Sino-Korean predicates on the nature of syntactic categorization

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1 Introduction

At a high level, the aim of this project is to motivate loanwords as a reflection of general universal properties of the grammar, as opposed to exceptional or esoteric mechanisms.

Main proposal. Sino-Korean lexical items (Korean words of Chinese origin) demonstrate that Roots are syntactic heads that project phrases and take complements (Harley 2014).

- If Roots are syntactic entities, then "Root categorization" is an unnecessary function of the grammar.
- Contrary to the mainstream view of Roots in contemporary morpho-syntactic theory (Alexiadou 2014; Borer 2003, 2014; Lohndal 2020; Merchant 2019; Embick & Marantz 2008), categorizing heads are not required to bring Roots into the syntactic derivation, because Roots are already syntactic entities.

In support of this claim, I further show that Korean light verb morphemes, which would be the most promising candidates for an overt categorizing v0 head in Sino-Korean predicate constructions, do not have the distribution or syntactic properties of a head that exclusively introduces category.

- I propose that light verbs in Sino-Korean predicates spell out a span of heads (Svenonius 2016), rather than a single functional head with one specified purpose.
- This analysis provides additional support of the step to remove "Root categorization" from the formal model of grammar.
- Categorizing heads exist, but serve only to demarcate transitions between syntactic domains (e.g., nominalizing a VP, verbalizing an AP, etc.).

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, I adopt the mechanism of *Spanning* (Svenonius 2016; Bye & Svenonius 2012).

Unless otherwise stated, Korean examples come from my own data collection.

1.1 Opposing perspectives on Roots

Can Roots live a syntactic life? Can they introduce internal arguments? What would an empirical argument in favor of these commitments look like?

The RootP Hypothesis (√PH): Roots are individuated syntactically (Harley 2014).

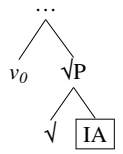
- Empirical grounds come from phonological and semantic suppletive paradigms.
- For example, Hiaki suppletive verbs (1), whose forms depend on the phi features of the internal argument (IA), make it difficult to pinpoint a single underlying phonological form for the Root.

(1) Hiaki unaccusative suppletive verb examples (Harley 2014: 234)

a.	*vuite ~ tenne*	'run.sg ~ run.pl'
b.	*siika ~ saka*	'go.sg ~ go.pl'
c.	*weama ~ rehte*	'wander.sg ~ wander.pl'
d.	*kivake ~ kiime*	'enter.sg ~ enter.pl'

Assuming suppletion to be a local operation (Bobaljik 2012), it must be the case that the IA, which conditions the forms in (1), is sister to the Root. Harley (2014)'s proposed structure for Hiaki verbs therefore utilizes the RootP (√P), exemplified in (2).

(2) The √P Hypothesis



There are many analyses, however, have a different viewpoint, arguing that Roots play no role in structural generation (Borer 2003, 2005a,b, 2013; Lohndal 2014) and cannot be direct introducers of complements (Alexiadou 2014; Merchant 2019).

- Some accounts even require adjunction of a Root to a categorizing head, in order for it to enter the syntactic derivation (Embick 2004; Embick & Marantz 2008; Embick 2015; Lohndal 2020).

The Deficient Root Hypothesis (DRH): Roots lack the ability to project phrases. IAs must then, under this perspective, instead be introduced by functional projections.

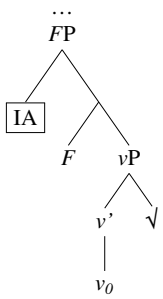
- Largely driven on data from derived nominal paradigms in different languages, most *DRH* approaches to argument structure (AS) assert that verbal functional projections, specifically, are the introducers of thematic arguments (Borer 2013; Alexiadou & Lohndal 2017; De Belder 2011; Lohndal 2014; Riksem 2018).

The √*PH* stands in direct opposition to the *DRH*: if Roots can introduce their own complements, then they are syntactic heads, and consequently are not 'syntactically deficient' elements that need assistance from other heads to enter a derivation.

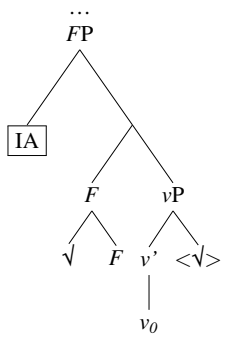
- Proving this empirically, however, requires justifying the existence of an acategorial syntactic constituent that consists solely of the Root and its internal argument.
- As Alexiadou (2014) points out, it is not strictly necessary for the IA to originate as a complement of the Root, in order to account for the Hiaki suppletive verbs.
- The IA could be introduced higher, by some functional projection *F*, and as long as a copy of the Root moves into *F* via head movement, it would enter into a sufficiently local relationship with the IA to trigger suppletion (3).

(3) Alternative structure with *F* (Alexiadou 2014; Alexiadou & Lohndal 2017)

a. *F* introduces IA



b. Move √ to F



In what follows, I turn to Sino-Korean lexical items, which, as I will show, provide us with the most transparent cases of predicate composition, allowing us to confirm the existence of the √P constituent.

2 Roots as real syntactic heads

Sino-Korean lexical items (henceforth SKLs[1]) pattern both as AS-Nominals (nominals with argument structure; Grimshaw 1990) (4) and as verbal predicates (5).

(4) a. *ainsyuthain-uy pich-uy sokto* ***kyeysan****(-un …)*
Einstein-GEN light-GEN speed calculate(-TOP …)
"Einstein's calculation of the speed of light (was …)"

b. *cikwen-uy kongkum* ***hoynglyeng****(-un …)*
worker-GEN fund embezzle(-TOP …)
"The worker's embezzlement of the funds (was …)"

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

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

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 (6–7), indicating that AS properties correlate with independent syntactic evidence for verbality.

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

(7) 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 (8–10).

(8) *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)

[1]There is a long history of work on these lexical items in Korean syntax literature, which I will not go into too deeply here. SKLs are typically referred to as "Verbal Nouns", or VNs (Ahn 1992; Chae 1997; Jun 2003, 2006; Manning 1993; Pak 2001; Sells 1995; Yoon & Park 2008).

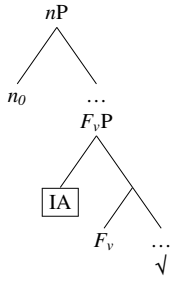
(9) [*ainsyuthain-uy ppal**-un/*-li*** *pich-uy sokto(-uy) kyeysan*]*-un*
[Einstein-GEN quick-ADJ/*-ADV light-GEN speed(-GEN) calculation]-TOP
"Einstein's quick calculation of the speed of light (…was impressive/etc.)"

(10) [*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.)"

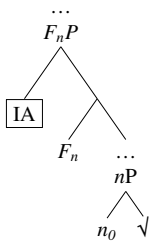
Unlike English AS-Nominals, which can have adverbial modification under the right conditions (6), SKL AS-Nominals exclusively license adjectival modification.

- 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 (11) exemplifies the structural analysis ruled out by this generalization.
- Proponents of the *DRH*, however, could counter with the alternative proposal that, for SKLs, their AS is uniquely created through the use of nominal functional structure only, e.g. (12).

(11) Impossible structure for an SKL AS-Nominal



(12) Possible alternative; the AS of an SKL is driven by nominal projections only



This alternative proposal (12) 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 (12) is not borne out empirically: in the verbal predicates made from SKLs, adjectival modification is fully impossible (13–14).

- The unavailability of adjectival modifiers means that nominal functional structure is absent from SKL verbal predicates.

(13) *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."

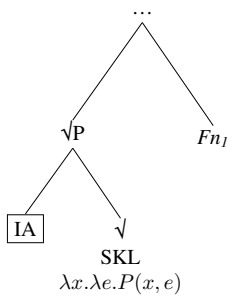
(14) *cikwen-i kongkum-ul **cacwu/*cac-un*** *hoynglyeng-ha-yss-eyo*
worker-NOM fund-ACC frequent.ADV/*frequent-ADJ embezzle-do-PST-DECL
"The worker frequently embezzled funds."

Interim summary. 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. This is formalized in (15–16).

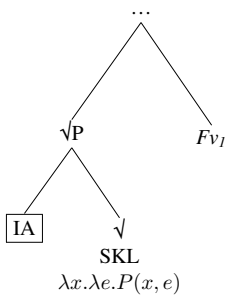
- These facts and others lead me to argue in Webster (under review) that Roots are heads that project phrases and take complements. For those interested, I include in the Appendix additional data and argumentation ruling out further alternatives to the √P hypothesis.

The proposed structure for an SKL in both its nominal and verbal constructions are given in (15–16). 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.

(15) √P for SKL AS-Nominal



(16) √P for SKL verbal predicate



3 Consequences for syntactic categorization

If Roots are real syntactic heads, then the *DRH* is out. If the *DRH* is out, then it is not strictly necessary to assume that "Root categorization" is a real function of the grammar.

- One could instead, for example, adopt a Borerian approach to 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) that serves the sole function of categorization.

3.1 Light verb *ha-* is not a categorizer

The light verb *ha-* in Korean is obligatory in SKL verbal predicates (5, 13–14). This generalization immediately lends itself to the possibility that *ha-* is a v_0 categorizer.

The 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 (17).

(17) 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."

- In addition, there are many intransitive predicates that utilize *ha-* (18), formed from Roots that can independently head referential nominals (though crucially not AS-Nominals; see, e.g., 19).

(18) 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"

(19) * *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 LV 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 form (20).

(20) 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.

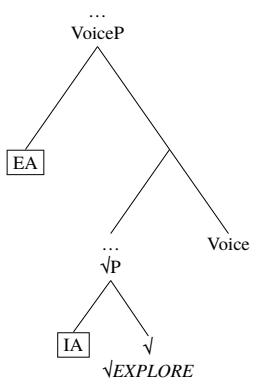
- And crucially, in all cases, *ha-* is doing **more** than just categorization.
  - For SKL verbal predicates, it communicates Voice
  - In combination with stative predicates, it introduces a thematic argument
  - In combination with Roots that lack AS properties, it "eventivizes"

Analysis. 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.

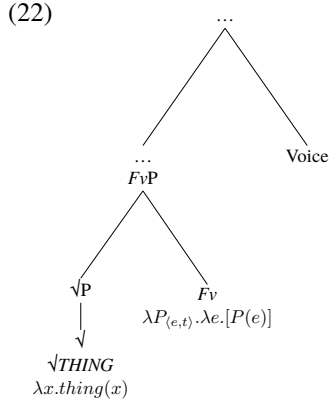
- This account utilizes the formal mechanism of *Spanning* (Svenonius 2016; Bye & Svenonius 2012). The spanning hypothesis asserts that "spans", rather than terminal nodes, are the loci for lexical insertion (vocabulary insertion) in a post-syntactic approach to morphological form. A span is defined as a contiguous sequence of heads in a head-complement relation.

Take, for example, the SKL predicate *thamkwu-ha-* ("to explore"), to have the following underlying structure in (21).

(21)



(22)



I suggest that the Sino-Korean Loan words (SKLs), have forms that are stored in the lexicon as direct exponents of the Root (23).

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

(23) Lexical entries

a. *thamkwu*, /t^{h}am.ku/ ⇔ ⟨ √*EXPLORE* ⟩

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

This same analysis derives the native intransitive predicates in (18) as well; for these predicates, I assume an underlying structure like (22) above, that has at least two verbal heads above the Root: a functional projection *Fv* that "eventivizes", and Voice.

Again, because there is only a stored entry for the Root (24), rather than the full span of the predicate structure, the light verb *ha-* is inserted to pronounce the remaining portion of the span.

(24) Lexical entries

a. *il*, /il/ ⇔ ⟨ √*THING* ⟩

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

4 Extending to native predicates

The spanning analysis extends straightforwardly to native predicates in Korean, which do not utilize a light verb. Consider, for example, the native predicates in (25).

(25) 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."

(26) Lexical entries

a. *ciwu-*, /ciu/ ⇔ ⟨ √*ERASE*, …, Voice$_{(ACTIVE)}$ ⟩

b. *mek-*, /mɔk/ ⇔ ⟨ √*EAT*, …, Voice$_{(ACTIVE)}$ ⟩

Notice that, because the lexical entries for native predicates store a span (26), 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[2] of adverbial phrases (27–28).

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

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

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

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.

4.1 Categorizers still exist

Taking stock. What have Sino-Korean predicates revealed?

[2]Though AS-Nominals with *-ki* are attested in Korean, they are relatively low frequency— *-ki* is much more common as a full clausal nominalizer. This likely contributes to the marginality of the adverbial phrases in (28); the data in (28) were evaluated by two consultants, both of whom noted that the constructions with the adverbial phrases felt, in principle, possible, but unnatural/unlikely to be used in everyday language.

We've seen first that SKLs provide the empirical evidence needed to isolate a √P constituent, thereby sufficiently proving that Roots are syntactic heads.

- This result predicts that "Root categorization" is unnecessary, a claim which is then further supported by a close look at Korean light verbs, which despite being the best possible candidate for an overt v0 head in SKL predicates, does not empirically behave as a simple categorizing head.
- The analysis in Section 3 interprets the light verb *ha-* instead as a morphological consequence of *spanning*, rather than as a signature of a categorizing head *v0*.

I hypothesize that Korean loanwords reflect straightforwardly the situation in UG, and that therefore "Root categorization" does not exist, generally (beyond just Korean).

- To clarify, the perspective here is against the necessity of syntactic categorizing heads *v0*, *a0*, *n0* etc. that perform *exclusively* the sole function of defining a Root's category, but the proposal is still compatible with the existence of categorizing heads in general.
- Categorizers like *-ki*, for example, perform the function of explicitly marking derivations between established functional domains (nominal, verbal).
- The proposal is also open to accounts such as, e.g., Harley (2013), that posit a "v0" head as part of the verbal functional spine which contributes some causative semantics to the predicate's event structure.

5 Beyond Korean

SKLs, precisely because they resist combination with native derivational affixes, exemplify transparent morphological forms that map cleanly to corresponding underlying structure— revealing the confirmation of the √P hypothesis.

- The hypothesis is that the components that make up a predicate are universal, and Loanwords provide us the most transparent cases of predicate composition.

As a further extension, what might Korean tell us about the integration of loanwords into the lexicon, from a cross-linguistic perspective?

The analysis here suggests that loanwords in Korean are stored as exponents of Roots; could this be happening in other languages as well?

- 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 hypothesize that the way in which loanwords are used as predicates might differ across languages with different typological classifications of morphological behavior (Nichols 1986; Bickel & Nichols 2007)
- It may also further depend on the state of the grammar at a given point in time at which heavy language contact occurred.

Prediction: loanwords will be stored in the lexicon as corresponding forms to the minimal span that a given language allows to be exponed.

- In languages like Korean, this can be a span of just the Root, but in a language with isolating morphology, (e.g., English, Mandarin, Maori), it might be the case that a span of just the Root is never exponed directly.
- In other words, the minimal span that can correspond to a stored pronunciation could be a point of cross-linguistic variation.

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Appendix

Additional data points and argumentation from Webster (under review) for a √P analysis of SKLs.

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.

(29) *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"

Mimetic Roots cannot live independent lives as nominals on their own, even if the intended referent of the nominal is the sound/notion itself (30).

(30) 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.

(31) 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."

(32) 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 (33), only referential ones. Though an ACC-marked object is possible in (31), the source of it cannot be the Root.

(33) 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.

(34) 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"

(35) 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.

(36) 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."

(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/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."