

ACATEGORIAL LICENSING OF INTERNAL ARGUMENTS IN KOREAN

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1 Introduction

This project argues that root categorization is not an essential pre-condition to the licensing of an internal thematic argument, utilizing empirical data from Sino-Korean event predicates (popularly called Verbal Nouns (VNs); see Cho and Saiki 1987, Chae 1997, and more). This claim is motivated by the observation that VNs satisfy all diagnostic criteria presented in Grimshaw (1990) for the diagnosis of argument structure, while also having fully uniform nominal syntax when in nominal structures, and fully uniform verbal syntax when in verbal structures. The analysis ultimately proposes that the only structure motivated by the empirical data is one where the VN, as an acategorical root, introduces its own internal argument, prior to any notion of syntactic categorization (in line with the structural proposal presented in Harley 2014). The consequential structures for the *n*P and *v*P constructions respectively are remarkably identical in shape, despite having no derivational relationship. The spirit of this account, then, returns us to the formal representation originally argued for in Chomsky (1970), where nominal and verbal structures parallel each other, but are ultimately not transformationally (or derivationally) related.

1.1 Background

1.1.1 Event structure

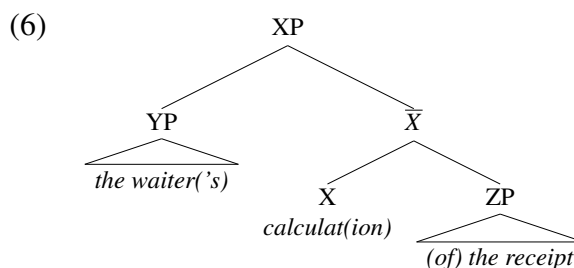
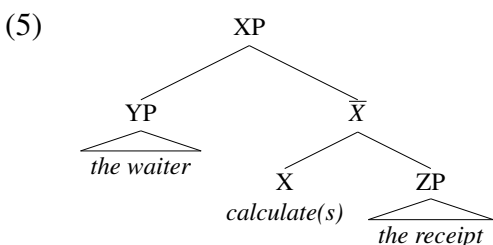
Event structure is a relatively uncontroversial property associated with verbal predicates, but has generally been found to be much more restricted for the nominal domain. Process nominals—which Grimshaw (1990) refers to as Complex Event Nominals (CENs)—are the only fully nominal constructions that have been argued to have the capacity to license arguments, given diagnostics that target sensitivity to Lexical Aspect (Aktionsart; Vendler 1967). Examples of these diagnostics include event modification, agent-oriented modifiers, manner adjectives, temporal modifiers, and implicit argument control (Grimshaw 1990, Borer 2003). For example, compare across English Complex Event Nominals (CENs) (1), Simple Event Nominals (SENs) (2–3), and Referential Nominals (RNs) (4) in their ability to host the event modifier *FREQUENT*.

- (1) A waiter's frequent calculation of receipts is just part of the job.
- (2) * The frequent exam was starting to get exhausting.
- (3) The frequent exams were starting to get exhausting.
- (4) ? I really like getting to see the frequent cats that come by to visit.

The CEN in (1) is the only type of nominal that is able to license the modifier *FREQUENT* in its singular form, with the modifier describing something about the habitual recurrence of some event of calculation. In contrast, a SEN can only license the modifier *FREQUENT* when plural (2–3). Attempting to use *FREQUENT* with a RN, as in (4), is marginal, and again requires a plural form.

1.1.2 Syntactic representations of process nominals

Many process nominals (CENs) in well-studied languages have clear deconstructable morphology suggesting embedded verbal material. For example, *calculation* can be transparently decomposed into the verb *calculate* and a nominalizing suffix *-(a)tion*. Process nominals have consequently been often referred to in syntactic literature by names that imply verbal origin and a derivational history, such as nominalizations, derived nominals, and de-verbal nominals. Chomsky (1970), in an exploration of derived nominals in English, argues that nominals and sentences are parallel, but distinct. While there is some relationship between the noun form *calculation* and the verb form *calculate* in the lexicon, the syntactic structures of the nominal and the verb phrase are generated independently, following an X-bar theoretic template.



Under Lexicalist approaches (Aronoff 1976, Jackendoff 1975, Lieber 1980, Grimshaw 1990), process nominals do not inherit any syntactic structure from the related verb, only its thematic grid. Contemporary approaches within the generative tradition however, have largely shifted toward structural accounts of predicates and argument licensing (Kratzer 1996, Borer 2013; Harley 1995, 2009), leading to the development of syntactic frameworks that look to do away with a lexical component entirely. For example, Distributed Morphology (DM) (Halle and Marantz 1993) minimizes the extent of the lexicon down to just lists of form-meaning pairings.

2 Korean “Verbal Nouns” (VNs)

Under a structural approach to argument structure (AS), everything is done compositionally, with the same syntactic tools. Therefore, the difference between process nominals (CENs), which have AS, and other nominals that lack AS, must stem from a structural source. For many, the structural source of this difference is attributed to the presence or absence of a verbal syntactic layer (Borer 2003, 2013; Alexiadou 2010a,b). Researchers have had good reason cross-linguistically to point

toward the presence of some verbal layer embedded within the process nominal construction (Hazout 1995, Alexiadou and Rathert 2010, Fu et al. 2001). However, ready counter-evidence to this hypothesis has been identified in Korean (Yoon and Park 2008; C-W. Park 2013; J. Yoon 2022): a class of Sino-Korean predicates that are often called “Verbal Nouns” (VNs). There are three possible constructions that VNs appear in. They can head process nominal constructions, as in (7), appear as part of a complex predicate in combination with a light verb, as in (8), or surface as an internal argument of a main verb, as in (9). The relevant VN in (7–9) is bolded.

- (7) *yengwuwen-uy tongwul(-uy) **thamkwu***
 researcher-GEN cave(-GEN) explore
 ‘the researcher’s exploration of the cave’
- (8) *yenkwuwen-i tongkwul-ul **thamkwu**-ha-yss-ta*
 researcher-NOM cave-ACC explore-do-PST-DECL
 ‘The researcher explored the cave.’
- (9) *yengwuwen-i tongwul-ul **thamkwu**-lul ha-yss-ta*
 researcher-NOM cave-ACC explore-ACC do-PST-DECL
 ‘The researcher explored the cave.’

These VNs have received a lot of attention from researchers of Korean and Japanese syntax (Grimshaw and Mester 1988; H-R. Chae 1996, 1997; J-S. Jun 2003, 2006, among others). The term “verbal noun” is representative of the observation that these lexical items, like verbs, have event structure and take thematic arguments, but yet seem somehow fluid in their categorical label. In some contexts, VNs appear within a purely nominal construction (7), but in other contexts instead create part of a verbal predicate (8). The “double accusative” construction (9) adds an additional puzzle, where both the VN and its thematic argument seem, at least from looking at the accusative case marking, to be arguments of the light verb itself.

Yoon and Park (2008) argue that VNs violate *phrasal coherency* (Malouf 1998), which suggests that the following three verbal properties are hierarchically organized (Borer 2003, Fu et al. 2001): sentential case licensing, argument licensing & event structure, and VP pro-forms & VP adverbs (Table 1). Case licensing, as the highest verbal property, entails the presence of the intermediate and lowest verbal properties— in other words, if a given construction exhibits case licensing, phrasal coherency asserts that the same construction should also have argument licensing and event structure, as well as VP pro-forms and VP adverbs. Argument licensing and event structure, as the intermediate property, does not entail the ability to license case, but does entail the ability to host pro-forms and VP adverbs. VP pro-forms and adverbs, as the lowest property, do not entail the higher properties. Yoon and Park (2008) provide evidence that VN nominal constructions are lacking the highest property (case licensing) and the lowest property (VP pro-forms, VP adverbs), but nonetheless have the intermediate property of argument licensing and event structure. They categorically pass all Grimshaw (1990) diagnostics for AS, while other Korean nominals

Highest verbal property	Case licensing
↓	argument licensing, event structure
Lowest verbal property	VP pro-forms, VP adverbs

Table 1: Phrasal coherency (Yoon and Park, 2008, Borer, 2003)

categorically fail. Rather than throw the entire notion of phrasal coherency away, Yoon and Park (2008) argue that Korean VNs do not demonstrate VP phrasal coherency because they lack a verbal category entirely. It follows from this that argument structure and event structure are therefore erroneously part of the VP phrasal coherency entailment hierarchy.

Korean VNs, when heading nominal constructions, pattern exactly as one would expect of process nominals (CENs): they denote an event, and have aspectual qualities (in the Aktionsart sense) that can be targeted for modification (Yoon and Park 2008). For example, they allow eventive modifiers like FREQUENT and CONSTANT when singular (10), as well as agent-oriented modifiers like DELIBERATE and CARELESS (11).

- (10) a. *cikwen-uy **cac-un** kongkum(-uy) hoynglyeng*
 worker- frequent-ADJ fund(-GEN) embezzle
 ‘the worker’s frequent embezzlement of funds’
 b. *yenkwuwen-uy **kkunhim.eps-nun** tongkwul(-uy) thamkwu*
 researcher-GEN constant-ADJ cave(-GEN) explore
 ‘the researcher’s constant exploration of the cave’
- (11) a. *yenkwuwen-uy **kyeyhwoekceki-n/kwutsey-n** tongkwul(-uy) thamkwu*
 researcher-GEN deliberate-ADJ/steadfast-ADJ cave(-GEN) explore
 ‘the researcher’s deliberate/steadfast exploration of the cave’
 b. *sacang-uy **pwucwuuyha-n/uysimsulewu-n** cungke(-uy) unphyey*
 boss-GEN careless-ADJ/suspicious-ADJ evidence(-GEN) conceal
 ‘the boss’ careless/suspicious concealment of evidence’

Manner adjectives, such as SLOW or QUICK, are also possible (12), and so are temporal modifiers, e.g. durational phrases, like the English correlate *in/for two years* (13).

- (12) *ainsyuthain-uy **ppal-un/nuli-n** [pich-uy sokto](-uy) kyeysan*
 Einstein-GEN quick-ADJ/slow-ADJ [light-GEN speed](-GEN) calculate
 ‘Einstein’s quick/slow calculation of the speed of light’
- (13) *yenkwuwen-uy **i.nyen tongan-uy** tongkwul(-uy) thamkwu*
 researcher-GEN two.year duration-GEN cave(-GEN) explore
 ‘the researcher’s exploration of the cave for two years’

Though there has been (and still is) much debate about the category of VNs (see Park 2013 and citations therein), the facts are clear: VNs are ‘hybrid’ in the precise way in which process nominals are characterized: having event structure and arguments, while lacking verbal syntax. The external syntax of VN process nominals can *only* be nominal; no sentential cases or adverbials are allowed. Example (14) demonstrates grammatical licensing of adjectives vs. the ungrammatical licensing of adverbs, while (15) demonstrates that nominative and accusative case are not possible within process nominal constructions headed by VNs.

- (14) [_{DP} *yenkwuwen-uy **kkunhi.m.eps-nun**/*-i tongkwul thamkwu*]-nun
 [_{DP} researcher-GEN constant-**ADJ**/*-**ADV** cave explore]-TOP
 ‘The researcher’s constant exploration of the cave (. . . was tiring/etc.)’

- (15) a. [DP *yenkwuwen-uy* *tongkwul(-uy)* *thamkwu*]-*nun*
 [DP researcher-GEN cave(-GEN) explore]-TOP
 ‘The researcher’s constant exploration of the cave (... was tiring/etc.)’
 b. * [DP *yenkwuwen-i* *tongkwul-ul* *thamkwu*]-*nun*
 [DP researcher-NOM cave-ACC explore]-TOP
 Intended: ‘The researcher’s constant exploration of the cave (... was tiring/etc.)’

The conclusion arrived at in the face of these empirical facts is that contemporary structural theories of AS which attribute the ability to license arguments to the presence of verbal structure are not entirely adequate for capturing the full cross-linguistic picture. Korean VNs demonstrate that argument structure is not exclusively a verbal property, and therefore AS is not inherently tied to the verbal syntactic category.

3 Structural analysis

This section transitions from diagnosing event structure to considering, given the above facts, what a formal, structural representation of Korean VN constructions could be, with particular consideration about the originating location of the internal argument. For this discussion, we will consider the difference between VN process nominal constructions (16) and VN+light verb complex predicate constructions (17).

- (16) *yengwuwen-uy* *tongwul(-uy)* ***thamkwu***
 researcher-GEN cave(-GEN) explore
 ‘the researcher’s exploration of the cave’
 (17) *yenkwuwen-i* *tongkwul-ul* ***thamkwu***-*ha-yss-ta*
 researcher-NOM cave-ACC explore-do-PST-DECL
 ‘The researcher explored the cave.’

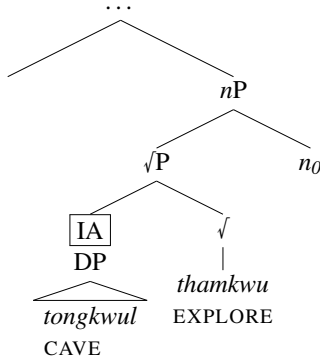
Given that a construction like (16) must lack verbal structure, two possible structures are explored in the following sections; one where the internal argument is directly introduced by the VN itself, prior to syntactic categorization, and one where the internal argument is introduced higher, after syntactic categorization, by a functional head.

3.1 Hypothesis 1: the \sqrt{P} (Harley 2014)

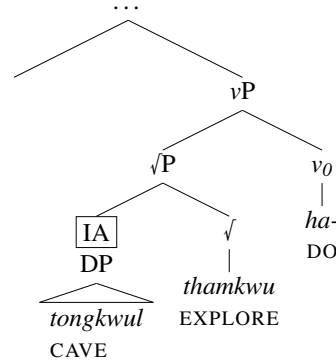
Decompositional approaches that assume that morphological complexity is handled as part of the syntactic module represent syntactic categorization via the combination of Roots with functional categorizing heads (n_0 , v_0 , etc.). The \sqrt{P} hypothesis, motivated in Harley (2014), commits to Roots as elements that are not entirely bleached of syntactic relevance: they introduce their own complement directly.

An example of what this potential structure would look like for (16–17) is given below in (18) and (19). The structures are identical below the categorizing head. The VN, as a Root, introduces its own internal argument as its complement, and is then categorized as either a Noun or a Verb, respectively. For simplicity of discussion, the verbal structure in (19) assumes that the light verb takes on the role of categorization, while also contributing its own semantics to the structure.

(18)



(19)



What is essential to note here for these hypothesized structures is that (18) is *not* derived from (19), nor is (19) derived from (18). We might consider whether this latter derivational relationship is possible. The data discussed in Section 2 prove that whatever the property necessary for AS is, it is *not* verbal, therefore ruling out a deverbalization process. Turning to the verbal construction, we find that the VN+light verb constructions exhibit the opposite restriction. *X-ha-* forms are crucially *not* nominal (20–22), no matter what surface position the internal argument (IA) sits in: nominal modification using adjectives and nominal cases are disallowed.

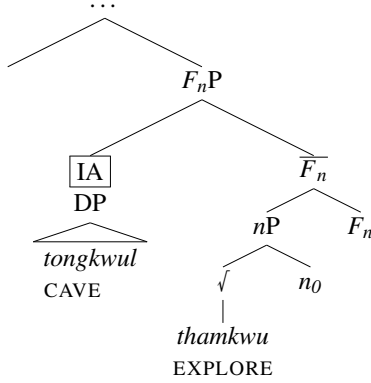
- (20) *yenkwuwen-i tongkwul-ul kkunhi.m.eps-i/*-nun thamkwu-ha-yss-ta*
 researcher-NOM cave-ACC constant-ADV/*-ADJ explore-do-PST-DECL
 ‘The researcher tirelessly/continuously explored the cave.’
- (21) *yenkwuwen-i kkunhi.m.eps-i/*-nun tongkwul(-ul) thamkwu-ha-yss-ta*
 researcher-NOM constant-ADV/*-ADJ cave(-ACC) explore-do-PST-DECL
 ‘The researcher tirelessly/continuously explored the cave.’
- (22) *yenkwuwen-i twu pen(*-uy) tongkwul(*-uy) thamkwu-ha-yss-ta*
 researcher-NOM two times(*-GEN) cave(*-GEN) explore-do-PST-DECL

By the same logic in which verbal structure was ruled out for the VN process nominal constructions, we also rule out nominal structure for the *X-ha-* constructions, meaning that we cannot posit a denominalization process to link (16–17) derivationally, either. Therefore, whatever the necessary property for licensing AS is, it is also *not* nominal. If the necessary property for argument structure to be generated is not verbal, nor is it nominal, what is left? The only thing consistent across these constructions is the Root, i.e. the VN itself. Therefore, it is the Root that creates the possible conditions for argument structure, as represented in (18–19).

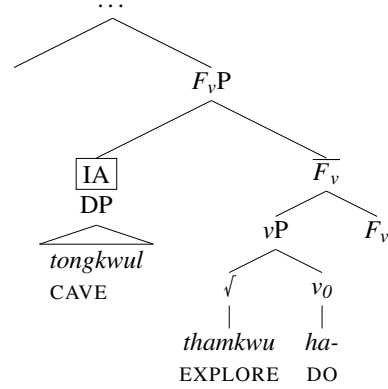
3.2 Against an alternative: Hypothesis 2

An alternative hypothesis that would still be compatible with the empirical generalization that VN process nominal constructions are fully nominal, and VN+*ha-* constructions are fully verbal, would be to assume that there is functional structure in the nominal that introduces an internal argument, and parallel functional structure that introduces the internal argument in the verbal domain. This hypothesis is schematized in (23–24) below. Though this proposal does not directly capture the intuition that the internal argument is allowed in the structure because of the Root, it is more inline with theoretical positions that do not allow Roots to hold any syntactic abilities, and require them to be categorized in order to enter the syntactic structure (Embick and Marantz 2008; Borer 2013).

(23)



(24)



Ruling out Hypothesis 2 empirically really comes down to pinpointing the originating base position of the internal argument. In Hypothesis 1 (18–19), the Root introduces the IA directly as its complement, but in Hypothesis 2 (23–24), the IA is introduced structurally higher, as a specifier of a domain-specific functional head (F_n for the process nominal, and F_v for the verbal structure).

The actual position of the IA can be determined via an investigation of differential object marking (DCM) (Bossong 1985, 1991; Aissen 2003). In both the process nominal and complex predicate constructions utilizing VNs, differential case marking (DCM) is observed on the direct object, sensitive to its position in the structure. DCM in Korean is not exclusive to the Sino-Korean VN constructions discussed here—it occurs for non-complex predicates of native Korean origin as well. DCM has been identified and investigated in Korean by a number of researchers (e.g. Lee 2005, 2006; Kim 2008; Kwon and Zribi-Hertz 2008), and has been cross-linguistically observed to track animacy, definiteness, and/or other dimensions of prominence (Aissen 2003). While Korean does not appear to have DCM fully grammaticalized as a categorical distinction between objects, the language does reflect a clear preference for which environments seem to make case drop acceptable, following the anticipated cross-linguistic patterns.

There are two possible positions for the internal argument as either directly adjacent to the predicate (25a), or higher, above adverbial modification (25b).

- (25) a. *cikwen-i cacwu kongkum(-ul) hoynglyeng-ha-yss-ta*
 worker-NOM frequently fund(-ACC) embezzle-do-PST-DECL
 ‘The worker frequently embezzled (the) funds.’
 b. *cikwen-i kongkum*(-ul) cacwu hoynglyeng-ha-yss-ta*
 worker-NOM fund*(-ACC) frequently embezzle-do-PST-DECL
 ‘The worker frequently embezzled the funds.’

The presence of ACC case is mediated by this positional variation: in the low position, ACC is variably able to be dropped; in the higher position, ACC is *obligatory*. The exact same phenomenon is observed in the process nominals: In (26a), the internal argument directly precedes the VN, and in this position GEN is possible, but dis-preferred. In (26b), in contrast, the internal argument surfaces higher, above adjectival modification, and in this position GEN case is *required*.

- (26) a. *cikwen-uy cac-un kongkum(-uy) hoynglyeng*
 worker-GEN frequent-ADJ fund(-GEN) embezzle
 ‘the worker’s frequent embezzlement of funds’

- b. *cikwen-uy kongkum*(-uy) cac-un hoynglyeng*
 worker-GEN fund*(-GEN) frequent-ADJ embezzle
 ‘the worker’s frequent embezzlement of the funds’

The object shift phenomenon shows us that the internal argument *originates in a lower position* that is directly adjacent to the VN; this is only captured by the \sqrt{P} hypothesis introduced in Section 3.1. Regardless of whatever case licensing mechanism is assumed, the IA must move from a lower base position to a higher one in order to interact with higher syntactic mechanisms, as diagnosed by its position with respect to modifiers. Recalling the earlier discussion on phrasal coherency, the initial base position of the IA is structurally *lower* than the lowest property (adverbial or adjectival modification) associated with the verbal or nominal domain respectively.

4 Conclusion

This paper has argued, given data from Sino-Korean eventive roots (VNs), that the ability to license argument structure is *not* contingent on verbal structural material. This proposal furthermore suggests that, for Sino-Korean predicates (VNs)— and by extended hypothesis, any predicates that lack clear categorizing morphology— root categorization is not required as a prerequisite to building AS on top of the predicate, and therefore not required in order for the Root to play a role in structure building. The establishment of an unambiguously ‘verbal flavor’ or ‘nominal flavor’ of a construction occurs later than the building of argument structure in the time course of the syntactic derivation, crucially after (minimally) the introduction of the internal argument. Introducing an IA is not a property of “verbs”, but rather a property of Roots (Harley, 2014). Roots are, then, not entirely bleached items that simply index forms to meanings, against the strictly traditional Distributed Morphology (DM) notion of roots.

The empirical data also reveals that a derivational analysis of VN process nominal constructions from their verbal counterparts is *not* viable, nor is the reverse derivational analysis, from process nominal to verbal. The resulting, non-derived structures for the nominal and the verbal construction respectively is remarkably similar to the original structural proposal argued for in Chomsky (1970). Within a contemporary decompositional notion of morpho-syntax, we can understand the relationship between a process nominal and its verbal counterpart as being built from the same base root, but with nominal-specific or verbal-specific structure above the \sqrt{P} .

One final commentary on the usefulness of loanwords is warranted; while not a point that is central to the discussion above, it is in fact the case that VNs are borrowed eventive roots of Sino-Korean origin. Loan words lack overt morphology, and resist combination with native categorizing morphemes, and so they provide us with a magnifying glass to understand the nature of AS when the confound of categorizing morphology is absent. The question of whether overt category morphology is present for a given predicate is ultimately, then, an orthogonal question to whether argument structure is available and possibly contingent on root class, i.e. loan roots vs. native roots. It is striking to note that English zero-derived predicates which have possible process nominal interpretations (e.g. RELEASE, DISCHARGE, USE; predicates with a single form used in both the nominal and verbal domains) tend to be borrowed Latinate/French roots (Alexiadou, 2009). Future exploration of the use of loanwords in syntactic theory will prove fruitful in addressing questions about the role and nature of overt morphological categorization as it is relevant to AS, as well as in other domains of syntactic investigation beyond.

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