## On Multiple Verbal Suffixation in Japanese and Korean

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## 1. Introduction

Since the seminal works on cartography by Cinque (1999) and distributed morphology (DM) by Marantz (1997, 2001) inter alia, many linguists have argued for an articulated clausal structure under TP as indicated in (1).

(1)  $[_{TP} \dots [_{XP} \dots [_{VoiceP} (EA) [_{YP} \dots [_{vP} (IA) \sqrt{Root^{(Z)^{V}}]^{Y}}]^{Voice}]^{X}^{T}]$ 

For instance, X and Y are identified as High/Outer- and Low/Inner-Aspect (Borer 2005, MacDonald 2008, Travis 2010, Fukuda 2012), and Y and Z as High- and Low-Applicative (Pylkkänen 2000, 2008, McGinnis 2001). Unlike Voice, the locus of Cause may vary across languages. According to Pylkkänen (2008), its locus is parametrized in three different ways as shown in (2). This means that Cause may appear in either X, Y or Z in (1).

(2) a. Root-selecting Cause b. vP-selecting Cause c. Phase-selecting Cause  $\sqrt{R^{Cause}}$   $[_{vP}(IA) \dots \sqrt{R^{v}}]^{Cause}$   $[_{{}_{aP}} EA \dots \alpha]^{Cause}$ 

Japanese exhibits all three possibilities in (2). While (2a) is instantiated by the root  $\sqrt{Vs}$  (V=variable vowel) radicalized from /(a)s/ as in *dok-as* 'move away<sub>vt</sub>', which alternates with the intransitive *dok* 'move away<sub>vi</sub>' (Aoyagi 2016), (2b) by *kusar-ase* 'spoil<sub>vt</sub>' formed on *kusar* 'spoil<sub>vi</sub>', which does not have a "lexically" related transitive form (Miyagawa 1984). (3a) is the commonest one that selects VoiceP as in *Hanako-ni huku-o ki-sase* 'make Hanako put on clothes', where *Hanako* fulfills the properties of an EA.

## 2. Questions

First of all, although multiple verbal suffixation is more productive in Japanese than in Korean, passive-causatives as in (3b), unlike causative-passives as in (3a), are quite marginal at best (Ishizuka 2012); however, (3b), though marginal, is still better than (3c) where the passivized subject *sono hon* 'that book' is inanimate.

- (3) a. John<sub>1</sub>-ga [Mary<sub>2</sub>-ni [αP e<sub>1</sub> kodomo<sub>1/2</sub>-o home]-sase]-rare-ta
   John-nom Mary-dat child-acc scold-caus-pass-past
   'John was made to praise his/her child by Mary.'
  - b. %Mary-ga [John<sub>1</sub>-o Tom-ni e<sub>1</sub> sikar-are]-sase-ta
    Mary-nom John-acc Tom-dat scold-pass-caus-past
    'Mary made/let John be scolded by Tom.' (Saito 1982)
  - c. \*John-wa [sono hon<sub>3</sub>-o ooku-no gakusei-ni e<sub>3</sub> yom-are]-sase-ta
    John-top that book-acc many student-by read-pass-caus-past
    '(int.) John made that book read by many students.'

Secondly, turning to Korean, the loci of the two generally competing causative forms /Ci/ and /Cu/ should be determined. While /Ci/ may be merged with either adjectival (e.g. *noph-i* 'heighten', *nelp-hi* 'widen'), intransitive (e.g. *cwuk-i* 'kill', *anc-hi* 'seat') or transitive (e.g. *mek-i* 'feed', *ip-hi* 'clothe') roots, /Cu/ with adjectival (e.g. *pal-wu* 'straighten', *nac-chwu* 'lower') and intransitive (e.g. *kkay-wu* 'wake<sub>vt</sub>', *mac-chwu* 'correct<sub>vt</sub>') roots, but not with transitive roots.

## 3. Proposals

As for (3a), the underlying sentence before *-rare* is merged is the following causative clause.

 (4) Mary<sub>2</sub>-ga [αP John<sub>1/2</sub>-ni (wazato<sub>1</sub>) (zibun<sub>1/2</sub>-no) kodomo-o home]-sase-ta Mary-nom John-dat on.purpose self-gen child-acc praise-caus-past
 'Mary made John praise his child (on purpose).'

In (4), *John* (as well as *Mary*) may antecede *zibun* and be modified by a subject-oriented adverb; hence,  $\alpha P$  is identified as VoiceP. As a result, *-sase* in (4) is an instance of phase-selecting Cause in (2c). Then, *-rare* in (3a) should appear higher than Voice. Aoyagi (2010) claims that Higher Applicative (H-Appl), whose benefactive and malefactive exponents are *(-te) moraw* 'receive' and *-rare*, respectively, is located above Voice (i.e. X in (1)) in Japanese (but not in Korean). Given this, (3a) has the following representation.

(5)  $[_{\text{H-ApplP}} \text{ John}_1 [_{\text{CausP}} \text{ Mary}_2 [_{\text{VoiP}} e_1 [_{vP} \text{ child}_{1/2} \sqrt{\text{praise}^v}]^\text{Voice*}]^\text{Caus}]^\text{H-Appl}_{[mal]}]$ This is a welcome result; although *John* is "included" in the passivized event in the sense that the child can be taken for his own (Washio 1993), adversity is forced. Moreover, the contrast between (3b) and (3c) can also be accounted for if Cause may select H-ApplP in the order reversed from (5) (i.e., Voi^H-Appl^Caus) for those who accept (3b). Since H-Appl assigns experiencer to an animate DP in its Spec, the selectional requirement in (2c) is met for them. However, the sentence embedded under Cause in (3c) is a direct passive headed by Voice[\_+passive]. Since Voice[\_+passive] does not take an EA by definition, it does not satisfy the selectional requirement in (2c) (or, for that matter, either (2a) or (2b), either).

As for /Ci/ in Korean, Aoyagi (2016) argues that, unlike /(a)s/ in Japanese, it stays in v. This is not unwarranted. First, it may be merged with an adjectival root to form a verb (e.g. *noph-i* 'heighten'). Furthermore, it is not sensitive to the arity of the root; thus, it may be merged with a (mono-)transitive root to form a ditransitive verb (Tsukamoto 2012) as well as monadic (i.e. adjectival or intransive) root to form a transitive verb. On the other hand, /Cu/ selects an adjectival or unaccusative root, but not a dyadic root. This means that /Cu/ selects a monadic vP (i.e. [CausP [vP IA  $\sqrt{Root^v=/Ci/]^Caus=/Cu/.]$ . One might predict that /Ci/ and /Cu/ may both be merged with a root. This is actually borne out, as instantiated by *se-y-wu* 'stand<sub>vt</sub>', *ca-y-wu* 'put to sleep<sub>vt</sub>', *kh-i-wu* 'grow<sub>vt</sub>', etc.