Lexical Integrity and Suspended Affixation in Two Types of Denominal Predicates in Korean

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- Workshop on Suspended Affixation, Cornell University, October 26-27, 2012 -

1. Introduction

Lexicalist Hypothesis:

(1) "The Lexical Hypothesis is about the organization of the grammar into modules. It suggests that the system of words in a language (=morphology, JY) is independent of the system of phrases in a language (=syntax, JY) in a particular way. It is independent of it, but communicates with it through a narrow channel—the "top-level" properties of words……**Now either this is *not* the situation, or we need something like the Lexical Hypothesis**." (Williams 2007:354)

1.1. Lexical Integrity Tests (Bresnan and Mchombo 1995)

Extraction:

(2) a. American history, which they have been teaching __ for years
    b. *American history, which they have been __-teachers for years

Gapping:

(3) a. John likes Bill, and Mary __ Paul
    b. *John out-ran Bill, and Mary __-swam Paul

Conjoinability: (*aka* Suspended Affixation)

(4) a. Mary out-ran and out-swam John
    b. *Mary out-[ran and swam] John

Phrasal Recursivity:

(5) a. *[quite happi]-ness
    b. *[happy and glad]-ness

Inbound Anaphoric Islands:

(6) *Reagan$_i$ addressed a meeting of him$_i$-ites

Outbound Anaphoric Islands: (not discussed in B&M 1995)

(7) ?Reagan$_i$-ites still honor his$_i$ legacy

1.2. Suspended Affixation in Korean Morphology

Affixes Allowing Suspended Affixation in Verbal Inflection (M-K Park 1994; Yoon 1994, 1997)

(8) a. Sip-nyen-cen John-uy salm-un kananhay-**ss**-**ko** pichamhay-**ss**-ta
10-years-ago J-gen life-top poor-pst-and miserable-pst-decl

b. Sip-nyen-cen John-uy salm-un [[kananha-**ko** pichamhay]]-**ss**-ta
10-years-ago J-gen life-top poor-and miserable-pst-decl

c. *Sip-nyen-cen John-uy salm-un kananhay-**ss**-**ko** pichamha-ta
10-years-ago J-gen life-top poor-and miserable-pst-decl
'10 years ago, John had a poor and miserable life.'

(9) a. John-un [[ton-ul hwumchi]-**kena** [pimil-ul nwuselha]]-ci **anh**-**ass**-ta
J-top money-acc steal-or secret-acc divulge-comp neg-pst-decl
'John did not steal money or divulge the secret.'

b. John-un [[ton-ul hwumchi-**ess**]-**kena** [pimil-ul nwuselha-ci **anh**-**ass**]]-ta
J-top money-acc steal-pst-and secret-acc leak-comp neg-pst-decl
'John stole the money or he did not divulge the secret.' ≠ (9a)

c. John-un [[ton-ul hwumchi]-**kena** [pimil-ul **an**-nwuselhay]]-ss-ta
J-top money-acc steal-or secret-acc neg-divulge-pst-decl
= (9b), *(9a)

Affixes Allowing Suspended Affixation in Nominal Inflection (Yoon 2004; Yoon and Lee 2005)

(10) a. Cheli-**wa** Tongswu-**ka** haksayng-i-ta
C-and T-nom student-cop-decl
'Cheli and Tongswu are students.'

b . Cheli-**ka** **kuliko** Tongswu-**ka** haksayng-i-ta
C-nom and T-nom student-cop-decl
'Cheli and Tongswu are students.'

(11) a. Cheli-**wa** Yenghi-**ka** pwupwu-i-ta
C-and Y-nom couple-cop-decl
'Cheli and Yenghi are a couple.'

b. *Cheli-**ka** **kuliko** Yenghi-**ka** pwupwu-i-ta
C-nom and Y-nom couple-cop-decl
Intended: 'Cheli and Yenghi are a couple.'

Suspended Affixation in Phrasal Deverbal Nominalization (Yoon 1989, 1996)

(12) [[John-i pap-ul ha]-**ko** [Mary-ka selkeci-lul hay-ss]]-**um**-i pwunmyengha-ta
J-nom meal-acc do-and M-nom dishes-acc do-pst-nml-nom evident-decl
'It's clear that John cooked and Mary did the dishes.'

(13) [[John-i pap-ul hay-ss]-**um-i** **kuliko** [Mary-ka selkeci-lul hay-ss]]-**um**-i
J-nom meal-acc do-pst-nml and M-nom dishes-acc do-pst-nml-nom
pwunmyengha-ta
evident-decl
'It's clear that John cooked and (that) Mary did the dishes.'

Affixes Allowing Suspended Affixation in Nominal Derivation (H-B Im 1989; Yoon 2008, etc.)

(14) a. [20-il-**ina** 21-il]-**kkey** manna-ca
20-day-or 21-day-around meet-prop
'Let's meet on the 20th or the 21st of next month.'

(15) a. [[pangkum o-n salam]-**kwa** [imi iss-nun salam]]-**kkili** hay-la
just.now come-rel person-and already be-rel person-among do-imp
'(Do it) amongst the people who just came and those that are already here.'

1.3. Goals of talk:

- Show there are two types of denominal (adjectival) predicates in Korean with respect to the proposed tests of Lexical Integrity
- Evaluate some previous approaches to the two classes of predicates
- Propose a way to model the behavior in a DM-like system
- Discuss implications for DM

2. Two Types of Denominal Predicative Suffixes and Lexical Integrity Tests

(16)

-*ci*-:	'be characterized by'	***kunul***('shade')-***cita*** (그늘지다) 'get shady' ***mith*** ('bottom')-***cita*** (밑지다) 'suffer loss'
-*lop*-:	'be characterized by'	***hay***('harm')-***lopta*** (해롭다) 'be harmful' ***hyangki***('fragrance')-***lopta*** (향기롭다) 'be fragrant'
-*mac*-:	'give impression of'	***iksal***('humor')-***macta*** (익살맞다) 'be humorous' ***nungcheng***('guile')-***macta*** (능청맞다) 'be deceitful'
-*sulep*-:	'be suggestive of'	***salang***('love')-***sulepta*** (사랑스럽다) 'be lovely' ***iksal*** ('humor')-***sulepta*** (익살스럽다) 'be humorous'
-*tap*-:	'be worthy of'	***ceng***('affection')-***tapta*** (정답다) 'be affectionate' ***namca***('man')-***tapta*** (남자답다) 'be manly'
-*kath*-:	'be/act like'	***papo***('fool')-***kathta*** (바보같다) 'be/act foolish' ***kwunin***('soldier')-***kathta*** (군인같다) 'be/act like a soldier'

Conjoinability (Suspended Affixation)

(17)a. *[kunul-kwa kilum]-**ci**-n kos
shade-and oil-characterized-rel place
'A shaded and fertile location'

b. kunul-**ci**-ko kilum-**ci**-n kos
shade-characterized-and oil-characterized-rel place

vs.

c. Ku-nun [yongkamha-n kwunin-**kwa** cincengha-n aykwukca]-**taw-**ass**-**ta
He-top courageous-rel soldier-and genuine-rel patriot-be.like-pst-decl
'He really lived up to his reputation as a courageous soldier and true patriot.'

d. …yongkamha-n kwunin-**tap**-ko cincengha-n aykwukca-**taw**-ass-ta
…brave-rel soldier-be.like-conj genuine-rel patriot-be.like-pst-decl

(18) *-ci* class (*-ci, -lop, -sulep, -kyep*, etc.) → **Opaque suffix**
-tap class (*-tap, -kath,* etc.) → **Transparent suffix**

The two classes behave consistently with respect to other tests of Lexical Integrity, except for Extraction (of base stranding the suffix), regarding which both behave alike.

Phrasal Recursivity

(19)a. *Kukes-un [taytanha-**n** mith]-**ci**-nun cangsa-i-ta
That-top extreme-rel bottom-characterized.by-rel transaction-cop-decl
'That deal will cost us a lot of money.'

b. Kukes-un taytanh-**i** [mith-**ci**-nun] cangsa-i-ta
That-top extreme-adv bottom-characterizedb.by-rel transaction-cop-decl

vs.

c. Ku-nun [hwulyungha-**n** hakca]-**tap**-key yenkwu-lul swici anh-nunta
He-top outstanding-rel scholar-be.like-comp research-acc stop neg-pres
'He never stops doing research, as befits his reputation as an outstanding scholar.'

d. *Ku-nun hwulyungha-**key** [hakca-**tap**-key] yenkwu-lul swici anh-nunta
he-top outstanding-adv scholar-be.like-comp research-acc stop neg-pres

Gapping

(20)a. *Ku kos-un kilum-__ (kuliko) i kos-un kunul-**ci-**ta
that place-top oil- (and) this place-top shade-characterized-decl
'That place is fertile while this place is shady.'

b. Ku kos-un kilum-**ci**-ko i kos-un kunul-**ci-**ta
that place-top oil-characterized-conj this place-top shade-characterized-decl

vs.

c. Cheli-nun kwunin-__ (kuliko) Tongswu-nun haksayng-**tap-**ta
C-top soldier (and) T-top student-be.like-decl
'Cheli is every bit a soldier and Tongswu, (every bit) a student.'

d. Cheli-nun kwunin-**tap**-ko Tongswu-nun haksayng-**tap-**ta
C-top soldier-be.like-conj T-top student-be.like-decl

Inbound Anaphoric Islands

-sulep- (***-ci*** class) **vs. *–tap-*:**

(21)a. *Kukes-un ku-**sulep**-ci anh-un hayngtong-i-ta
That-top he-be.like-comp not-rel action-be-decl
'That was not like him at all.'
cf.
a'. *?Kukes-un ne-**sulep**-ci anh-un hayngtong-i-ta
that-top you-be.like-comp not-rel action-be-decl

b. Kukes-un ku/ne-**tap**-ci anh-un hayngtong-i-ess-ta
That-top he/you-be.like-comp neg-rel action-be-pst-decl
'That was unbecoming of him/you.'

(22)a. * Cheli-uy RMH_i-**sulew**-un taytap-i **ku_i**-lul nolakey hayssta
C-gen R-be.like-rel answer-nom he-acc surprise made
'Cheli's Rho-Moo-Hyun-like answer surprised him (=RMH).'

b. $Cheli_i$-**tap**-ci moshan cemswu-ka **ku_i**-lul hwa-ka nakey hayssta
C-be.like neg score-nom he-acc anger-nom arise made
'The score that was sub-par for Cheli made him (=Cheli) angry.

Extraction

(23) a. *[Cheli-ka acwu __-**sulew**-un] Rho-Moo-Hyun
C-nom very be.like-rel RMH
'RMH, who Cheli is very much resembles (in his ways…)'

a'. Cheli-ka acwu Rho-Moo-Hyun-**sulep**-ta
C-nom very RMH-be.like-decl
'Cheli is very RMH-like.'

b. *[Cheli-ka __-**tap**-key nul hayngtongha-nun] [yongkamha-n kwunin]
C-nom like-comp always act-rel brave-rel soldier
'The brave soldier that Cheli always acts like'

b'. Cheli-ka yongkamha-n kwunin-**tap**-key nul hayngtonghan-ta
C-nom brave-rel soldier-like-comp always act-decl
'Cheli always behaves like a brave soldier.'

c. Cheli-ka [PRO __ cangcha **toy**-ko sipheha-nun] chikwa-uysa
C-nom later become want-rel dentist
'A dentist, which is what Cheli wants to become eventually'

c'. Cheli-ka [PRO cangcha chikwa-uysa-ka **toy**]-ko siphehanta
C-nom later dentist-nom become-comp wants
'Cheli wants to become a dentist eventually.'

Double-duty Suffixes (H-B Im 1989, C-K Shi 1994)

(24) a. *Kukes-un [ttattusha-n ceng]-**taw**-ass-ta
It-top warm-rel affection-be.like-pst-decl

b. Kutul-un acwu [ceng-**taw**]-un sa.i-(i)-ta
They-top very affection-be.like-rel relation-(be)-decl
'They have a really close relationship.'

c. *[ceng-kwa alum]-**taw**-un sa.i
affection-and beautiful-be.like-rel relation
'Close and beautiful relationship'

(25) a. *Ku cis-un [taytanha-n papo]-**kath**-ass-ta
That act-top exceeding-rel fool-be.like-pst-decl
'That was extremely foolish.'

b. Ku cis-un taytanh-i [papo-**kath**]-ass-ta
that act-top exceeding-adv fool-be.like-pst-decl

c. *Ku cis-un [papo-wa pyengsin]-**kath**-ass-ta
That act-top fool-and loser-like-pst-decl
'That was foolish and dumb.'

(26) Summary of Lexical Integrity Tests

	Coordination	Phrasal Recursivity	Gapping	Inbound Anaphoric Island	Outbound Anaphoric Island	Extraction
Opaque suffix	N	N	N	N	N	N
Transparent suffix	Y	Y	Y	Y	Y	N
Double-duty	N/Y	N/Y	N/Y	N/Y	N/Y	N

3. Some Analyses of the Opaque-Transparent Distinction

3.1. A Lexicalist Analysis: Affixes vs. Clitics

Affixes → Attached in the lexicon via the Word System → Base+affix juncture is subject to Lexical Integrity
Clitics → Attached in the syntax via the Phrase System → Base+clitic juncture is not subject to Lexical Integrity

Affixes vs. Clitics (Zwicky & Pullum 1983)

- Phonological properties: 'lexical' vs. 'post-lexical' rules (Kiparsky 1982); alternation between bound/free forms

- Morphological properties: selectivity for host; idiosyncratic allomorphy; morphotactics (affixes internal to clitics, closer to root/stem than clitics; affix ordering morphologically constrained, and not by syntactic principles)

- Syntactic properties: head vs. edge distribution; scope over coordination; internal phrasal modification; one vs. two syntactic atoms

- Semantic properties: opacity vs. transparency of meaning

Hypothesis

Opaque suffix → **Affix**
Transparent suffix → **Clitic**
Double-duty suffix → **Affix/clitic**

Problems

- Transparent suffixes show a mixture of affix and clitic properties, i.e., they are in-between affixes and clitics, a class of entities sometimes called **(Ad)-phrasal affixes**

- Are ad-phrasal affixes clitics? Are they affixes?

Assimilation to Affixes: Cho and Sells (1995—**regular affixes**)
Halpern (1994—**lexical clitics**)
Westcoat (2002**—lexical sharing**)
Zwicky (1987—**edge inflections/features**)

Assimilation to Clitics: Chae and No (1998)
Chae and Baik (2010)

Transparent suffixes are not clitic-like:

- If they are (simple) clitics, (27) should be fine through cliticization.

(27) *[Cheli-ka __-**tap**-key nul hayngtongha-nun] [yongkamha-n kwunin]
C-nom like-comp always act-rel brave-rel soldier

- The morphological 'size' of the host is restricted. In particular, the host may not carry certain Delimiting particles (**Z-Delimiters** – Cho and Sells 1995)

- Transparent suffixes may exhibit idiosyncratic allomorphy (cf. *–tap-* vs. *–taw-*).

- The host+suffix unit (arguably) acts as X^0 in certain syntactic constructions (Kim et. al. 2008).

- Transparent suffixes serve double-duty as opaque suffixes.

Transparent suffixes are not affix-like:

- Edge Distribution

- Lexical integrity violations

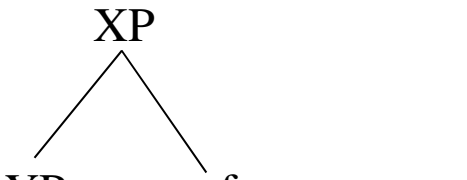
- Etc

3.2. Lexical vs. Phrasal Affixation (*Ehwicek vs. Thongsacek Phasayng*)—*aka* 'Parallel' Morphology

(28)a.

opaque affix
attached in the lexicon

b.



transparent affix
attached in syntax

Borer (1988), Sadock (1991), H-B Im (1989), C-K Shi (1994), C-S Ko (1992), Yoon (1996, 2003, 2008, 2011), Ackema and Neeleman (2004), Etc.

- Explains hybrid behavior of transparent suffixes
- Double-duty affixes serve as existence arguments for the architecture

Trying Out A New Option

- Both approaches appeal to the division between Lexicon and Syntax as an explanatory construct

- The only difference between the two approaches has to do with whether affixation is locked up in the Lexicon (Lexicalist approach) or is orthogonal to the Lexicon-Syntax divide (Parallel Morphology).

- Can the difference between two classes of affixes be accounted for in a view of morphosyntactic interface such as that espoused under Distributed Morphology;

(i) Where there is **a single generative mechanism** ("Syntax All The Way Down") for both words and phrases

(ii) **The distinction between the Lexicon and Syntax is not an explanatory construct**

4. Two Types of Denominal Predicates in a Single Engine (DM-like) Approach

4.1. Take One—Lowering vs. Local Dislocation

On Affix vs. Clitics in DM (Embick and Noyer 2001):

- The distinction cannot be posited in a theory like DM (because all dependent elements are in essence clitics).

- Franks (2001), which posits the affix-clitic distinction, leaves it accidental why the distribution of the two is identical in Bulgarian DPs.

Objections

- But the distribution of affixes and clitics is NOT always identical!!

- So, we need a way to model the different distributions, even if affix-clitic dichotomy is not an explanatory construct in the theory.

- Typical difference – Head vs. Edge-attachment

- Possible DM response—Head vs. Edge operations (Head Movement/Lowering vs. Local Dislocation)

Transparent suffixes target the Edge; Opaque suffixes target the Head:

(29) a. *[kunul-kwa kilum]-**ci**-n kos
shade-and oil-characterized-rel place
'A shaded and fertile location'

b. kunul-**ci**-ko kilum-**ci**-n kos
shade-characterized-and oil-characterized-rel place

c. … [yongkamha-n kwunin-kwa cincengha-n aykwukca]-**taw-**ass**-**ta
courageous-rel soldier-and genuine-rel patriot-be.like-pst-decl
'(He really lived up) to his reputation as a courageous soldier and true patriot.'

d. …. yongkamha-n kwunin-**tap**-ko cincengha-n aykwukca-**taw**-ass-ta
brave-rel soldier-be.like-conj genuine-rel patriot-be.like-pst-decl

(30) a. [Chomsky, ku yumyenghan enehakca]-**tapta**
Chomsky that famous linguist-be.like

b. *[Chomsky]-**tapta**, ku yumyenghan enehakca
Chomsky-be.like that famous linguist

Does this suffice?

- Why should the mode of forming a complex head have an effect on modification of the base?
- Why should the mode of forming a complex head have an effect on reference?
- Why should the mode of forming a complex head have an effect on gapping of the terminal spelled out as suffix?
- Why should Lexical Integrity hold at all under DM assumptions?

4.2. Take Two--Roots vs. Words

Lesson from previous section

- We need more than a way to model the Head vs. Edge distribution of the two types of suffixes.

Roots vs. Words (Marantz 1997, Arad 2003,etc.)

- Lexemes (or Roots) are pairings of form and meaning, but not via syntactic category
- Syntactic category is assigned to lexemes-Roots syntagmatically, by functional heads bearing lexical category specification (Categorization Assumption).
- Categorized Roots = Words

Further Properties of Roots in DM

- Root ≠ root (as base of all affixation) (cf. Marantz 1997, Arad 2003, and below)
- Multi-morphemic Roots are/can be formed by Merge in a 'single engine' approach, depending on how Merge works (cf. Zhang 2007, Chomsky 2008).
- Internal structure of Roots (as well as juncture of Root and categorizing head) is invisible to computations in syntax proper, because of lack of syntactically visible features.
- Words (categorized Roots) are visible to syntax

(31) Proposed analysis of the transparent-opaque suffixes

a. Both opaque and transparent affixes combine (Merge) with their hosts in the syntax/CS.

b. The bases to which opaque suffixes attach are Roots.

c. Opaque suffixes are possibly light verbs in Korean (Johns 2007; Yeo 2008).

d. Transparent affixes select syntactically categorized phrases.

e. Transparent affixes combine with their hosts by an edge-to-edge process, while opaque affixes may combine with their hosts via a head-to-head process (from section 4.1).

Plan for the Remainder of the Talk:

- Establish diagnostic properties of Roots vs. Words (Nouns) in Korean
- Show that the bases of opaque suffixes are Roots
- Show that the bases of transparent suffixes are Words (Nouns)
- Show how this deals with Lexical Integrity
- Discuss implications of the analysis for DM

4.3. Opaque suffixes attach to Roots; transparent suffixes attach to Nouns

Roots vs. Nouns (cf. Wiltschko 2009):

(32)

Roots
A-categorial distribution (no nominal plural marking, no determiners/possessives, no Nominal Particles); non-referential interpretation

Nouns
Nominal distribution (nominal plural marking, determiners/possessives, nominal particles); referential interpretation (Baker 2003)

4.3.1. Opaque suffixes

- Bound Roots are possible as base:

(33) [**kkata**]$_R$-lopta [**chilchil**]$_R$-macta [**along**]$_R$-cita
R-suggest.of R-be.char.by R-be.char.by
'be picky' 'be a klutz' 'be dappled'

[**yeyppu-cang**]$_R$-sulepta [**mek-umcik**]$_R$-sulepta
R-be.like R-be.like
'be pretty' 'seem tasty'

- Bound roots do not have nominal distribution:

(34) a. *Cheli-nun **kkata**$_{\mathbf{R}}$-lo yumyenghata
C-top R-inst known.for
vs.
Cheli-nun **kkata**-lop-ki-lo yumyenghata
C-top R-suggest.of-nml-inst known.for
'Cheli is famous for being finicky.'

b. *[**yeyppu-cang**$_{\mathbf{R}}$]-uy elkwul
R-gen face
vs.
[**yeyppu-cang**]-sulew-un elkwul
R-be.like-rel face
'An atttractive face'

(35) a. *kulen **kkata**$_{\mathbf{R}}$-nun cheum poassta
dem R-top never.before seen
vs.
Kulen **kkata**-low-um-un cheum poassta
dem R-suggest.of-nml-top never.before seen
'I have never seen someone so finicky.'

b. *ce [**yeyppu-cang**]$_R$ com po-ala
dem R a.little see-imper
vs.
ce [**yeyppu-cang**]-sulew-un cis com po-ala
dem R-be.like-adnom act a.little see-imper
'Look how cute s/he is!'

- The juncture between bound Roots and affixes admits no nominal particles:

(36) a. *kkata$_R$-**tul**-lopta
R-pl-be.char.by
vs.
?kkata-lop-ki-**tul** ha-ta
R-be.char.by-nml-pl do-decl
'(are) very finicky'

b. *[yeyppu-cang]$_R$-**tul**-sulepta
R-pl-impres.of
vs.
[yeyppu-cang]$_R$-sulep-ki-**tul** ha-ta
R-impress.of-nml-pl do-decl
'(are) attractive'

c. *kkata$_R$-**man**-lopta
R-only-be.char.by
vs.
kkata-lop-ki-**man** hata
R-be.char.by-nml-only do
'is only finicky'

d. *[yeyppu-cang]$_R$-**man**-sulepta
R-only-be.like
vs.
[yeypp-cang]$_R$-sulep-ki-**man** hata
R-be.like-nml-only do
'is only attractive'

- But not all bases of opaque suffixes are bound:

(37) a. Cheli-nun **kunul**-ul chaca taniessta
C-top shade-acc seek went.around
'Cheli was looking for a shade.'

b. **Nwunmwul**-man hullici mal-ko cengsin chali-ela
Tears-only shed do.not-comp senses recover-imper
'Stop crying and come to your senses!'

(38) [**kunul**]$_X$-cita [**iksal**]$_X$-macta [**nwunmwul**]$_X$-kyepta [**hyangki**]$_X$-lopta
Shade-be.char.by humor-impres.of tear-full.of fragrance-be.char.by
'be shady' 'be humorous' 'be sad' 'be fragrant'

x = Root? Noun?

- Though they are not bound, they are Roots when they occur as bases of opaque suffixes:

#1. Nominal particles are prohibited.

(39) a. *kunul$_R$-**tul**-cita *iksal$_R$-**tul**-macta
shade-pl-be.char.by humor-pl-impres.of

b. *kunul$_R$-**man**-cita *iksal-**man**-macta
shade-only-char.by humor-only-impress.of

#2. Nominal modifiers are prohibited.

(40) a. *[celen [iksal]$_R$]-macta *[cipwung-uy [kunul]$_R$]-cita
dem humor-impres.of roof-gen shadow-be.char.by

(41) a. ce [[kunul]$_R$-***n***]$_N$ celen [[iksal]$_R$-***n***]$_N$
dem shade dem humor

b. cipwung-uy [[kunul]$_R$-***n***]$_N$ Cheli-uy [[iksal]$_R$-***n***]$_N$
roof-gen shadow C-gen humor

<u>Note on –*sulepta*—becoming a transparent suffix?</u>

(42) [**MB**]-sulepta [**ne**]-sulepta (Google)
MB-be.like you-be.like

(43) a. [hwang.ya-uy mwupepca-**tul**]-sulepta (Google)
Wilderness-gen outlaw-pl-be.like

b. wonmang-**man**-sulepta (Google)
blame-only-be.like

c. mancok-**un**-sulepsupnita (Google)
satisfaction-top-be.like

4.3.2. Transparent Suffixes

- Bound forms cannot occur as bases of transparent suffixes (C-S Kim 1996):

(44) a. *[mit-umcik]$_R$-tapta/-kathta
R-be.like/-seem.like

b.*[yeyppu-cang]$_R$-tapta/-kathta
R-be.like/-seem.like

c.*[kapcak]$_R$-tapta/-kathta
R-be.like/-seem.like

d.*[ppenppen]$_R$-tapta/-kathta
R-be.like/-seem.like

- Bases of transparent suffixes are Words (Nominals):

(45) a. [[haksayng]$_R$-***n***]$_N$-tapta/-kathta
student-be.like/-seem.like

b. [ne]$_{N?/D?}$-tapta/-kathta [MB]$_{N?/D?}$-tapta/-kathta
You-be.like/-seem.like MB-be.like/-seem.like

- Bases can be modified by external nominal modifiers:

(46) a. [kulen [[salam]$_R$-*n*]$_N$]-kathta
Dem person-seem.like
'seems like that kind of person'

b. [[yongki iss-nun [ne]$_N$]-tapta
Courage have-rel you-be.like
'is very much like the courageous person you are'

c. [Kim-kyoswunim-uy [[haksayng]$_R$-*n*]$_N$]-tapta
K-professor-gen student-be.like
'is very much like Professor Kim's student'

- However, not all nominal particles are allowed in the base-affix juncture:

(47) a. [[haksayng]$_R$-*n*]$_N$-**tul**-tapta/-kathta
Student-pl-be.like/-seem.like
'(are) like students'

vs.

b. *?[[haksayng]$_R$-*n*]$_N$-**man**-tapta vs. haksayng-tap-ki-**man** hata
Student-only-be.like student-be.like-nml-only do
'is only like a student'

c. *?[[haksayng]$_R$-*n*]$_N$-**un**-tapta vs. haksayng-tap-ki-**nun** hata
Student-top-be.like student-be.like-nml-top do
'IS a like a student'

d. *?[[haksayng]$_R$-*n*]$_N$-**man**-kathta vs. haksayng-kath-ki-**man** hata
Student-only-seem.like student-seem.like-nml-only do
'seems only like a student'

e. ?[[haksayng]$_R$-*n*]$_N$-**un**-kathta vs. haksayng-kath-ki-**nun** hata
Student-top-seem.like student-seem.like-nml-top do
'DOES seem like a student'

(48) [[haksayng]$_R$-*n*]$_N$-**man/un** tuleo-la
Student-only/top come.in-imper
'Only students come in/if you're a student, you can come in.'

<u>Cho and Sells (1995); Sells (1995):</u>

- Restrictions on attachment of Delimiting particles to base is indicative of lexical attachment of these suffixes, since there is no other reason than morphotactics as to why they should be banned.

An Alternative:

- There may be an explanation for the morphotactic restriction based on scope (Yoon 2003).
- Lack of inverse construction for transparent suffixes other than the copula can explain (47).

(49) a. I sahang-i cekyongtoynun kes-un ce haksayng-**man/to**-ita
This clause-nom apply nml-top that student-only/also-be
'the one to whom this clause/provision applies is that student alone/too.'

b. *?Ce haksayngtul-un hankwuk.kwukcek-**man/to**-i-ta
those students-top korea.citizenship-only/also-cop-decl
'Those students have only Korean citizenship/have Korean citizenship as well.'

- The judgments are quite variable.
- Alternatively, a limited amount of morphotactic restriction imposed by morphology may be allowed, given that we are dealing with affixes, and not clitics (Cho and Sells 1995).

5. Other Differences between the two classes of suffixes/predicates

5.1. In/Out-bound Anaphoric Islands

- Bases of opaque suffixes are Roots, which lack reference.

- Bases of transparent suffixes are Nouns, which are capable of reference (Baker 2003—perhaps in the context of a DP. See below), or they may be constituents in the higher functional hierarchy above Nominals (Pronouns as D, etc.).

<u>-*sulepta* again:</u>

(50) a. *Kukes-un ku-**sulep**-ci anh-un hayngtong-i-ess-ta
That-top he-be.like-comp not-rel action-be-pst-decl
'That was not like him.'

b. *?Cheli-uy RMH_i-**sulew**-un taytap-i ku_i-lul nolakey hayssta
C-gen R-be.like-rel answer-nom he-acc surprise made
'Cheli's Rho-Moo-Hyun-esque answer surprised him(=RMH).'

- Inbound and outbound anaphoric island violations (with 3rd Person pronouns) are not allowed with –*sulepta*, and yet we found the following forms.

(51) [**MB**]-sulepta [**ne**]-sulepta (Google)
MB-be.like you-be.like

(52) a. [hwang.ya-uy mwupepca-**tul**]-sulepta (Google)
Wilderness-gen outlaw-pl-be.like

b. wonmang-**man**-sulepta (Google)
blame-only-be.like

c. mancok-**un**-sulepsupnita (Google)
satisfaction-top-be.like

A proposal:

- In the innovative use *sulepta* takes NP, but not DP.
- Locus of true reference is DP.
- NPs allow nominal modifiers (such as Possessive) and particles.
- Proper Names (and 1st/2nd person Pronouns) used non-referentially are Nouns and are fine as bases of *sulepta*, but do not have true reference (in the absence of D).

5.2. Coordination (Suspended Affixation)

- True coordination requires conjuncts to bear syntactic category, given that coordination abides by the Law of the Coordination of Likes

5.3. Gapping

- Prosodic account (Booij 1985) → Not likely
- Gapping strands a Root in opaque predicates, but a Word in transparent predicates

5.4. Extraction

- No difference between the two suffixes
- Both are suffixes, and need a suitable (phonological) host to attach to

6. Lexical Integrity and DM

‘Architectural’ predictions of DM:

- If complex head (word) formation is post-syntactic (i.e., happens *via* Lowering or Local Dislocation), there should be no difference between structures spelled out as complex heads and those spelled out analytically with regard to processes that take place in core syntax.

- Even if complex head formation is mediated by syntactic head movement, the result may be the same, unless head movement alters properties of structures after movement (cf. Baker’s 1988 Government Transparency Corollary).

- In other words, Lexical Integrity violations—except those attributable independently to other components—should be attested massively. This is **an ‘architectural’ prediction** (cf. Embick and Marantz 2008 on the architectural prediction against Poser blocking in DM).

Are the predictions borne out?

- **Yes**—for transparent suffixes in Korean (as well as other complex heads in both derivation and inflection)
- **No**, in a host of other cases in other languages.
- **Question: Why aren’t more languages like Korean?**

(53) a. *[$_{N}$ parent$_{i}$ -**hood**] (of) [$_{NP}$ responsible [$_{NP}$ t_{i} from Glasgow]]

b. *[$_{A}$ wash$_{i}$ -**able**] (of) [$_{VP}$ t_{i} dirty dishes]]

c. *[$_{V}$ central$_{i}$ -**ize**] [$_{AP}$ more [$_{AP}$ t_{i} to our arguments (than we thought)]]
(Head Movement derivation)

c'. *[$_{VP}$ t_{i} [$_{AP}$ more [$_{AP}$ central-**ize$_{i}$** to arguments (than we thought)]]
(Lowering derivation)

(Data adapted from Ackema and Neeleman 2007)

(54) *[$_{A}$ wash$_{V}$ –**able**] [$_{VP}$ carefully [$_{VP}$ [$_{VP}$ t_{i} in water] and [$_{VP}$ rinse thoroughly afterwards]]]

<u>One possible response:</u>

- The bases (*parent*, *wash*, *central* in 53 above) are not Words but Roots, because the affixes are Root-level affixes (like opaque suffixes in Korean).

- The stranded dependents cannot be licensed by the bases in the first place, as they lack syntactic features.

If the base is a Word, then we should have stranding as well as other Lexical Integrity violations:

- The suffixes *–ness* and *–er/-est* are Word-level suffixes (Embick and Marantz 2008).
- They should allow stranding as well as other violations of Lexical Integrity.
- But these predictions are not borne out.

(55) *$[_{NP}$ $[_{N}$ $[_{A}$ will-ing$]_i$ –**ness**$]$ $[_{AP}$ very $[_{AP}$ t_i to help others$]]]$ (Hd Movement)

*$[_{NP}$ t_i $[_{AP}$ very $[_{AP}$ $[_{A}$ will-ing$]$-**ness$_i$** to help others $]]]$ (Lowering)

(56) *$[_{DegP}$ $[_{Deg'}$ t_i $[_{AP}$ $[_{AP}$ $[_{A}$ tall$]$-**er$_i$**$]]$ and $[_{AP}$ smart $]]]$ [than Steve]] (Local Dislocation)

Q: How do we account for the differences between Korean and other languages?

Option #1: Revisiting the Mechanics of Complex Head Formation (mimicking the GTC):

- Complex head formation (*via* Head Movement, Lowering, or Local Dislocation) does not allow stranding in languages like English.

- This may be because a complex head **[$_{X/Y}$ X-Y]** need not be formed from structures where X takes YP as complement ([$_{XP}$.. **X** [$_{YP}$ .. **Y**..]]), as standardly assumed.

- If 'syntax all the way down' can form [$_{X/Y}$ **X-Y**] structures directly, we might assume that in the case of such 'base-generated' complex heads, stranding/licensing of dependents may work differently than in structures where the complex head is derived from complementation.

- The idea is that where Lexical Integrity violations are attested (as in Korean), complex heads are formed from phrasal complementation structures.

- This may work, but has some problems:

- Relies on X vs. XP status being differentiated inherently, contra Bare Phrase Structure.

- Needs some sort of 'Percolation' mechanism within base-generated complex head to get dependent of Y licensed at the top of the complex word, essentially mimicking lexicalist analyses with feature percolation.

Option #2: Revisiting Lexical/Vocabulary Insertion Algorithms:

- The standard assumption in DM is that while **Vocabulary Insertion** is at terminal nodes, it only happens **after the terminals are collected into a complex head** by one of the head-forming mechanisms for exponents of the terminal nodes that are bound forms.

- For example, context-sensitive V.I. such as that shown below requires X and the T[+past] terminals to be sister nodes within a complex head.

  [+past] ←→ /-t/ / X + ___ (where X = *dwell*, *buy*, *send*, etc.)

  The formation of complex head where X is adjacent to T is a **pre-requisite to** V.I., since without the formation of complex heads, X(=V) and T will not be adjacent.

- Crucially, it is not that V.I. requires complex head formation, but in the case of insertion of bound forms, **adjacency** will not be satisfied without complex head formation preceding V.I. in cases like above.

- Notice that in a strict head-final language with suffixes, insertion of bound forms at terminals could happen **without the formation of complex heads** and **still meet the condition of adjacency** (cf. Ackema and Neeleman 2004), because the terminals are adjacent in the syntax. E.g.,

  $[_{CP}$ … $[_{TP}$ …. $[_{VP}$ ……. **V**] **T**] **C**]

Option #2: Revisiting Lexical/Vocabulary Insertion Algorithms (cont):

- I propose this is what happens with Transparent Suffixes (and other suffixes behaving similarly) in Korean. V.I. takes place on terminal nodes in a syntactic structure where the terminals have NOT been collected into a complex head, because adjacency is met.

- Thus, the fact that the exponent of T (or C) is bound will have no consequences—other than those attributable to boundness (Extraction facts)—on the rest of the syntax of the TP and VP, with the full range of coordination, stranded dependents, etc. allowed.

- Independent evidence that this is correct comes from D-H Chung's work (2009, 2011) that shows that the **surface phonological word** spelt out as an inflected verb (**V-T-C** sequence) does not act as a constituent for the purposes of movement or deletion.

(57) a. Cheli-nun [Tongswu-ka pap-ul mekessta-ko] sayngkakhanta
C-top T-nom meal-acc ate-comp thinks
'Cheli thinks Tongswu had his meal.'

b. **Pap-ul** Cheli-nun [Tongswu-ka __ mekessta-ko] sayngkakhanta
meal-acc C-top T-nom ate-comp thinks

c. [**Tongswu-ka** **pap-ul** **mekessta-ko**] Cheli-nun__ sayngkakhanta
T-nom meal-acc ate-comp C-top thinks

d. *__mekessta-ko__ Cheli-nun [Tongswu-ka pap-ul __] sayngkakhanta
ate-comp C-top T-nom meal-acc thinks

e. *__pap-ul mekessta-ko__ Cheli-nun [Tongswu-ka ___] sayngkakhanta
meal-acc ate-comp C-top T-nom thinks

(58) A: na-nun [John-i Mary-lul salanghanta-ko] mitnunta
I-top J-nom M-acc loves-comp believe
'I believe John loves Mary.'

B: *haciman Bill-un [John-i Mary-lul ~~salanghanta-ko~~] an-mitnunta
But B-top J-nom M-acc loves-comp neg-believes
'But Bill does not believe John loves Mary.'

C: *haciman Bill-un [John-i ~~Mary-lul salanghanta-ko~~] an-mitnunta
But B-top J-nom M-acc loves-comp neg-believes

D: haciman Bill-un [~~John-i Mary-lul salanghanta-ko~~] an-mitnunta
But B-top J-nom M-acc loves-comp neg-believes

- If the lack of complex head formation is responsible for violations of Lexical Integrity, then in cases where we DO have complex heads, Lexical Integrity must not be violable. However, it's unclear that current mechanisms in DM can predict this difference (see discussion of Option #1).

Sundry Final Remarks:

- DM predicts that Lexical Integrity should track the difference between Words and Word-level affixes vs. Categorized Roots ('first phase') while the Lexicalist hypothesis predicts that it should track the difference between 'below word' vs. 'above word'.

- Lexical Integrity violations in Korean do not support the Lexicalist cut of the theoretical pie, since a word-internal juncture was fully visible to syntax in the case of transparent suffixes, but the DM cut is not supported either, since the juncture between categorized words ('first phase') and the rest remain impermeable to syntax in many languages, while it remains porous in languages like Korean.

- Presence vs. absence of complex head formation may be the key to Lexical Integrity. Headedness in syntax and morphology seems correlated with this fact.

- An alternative algorithm for lexical/vocabulary insertion may be called for, in a theory like DM. Namely, we do not want V.I. of bound forms only in structures where terminals have been collected into a complex head.

- Roots in the sense of DM can be morphologically complex or simple.

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