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Simple Event nominals with Argument Structure? – Evidence from Irish deverbal nominalizations[1]

Abstract: Deverbal nominals in Irish support Grimshaw's (1990) tripartite division into complex event (CE-), simple event (SE-) and result nominals (R-nominals). Irish nominals are ambiguous only between the SE- and R-status. There are no CE-nominals containing the AspP layer in their structure. SE-nominals (also found in Light Verb Constructions) are number-neutral and incapable of pluralizing and are represented as [nP[vP[Root]]]. R-nominals are devoid of the vP layer and behave like ordinary nouns. The Irish data point to v as the layer introducing event implications and the vP or PPs as the functional heads introducing the internal argument (Alexiadou and Schäfer 2011). Event denoting nominals in Irish can license the internal argument but aspectual modification and external argument licensing are not possible (cf. synthetic compounds in Greek (Alexiadou 2017)), which means that, counter to Borer (2013), the licensing of Argument Structure need not follow from the presence of the AspP layer.

Keywords: Complex Event Nominals, Simple Event Nominals, Argument Structure, AspectP licensing, Irish, deverbal nominalization

1. Introduction

In this paper we shall assess the validity of competing proposals advanced within the theoretical confines of the Distributed Morphology framework (Halle and Marantz 1993, 1994; Marantz 1997, 2013; Harley and Noyer 1999, 2000; Embick and Noyer 2007; Embick 2010) with respect to the category which traditional Irish grammars refer to as the verbal noun (VN). It will be demonstrated that the morpho-syntactic properties of deverbal nominalizations in Irish provide support for a tripartite division into complex

event nominals, simple event nominals and result nominals, as put forward in Grimshaw (1990) and refined by Alexiadou (2017a). In Section 2 a theoretical question will be raised concerning internal argument licensing in view of the distinction into complex- and simple-event nominals. In section 3 the properties of Irish VNs in their nominal function will be scrutinized in different contexts to show that they are ambiguous only between the simple event and result status with the proviso that simple event nominals are equated with a subtype of AS-nominals discussed in Alexiadou (2017a). In section 4 we will summarize the theoretical ramifications of the proposed analysis. Namely, that counter to Borer (2003, 2013, 2014), we need to sever the licensing of Argument Structure from the presence of an aspectual reading of the event.

2. The typology of nominals

Grimshaw (1990) classified nominals into three types, i.e. result nominals (R-nomials), simple event nominals (SE-nominals), and complex event nominals (CE-nominals). Only CE-nominals, also referred to in other approaches as Argument Supporting nominals (AS-nominals) (Alexiadou 2009; Borer 2003, 2013, 2014), are analysable in terms of aspectual distinctions and have an associated argument structure like verbs. In contradistinction to verbs, the external argument in CE-nominalizations is optional and if it is present (either as a NP in the genitive case or a *by*-PP), the internal argument is obligatory. They can license agent oriented modifiers (e.g. *deliberate*, *intentional*) as well as aspectual modifiers (e.g. *constant*, *frequent*). CE-nominals behave like verbs since they license event-related PPs (*in an hour*, *for an hour*) and cannot be made plural.

(1)   (the enemy's) destruction of the city in three days
        the deliberate destruction of the city (by the enemy)
        the constant shooting of rabbits by Bill

SE-nominals, like CE-nominals, have event implications and are barred from contexts appropriate for concrete objects, which are reserved for R-nominals. On a 'simple event' reading, like CE-nominals, they denote an event, but are not associated with an event structure and hence lack argument structure because they do not license event-related PPs and admit plural formation. Non-eventive R-nominals lacking an associated argument structure show a variety of readings, though they typically denote the product or result of the event denoted by the base verb and behave like non-derived nouns.

As far as morphological marking is concerned, it is claimed that the ability to take arguments is always coupled with the presence of an overt nominalizer (Borer 2003: 47; Alexiadou and Grimshaw 2008: 3) and

that nominals with Latinate suffixes can be ambiguous between CE- and R-nominal status. In Alexiadou and Grimshaw (2008: 2) and Alexiadou (2009) we find a slightly modified version of this approach, where nouns like *examination* are three-way ambiguous, i.e. they have a complex event reading, a simple event reading, and a result reading, as shown in (2) below:

(2) a. The examination of the patients took a long   (Complex Event nominal)
          time.
     b. The examination took a long time.   (Simple Event nominal)
     c. The examination/exam was on the table.   (Result nominal)

A comprehensive elaboration of the debate instigated by Grimshaw's (1990) monograph concerning the characteristics of particular types of nominals would go far beyond the bounds of this paper,[2] but here we will specifically focus on the internal-argument licensing potential of SE-nominals.[3] We will contrast two competing theoretical proposals: the first advocated by Borer (2003, 2012, 2014), who conflates the categories of R-nominals and SE-nominals and calls them R(eferential)-nominals, and the second proposed by (Alexiadou 2017a), who claims that Grimshaw's tripartite division, though modified, seems to be relevant for synthetic compounds in Greek.

2.1. Borer's classification

The structures in (3) below translate the above-mentioned three-way distinction into a bipartition proposed in the exo-skeletal model of Borer (2005, 2013, 2014). In the XS-Model, roots devoid of formal (non-phonological) properties are merged with Categorial and Semantic Functors. $C_{N[V]}$ is a C-functor which projects N and which defines its complement as equivalent to V. In English it can be phonologically realized as, among others, *-ation*, *-ance*, *-ment*, *-al*. AS-nominals, in contradistinction to R-nominals, contain verbal functional structure. The root is dominated by functional nodes which are part of the verbal extended projection {Ex[V]}. In (3a) the root is immediately dominated by an ExP segment that licenses a quantity object (Asp_Q in Borer 2005). R-nominals are devoid of aspectual structure (3b), which explains why they do not co-occur with the internal argument.

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2 Other important characteristics of the three types of nominals are discussed in Alexiadou (2001: 10–12), Alexiadou and Grimshaw (2008: 3), Borer (2003: 45; 2014: 71–73).

3 The term SE-nominal is used in this paper merely to highlight the fact that Irish deverbal nominals display properties which situate them in the fuzzy area between canonical CE-/AS-nominals and R-nominals. We will see that adopting a dichotomy approach results in different classifications depending on the inclusion criteria.

(3) a.   government of the people (Borer 2013: 420)

$$C_{N[V]}$$

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              C_N[V]
         /           \
     C_N[V]            E
    /      \          /  \
[c=v ^π√GOVERN^Q∃]  C_N[V]
              /πment/  <<  [c=v ^π√GOVERN^Q∃]  >>  ASP_Q
                                                    /    \
                              <<  [c=v ^π√GOVERN^Q]  >>  [c=v ^π√GOVERN]
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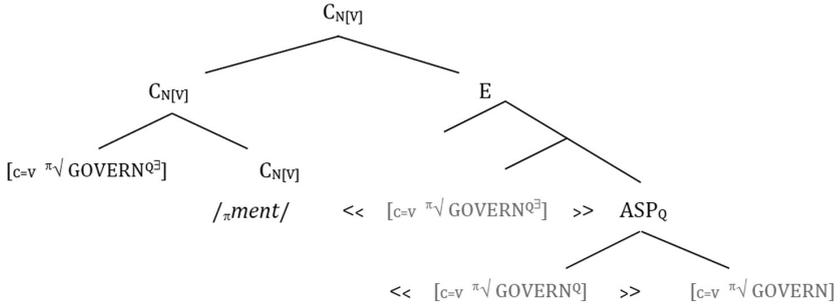
b.   (The) government (is imperfect) (Borer 2013: 420)

$$C_{N[V]}$$

```
              C_N[V]
          /           \
      C_N[V]         [c=v ^π√GOVERN]
     /      \
[c=v ^π√GOVERN]   C_N[V]
                 /πment/
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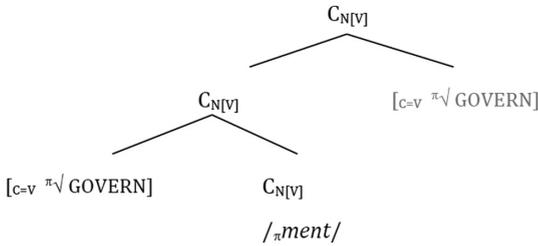
The structure in (4) is a simplified representation of the structure of AS-nominals from Borer (2014: 83), in which both the internal and external argument are licensed by ExP-segments. As argued in Borer (2005), Asp_Q (Aspect of Quantity) introduces the internal argument, whereas Asp_{Ev} (Aspect of Event) licenses the event argument and an external argument.

(4) The government/governance (of the people by the people) (Borer 2014: 83)

$$C_{N[V]}$$

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                C_N[V]
          /               \
      C_N[V]             X∈{Ex[V]}
     /      \           /       \
[c=v √GOVERN]  C_N[V]  (ARG)
                                  Y∈{Ex[V]}
                                 /        \
         ment                (ARG)
         ance                         [c=v √GOVERN]
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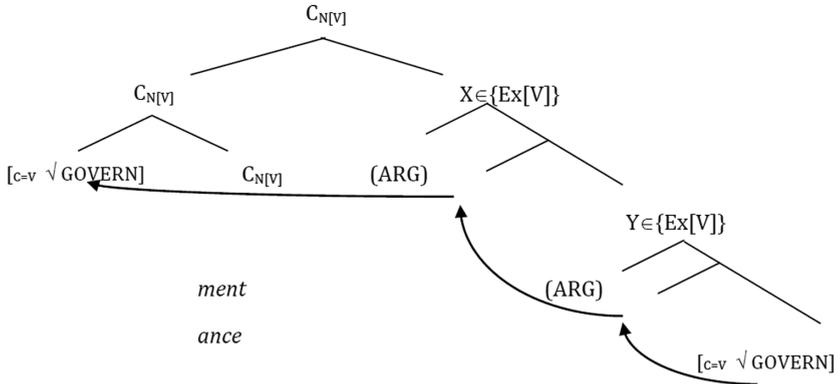
2.2. Alexiadou's classification

Following Kratzer (1996), Alexiadou et al. (2015) regard VoiceP as the locus of the external argument. VoiceP corresponds to the external-argument introducing vP shell in Distributed Morphology (Harley 2009: 325) and it is linked with the ability to take agent-oriented modifiers, *by*-phrases and instrumental phrases. The layer introducing the internal argument and event implications is associated with the categorizing head v. There is no 'RootP' and no argument can appear in the complement or specifier position of the root (Alexiadou and Schäfer 2011; Alexiadou 2014) and so "internal arguments are licensed via particles/prepositions/functional heads/small clauses" (Alexiadou et al. 2015: 13).[4] In Alexiadou's typology of nominals (see e.g. Alexiadou 2001, 2017a and Alexiadou et al. 2013) the structure in (5) corresponds to the structure of AS-nominals. It hosts an external argument in the specifier of VoiceP, the internal argument is licensed within vP and aspectual adverbials under AspP:

(5) [DP [nP [AspectP [VoiceP [vP [Root]]]]]] the training of the dog by John for 2 hours

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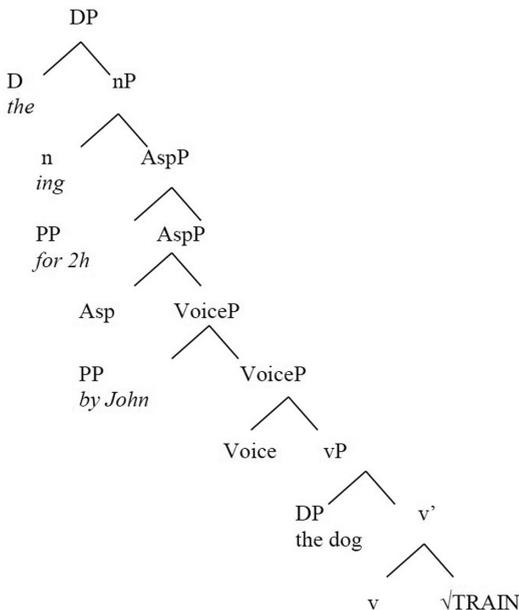
4 For a radically opposed view the reader is referred to Harley (2009, 2014), who extensively argues for the existence of the RootP.

R-nominals that lack event implications (as in (2c) above) will have the structure in (6), in which the root is directly merged with nominal functional layers. They are devoid of the vP functional projection which licenses the internal argument (Alexiadou 2009):

(6)   [DP [nP [Root]]]

In her analysis of deverbal compounds (DCs), Alexiadou (2017a) demonstrates that Greek synthetic DCs, just like AS-nominals, may have event implications, and allow an internal argument in their structure; unlike them, however, they lack an external argument, and do not tolerate agentive adverbials and aspectual modifiers. They are argued to contain v, the layer that introduces internal arguments. The examples in (7) below demonstrate that Greek DCs do not allow aspectual modifiers (7b) or *by*-phrases (7a), while they can refer to events (7c). Unlike English DCs, they can accept pluralization (7d), and disallow modifiers such as *frequent* (7e) (Alexiadou 2017a: 60):

(7)   a.   *kapnokaliergia   apo   agrotes
              tobacco-cultivation   by   farmers
       b.   *kapnokaliergia   ja   3 hronia
              tobacco-cultivation   for   3 years
       c.   I   kapno-kaliergia   sti Kavala   arhise   to   19o eona.
              the   tobacco-cultivation in Kavala   started   during   the 19th century
              'The tobacco cultivation in Kavala started during the 19th century.'
       d.   tosi   diafimisi   apo   kapnokaliergies
              so much   advertisement   from   tobacco-cultivations
              'So much advertising by tobacco-cultivations'
       e.   *i   sihni   kapnokalliergia   kurazi.
              the   frequent   tobacco cultivation   tires
              'Frequent tobacco cultivation is tiresome.'

Interestingly, the respective structures in English are compatible with *by*-phrases and agent-oriented modifiers (di Sciullo 1992; Iordăchioaia et al. 2017), which means that their structure additionally contains the VoiceP layer. Di Sciullo's (1992) example (30) shows that DCs in English can co-occur with the *by*-PP and agent oriented modifiers: [5]

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5   For a detailed discussion of the differences in the internal structure of DCs in
     English and Greek and the ways in which the structure of a DC varies from the
     structure of an AS-nominal the reader is referred to Iordăchioaia et al. (2017) and
     Alexiadou (2017a).

(8) a. Taxi driving by John can be dangerous
    b. John's deliberate taxi driving did not please Harry.

Thus, Alexiadou's classification of deverbal nominals envisages the existence of nominals that lack implicit external arguments, but do have event implications, and internal arguments (9) as well as nominals which can additionally host the external argument but lack aspectual modifiers (10):

(9) [DP [nP [vP [Root]]]]

(10) [DP [nP [VoiceP [vP [Root]]]]]

In the analysis put forth in, e.g. Alexiadou (2001), (2009), Alexiadou et al. (2013), the absence of Aspect is not correlated with AS, whereas in Borer's (2013) system, where argument realization and aspect are tightly connected, the absence of aspectual structure implies the lack of AS. We will now examine the properties of nominals in Irish with a view to providing empirical evidence in favour of either of the two approaches.

3. The Irish data

3.1. Basic morphological and syntactic facts concerning VNs in Irish

The Irish data are interesting because there are no formal differences between nominalizations and non-finite forms (infinitives and present participles).[6] The occurrence of VNs, in different syntactic configurations can in no way be linked to distinct morphological markers.[7] The examples in Table 1 below illustrate VNs discharging the function of non-finite categories and nominalizations, where *socrú* is the suffixed VN of the verb *socr·aigh* 'settle'.[8]

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6 The morphophonology of the Irish VN is analysed in detail in Bloch-Trojnar (2006). The formation of VNs in Irish involves over 20 morphophonological exponents, e.g.: *-(e)amh caith* 'spend' *caitheamh*, *-í cón·aigh* 'dwell' *cónaí*, *-ach ceann·aigh* 'buy' *ceannach*, *-t bain* 'cut' *baint*, *-chan beo·igh* 'animate' *beochan* etc. Regular default markers depend on the conjugation of the verb. First conjugation verbs take *-(e)adh* (e.g. *glan* 'clean' – *glanadh*), whereas second conjugation verbs are subject to the rule attaching *-ú* (e.g. *maslaigh* 'offend' – *maslú*).

7 Despite surface homonymy, it is possible to tease apart verbal from nominal categories with the aid of syntactic and morphological criteria. A detailed exposition of arguments for categorizing VNs in different contexts can be found in McCloskey (1983), Doyle (2002), Bloch-Trojnar (2006), Carnie (2011).

8 The citation form of the verb is the 2nd person singular imperative, because in many cases it coincides with the verbal root. In cases where it does not, it is necessary to leave out the inflectional marker *-(a)igh*.

Tab. 1: Different syntactic configurations featuring VNs in Irish.

Infinitive	Caithfidh mé fiacha a **shocrú**.[9] must I debt.PL PRT settle.VN 'I have to settle debts.'
Present Participle	Tá an aimsir ag **socrú**. is the weather PRT settle.VN 'The weather is becoming settled.'
AS-nominal (non-count)	**socrú** gaoithe, gleo settle.VN wind.GEN noise.GEN 'abatement of wind, noise'
Light Verb Construction (LVC)	**socrú** a dhéanamh le duine faoi rud settle.VN PRT do.VN with s.o. about sth 'to reach an agreement with s.o. about sth'
R-nominal (count)	**socruithe** sochraide settle.VN.PL funeral.GEN 'funeral arrangements

In the vast majority of cases the formation of VNs involves roots devoid of overt verbalizing morphology.[9] However, it should be borne in mind that default affixation rules are conditioned by conjugation class membership and that the conjugations should be viewed as stem classes rather than inflectional classes (Ó Sé 1991). This means that stem types are diacritic features encoded on the v.[10] There are also cases where the verbalizer is overt

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9 The letter *h* which immediately follows the initial consonant is the marker of its lenition, caused by the infinitival particle *a* (*socrú – a shocrú*).

10 Much like the prosodic templates of Semitic binyanim are encoded on the v (Arad 2005), there are two types of v, which receive a different realization depending on the structural and lexical properties of the root. The grammar also makes reference to diacritic features, arbitrary features that must simply be memorized as belonging to particular roots. Features relating to Conjugation count among them. Such features are relevant for morphological spell-out, but do not have any semantic interpretation. "This means that it is not the phonological form of the root which deterministically decides the conjugation of a verb; on the contrary, belonging to the second conjugation is a lexical property, which takes the form of a prosodic constraint on output forms" (Acquaviva 2014: 553). As rightly observed by the anonymous reviewer, the fact that the opposition is morphologically visible on verb stems only (hence 'conjugation') points to the presence of the [v] level. There is another piece of evidence in favour of the claim that conjugation is not a property of roots but the [Root-v] complex. In Irish, one and the same root can be merged with an aP, nP and vP categorizing head. A root like √DEARG depending on the categorizing head may be a predicate of a property (*dearg* 'red.ADJ'), may denote an abstract entity (*dearg* 'red.N, red colour') or an event. When the root is verbalized, it may be assigned to either

as in 1ˢᵗ conjugation verbs in *-ál*,[11] whose corresponding nominalization is marked overtly by means of a palatalizing autosegment, e.g. *buama* 'bomb' – *buamál-* 'to bomb' – *buamáil* 'bomb-VN' or *planda* 'plant' – *plandál-* 'plant' – *plandáil* 'to plant-VN'. Thus, there is morphological evidence supporting the presence of the v layer responsible for event implications.

3.2. The external syntax of nominals and their structure

Unlike Latinate nominalizations in English, which are ambiguous between the AS-, SE- and R-nominal status, nominals in Irish appear to show a different puzzling type of ambiguity. Namely, they appear to preserve AS but show no trace of Aktionsart/Aspect information.

Plural forms, as illustrated in (11) below, are a clear indication of R-nominal status. They are typically associated with resultative or concrete semantics[12] and they are never accompanied by NPs corresponding to participants involved in the event denoted by the base verb. Such nouns would be represented as [N[V[√]] or [Class[√]]] complexes in Borer's approach or as [DP [nP [Root]]] complexes in Alexiadou's approach.

(11)	Verb – VN	Nominalization (plural)
a.	tóg 'raise, build'– tógáil	Is breá na tógálacha iad. 'They are fine structures.'
b.	gear 'cut, levy' – gearradh	na gearrthacha a íoc 'to pay the rates'
c.	imigh 'go, go on'– imeacht	imeachtaí an lae 'events of the day'
d.	oir 'suit, fit, need' – oiriúint	oiriúintí oifige 'office accessories'
e.	éag 'die' – éag	éaga na bliana 'the year's mortality'
f.	leigheas 'cure, heal' – leigheas	leigheasanna 'cures'
g.	sáigh 'thrust'– sá	sáite ciseáin 'stakes of basket'

With reference to the syntactic properties of nominalizations, Doyle (2002: 100–101) points out that nominalizations are hardly ever accompanied by a complement and constructions with the corresponding finite verbs are usually preferred (see also Bloch-Trojnar 2016). He gives two examples which, in his opinion, border on ungrammaticality:

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the 1ˢᵗ or the 2ⁿᵈ conjugation and will accordingly combine with a different nominalizer, i.e. *dearg* 'redden, I' – *deargadh*, *dearg·aigh* 'redden, II' – *deargú*.

11 The suffix *-ál*, is used to nativize English verbal roots, provided they do not exceed three syllables in length, as in *draibheál-* 'to drive', *traenál-* 'to train', *péinteál-* 'to paint' or *robál-* 'to rob' (Doyle 1992: 99). It is also a means of turning nouns, both native and of English provenance, into verbs, as in *buama* 'bomb' – *buamál-* 'to bomb' or *planda* 'plant' – *plandál-* 'to plant' (Wigger 1972: 207–210).

12 Lexicalized senses of deverbal nominals are extensively discussed in Bloch-Trojnar (2018).

(12) a. */? Chuir   briseadh   na   gcloch   ionadh   orm.
          put.PST   break.VN   the   stones.GEN surprise   on-me
          'The breaking of the stones surprised me.'
      b. */? Chuala   siad   briseadh   na gcloch.
          hear.PST   they   break.VN   the stones.GEN
          'They heard the breaking of the stones.'

He concludes that there may be some constraint in Irish "to the effect that nominalizations do not inherit the subcategorization frames of their verbal bases" (Doyle 2002: 101). However, the apparent ungrammaticality of his examples may stem from something else. In cases of logical polysemy, the superordinate predicate determines the availability of a given interpretation and the superordinate predicates in (12) above enforce non-actional readings. The predicate *hear* requires the result interpretation – you cannot hear the action, only its acoustic result (Puzynina 1969: 166). A predicate such as *surprise* triggers a factitive meaning (Melloni 2011), which is not available for Irish nominalizations. In Bloch-Trojnar (2018: 34), I demonstrate that searches for translations of 'the fact that' constructions invariably return sentences with dependent clauses, e.g.

(13)   'I was surprised at his late arrival.'
      a. Bhí   iontas   orm   go   raibh sé déanach ag teacht.
         was   surprise on-me   that   was   he late   PRT come.VN
      b. *Chuir   a   theacht   déanach   iontas   orm.
         put.PST his   come.VN   late   surprise on-me

Nevertheless, structures where action nouns are accompanied by event participants are not impossible. We can find examples of VNs with complements in dictionaries (Ó Dónaill 1977; de Bhaldraithe 1959) and the New Corpus for Ireland (Nua-Chorpas na hÉireann).[13] Eventive interpretation is a prerequisite for the presence of AS. Hence, in what follows we will limit our investigation to nouns which refer to events and apply the standard diagnostic tests to establish the structural layers in their representation. We randomly select 3 verbs belonging to the traditionally recognized situation types (Vendler 1967; Smith 1997), i.e. states (*creid* 'believe' – *creidiúint*, *tuig* 'understand' – *tuiscint*, *amharc* 'see' – *amharc*), activities (*maslaigh* 'offend' – *maslú*, *iompair* 'carry' – *iompar*, *gearáin* 'complain' – *gearán*), accomplishments (*scríobh* 'write' – *scríobh*, *téigh* 'warm' – *téamh*, *crúigh* 'milk' – *crú*), achievements (*maraigh* 'kill' – *marú*, *athraigh* 'change' – *athrú*,

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13 The New Corpus for Ireland (henceforth NCI) is a corpus of approximately 30 million words, which allows access to words in context and makes it possible to identify sentences produced by native speakers. Unless otherwise specified the example comes from the NCI.

díol 'sell' – *díol*) and semelfactives (*buail* 'hit' – *bualadh*, *léim* 'jump' – *léim*, *croith* 'shake' – *croitheadh*). We filter the results to obtain sentences produced by native speakers and examine their complementation and modification patterns. We also conduct the search of the entire corpus to find out if particular modifiers are attested with VNs in their nominal function. Corpus searches are supplemented with material from standard dictionaries, i.e. Ó Dónaill (1977) and de Bhaldraithe (1959).

3.2.1. The presence of v

VNs can make reference to a simple event, i.e. they can act as subjects of predicates such as 'last', 'occur', 'start', 'stop', 'go on', 'take place' etc.

(14) a. Mhothaigh sé an t-athrú spioradálta a bhí ar siúl.
    feel.PST he the change.VN spiritual that be.PST on go-on.VN
    'He felt the spiritual change that was happening.' (NCI)

  b. … agus tharla an marú céanna air siúd.
    and happen.PST the kill.VN similar on-him yon
    '… and a similar death happened to him.' (NCI)

3.2.2. The presence of vP

The presence of the vP layer is associated with the licensing of the internal argument. If present, the NP complement corresponding to the direct object of a transitive verb or to the subject of an intransitive (unaccusative) verb is in the genitive case, as shown in (15a) and (15b) respectively. Also VNs can license PP complements selected by verbs underlying the nominal structure (15c).

(15) a. Níl **iompar scine** ceadaithe.
    be.NEG carry.VN knife.GEN permit.PPRT
    'It is not permitted to carry a knife.' (Ó Dónaill 1977: 722)

  b. Bhí **titim na hoíche** ann.
    be.PST fall.VN the night.GEN there
    'There was falling of the night. / The night was falling.' (Ó Cadhlaigh 1940: 74)

  c. faoi **dhíol gunnaí** leis na hIndiaigh
    about sell.VN gun.GEN.PL with the Indian.COM.PL
    'about selling guns to the Indians' (NCI)

VNs in Irish can also act as complements of light verbs such as, e.g. *tabhair* 'give', *lig* 'let', *faigh* 'get', *bain* 'take, extract' and *cuir* 'put' (Ó Siadhail 1989: 304–308; Wigger 2008).[14] The licensing of the participants in the event denoted by the VN in light verb constructions (henceforth LVCs) is far from settled.[15] The nominals corresponding to the direct object of the base verb mainly feature as complements of prepositions. Ó Siadhail (1989: 306) points to the spread of prepositional phrases with *ar* 'on' (16a).[16] If the light

verb is a prepositional verb (i.e. *tabhair do* 'give to', *bain as* 'extract from'), a specialized preposition will precede the object of the VN (16b–c). The genitive case marking of the object is rare but not impossible (16d).[17]

(16)

a. Do   dheineas   riarú   **ar** an leasú.   Cf. Riaraigh   mé an leasú.
   PRT   do.1SG.PST apportion.VN on the manure   apportion.PST I   the manure
   'I apportioned the manure.' (Ó Siadhail 1989: 306)   'I apportioned the manure.'

b. Bhain   sé   croitheadh   **as**   an mbuidéal.
   extract.PST he   shake.VN   from   the bottle
   'He shook the bottle.' (de Bhaldraithe 1959: 651)

c. Tabhair   téamh   beag   eile   **do**n   bhainne.
   give.2SG.IMPER warm.VN small   another to-the milk
   'Warm the milk a little more.' (Ó Dónaill 1977: 1217)

d. Ná   tabhair   **léim**   **na díge**   sin.
   NEG   give. 2SG.IMPER jump.VN the ditch.GEN that
   'Don't jump that ditch.' (Ó Dónaill 1977: 1187)

Another indicator of vP is manner modification. As we can see in (17), the VN accompanied by a complement expressed as a prepositional pronoun, i.e. a preposition+pronoun combination *air* 'on+him', is modified by an adjective:

(17) Agus ní marú   tapaidh imeoidh   air (…), ach   marú mall millteach!
     and not kill.VN quick   come.FUT on-him but   kill.VN slow dreadful
     'And it won't be a quick death that will happen to him either, but a slow and dreadful one' (NCI)

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14 A detailed analysis of the semantics, aspectual properties and the nominal status of the VN in LVCs is available in Bloch-Trojnar (2009, 2010, 2014).

15 Bearing in mind the cross-linguistic prevalence and diversity of LVCs, linguists are far from unanimous as to the exact nature of this interaction. There are proposals, in which the verb is regarded merely as locus for agreement and tense morphology and has no influence on the number and type of arguments side by side analyses involving argument structure composition in which light verbs have partially specified argument structures which are shared, fused, superimposed on or merged with the argument structure of the complement. For a detailed discussion of these proposals see Butt (2003) and the references therein.

16 In the framework of Grimshaw (1990), the occurrence of prepositions introducing the direct object NPs/DPs in the (de)verbal nominal could be taken as a clue that these are not arguments but complements. However, in this paper I follow Alexiadou and Schäfer (2011), Alexiadou (2014), Alexiadou et al. (2015) in regarding vP or PPs as functional heads introducing the internal argument.

17 Cases where the modifying NP in the genitive case corresponds to the object of a transitive verb are extremely rare. Notwithstanding, they are not impossible, which would mean that genitive marking and acting as a PP complement are non-distinctive strategies of expressing the internal argument.

3.2.3. *The presence of VoiceP*

The standard tests for the presence of the VoiceP layer licensing the external argument are *by*-phrases, agent oriented modifiers and instrumental phrases. Notably, cases with both arguments realized are virtually unattested (especially in Traditional Modern Irish).[18] Examples where the external argument is realized as an NP dominated by the preposition *ag* are usually dismissed as being calques from English, which do not reflect the true structure of the language, i.e. they can be found in Non-Traditional Late Modern Irish, which is a variety influenced by English and L2 speakers of Irish. Examples in (18) are a case in point. (18a) comes from an Online Irish-English Dictionary,[19] whereas there is no information of the source of (18b) in NCI:

(18)

a. maidir le beostoc a chosaint **óna** **gciapadh ag madraí**
   as regards livestock PRT protect.VN from-their harass.VN at dog.COM.PL
   'for the protection of livestock from worrying by dogs (lit. from their worrying by dogs)'

b. Léiríonn seo **athrú** mór **stíle** **ag na bhFrancaigh.**
   explain.PRES this change.VN big style.GEN at the French
   'This explains the great change of style of the French.' (NCI: source unknown)

However, we do find examples produced by native speakers in which the subject of the verb, in a nominalized structure is realized by the *ag*-phrase, providing that the internal argument is introduced by *ar*:

(19) Caoinim an fáil **ar** bhás atá **ag** gach a maireann.
     cry.1SG.PRES the get.VN on death that-is at every that live.3SG.PRES
     'I lament the finding of death by everything that lives.' (Ó Cearúil 1999: 110)

The external argument can sometimes feature in the genitive case as in (20) below. Note that the internal argument is licensed by the preposition *de* 'of':

(20) Tá fágaint na mairnéalach **den** leac seo ar na
     is leave.VN the sailors.GEN.PL from-the rock this among the
     hiontaisí is mó i stair an Bhlascaoid.
     wonders COP greatest in-the history the Blasket.GEN
     'The departure of the sailors from this rock is one of the strangest things in the history of the Blasket.' (Ó Criomhthain 1997: 140)

In LVCs the subject of the light verb is semantically co-identified as the external argument of the deverbal nominal complement. It can in no way be treated as its syntactic argument.

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18 For the distinction between Traditional Modern Irish and Non-Traditional Late Modern Irish see Ó Béarra (2007).

19 http://www.englishirishdictionary.com/dictionary (accessed January 2016).

Agentive modifiers such as *toiliúil* 'willful, deliberate', *aireach*, *faichilleach*, *cúramach* 'careful' have been found with VNs, but not in the presence of complements, e.g. *dúnmharú **toiliúil*** 'willful murder', *pleanáil **chúramach*** 'careful planning'. No instrumental phrases with VNs in their nominal usage have been found in this pilot study.

To sum up: Irish nominals acting as subjects, objects or complements of prepositions[20] can be accompanied by the internal argument (in the genitive case or preceded by a preposition). The examples with the external argument licensed by the *ag*-phrase are extremely hard to come by and their acceptability is linked with the obligatory presence of the object licensed by a preposition. Thus, nominals in Irish can be regarded as Argument Supporting. Is this tantamount to saying that they are CE-nominals in the sense of Grimshaw? To claim so we have to provide positive evidence for the presence of the AspP layer in their structure.

3.2.4. *The presence of AspP?*

The presence of AspP can be probed with the aid of frame adverbials such as 'in an hour/for an hour' and the possibility of modification with 'frequent' and 'constant'. Neither *minic* 'frequent' nor *leanúnach* 'constant' can be found with VNs if they are accompanied by NP satellites. Consider some examples in (21) below. In (21a) *minic* 'frequent' is the complement of the copula. (21b) exemplifies *leanúnach* modifying a VN which is an SE-nominal acting as the object of the verb *tarlaigh* 'occur', all similar cases being confined to non-native contexts in the corpus.

(21)

a. Is   minic   marú   éisc   in   aibhneacha na   hÉireann na   laethanta seo
   cop often   kill.ᴠɴ fish.ɢᴇɴ in   river.ᴘʟ   the   Ireland   the   day.ᴘʟ   this
   'The killing of fish in Ireland's rivers is a frequent occurrence these days.' (NCI)

b. tá   deireadh leis   an   marú   leanúnach a   tharla   lá   i ndiaidh lae
   is   end   with   the   kill.ᴠɴ constant   that occur.ᴘꜱᴛ day after   day
   'There is an end to the constant killing that has been going on day after day'
   (NCI: non-native)

The corpus data does not provide positive evidence for their compatibility with durative and frame adverbials, i.e. they do not occur with aspectual adverbials of the type 'in X time', 'for X time'. They are not attested with phrases such as *ar feadh an lae /bliana/míosa/an ama* 'for a day/month/year/time etc.' As regards durative expressions such as *le linn* 'during, in the course of' and *i rith* 'in the course of, throughout', it can be observed that

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20 For more linguistic examples see, e.g. Bloch-Trojnar (2006, 2013, 2016).

they are followed by non-finite clauses, i.e. VNs preceded by the auxiliary *bí* (22a), or VNs with demonstratives (22b), a feature of SE nominals. What look like VNs with complements in (22c) do not provide conclusive evidence for the presence of AS:[21]

(22) a. Le linn **dó** **bheith** **ag** **freastal** ar an ollscoil
       during his be.VN at attend.VN on the university
       bhí sé faoi gheasa ag ceol
       be.PST he under spell by music
       'when he was attending university he was enamoured by music' (NCI)

   b. Le linn **na** **cainte** **sin** bhí a shúile go dlúth
      during the talk.VN that be.PST his eye.PL intensely
      ar an bhfuinneog ag Mr Morris
      on the window at Mr Morris
      'during this talk Mr Morris had his eyes directed intensely at the window' (NCI)

   c. Le linn **éirí** **na** **gréine** tháinig néal dubh codlata
      during rise.VN the sun-gen come.PST cloud black sleep.GEN
      i gceann na laoch
      in head the worrior.GEN.PL
      'During sun-rise a black cloud of sleep came over the heads of the warriors' (NCI)

The adjectives *céimseach* and *dréimreach* 'gradual' give a handful of hits each but none of them occurring with VNs. Ordinarily, complex adverbial expressions are used such as *diaidh ar ndiaidh*, *céim ar chéim*, *de réir a chéile* 'gradually' which co-occur with clauses and not NPs. We will interpret these facts as the absence of the AspP layer in the nominal structure. Neither Aktionsart nor Aspect seem to be encoded.

As far as LVCs are concerned, Ó Siadhail (1989: 307) and Wigger (2008) underline that these structures are used to achieve a partitive or singulative

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21 The scarce examples such as those in (22c) above could be interpreted as syntactic phrases but more plausibly as left-headed NN$_{GEN}$ compound structures on account of the generic reference of the second N (Doyle 1996). We have seen that compounds in Greek and in English can be viewed as having argument structure. However, the presence of internal arguments is not always indicative of AS. Borer (2014: 78 n10) points out that simple event nominals may have an internal argument, without a verbal base introducing it (e.g. *my impulse to be daring*, *my lab's assistant culture of new forms of bacteria*). In Irish, R-nominals can also take a complement as indicated by example (11c), (11d), (11e) and (11g) above. Their R-nominal status is confirmed by plural number marking. The VN *éirí* in (22c) is non-count and since AS-nominals must be singular, whereas R-nominals may pluralize, it could be either. This issue definitely merits further investigation on a more extensive body of data.

effect. The telicizing effect, which is cross-linguistically attributed to LVCs (Butt 2003), is achieved in Irish by the ability of complement VNs to appear with cardinal numbers, enumerative determiners (e.g. *amháin* 'one', *eile* 'another', *chéad* 'first', *iomaí* 'many', *cúpla* 'a few'), and adverbials (*cúpla uair* 'a few times', *arís* 'again'), which bring about a bounded interpretation of the entire predicate (Bloch-Trojnar 2014). Interestingly, even though VNs can co-occur with counting adverbials in these structures, they are morphologically non-count and do not feature in the plural. The plural never appears on the complement in LVCs, even though some VNs have the plural form available. Substituting the plural for the singular always results in ungrammaticality. Consider the example in (23) below.

(23) *gearán*, gen.sg. & nom.pl. *-áin*, pl. ~ 'complain-VN'

Bhí	sé	ina	shuí	ag	déanamh gearáin /	*gearán	leis	fein.
be.PST	he	in-his	sit.VN	PRT	do.VN complain.VN. GEN.SG	complain.VN. GEN.PL	with-him	self

'He sat there feeling sorry for himself.' (Ó Dónaill 1977: 622)

An analysis of LVCs using the tools of DM and Minimalist Syntax is offered in Alexiadou (2017b), who builds on the structure proposed for compositional resultatives in Hale and Keyser (2002) and depicted in (24) below, in which v takes as its complement a complex phrase xP or root.[22]

(24)

```
           vP
          /  \
        v      ResultP<s>/=√
```
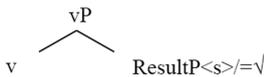
In Greek, English, and Kurdish examples discussed in Alexiadou (2017b) the complement of v is nP embedding a verbal structure:

(25)

```
           vP
          /  \
        v      nP
              /  \
            n      vP
```
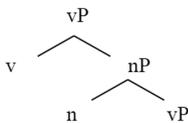
This embedded verbal structure, in turn, introduces the internal argument, i.e. [nP[vP theme [Root]]]. Light verbs in this analysis are treated as the overt realization of the v head.

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22 Eventive v<e> in the context of a root with a phonological matrix (WHITE) will give rise to *whiten*. If it does not find a root with a phonological matrix it will be spelt out as a copula or light verb (*become/go/ turn white*) because an xP cannot move into v.

3.3. The internal structure of nominals in Irish

The results of the application of the standard tests for the presence of particular layers of verbal structure prompt an analysis on which VNs in Irish in their nominal function are either R-Nominals or SE-nominals. In the former case the root is merged with nominal functional layers and behaves like an ordinary noun and may therefore pluralize. In the latter case we are dealing with nominals that are event denoting and argument licensing but lack the AspP layer in their structure. They are neutral with respect to the inflectional category of number and incapable of pluralizing. They are [nP[vP [Root]]] or at most [nP[VoiceP[vP [Root]]]] outside LVCs. Crucially in both cases the structures are devoid of the AspP layer.

The use of the term SE-nominal may seem controversial since it does not converge with the widely accepted definition proposed by Grimshaw (1990) – that of an (underived) event denoting noun which lacks both event structure and argument structure. However, the properties of Irish deverbal nominals make them pretty hard to tag. The task is made more difficult by the fact that most linguists work with a two-way distinction into AS-/CE- nominals and R-nominlas. My main contention is that there are no prototypical AS-/CE-nominals in Irish, in which the licensing of argument structure is coupled with the presence of the internal aspectual structure. If we apply Borer's criteria, Irish nominals do not quite match the class of R-nominals or 'non-AS de-verbal nominals' (Borer 2014: n1) on account of the fact that they structurally license arguments and they always embed a real, attested verb (have a licit v spellout). Artemis Alexiadou and her collaborators, in turn, (e.g. Alexiadou et al. 2010, Alexiadou and Schäfer 2010, Alexiadou 2017a) place emphasis on the contrast between deverbal nominals with argument structure (Argument Supporting Nominals, i.e. ASNs) and those without argument structure (Referential Nominals, i.e. RNs). In this approach there is a split between grammatical aspect (AspectP) and argument realization. Event structure is implied by argument realization and represents lexical aspect. Therefore, this approach is preferable with respect to the Irish data.

4. Conclusion

Our analysis bears out the classification of nominals proposed by Alexiadou (2017a) and the hypothesis advanced in Alexiadou and Schäfer (2010), according to which it is necessary to sever the licensing of AS from the presence of an aspectual reading of the event. Event denoting nominals in Irish can license the internal argument but aspectual modification is not possible (pretty much like in synthetic compounds discussed in Alexiadou 2017a). Such nominals are represented as the [nP [vP [Root]]] complex (also found in light verb constructions). The expression of the external arguments

outside LVCs is not impossible, but highly restricted. R-nominals are devoid of the vP layer – [nP [Root]] – and behave like ordinary nouns. Our data seem to indicate, counter to Borer (2003, 2005, 2013) and in line with Alexiadou (2017a), that internal argument licensing does not automatically imply the presence of the Asp layer in the structure. According to Acquaviva (2014: 548) Irish verbal inflection lacks an aspect morpheme, which "makes it easier to understand why this category finds a periphrastic expression." If the AspP is located above the functional projection licensing the external argument, we can hypothesize that what is a participle in the progressive or other aspect related constructions or the infinitive in modal constructions is in fact a structure involving the root and argument structure, leaving the aspectual information to be expressed by the light/copula/auxiliary verb in the matrix clause. This would explain the widespread homonymy presented in Table 1.

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