Sino-Korean loanword integration: consequences for the morpho-syntactic interface

Nikolas Webster
University of California, Santa Cruz
newebste@ucsc.edu | https://nikolaswebster.github.io/

1 Sino-Korean vs. native Korean predicates

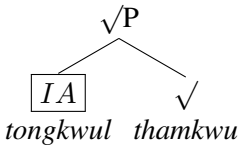
Sino-Korean loanwords (henceforth SKLs[1]) appear in both:

- AS-Nominals (1) (nominals with argument structure; Grimshaw 1990)
- verbal structures (2) ("light verb" constructions, Butt 2010)

(1) *yenkwuwen-uy tongkwul* ***thamkwu***(*-nun* …)
researcher-GEN cave explore(-TOP …)
"The researcher's exploration of the cave (was …)"
연구원의 동굴 탐구는…

(2) *yenkwuwen-i tongkwul-ul* ***thamkwu****-ha-yss-ta*
researcher-NOM cave-ACC explore-do-PST-DCL
"The researcher explored the cave."
연구원이 동굴을 탐구했다

In Webster (2025, 2026a,b), I use SKLs to argue in favor of the √P Hypothesis (Harley 2014): Roots are the introducers of internal arguments, e.g. (3).

(3)


[1]There is a long history of work on these lexical items in the Korean & Japanese syntax literature: SKLs are typically referred to as "Verbal Nouns", or VNs (see, e.g., Grimshaw & Mester 1988; Ahn 1992; Chae 1997; Jun 2003, 2006; Manning 1993; Pak 2001; Sells 1995; Yoon & Park 2008; among many others).

Building on Yoon & Park (2008), I argue for the √P on the basis of cross-constructional comparison of SKLs in nominal and verbal structures (1–2).

- SKL AS-Nominals categorically disallow VP adverbials (4), indicating an **absence of verbal functional structure** (Yoon & Park 2008).

(4) [*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 …)"
연구원의 끊임없는/* 끊임없이 동굴 탐구는…

- Further, verb phrases made from SKLs categorically fail to license NP adjectives (5), indicating an **absence of nominal functional structure**.

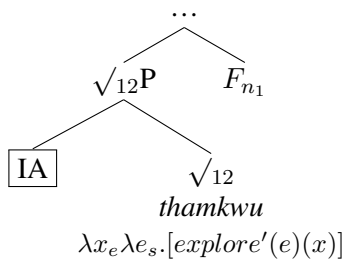
(5) *yenkwuwen-i tongkwul-ul kkunhimeps****-i/*-nun*** *thamkwu-ha-yss-ta*
researcher-NOM cave-ACC constant-ADV/*-ADJ explore-do-PST-DCL
"The researcher tirelessly/continuously explored the cave."
연구원이 동굴을 끊임없이/* 끊임없는 탐구했다

If the ability to license an internal argument (IA) cannot come from either verbal or nominal functional structure, it must come from the Root itself.

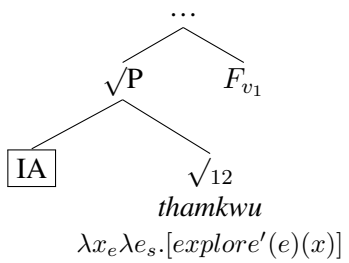
- The analysis in Webster (2025, 2026a,b) posits a √P constituent as the base of both SKL AS-Nominals and SKL verb phrases.
- The account proposes parallel, non-derived structures (cf. Chomsky 1970)
- The only difference comes from which extended projection— nominal (6) or verbal (7)— is built above[2].

[2]F_{n_1} in (6) is a placeholder for the first functional projection of the nominal domain, and F_{v_1} in (7) is a placeholder for the first functional projection of the verbal domain.

(6) $\sqrt{}$P for SKL AS-Nominal



(7) $\sqrt{}_{12}$P for SKL verb phrase



In Harley (2014), Roots are syntactically individuated formal units, unique given arbitrary indeces ($\sqrt{}_2$, $\sqrt{}_{31}$, $\sqrt{}_{874}$, etc.).

- These units are mapped to stored semantic and phonological information in the Encyclopedia and Vocabulary Lists, respectively (in a Distributed Morphology-style lexicon; Halle & Marantz 1993).

Native Korean AS-Nominals, in contrast, show evidence of **embedded verbal structure**, much the same as AS-Nominals investigated in Hebrew, Greek and English (Hazout 1995; Alexiadou 2001; Fu et al. 2001).

- Native Korean AS-Nominals require an obligatorily overt nominalizer, and
- allow marginal acceptability of VP adverbials (8–9):

(8) ?? [*sensayngnim-uy chelceha-key chilphan* ***ciwu-ki***]*-nun*
[teacher-GEN thorough-ADV blackboard erase-NMLZ]-TOP
insangcek-i-ess-ta
impressive-COP-PST-DCL
"The teacher's erasing of the blackboard thoroughly was impressive."
?? 선생님의 철저하게 칠판 지우기는 인상적였다

(9) ?? [*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-ta
walk-PST-DCL
"That child's eating of the food slowly took a long time."
?? 그 아이의 느리게 음식 먹기는 시간이 많이 걸렸다

The overall frequency of AS-Nominals taking syntactic subject or topic positions is quite rare in Korean, likely contributing to the marginality of (8–9).

- The acceptability of adverbials in *-ki* nominalizations improves greatly when they are placed in a more frequently utilized syntactic environment, e.g., with embedding infinitives (10-11).

(10) *sensayngnim-i* [*chelceha-key chilphan* ***ciwu-ki***]*-lo*
teacher-NOM [thorough-ADV blackboard erase-NMLZ]-toward
kyelceng-ha-yss-ta
decision-do-PST-DCL
"The teacher decided to thoroughly erase the blackboard."
선생님이 철저하게 칠판 지우기로 결정했다

(11) *ku ai-ka* [*nuli-key umsik* ***mek-ki***]*-lo*
that child-NOM [slow-ADV food eat-NMLZ]-toward
kyelceng-ha-yss-ta
decision-do-PST-DCL
"That child decided to slowly eat food."
그 아이가 느리게 음식 먹기로 결정했다

Brief summary of the syntactic restrictions (12):

- SKLs can form AS-Nominals that are unambiguously non-verbal (adverbs disallowed), as well as deverbal nominalizations (adverbs allowed), but only with the addition of *ha-* and *-ki*.
- Native predicates however, can only form deverbal nominalizations.

(12) AS-Nominal structures by morphological form

form	adverbs?	adjectives?
SINO-KOREAN *-ha-ki*	✓ yes	✓ yes
NATIVE *-ki*	✓ yes	✓ yes
SINO-KOREAN *-∅*	× no	✓ yes
* NATIVE *-∅*	*not well-formed	

2 Loanwords: exceptional, or universal?

Within morpho-phonological investigation there have been a number of analyses which propose sensitivity of the synchronic grammar to Lexical Strata (e.g., Haspelmath & Sims 2013; Ito & Mester 1995; Laks 2025; among others).

Formal accounts of Lexical Strata either:

1. Grammaticalize loanword status, e.g., with a feature [LOAN] that regulates the application of processes specific to loanwords (Ito & Mester 1995; Jurgec 2010)
2. Derive loanword behavior from the interaction of model components, without directly encoding etymology (Inkelas et al. 1997; Newell 2021).

In light of the empirical differences in structural properties of SKL vs. native Korean AS-Nominals, a version of the same question arises for syntax:

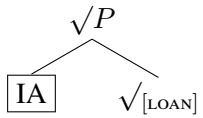
Big question:
- Should the AS properties of Sino-Korean loanwords be accounted for as a special property exclusive only to loanwords?
- Is etymological status a formal feature that Syntax has access to?

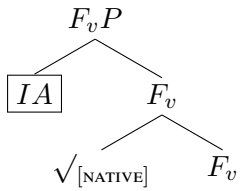
It is desirable, from the theoretician's perspective, to push for the universalist position, i.e., for adoption of the $\sqrt{P}$ more generally as the core of all predicate structures with the capacity to license an IA.

- Yet, the $\sqrt{P}$ analysis seems to under-explain the preferences of native predicates vs. loanword predicates within Korean.
- Further, AS-Nominals with embedded verbal structure as a much more typologically common strategy for realizing argument structure within a nominal construction (Fu et al. 2001; Hazout 1995; Alexiadou 2001, 2010a,b)

3 Hypothesis 1: Loanword AS is exceptional

One option is to view the $\sqrt{P}$ as an exceptional structure that is utilized exclusively by Sino-Korean predicates (13), while native predicates use a verbal functional projection for IA introduction instead (14).

(13)


(14)


Issue 1:

Unattested predictions about the mapping of event semantics

If we are committed to a constructionalist approach to argument structure, we predict that there are two distinct ways of structurally relating an IA to an event, and that this split is sensitive to etymology.

- This prediction only holds empirical traction if we can actually reliably categorize loan and native predicates not just by their origins, but also by their event structure.
- This is not borne out: there are a number of native Korean/Sino-Korean synonym pairs that describe the same event.

For example, consider the native Korean predicate in (15) and the Sino-Korean predicate in (16).

(15) *hoseki-ka* *khatu-lul* ***kolla****-ss-ta*
Hoseok-NOM card-ACC select-PST-DCL
"Hoseok chose/selected a card."
호석이가 카드를 골랐다

(16) *hoseki-ka* *khatu-lul* ***sentayk****-ha-yss-ta*
Hoseok-NOM card-ACC select-do-PST-DCL
"Hoseok chose/selected a card."
호석이가 카드를 선택했다

There are many more synonym pairs like (15), such as:

(17) a. *kitay-* / *uyci(ha-)*, "to lean on/rely on" 기대다 / 의지 (하다)
b. *ssu-* / *sayong(ha-)*, "to use" 쓰다 / 사용 (하다)
c. *ip-* / *chakyong(ha-)*, "to wear" 입다 / 착용 (하다)
d. *mit-* / *sinloy(ha-)*, "to trust/believe" 믿다 / 신뢰 (하다)

While Sino-Korean and native Korean predicates often have differences in frequency, as well as differences in register (with Sino-Korean items often being used in more formal or academic/literary contexts), frequency and register are not dimensions predicted to have any impact on our conception of events.

Issue 2:

Not all Sino-Korean lexical items have argument structure.

We cannot posit a $\sqrt{P}$ structure for every Sino-Korean predicate: there exist many Sino-Korean vocabulary items that do *not* have argument structure.

- There are many Korean vocabulary items, both native *and* Sino-Korean, that fail to make AS-Nominals entirely.
- They only form intransitive predicates in combination with *ha-*

(18) Example native Korean intransitive-only complex predicates
  a. *il-ha-* (thing-do-); "to work" 일하다
  b. *iyaki-ha-* (story-do-); "to talk, chat" 이야기하다
  c. *pap-ha-* (rice-do-); "to make a meal" 밥하다

(19) Example Sino-Korean intransitive-only complex predicates
  a. *sanchayk-ha-* (stroll-do-); "to take a walk" 산책하다
  b. *phyenci-ha-* (letter-do-); "to send/write a letter" 편지하다
  c. *nongtam-ha-*; (joke-do-); "to do/tell a joke" 농담하다

For all predicates in (18–19), the Roots which serve as their bases all:

1. Have a referential use on their own (20)
2. Cannot license an AS-Nominal construction (21)
3. Disallow an ACC-marked phrase in their verbal constructions (22)

(20) *ce-nun nongtam-i cengmal silh-eyo*
1P.SG-TOP joke-NOM really be.undesirable-PRS.DCL
"I really dislike jokes."
저는 농담이 정말 싫어요

(21) * *hanyengi-uy cacun nongtam*
Hanyoung-GEN frequent joke
Intended: "Hanyoung's frequent joking (about...)"
(can only have referential interpretation, i.e. jokes)
* 한영이의 잦은 농담

(22) *hanyengi-ka (*pulocekthu-lul) nongtam-ha-yss-eyo*
Hanyoung-NOM (*project-ACC) joke-do-PST-DCL
"Hanyoung joked/made a joke (*about the project)."
한영이가 (* 프로젝트를) 농담했어요

Section takeaways:

- While Sino-Korean loanwords do have something in common with each other, this commonality is something about their morpho-tactics, such that *ha-* is used to realize a verbal predicate, not their underlying AS-capabilities.
- Loanwords do not all share the same underlying event semantic properties, nor is there a semantic split that cuts between "loan" and "native" vocabulary items.

4 Hypothesis 2: The universalist perspective

It is evident that an explanation which treats the $\sqrt{P}$ of an SKL as an exceptional structure available only to loanwords and not other lexical items is untenable.

A more promising alternative argues for a universalist take on the $\sqrt{P}$:

- All argument introducing lexical predicates, both native and loan, have the same underlying AS, BUT:
- there may be morpho-phonotactic constraints active (which could target loan and native items differently) in a given language that conspire to make it impossible for certain structural realizations to be pronounced.

There is nothing syntactically ill-formed about a structure where a nominal extended projection merges directly above the $\sqrt{P}$ for a native Korean predicate, but the module of the grammar that handles pronunciation (PF) has no way to pronounce this structure, and it is therefore ruled out.

- This hypothesis makes a much stronger and more interesting explanatory prediction: that morpho-phonotactic constraints play a role in constraining possible syntactic derivations.

Morphology of Sino-Korean vs. native Korean predicates

In order to flesh out what a formal analysis under this hypothesis might look like, I first briefly summarize the necessary **morphological** facts of native and Sino-Korean vocabulary items, which any account must be able to derive.

> **Generalization 1:**
> Native Korean verb stems are bound: they cannot occur in isolation, and must have at least one overt suffix in order to be well-formed (23).

(23) a. **kolu-*
select-
* 고르

b. *kolu-ca*
select-PROP
'let's select'
고르자

c. *kolu-ki*
select-NMLZ
'selecting'
고르기

Not just any suffix works, however— case markers, for example, cannot compose directly with verb stem roots (24).

(24) a. **kolu-ka*
select-NOM
* 고르가

b. **kolu-lul*
select-ACC
* 고르를

c. **kolu-uy*
select-GEN
* 고르의

> **Generalization 2:**
> Native verb stems encode Voice (transitivity/valency), in a way that must ultimately be stored arbitrarily for each predicate.

There is no overt "elsewhere" exponent of Voice for native eventive predicates, nor are the allomorphs that exist fully morphologically or phonologically predictable in their distribution.
(Sohn 1999; Song 2015; Yeon 1991, 2003; Ko & Ku 2008)

"morphological causatives" (*-i*, *-hi*, *-li*, *-ki*, *-wu*, *-kwu*, *-chwu*)

- Sometimes compose with intransitive/stative roots to create transitives, or sometimes with transitive roots to create ditransitive causatives.

A subset of the same affixes (*-i*, *-hi*, *-li*, *-ki*) are also used in "morphological passives", again with a similar degree of non-productivity.

- These affixes compose with transitive roots to create inchoative/unaccusative counterparts.

valency: 1	**valency: 2**	**valency: 3**
mac- ("to be correct") 맞다	*mac-chwu-* ("to fit/match") 맞추다	-
wus- ("to laugh") 웃다	*wus-ki-* ("to make laugh") 웃기다	-
nuc- ("to be late") 늦다	*nuc-cwu-* ("to delay") 늦추다	-
-	*al-* ("to know") 알다	*al-li-* ("to inform") 알리다
-	*masi-* ("to drink") 마시다	-
mek-hi- ("to be eaten") 먹히다	*mek-* ("to eat") 먹다	*mek-i-* ("to feed") 먹이다
tat-hi- ("to close") 닫히다	*tat-* ("to close") 닫다	-
pakkwu-i- ("to change") 바뀌다	*pakkwu-* ("to change") 바꾸다	-

Table 1: Example native verb paradigms with morphological causative/passives

> **Generalization 3:**
> Sino-Korean eventive stems are free, not bound: unlike native verb stems, they cannot compose with affixes of the verbal functional sequence directly, nor with a nominalizer: *ha-* must be added (25).

(25) a. *sentayk*
select
'(a) selection'
선택

b. **sentayk-ca*
select-PROP
* 선택자

c. *sentayk-ha-ca*
select-do-PROP
'let's select'
선택하자

d. **sentayk-ki*
select-NMLZ
* 선택기

e. *sentayk-ha-ki*
select-do-NMLZ
'selecting'
선택하기

They can compose directly with case markers (26).

(26) a. *sentayk-i*
select-NOM
선택이

b. *sentayk-ul*
select-ACC
선택을

c. *sentayk-uy*
select-GEN
선택의

Generalization 4:
Voice is encoded for Sino-Korean complex predicates via an addition of a light verb, most often *ha-*.

The light verb *ha-* ("do") is found in all Sino-Korean verbal paradigms, but the underlying valency encoded depends on the Sino-Korean item used.

- Across all of the paradigms, *ha-* surfaces as the "default"/"basic" form, while *twoy-* ("become") and *sihki-* ("make/cause") are marked alternatives.

Paradigm 1: The SKL *chimmol* is intransitive with *ha-*, and can be transitivized if *sikhi-* is used instead. The form **chimmol-twoy-* is disallowed.

(27) a. *pingsan-i pay-lul chimmol-sikhi-ess-ta*
iceberg-NOM boat-ACC sink-make-PST-DCL
"The iceberg sank the boat."
빙산이 배를 침몰시켰다

b. *pay-ka chimmol-ha-yess-ta*
boat-NOM sink-do-PST-DCL
"The boat sank."
배가 침몰했다

c. * *chimmol-twoy-ess-ta*
sink-become-PST-DCL
* 침몰됐다

Paradigm 2: The SKLs *phakwoy* and *kyeysan* are transitive in their basic complex predicate forms with *ha-*, and can be "passivized" if *twoy-* is used instead.

(28) a. *kwunin-tul-i tosi-lul phakwoy-ha-yess-ta*
soldier-PL-NOM city-ACC destroy-do-PST-DCL
"The soldiers destroyed the city."
군인들이 도시를 파괴했다

b. *tosi-ka phakwoy-twoy-ess-ta*
city-NOM destroy-become-PST-DCL
"The city was/got/became destroyed."
도시가 파괴됐다

(29) a. *cikwen-i yengswucwung-ul kyeysan-ha-yess-ta*
worker-NOM receipt-ACC calculate-do-PST-DCL
"The worker calculated the receipt."
직원이 영수중을 계산했다

b. *yengswucwung-i kyeysan-twoy-ess-ta*
receipt-NOM calculate-become-PST-DCL
"The receipt was/got/became calculated."
영수중이 계산됐다

Paradigm 3: These two SKLs diverge in whether or not they undergo causitivization with the addition of *sikhi-*:

- *phakwoy-sikhi-* is still transitive (30), reported to have an indistinguishable meaning from *phakwoy-ha-* (28a), while *kyeysan-sikhi-* adds a causer (31).

(30) *kwunin-tul-i tosi-lul phakwoy-sikhi-ess-ta*
soldier-PL-NOM city-ACC destroy-make-PST-DCL
"The soldiers destroyed the city."
군인들이 도시를 파괴시켰다

(31) *sacang-i yengswucwung-ul cikwen-eykey kyeysan-sikhi-ess-ta*
boss-NOM receipt-ACC worker-DAT calculate-make-PST-DCL
"The boss made the worker calculate the receipt."
사장이 영수중을 직원에게 계산시켰다

A full account of these paradigm splits will not be finalized in this talk, but at minimum (27–31) serve to point out that *ha-*, as a default, is not the exponent of a specific Voice head (e.g., $\text{Voice}_{[\text{AGENT}]}$), but is rather an unmarked realization.

- This generalization is further supported by the fact that *ha-* has a broader distribution as a VP anaphor that is used as a repair in ellipsis, similar in characterization to English do-support (see, e.g., Park 1974; Jo 2000).

5 Formal analysis

In an effort to make sense of the grammatical properties of native vs. Sino-Korean predicates, I start with a discussion of how far Distributed Morphology (DM), and in particular the tenet of Late Insertion, can get us in deriving both the morphotactic and syntactic restrictions of loan vs. native predicates.

5.1 Challenges for Late Insertion

Recall the summary of the syntactic facts (32):

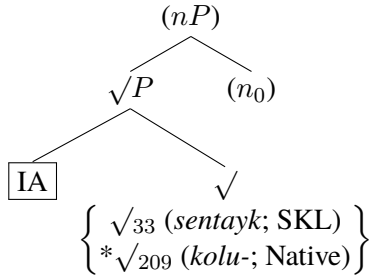
(32) AS-Nominal structures by morphological form

form	adverbs?	adjectives?
SINO-KOREAN *-ha-ki*	✓ yes	✓ yes
NATIVE *-ki*	✓ yes	✓ yes
SINO-KOREAN -∅	× no	✓ yes
*NATIVE -∅	*not well-formed	

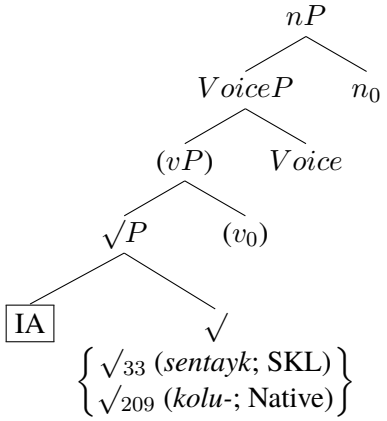
In order to capture (32), we must minimally assert that both structures in (33) are attested AS-Nominal structures in the Korean language.

- Sino-Korean Roots can participate in both, but native Roots can only participate in (33b).

(33) a.



b.



Theory neutrally, we might characterize the morphological generalizations of the previous section as a situation where the addition of *ha-* helps to make a Sino-Korean item the right "shape" to be able to compose with functional affixes.

- But the real challenge is making sense of how and why the morphotactic restrictions on composing Sino-Korean items with functional affixes should in anyway result in a ruling out of (33b) for native predicates.

A note on Distributed Morphology

In DM (Halle & Marantz 1993; Embick & Marantz 2008), Vocabulary Insertion is the **post-syntactic** operation that handles the insertion of exponents, and involves competition:

- Each List 1 morpheme is associated with a set of allomorphs, along with information on the conditioning environments for their insertion.
- But Vocabulary Insertion is not a mechanism that enacts constraints: Syntax gives PF a structure, and it will be Linearized and then pronounced according to the best fit of allomorphs.

Consider, for example, the following VI instructions in (34–35)[3]:

(34) Vocabulary entries for the relevant Roots:

$\sqrt{_{33}}$ ⇔ *sentayk* / elsewhere
$\sqrt{_{209}}$ ⇔ *kolla-* / __ $\{T_{\text{PAST}}, T_{\text{PRES}}, \dots\}$
⇔ *kolu-* / elsewhere

(35) Vocabulary entries for the relevant functional morphemes:

[Voice] ⇔ -∅ / __ $\{\sqrt{_{209}}, \dots\}$
⇔ *-ha-* / __ $\{\sqrt{_{33}}, \dots\}$
$[v_0]$ ⇔ -∅ / elsewhere
$[n_0]$ ⇔ *-ki* / __ {Voice, …}
⇔ –∅ / elsewhere

The issue lies in the availability of the elsewhere exponents: PF will take any structure it receives from Syntax and pronounce it according to the entries of List 3, and as long as each entry includes an elsewhere condition, there will always be at least one form that can be realized for a given terminal node.

- Both structures in (33) with native Root $\sqrt{_{209}}$ can be generated; when the fully nominal structure is shipped to PF, it is certainly pronounceable.

The system as it stands, therefore, is over-generating unattested strings.

[3] The native Root $\sqrt{_{209}}$ (*kolu-*) does not have any corresponding morphological causative or passive forms, and so for the purposes of the demonstration I will simply list a non-overt realization for Voice. It is also an irregular verb— I list a couple of its conditioning contexts, though these are not directly relevant since the elsewhere form is realized in the context of nominalizer *-ki*. I will also abstract away from the choices of *ha-* vs. *twoy-* for the allomorph of Voice for the SKL Root $\sqrt{_{33}}$ (*sentayk*), and list only *ha-*, which will suffice to make the necessary points.

- Since we can't locate the source of the ill-formedness in the Syntax, we have no choice but to supplement PF; we need something like a PF surface filter, that can evaluate morphological well-formedness.

5.2 Supplementing with Spanning

The spanning hypothesis (Svenonius 2012, 2016; Bye & Svenonius 2012; Merchant 2015) asserts that "spans", rather than terminal nodes, are the loci for Vocabulary Insertion.

- Svenonius (2012) defines a span as a contiguous sequence of heads in a head-complement relation.
- Merchant (2015) provides a formalization of this that allows spans to be defined in an ordered n-tuple of terminal nodes post-Linearization (36).

(36) Let T be an ordered n-tuple of terminal nodes $\langle t_1, \dots t_n \rangle$ such that for all $t \in T, t = t_1$ or t is an element of the extended projection of t_1.
   a. For all $k = 1 \dots n$, t_k is a span. (Every node is a trivial span.)
   b. For any $n > 0$, if t_k is a span, then $\langle t_k, \dots, t_{k+n} \rangle$ is a span.
   (Merchant 2015: 288)

Spans compete with each other for insertion, and the same general rule for competition between exponents applies: the most specific one wins.

The immediate benefit of spans is they can straightforwardly capture the intuition that native Korean Roots have forms that necessarily coincide with verbal structure, while Sino-Korean Roots do not.

- Consider the following VI instructions in (37–38).

(37) Vocabulary entries for spans that include Roots:

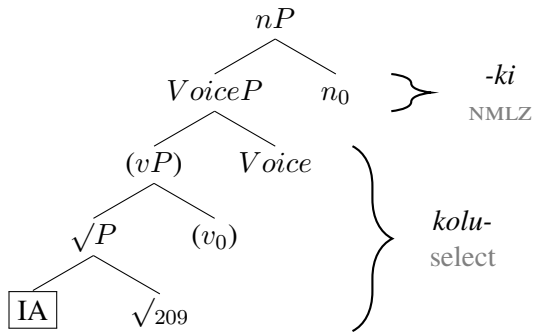
$\langle \sqrt{}_{33} \rangle$	$\Leftrightarrow$	*sentayk*	/	elsewhere
$\langle \sqrt{}_{209}, (v_0), Voice \rangle$	$\Leftrightarrow$	*kolla-*	/	__ $\{\langle T_{\text{PAST}} \rangle, \langle T_{\text{PRES}} \rangle, \dots\}$
	$\Leftrightarrow$	*kolu-*	/	elsewhere

(38) Vocabulary entries for relevant spans of functional morphemes:

$\langle (v_0), Voice \rangle$	$\Leftrightarrow$	*-ha-*	/	elsewhere
$\langle n_0 \rangle$	$\Leftrightarrow$	*-ki*	/	$\{\langle (v_0), Voice \rangle, \dots\}$ __

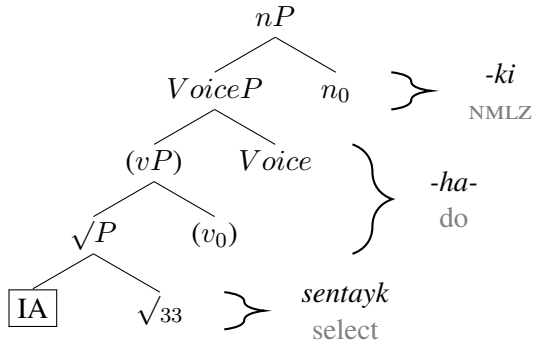
Example derivation of deverbal nominalization (39), which utilizes the native Root $\sqrt{}_{209}$.

(39)



Example derivation of deverbal nominalization (40), which utilizes the SKL Root $\sqrt{}_{33}$.

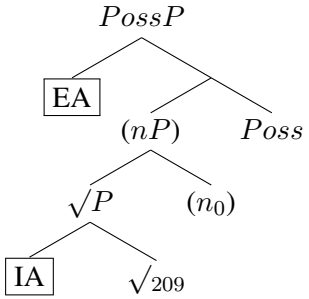
(40)



Positive outcomes:

- Gives us a way to capture *ha-* as a morphological "repair"; it is the default realization of Voice, but only arises for predicates whose exponents are stored as trivial spans of just the Root.
- We need some way to supplement PF such that it can play a role in ruling out derivations, and with Spanning, we could appeal to the idea of "non-pronounceability".

(41) *Native Korean AS-Nominal:
No way for PF to insert VIs for all nodes

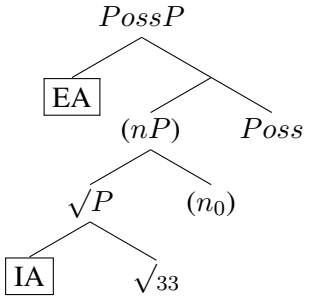


Possible explanation:

- appeal to the idea of a paradigm gap, asserting that there is no exponent stored at all for the trivial span of native Root $\langle\sqrt{}_{209}\rangle$.
- The only exponents that have coordinates mapping $\sqrt{}_{209}$ to a pronounceable sequence are those stored for the larger span $\langle\sqrt{}_{209}, (v_0), Voice\rangle$, listed earlier in (37).

In contrast, under this logic, (42) *is* possible because the loanword Root $\sqrt{}_{33}$ *does* have an exponent stored for the singleton span $\langle\sqrt{}_{33}\rangle$.

(42) SKL AS-Nominal



A residual issue:

Another tenet of the spanning framework is that null exponents do not exist, which complicates the analysis a bit:

- According to the logic here, (41) is no good because there is no set of exponents that can satisfactorily work together to pronounce it.
- But, according to this same logic, we haven't quite successfully created a set of Vocabulary Entries that can pronounce (42), either.

Korean has no exponents that correspond to a hypothesized $Poss$ head[4], and if n_0 is indeed the next head above the Root, it, too, never has an overt exponent in the context of any Sino-Korean vocabulary items.

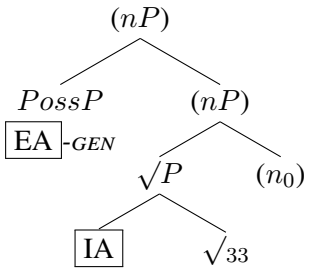
- To resolve this, we must either revisit our starting assumptions about null exponents, OR:
- Possibly, this could actually be indirect evidence in favor of an adjunct approach to external arguments in nominals.

I've assumed in (42), following prior work (Grimshaw 1990; Pesetsky 1995; Marantz 1997; Harley & Noyer 1998; Folli & Harley 2005; Sichel 2010; Alexiadou et al. 2015), that the licensing of an ext. argument in an AS-Nominal is sensitive to different restrictions than an ext. argument of the verbal domain.

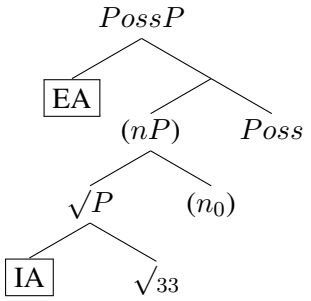
There are two ways this has been formalized:

1. Representing the external argument as an adjunct (Rappaport 1983; Dowty 1989; Grimshaw 1990; Kratzer 1996; Fox & Grodzinsky 1998; Alexiadou 2001), as in (43).
2. representing it as an argument (Roeper 1987, 1993, 2004; Longobardi 2001; Sichel 2009), as in (44).

(43)



(44)



If we adopt the adjunction analysis, we no longer have a $Poss$ head to worry about; and if we further might be able to appeal to syntactic category as derived by context, vs. by functional head, we may be able to leave out n_0, too.

[4]There is never an overt morphological indication on the stem that a nominal has a possessor, only GEN marking on the possessee.

6 Conclusion

In this talk, I argued that …

- Despite the cross-linguistic tendency for AS-Nominals to embed verbal structure, it is not the case that the $\sqrt{P}$ is simply an exceptional structure available only to loanwords.
- The $\sqrt{P}$ is indeed a more general truth about the organization of syntactic argument structure.

Crucially, if this is correct, then it must be the case that …

Morpho-phonotactic constraints of a given language have the ability to conspire to make it possible or impossible for certain syntactic structures to be realized.

The Spanning analysis gives us a means to post-syntactically encode information about the structures that a given morphological form is allowed to be associated with, without storing actual syntactic structures in our vocabulary entries.

- We capture the fact that forms of native Korean predicates always encode something about Voice and always create deverbal nominalizations, by restricting the shape of the span their exponents target.

- It is appealing to consider the idea that loan and native exponents could differ consistently in the size of the span they expone, which makes predictions about the morphological paradigms we expect to see loan and native vocabulary items participating in (with room to theorize about cross-linguistic variation).

However, there are residual challenges with implementing the account to adequately make sense of the surface forms of non-verbal SKL AS-Nominals.

A final note: The methodological upshot of this proposal holds regardless of the exact framework implemented. Loanwords are actually *more transparent*, with more regularity than native lexical items, in their syntactic behavior.

- It was the native predicates that had exceptional restrictions on their contextual realization, not the Sino-Korean ones.

If you don't remember anything else, remember this!
When it comes to the investigation of syntax, loanwords should be thought of as a diagnostic means to reveal general— not exceptional— truths about a given language's grammatical system.

References

Ahn, Hee-Don. 1992. *Light verbs, VP-movement, negation and clausal architecture in Korean and English*: University of Wisconsin-Madison dissertation.

Alexiadou, Artemis. 2001. *Functional structure in nominals: Nominalization and ergativity*, vol. 42 Linguistik Aktuell/Linguistics Today. Amsterdam: John Benjamins Publishing Company. https://doi.org/10.1075/la.42.

Alexiadou, Artemis. 2010a. Nominalizations: A probe into the architecture of grammar, part I: The nominalization puzzle. *Language and Linguistics Compass* 4(7). 496–511. https://doi.org/10.1111/j.1749-818X.2010.00209.x.

Alexiadou, Artemis. 2010b. Nominalizations: A probe into the architecture of grammar, part II: The aspectual properties of nominalizations, and the lexicon vs. syntax debate. *Language and Linguistics Compass* 4(7). 512–523. https://doi.org/10.1111/j.1749-818X.2010.00211.x.

Alexiadou, Artemis, Elena Anagnostopoulou & Florian Schäfer. 2015. *External arguments in transitivity alternations: A layering approach*, vol. 55 Oxford Studies in Theoretical Linguistics. Oxford: Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199571949.001.0001.

Butt, Miriam. 2010. The light verb jungle: Still hacking away. In M. Amberber, B. Baker & M. Harvey (eds.), *Complex predicates: Cross-linguistic perspectives on event structure*, Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511712234.

Bye, Patrik & Peter Svenonius. 2012. Non-concatenative morphology as epiphenomenon. In J. Trommer (ed.), *The morphology and phonology of exponence*, vol. 41 Oxford Studies in Theoretical Linguistics, Oxford: Oxford University Press.

Chae, Hee-Rahk. 1997. Verbal nouns and light verbs in Korean. *Language Research* 33(4).

Chomsky, Noam. 1970. Remarks on nominalization. In R. A. Jacobs & P. S. Rosenbaum (eds.), *Readings in english transformational grammar*, 184–221. Boston, MA: Ginn and Company.

Dowty, David. 1989. On the semantic content of the notion 'thematic role'. In G. Chierchia, B. Partee & R. Turner (eds.), *Properties, types and meaning II*, 69–129. Dordrecht: Kluwer.

Embick, David & Alec Marantz. 2008. Architecture and blocking. *Linguistic Inquiry* 39(1). 1–53. https://doi.org/10.1162/ling.2008.39.1.1.

Folli, Raffaella & Heidi Harley. 2005. Consuming results in Italian and English: Flavors of v. In P. Kempchinsky & S. Slabakova (eds.), *Aspectual inquiries*, 95–120. Dordrecht: Springer.

Fox, Danny & Yosef Grodzinsky. 1998. Children's passive: a view from the by-phrase. *Linguistic inquiry* 29. 311–332.

Fu, Jingqi, Thomas Roeper & Hagit Borer. 2001. The VP within process nominals: Evidence from adverbs and the VP anaphor do-so. *Natural Language & Linguistic Theory* 19(3). 549–582. https://doi.org/10.1023/A:1010654105760.

Grimshaw, Jane. 1990. *Argument structure*, vol. 18 Linguistic Inquiry Monographs. Cambridge, MA: MIT Press.

Grimshaw, Jane & Armin Mester. 1988. Light verbs and θ-marking. *Linguistic Inquiry* 19(2). 205–232. https://www.jstor.org/stable/4178587.

Halle, Morris & Alec Marantz. 1993. Distributed morphology and the pieces of inflection. In Kenneth Hale & Samuel J. Keyser (eds.), *The view from building 20: Essays in linguistics in honor of Sylvain Bromberger* Current Studies in Linguistics, 111–176. MIT Press.

Harley, Heidi. 2014. On the identity of roots. *Theoretical Linguistics* 40(3/4). 225–276. https://doi.org/10.1515/tl-2014-0010.

Harley, Heidi & Rolf Noyer. 1998. Licensing in the non-lexicalist lexicon: nominalizations, vocabulary items and the encyclopaedia. In Heidi Harley (ed.), *Papers from the UPenn/MIT roundtable on argument structure and aspect*, 119–137. Cambridge: MITWPL.

Haspelmath, Martin & Andrea Sims. 2013. *Understanding morphology*. Routledge.

Hazout, Ilan. 1995. Action nominalizations and the lexicalist hypothesis. *Natural Language & Linguistic Theory* 13(3). 355–404. https://doi.org/10.1007/BF00992736.

Inkelas, Sharon, Orhan Orgun & Cheryl Zoll. 1997. The implications of lexical exceptions for the nature of grammar. In J. J. McCarthy (ed.), *Optimality theory in phonology: A reader*, Clarendon Press.

Ito, Junko & Armin Mester. 1995. Japanese phonology. In J. Goldsmith (ed.), *The handbook of phonological theory*, Oxford: Blackwell.

Jo, Jung-Min. 2000. Morphosyntax of a dummy verb ha- in Korean. *Studies in the Linguistic Sciences* 30(2). 77–100.

Jun, Jong Sup. 2003. *Syntactic and semantic basis of case assignment: A study of verbal nouns, light verbs, and dative*: Brandeis University dissertation.

Jun, Jong Sup. 2006. Semantic constraints on the genitive complements of verbal nouns in Korean. *Language Research* 42(2). 357–397.

Jurgec, Peter. 2010. Disjunctive lexical stratification. *Linguistic inquiry* 41(1). 149–161.

Ko, Yong-Kun & Pon-Kwan Ku. 2008. *Wulimal mwunpeplon*. Seoul: Cipmwuntang.

Kratzer, Angelika. 1996. Severing the external argument from its verb. In J. Rooryck & L. Zaring (eds.), *Phrase structure and the lexicon*, vol. 33 Studies in Natural Language & Linguistic Theory (SNLT), 109–137. Dordrecht: Springer. https://doi.org/10.1007/978-94-015-8617-7_5.

Laks, Lior. 2025. From competing patterns to competing structures: Verbal constructions based on loanwords in Hebrew. *Revue en Sciences du Langage, (spécial)* .

Longobardi, Guiseppe. 2001. The structure of dps: Some principles, parameters, and problems. In M. Baltin & C. Collins (eds.), *The handbook of contemporary syntactic theory*, 562–504. Oxford: Blackwell.

Manning, Christopher. 1993. Analyzing the verbal noun: internal and external constraints. In Soonja Choi (ed.), *Japanese/Korean Linguistics*, vol. 3, Stanford, CA: CSLI Publications.

Marantz, Alec. 1997. No escape from syntax: Don't try a morphological analysis in the privacy of your own lexicon. In Alexis Dimitriadis, Laura Siegel, Clarissa Surek-Clark & Alexander Williams (eds.), *University of Pennsylvania Working Papers in Linguistics*, vol. 4, 201–225. Penn Graduate Linguistics Society.

Merchant, Jason. 2015. How much context is enough? two cases of span-conditioned stem allomorphy. *Linguistic Inquiry* 46(2). 273–303.

Newell, Heather. 2021. Deriving level 1/level 2 affix classes in english: Floating vowels, cyclic syntax. *Acta Linguistica Academica* 68(1–2). 31–76.

Pak, Miok. 2001. Verbal nouns in Korean: categorically unspecified lexical roots. In Susumu Kuno, Ik-Hwan Lee, John Whitman, Joan Maling, Young-Se Kang & Young-joo Kim (eds.), *Harvard studies in Korean linguistics*, vol. 9, 517–531. Seoul: Hanshin Publishing.

Park, Byung-Soo. 1974. The Korean verb ha & verb complementation. *Language Research* 10.

Pesetsky, David M. 1995. *Zero syntax: Experiencers and cascades* Current Studies in Linguistics. Cambridge, MA: MIT Press.

Rappaport, Malka. 1983. On the nature of derived nominals. In B. Levin, M. Rappaport & A. Zaenen (eds.), *Papers in Lexical-Functional grammar*, 113–444. Bloomington, IN: Indiana University Linguistics Club.

Roeper, Thomas. 1987. Implicit arguments and the head-complement relation. *Linguistic inquiry* 18. 267–310.

Roeper, Thomas. 1993. Explicit syntax in the lexicon: The representation of nominalizations. In James Pustejovsky (ed.), *Semantics and the lexicon*, 185–220. Dordrecht: Kluwer.

Roeper, Thomas. 2004. Nominalizations: How a marginal construction reveals primary principles. In R. Leiber & P. Stekaur (eds.), *Handbook of morphology*, Dordrecht: Kluwer.

Sells, Peter. 1995. The category and case marking properties of verbal nouns in Korean. In Susumu Kuno, Ik-Hwan Lee, John Whitman, Joan Maling, Young-Se Kang & Young-joo Kim (eds.), *Harvard studies in Korean linguistics*, vol. 6, 370–386. Seoul: Hanshin Publishing Company.

Sichel, Ivy. 2009. New evidence for the structural realization of the implicit agent in nominalization. *Linguistic inquiry* 40(4).

Sichel, Ivy. 2010. Event-structure constraints on nominalization. In Artemis. Alexiadou & M. Rathert (eds.), *The syntax of nominalizations across languages and frameworks*, vol. 23 Interface Explorations, 159–198. Berlin, New York: De Gruyter Mouton. https://doi.org/10.1515/9783110245875.159.

Sohn, Ho-Min. 1999. *The korean language*. Cambridge: Cambridge University Press.

Song, Jae Jung. 2015. Causatives. In L. Brown & J. Yeon (eds.), *The handbook of Korean linguistics*, 98–115. Hoboken, NJ: John Wiley & Sons, Inc. https://doi.org/10.1002/9781118371008.ch6.

Svenonius, Peter. 2012. Spanning. Unpublished manuscript, University of Tromsø, CASTL.

Svenonius, Peter. 2016. Spans and words. In D. Siddiqi & H. Harley (eds.), *Morphological metatheory*, Amsterdam: John Benjamins Publishing Company.

Webster, Nikolas. 2025. Acategorial licensing of internal arguments in Korean. In Michael Barrie (ed.), *Proceedings of the 18th workshop on Altaic formal linguistics*, 249–259. MIT Working Papers in Linguistics.

Webster, Nikolas. 2026a. *Loanwords in syntax: the projection of internal arguments*: University of California Santa Cruz dissertation.

Webster, Nikolas. 2026b. Roots introduce internal arguments. Manuscript, revise and resubmit.

Yeon, Jae-Hoon. 1991. The korean causative-passive correlation revisited. *Language Research* 27(2). 337–358.

Yeon, Jaehoon. 2003. *Korean grammatical constructions: Their form and meaning*. London: Saffron Books.

Yoon, James H. S. & Chongwon Park. 2008. Process nominals and morphological complexity. In Mutsuko E. Hudson (ed.), *Japanese/Korean Linguistics*, vol. 13, Stanford, CA: CSLI.