Loanword integration and its consequences for the morpho-syntactic interface

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1 Overview

This project deals with the morpho-syntactic reality of loanwords:

- Are loanwords exceptional, or do they reflect general universal properties of the grammar?

Synchronic analyses of borrowed morphemes, especially in cases where these morphemes pattern together along a number of grammatical dimensions, are often analyzed with Lexical Strata (e.g., Haspelmath & Sims 2013; Ito & Mester 1995; among others).

- There are different ways to encode Lexical Strata; for example, having a formal feature [LOAN], which then regulates the application of processes specific to loanwords (Ito & Mester 1995; Jurgec 2010).
- Alternatively, one might go the route of "pre-specification", where loanwords are understood to behave differently because they have different underlying representations, but there is no DIRECT sensitivity of the grammar of the lexicon to etymological origin (Inkelas et al. 1997; Newell 2021).
  - In this talk, I present a morpho-syntactic analysis of Sino-Korean loanwords that falls under this latter approach.

1.1 This talk

Building on prior work Webster (under review) that uses Sino-Korean predicates to make an empirical case for adopting the √P Hypothesis (Harley 2014), I take the latter perspective, arguing that, when it comes to the morpho-syntactic interface, loanwords are unique only in the way that they are integrated into a given language's Vocabulary List.

The steps of argumentation are as follows:

- First, I resolve questions about the "light verb": why is the morpheme *ha-* obligatory for SKL verbal predicates, and what underlying structure does it correspond to?
  - I show that the broader distribution of *ha-* provides empirical support for a Borerian approach to syntactic category (e.g. Borer 2014), and necessitates a many-to-one mapping of syntactic projections to morphological form.
- Second, I clarify the correct relationship between AS-Roots and loanword status, finding it to be asymmetrical: while all Korean AS-Roots with stored Vocabulary Entries are indeed loanwords, it is not the case that every loanword in the Korean language is an AS-Root.
  - Therefore, even though there is a strong link between AS-Roots and loanword status, the *actual* correct cut for generating the √P is about meaning: the Root itself must denote an activity (encode an event argument), in order for a non-derived AS-nominal to be licensed.
- Finally, I expand upon the predictions made by a general hypothesis of loanword integration, namely, that loanwords are integrated as Vocabulary Items as the smallest possible span (a singleton span of just the Root); I demonstrate the success of this hypothesis in capturing the behavior of native Korean nominalizations, and note some promising extensions to languages beyond Korean that share a similar morphological profile (Turkish, Persian).

2 Review of the √P Hypothesis

Sino-Korean loans (henceforth SKLs[1]) pattern both as AS-Nominals (1) (nominals with argument structure; Grimshaw 1990) and as verbal predicates (2).

(1) a. *cikwen-uy kongkum* ***hoynglyeng***
worker-GEN fund embezzle
"The worker's embezzlement of the funds"

b. *yenkwuwen-uy tongkwul* ***thamkwu***
researcher-GEN cave explore
"The researcher's exploration of the cave"

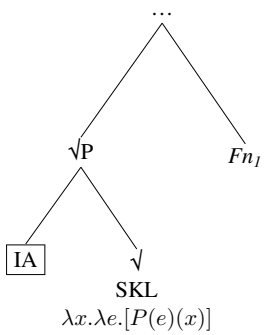
(2) a. *cikwen-i kongkum-ul* ***hoynglyeng-ha****-yss-eyo*
worker-NOM fund-ACC embezzle-do-PST-DECL
"The worker embezzled the funds."

b. *yenkwuwen-i tongkwul-ul* ***thamkwu-ha****-yss-eyo*
researcher-NOM cave-ACC explore-do-PST-DECL
"The researcher explored the cave."

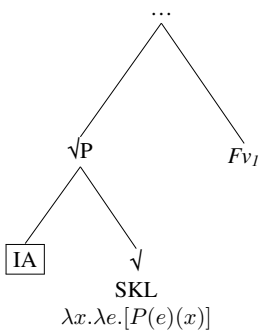
In Webster (under review), I propose the following structure(s) for an SKL in its nominal and verbal constructions (3–4).

- Fn_1 represents the first functional projection that establishes the nominal domain. Fv_1 stands in for the first functional projection of the verbal domain.

(3) √P for SKL AS-Nominal



(4) √P for SKL verbal predicate



3 The distribution of *ha-*

The light verb morpheme *ha-* in Korean is obligatory in SKL verbal predicates (5). This generalization immediately lends itself to the possibility that *ha-* is a v_0 categorizer.

(5) * *ainsyuthain-i pich-uy sokto-lul* ***kyeysan****-yss-eyo*
Einstein-NOM light-GEN speed-ACC calculate-PST-DECL
Intended: "Einstein calculated the speed of light."

The broader empirical distribution of *ha-* is complicated, however, and does not line up neatly with this claim:

- At first glance, in SKL verbal predicates examples previously introduced, *ha-* really does seem to do little more than mark the presence of the verbal domain (a characterization in favor of treating it as simply a categorizer).
- On the other hand, *ha-* has a larger distribution, appearing in predicates built with native Roots as well, in which case it seems to instead **correlate with the addition of AS properties that the Root in isolation lacked**.
- For example, *ha-* in combination with some native Korean stative predicates *does* reliably transform a stative verb to a transitive predicate (6).

(6) a. *kangaci-ka coh-ayo*
dog-NOM be.good-PRS.DECL
"Dogs are good."

b. *Jwunkwu-ka kangaci-lul coha-****ha****-yo*
Jungu-NOM dog-ACC be.good-HA-PRS.DECL
"Jungu likes dogs."

[1]There is a long history of work on these lexical items in Korean syntax literature: SKLs are typically referred to as "Verbal Nouns", or VNs (see, e.g., Ahn 1992; Chae 1997; Jun 2003, 2006; Manning 1993; Pak 2001; Sells 1995; Yoon & Park 2008; among others).

- In addition, there are many intransitive predicates that utilize *ha-* (7–8), formed from Roots that can independently head referential nominals (and crucially not AS-Nominals; see, e.g., 9).

(7) Some example intransitive predicates that surface with the light verb *ha-*:

a.	*samang-ha-*	*DEATH*-do-	"to die"
b.	*sanchayk-ha-*	*STROLL*-do	"to take a walk"
c.	*il-ha-*	*THING*-do-	"to work"
d.	*swukcey-ha-*	*HOMEWORK*-do-	"to do homework"

(8) * *hanyengi-ka pulecekhthu-lul il-ha-yss-eyo*
Hanyoung-NOM project-ACC thing-do-Pst-DECL
Intended: "Hanyoung worked (on) the project."

(9) * *hanyeng-uy cacu-n il*
Hanyoung-GEN frequent-ADJ thing
Intended: "Hanyoung's frequent working/doing of work"

Furthermore, the larger set of light verbs available in Korean (e.g. *twoy-*, *sikhi-*, *pat-*; English: "become", "order", "receive") reveal that, *even* for SKL verbal predicates, the choice of morpheme form is not completely arbitrary, but conditioned by Voice.

- There are reliable *ha-*/*twoy-* ("do"/"become") valency alternations where *ha-* reliably surfaces for the transitive form, while *twoy-* reliably surfaces for the unaccusative[2](10).

(10) a. *yenkwuwen-i tungkwul-ul thamkwu-**ha**-yss-eyo*
researcher-NOM cave-ACC explore-do-PST-DECL
"The researcher explored the cave."

b. *tungkwul-i thamkwu-**twoy**-yss-eyo*
cave-NOM explore-become-PST-DECL
"The cave was/got/became explored."

In sum, *ha-* cannot be analyzed as a head that consistently performs a single role; sometimes it correlates with Voice, sometimes it correlates with the addition of an event argument, and sometimes it correlates with the addition of an IA.

- And crucially, in all cases, *ha-* is doing **more** than just categorization.
  - For SKL verbal predicates, it communicates Voice / introduction of an external argument
  - In combination with stative predicates, it introduces a thematic argument (a non-agent of some kind)
  - In combination with Roots that lack AS properties, it "eventivizes".

Under the √P hypothesis, it is already counter-intuitive to require categorizing heads to bring Roots into the syntactic derivation, because Roots are already syntactic entities.

- The distribution of *ha-* further supports the idea that for us that "Root categorization" is not a real component of the formal grammar (contra Embick 2004; Embick & Marantz 2008; Embick 2015; Lohndal 2020).
- Instead, syntactic "category" of a Root is accomplished in a Borerian style of categorization (Borer 2014), where category is determined through association with a particular structural domain built above the Root, rather than linked to the presence or absence of a syntactic head (v_0) serving the sole function of categorization.

3.1 Formal analysis

The only possible account of all of the above facts, in a post-syntactic approach to morphology, requires a morpho-syntactic interface that allows for a one-to-many mapping of form to underlying structure.

- I propose to treat *ha-* as a pronunciation of the verbal functional sequence (up to Voice) that is utilized as a PF repair strategy when the Lexicon only has a stored Vocabulary Item for the Root itself.
- In this work, I assume that morphological form is handled by a post-syntactic module, in line with Distributed Morphology (Halle & Marantz 1993).
- In particular, this account utilizes the formal mechanism of *Spanning* (Svenonius 2016; Bye & Svenonius 2012). The spanning hypothesis asserts that "spans", rather than terminal nodes, are the loci for lexical insertion (vocabulary insertion) in a post-syntactic approach to morphological form. A span is defined as a contiguous sequence of heads in a head-complement relation.

[2]The *twoy-* predicate patterns syntactically as an unaccusative, failing diagnostics for implicit argumenthood (namely, implicit subject control).

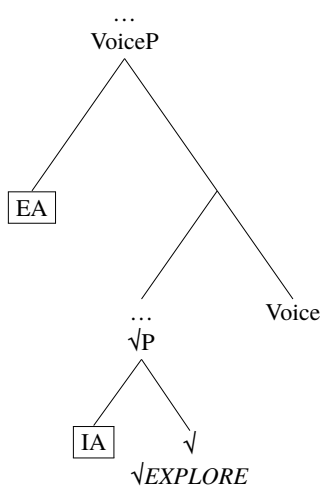
Take, for example, the SKL predicate *thamkwu-ha-* (“to explore”), to have the Vocabulary entry of (11a) and the underlying structure in (12). I suggest that the Sino-Korean Loan words (SKLs), have forms that are stored as direct exponents of the Root.

(11) Vocabulary Items

a. *thamkwu*, /tʰam.ku/ ⇔ ⟨ √*EXPLORE* ⟩

b. !(DOES NOT EXIST) ⇔ ⟨ √*EXPLORE*, …, Voice$_{(\text{ACTIVE})}$ ⟩

(12)



Crucially, because a corresponding form to expone the full span of the SKL verbal predicate does not exist, a the light verb morpheme *ha-* is chosen as a repair, to pronounce the span of heads above the Root.

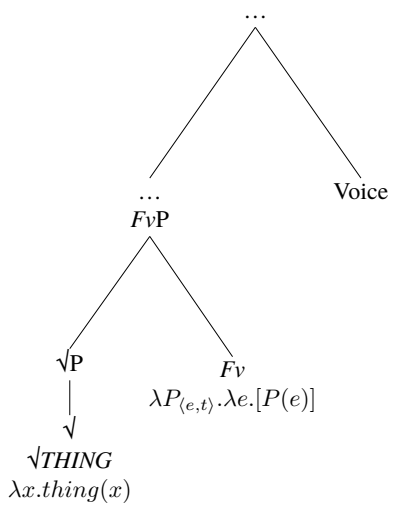
- This same analysis derives intransitive predicates like those in (7) as well; for these predicates, I assume an underlying structure like (14), that has at least two verbal heads above the Root: a projection *Fv* that “eventivizes”, and Voice.
- Again, because there is only a stored entry for the Root (13), rather than the full span of the predicate structure, the light verb *ha-* is inserted to pronounce the remaining portion of the span.

(13) Vocabulary Items

a. *il*, /il/ ⇔ ⟨ √*THING* ⟩

b. !(DOES NOT EXIST) ⇔ ⟨ √*THING*, …, *Fv*, …, Voice$_{(\text{ACTIVE})}$ ⟩

(14)



4 Clarifying the relationship between the √P and loanwords

Do loanwords reveal something exceptional, or universal? In order to truly motivate the √P as a universal theory of internal argument introduction, I will argue that the distribution of loanwords is due to the *interaction* of loanwords with the morphological

system of the language, directly condition to how the syntax builds argument structure. Two parts to this argument:

1. The link between AS-Roots and loanwords is asymmetrical: all of the AS-Roots we find with direct pronunciations are loanwords, BUT, not every loanword is stored as an AS-Root.
2. The spanning account account, in combination with a hypothesis about loanword storage can also straightforwardly account for native Korean nominalizations, which act more like the nominalizations explored in other languages.

4.1 Not all loanwords in Korean are AS-Roots

Some Sino-Korean loanwords, even if they can appear in a verbal predicate, fail to license an AS-Nominal, with marginal-to-impossible licensing of an internal argument in the complex predicate form.

As a case study, consider the word *cilmwun*, a Sino-Korean loanword that means "(a) question" (15).

(15) *na-nun chinkwu-eykey **cilmwun**-ha-yss-ta*
1p.SG-TOP friend-to question-do-PST-DECL
'I asked my friend (a question).'

Attempting to force the addition of a direct object is marginal at best— a prepositional phrase with "about" is preferred (16).

(16) a. *?? *na-nun (chinkwu-eykey) kwacey-**lul** cilmwun-ha-yss-ta*
1p.SG-TOP (friend-to) project-ACC question-do-PST-DECL
Intended: 'I asked (my friend) about the project/assignment/task.'

b. *na-nun (chinkwu-eykey) kwacey-**ey tayhay** cilmwun-ha-yss-ta*
1p.SG-TOP (friend-to) project-about question-do-PST-DECL
'I asked (my friend) about the project/assignment/task.'

A nominal made using *cilmwun* is only interpretable as a referential nominal, not a process nominal/complex event nominal (17).

(17) a. *ku haksayng-uy kwacey cilmwun*
that student-GEN project question
'the student's question about the task' / 'the student's task/project question'

b. ? *ku haksayng-uy cacu-n/kkunh.im.ebs-nun kwacey cilmwun*
that student-GEN frequent-ADJ/constant-ADV project question
'the student's frequent/constant questions about the task' / 'the student's frequent/constant task questions"
(receives obligatorily plural interpretation when modified by frequent/constant)

4.2 However, all AS-Roots in Korean have traces of Sino-Korean origin

Apparent exceptions in the other direction can be found, too (as in, native words that are capable of representing AS-Roots)— however, all exceptions that I have found, upon closer inspection *still* can be traced diachronically to a Sino-Korean origin.

Consider, for example, the Korean lexical item *sanyang* ("hunting"). While *sanyang* is perceived to be a native Korean lexical item by many, Yi (2008) reports that it falls under the category of *nativized* Sino-Korean words, which are words with a Sino-Korean etymological origin that are no longer perceived as such, because they have undergone drastic-enough phonetic change that their pronunciations no longer correspond to the readings of their source Chinese characters.

- The word *sanyang*, is etymologically linked to an earlier Sino-Korean word *san.hayng*, meaning "mountain trip" (Yi 2008).
- The lexical item *sanyang* can head an AS-Nominal, and be used as the content Root of a verbal predicate:

(18) *ku salam-uy kkunh.im.ebs-nun thokki sanyang*
that person-GEN constant-ADJ rabbit hunting
'that person's constant hunting of rabbits'

(19) *ku salam-i thokki-lul sanyang-ha-yss-ta*
that person-NOM rabbit-ACC hunting-do-PST-DECL
'That person hunted rabbits.'

One more interesting point: *sanyang* commonly occurs in a compound-like construction with the internal argument *manye* ("witch"), in which case it can have the idiomatic interpretation of a "witch-hunt" (20). This, too, can have a direct object.

(20) *manh-un salam.tul-i ku aitol-lul manye-sanyang-ha-yss-ta*
many-ADJ person.PL-NOM that celebrity-ACC witch-hunting-do-PST-DECL
'Many people did a witch-hunt of that celebrity/witch-hunted that celebrity.'

The above examples suggest that the relevant cut for whether a Root will be able to head an AS-Nominal, and form a verbal predicate with *ha-*, is not *directly* mediated by lexical strata, but rather by the semantics of the Root itself.

- **The takeaway**: the ACTUAL cut for AS-Roots is about the meaning: the Root itself must denote an activity (encode an event argument), in order for a non-derived AS-nominal to be licensed.

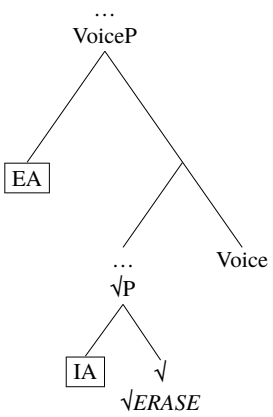
5 Extending to native Korean nominalizations

The spanning analysis extends straightforwardly to native predicates in Korean, which do not utilize a light verb. Consider, for example, the native predicates in (21).

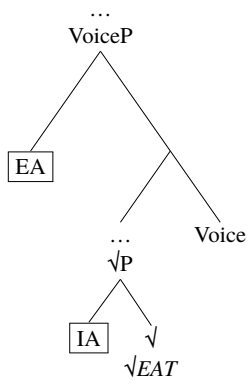
(21) a. *sensayngnim-i chilphan-ul ciwu-ess-eyo*
teacher-NOM blackboard-ACC erase-PST-DECL
"The teacher erased the blackboard.."

b. *ku ai-ka umsik-ul mek-ess-eyo*
that child-NOM food-ACC eat-PST-DECL
"That child ate the food."

(22) a.



b.



(23) Vocabulary Items
a. *ciwu-*, /ciu/ ⇔ ⟨ √*ERASE*, …, Voice$_{(\text{ACTIVE})}$ ⟩
b. *mek-*, /mɔk/ ⇔ ⟨ √*EAT*, …, Voice$_{(\text{ACTIVE})}$ ⟩

Under the present account, because the Vocabulary Items for native predicates store a span that *includes* the Root (23), we expect that these morphological forms cannot be used directly to create a non-derived AS-nominal (cf. SKLs). This is borne out: an overt nominalizer morpheme *-ki* is **required** in order to use a native predicate as an AS-Nominal.

- And, unlike SKL AS-Nominals, native Korean nominalizations pattern more like English in allowing marginal acceptability of adverbial phrases (24–25).

(24) a. *sensayngnim-uy chelceha-n chilphan **ciwu-ki**-nun insangcek-i-ess-eyo*
teacher-GEN thorough-ADJ blackboard erase-NMLZ-TOP impressive-COP-PST-DECL
"The teacher's thorough erasing of the blackboard was impressive."

b. ?? *sensayngnim-uy chelceha-key chilphan **ciwu-ki**-nun insangcek-i-ess-eyo*
teacher-GEN thorough-ADV blackboard erase-NMLZ-TOP impressive-COP-PST-DECL
"The teacher's erasing of the blackboard thoroughly was impressive."

(25) a. *ku ai-uy nuli-n umsik **mek-ki**-nun sikan-i manhi kelli-ess-eyo*
that child-GEN slow-ADJ food eat-NMLZ-TOP time-NOM much walk-PST-DECL
"That child's slow eating of the food took a long time."

b. ?? *ku ai-uy nuli-key umsik **mek-ki**-nun sikan-i manhi kelli-ess-eyo*
that child-GEN slow-ADV food eat-NMLZ-TOP time-NOM much walk-PST-DECL
"That child's eating of the food slowly took a long time."

Though AS-Nominals with *-ki* are attested in Korean, they are relatively low frequency; *-ki* is much more common in embedding infinitives. This likely contributes to the marginality of the adverbial phrases in (25); examples like those in (26) are more useful for demonstrating the easy acceptability of adverbials.

(26) a. *sensayngnim-i chelceha-key chilphan **ciwu-ki**-lo kyelceng-ha-yss-eyo*
teacher-NOM thorough-ADV blackboard erase-NMLZ-toward decision-do-PST-DECL
"The teacher decided to thoroughly erase the blackboard."

b. *ku ai-ka nuli-key umsik **mek-ki**-lo kyelceng-ha-yss-eyo*
that child-NOM slow-ADV food eat-NMLZ-toward decision-do-PST-DECL
"That child decided to slowly eat food."

Note: Under the present view, categorizing heads of course exist (like *-ki*), but serve only to demarcate transitions between syntactic domains (e.g., nominalizing a VP).

When considering SKLs in the context of native Korean nominalizations, it seems that the existence of the fully nominal (non-derived) AS-Nominals for SKLs is a by-product of how loanwords are being stored in the Korean lexicon.

- As SKLs are being stored as forms of Roots, rather than a full span, the non-derived structure is available to them.
- The non-derived structure is not available to native predicates, because their morphological forms already inherently encode to a structure that is larger than a √P.

5.1 Sketching out a general hypothesis on loanword integration

Loanwords are integrated as Vocabulary Items as the smallest possible span (a singleton span of just the Root).

Cross-linguistic potential?

- Languages like Persian, Turkish, and Hindi, which all have attested light verb paradigms, are also reported to have the same interaction of loanwords and light verbs in predicate formation (Butt 1995, 2010; Mahajan 2012; Megerdoomian 2012; Mohanan 2017; Özbek 2010).
- Notably, these languages are all verb-final and agglutinative.

I believe it possible that the way in which loanwords are used as predicates may differ across languages with different typological classifications of morphological behavior (Nichols 1986; Bickel & Nichols 2007).

- Specifically, though loanwords in Korean target insertion at the Root, it is possible that loanwords in other languages could target larger spans, or justify a different model of spellout entirely, depending on the way a given language's morpho-phonology organizes itself.
- Pending a fuller understanding of the cross-linguistic picture, the data may justify systematic variation within the system of morphological spellout.

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Appendix

Structural accounts of AS-Nominals (Hazout 1995; Fu et al. 2001; Alexiadou 2001, 2009, 2010a,b): VP adverbs and VP-anaphora as evidence of a VP layer (27–28), indicating that AS properties correlate with independent syntactic evidence for verbality.

(27) a. His explanation of the accident thoroughly (did not help him).
b. His transformation into a werewolf so rapidly was unnerving.

(28) a. * His version of the accident thoroughly (did not help him).
b. ?? His metamorphosis into a werewolf so rapidly was unnerving. (Fu et al. 2001: 555)

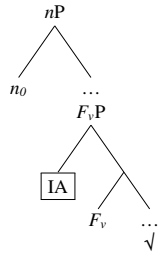
However, first noted by Yoon & Park (2008), AS-nominals built from SKLs disallow VP adverbials (29–30). Unlike English AS-Nominals, which can have adverbial modification under the right conditions (27), SKL AS-Nominals exclusively license adjectival modification.

(29) *mikwun-uy* *baghdad-ulo-uy* *sinsok-**han**/*-**hi*** *cinkyek*
American.army-GEN Baghdad-to-GEN quick-ADJ/*-ADV incursion
"American troops' quick incursion into Baghdad" (Yoon & Park 2008: 235)

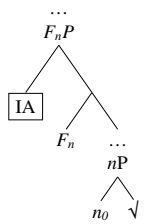
(30) [*yenkwuwen-uy* *kkunhimeps-**nun**/*-**i*** *tongkwul* *thamkwu*]*-nun*
[researcher-GEN constant-ADJ/*-ADV cave explore]-TOP
"The researcher's constant exploration of the cave (…was tiring/etc.)"

- SKL AS-Nominals are fully non-verbal, therefore providing definitive proof that AS can exist in the absence of verbal functional structure. The tree in (31) exemplifies the structural analysis ruled out by this generalization.
- Before immediately jumping to the √P analysis, however, one could counter with the alternative proposal that, for SKLs, their AS is uniquely created through the use of nominal functional structure only, e.g. (32).

(31) * Impossible structure for an SKL AS-Nominal



(32) Possible alternative: nominal projections only



This alternative proposal (32) is empirically testable: if the AS properties of an SKL come from a nominal functional projection, then in other argument-licensing contexts where the same Roots are used, nominal structure should be diagnosable. Just as VP adverbials are reliable diagnostics for verbal functional structure, adjectival modifiers are available as diagnostics for nominal functional structure.

- Underlying nominal functional structure (32) is not borne out empirically: in the verbal predicates made from SKLs, adjectival modification is fully impossible (33–34), indicating that nominal functional structure is absent from SKL complex predicates.

(33) *ainsyuthain-i pich-uy sokto-lul ppal-**li/*-un** kyeysan-ha-yss-eyo*
Einstein-NOM light-GEN speed-ACC quick-ADV/*-ADJ calculate-do-PST-DECL
"Einstein quickly calculated the speed of light."

(34) *cikwen-i kongkum-ul **cacwu/*cac-un** hoynglyeng-ha-yss-eyo*
worker-NOM fund-ACC frequent.ADV/*frequent-ADJ embezzle-do-PST-DECL
"The worker frequently embezzled funds."

In both AS-Nominals and verbal predicates made with SKLs, neither nominal or verbal structure can be responsible for introducing the internal argument. I take these empirical observations to mean that it is the Root (i.e., the SKL itself) that creates the possible conditions for AS. These facts and others lead me to argue that Roots are heads that project phrases and take complements.

Additional evidence against a "nominal structure" alternative

The light verb *ha-* selects for Roots directly. For example, it can select for items that *must* be Roots. This is most transparent in mimetic/onomatopoetic descriptive predicates. Mimetic Roots can combine with the LV *ha-* to create descriptive predicates, as well as with nominalizing suffixes to create referential nouns.

(35) *kaykol(kaykol)*, the "ribbet" sound that a frog makes
a. *kaykol(kaykol)-ha-* √*CROAK*-do- "to croak/ribbet"
b. *kaykol-i* √*CROAK*-NMLZ.DIM "a frog"

Mimetics cannot live independent lives as nominals on their own, even if the intended referent of the nominal is the sound/notion itself (36).

(36) a. * *(kaykwuli-tul-uy) kaykwulkaykwul-i tul-li-yss-eyo*
(frog-PL-GEN) croak.croak-NOM hear-PASS-PST-DECL
Intended: "A (frogs') croak was heard."

b. *(kaykwuli-tul-i) kaykwulkaykwul-ha-nun soli-ka tul-li-yss-eyo*
(frog-PL-NOM) croak.croak-do-ADJ sound-NOM hear-PASS-PST-DECL
"The sound of frogs croaking was heard."

Against a "flavors of AS functional projection" alternative

SKLs can be directly contrasted with another set of lexical items that have the same environmental distribution, but are unable to introduce their own arguments.

(37) a. *cwuni-ka mwuncang-ul khu-key **mal**-ha-yss-eyo*
Juni-NOM sentence-ACC big-ADV word-do-PST-DECL
"Juni said (the) sentence loudly."

b. *ku kaswu-ka cayen-uy alumtawum-ul cacwu **nolay**-ha-yss-eyo*
that singer-NOM nature-GEN beauty-ACC frequently song-do-PST-DECL
"That singer often sang of nature's beauty."

(38) a. *i mwuncang-un **mal**-i manh-ayo*
this sentence-TOP word-NOM be.many-PRS.DECL
"This sentence has a lot of words."

b. *hanyengi-ka kacang cohaha-nun **nolay**-ka latio-eyse hullenao-ass-eyo*
Hanyoung-NOM most like-ADJ song-NOM radio-on flow.out-PST-DECL
"The song (that) Hanyoung likes most played on the radio."

Crucially, *mal* and *nolay* cannot create AS-Nominals (39), only referential ones. Though an ACC-marked object is possible in (37), the source of it cannot be the Root.

(39) a. * *Cwuni-uy cac-un mwuncang(-uy) **mal***
Juni-GEN frequent-ADJ sentence(-GEN) word
Intended: "Juni's frequent saying of sentence(s)"

b. * *kaswu-uy cac-un cayen-uy alumtawum **nolay***
singer-GEN frequent-ADJ nature-GEN beauty song
Intended: "The singer's frequent singing of nature's beauty"

Differential object marking cuts between types of IAs

Two possible canonical positions for an IA to appear: either directly adjacent to the head of the relevant phrase, or higher, above modification.

(40) a. *cikwen-i cacwu* ***kongkum(-ul)*** *hoynglyeng-ha-yss-eyo*
worker-NOM frequently fund(-ACC) embezzle-do-PST-DECL
"The worker frequently embezzled (the) funds."

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

(41) a. *cikwen-i* ***kongkum*(-ul)*** *cacwu hoynglyeng-ha-yss-eyo*
worker-NOM fund*(-ACC) frequently embezzle-do-PST-DECL
"The worker frequently embezzled the funds."

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

Optional case in the low IA position is tied to being the complement of a Root. It follows then that optional case should disallowed in light verb predicates built from Roots that lack AS.

(42) a. *Cwuni-ka khu-key* ***mwuncang*(-ul)*** *mal-ha-yss-ta*
Juni-NOM big-ADV sentence*(-ACC) word-do-PST-DECL
"Juni said (the/a) sentence loudly."

b. *kaswu-ka cacwu* ***cayen-uy alumtawum*(-ul)*** *nolay-ha-yss-eyo*
singer-NOM frequently nature-GEN beauty*(-ACC) sing-do-PST-DECL
"The singer often sang of nature's beauty."

(43) a. *Cwuni-ka* ***mwuncang*(-ul)*** *khu-key mal-ha-yss-eyo*
Juni-NOM sentence*(-ACC) big-ADV word-do-PST-DECL
"Juni said (the/a) sentence loudly."

b. *kaswu-ka* ***cayen-uy alumtawum*(-ul)*** *cacwu nolay-ha-yss-eyo*
singer-NOM nature-GEN beauty*(-ACC) frequently sing-do-PST-DECL
"The singer often sang of nature's beauty."