
- Van Hout, Angelica, and Thomas Roeper. 1998. Events and aspectual structure in derivational morphology. *MIT Working Papers in Linguistics* 32: 175-220.